New Evidence on the Aftermath of Financial Crises in Advanced Countries

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Online Appendix A
Derivation of the New Measure of Financial Distress

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This appendix describes how we derive our new semiannual measure of financial distress for a sample of advanced economies for the period 1967 to 2012. As discussed in the paper, we use a single, real-time, narrative source to identify financial distress in 24 countries. We attempt to define financial distress precisely, and to evaluate the narrative evidence systematically. The use of a single source that covers many countries over a long period of time helps ensure consistency in the analysis across countries and episodes. The use of contemporaneous accounts should help us avoid the possibility of bias from the retrospective identification of financial crises.

An important feature of our measure is that we do not treat financial crises as a 0-1 variable, or divide crises into just two groups, such as minor and major or non-systemic and systemic. Both logic and descriptions of actual episodes of financial distress suggest that financial-market problems come much closer to falling along a continuum than to being discrete events that are all of similar severities, or that fall into just a few categories. We therefore classify financial distress on a scale of 0 to 15.

A. Source

The particular real-time narrative source we use is the *OECD Economic Outlook*. This is a roughly 200-page document that has been published by the OECD twice a year since 1967. The *Economic Outlook* describes economic conditions in each member country of the OECD.

This source has several advantages. First, and most obviously, it is relatively high frequency, available over a long time period, and covers a large number of advanced countries. Thus it allows us to construct a measure of distress for a large sample over much of the postwar period. Second, the entries blend data and analytical discussions of country economic developments and are of medium length. As a result, they provide serious information in a relatively concise form. Third, the format, topics covered, and level of analysis appear to be relatively consistent both across countries and over time, suggesting that the OECD strives for similarity and continuity in its coverage and analysis. Thus, the source can be used to derive a measure of financial distress for a number of countries that is similarly consistent across countries and time. Finally, financial conditions and determinants of credit growth are discussed routinely in the volumes from the beginning of the sample, and bank health is often mentioned. As a result, financial distress is likely to be captured if it is present.

Our goal in constructing a measure of financial distress based on the *OECD Economic Outlook* is not to create the most accurate series possible for distress: since the *Economic Outlook* surely does not reflect every piece of information about financial distress, a measure based on it is necessarily imperfect. Rather, our goal in relying on a single real-time source is to construct a measure that is largely free of possible bias coming from retrospective judgments, and from possible inconsistencies from the use of highly disparate sources to gauge distress in different countries and time periods.

One drawback to the use of the *OECD Economic Outlook* is that it is a public document and member countries have some input to the country summaries. Thus one possible concern is that some financial distress may not be revealed for fear that it could worsen conditions or precipitate a crisis. The fact that we find financial problems often being discussed strongly suggests that such covering up of problems is not a major issue. Our use of a single source and a scaled indicator also provides important insurance against this potential problem. Because we identify distress starting at quite minor levels, we should capture most significant episodes even if there is some downplaying of problems.

Another possible concern is that the *OECD Economic Outlook* might be idiosyncratic, or simply do a bad job of identifying financial distress. As discussed in Section II.E of the paper and in online Appendix B, to check for this possibility we examine three other real-time narrative sources in a number of key episodes. This analysis shows that the assessments based on the *Economic Outlook* in fact provide a reasonably accurate summary of what range of observers described at the time. And, as we discuss, there do not appear to be any important sources of common bias across the real-time sources that could plausibly make them all similarly inaccurate guides to financial distress.

The membership of the OECD expanded over our sample period. A few countries joined between 1967 and 1973, and there was a large influx of new members, including many formerly communist countries, starting in 1994. To have a relatively consistent sample and to keep the focus on advanced countries, we restrict the sample to the twenty-four members of the OECD as of 1973. These are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Our sample ends at the end of 2012, so that we include the heart of the 2008 financial crisis and its aftermath.

The two issues of the *OECD Economic Outlook* are published at mid-year and at year-end. Specifically, the first issue is dated June or July (except in 1986 and 2010 through 2012, when it is dated May), and typically reflects developments through sometime in May. The second issue is dated December (except in 2009 through 2012, when it is dated November), and reflects developments through roughly November. As a result, financial distress that occurs very late in the half-year will be discussed in the next volume. This means that in our series, financial distress occurring late in the half-year will also be dated in the subsequent half-year. The semiannual publication of the *Economic Outlook* means that our new measure is semiannual as well.

In most issues of the *OECD Economic Outlook*, the material in the first part of the volume is organized by subject (for example, "Monetary and Fiscal Policies"), but there are often references to conditions in particular countries. The material in the second part is organized by country; a typical entry is about 2000 words. The fact that the accounts are long enough to provide considerable information, but not so long that they provide extreme detail, proves to be useful. Because the entries are not extensive, we interpret a decision to include a discussion of financial-market problems as at least strongly suggestive that the OECD viewed the problems as significant (unless, for example, the reference is clearly in passing, or is included only to note that some unusual financial-market development is not causing macroeconomic difficulties). Similarly, if financial-market problems are mentioned in a brief summary or a conclusion of the entry on a country, we interpret that as strong evidence that the problems are significant. Thus, the moderate length of the accounts in the *Economic Outlook* reduces the scope for judgment, and so helps limit any possibilities for bias in our classification.

B. Methods

Conceptually, we think of financial distress as corresponding to increases in what Bernanke (1983) refers to as the "cost of credit intermediation." This cost includes both the cost of funds for financial institutions relative to a safe interest rate, and their costs of screening, monitoring, and administering loans and other types of financing. A rise in the cost of intermediation makes it more costly for financial institutions to extend loans to firms and households, and thus reduces the supply of credit. Importantly, we do not consider reductions in lending stemming from increases in all interest rates (as a result of tighter monetary policy, for example) as representing financial distress. The question of how monetary policy and the overall level of interest rates affect the economy is different from the issue of the aftermath of disruptions to the financial system, and we do not want to confound the two.[1]

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[1] Bernanke also includes influences on credit flows and interest rates resulting from changes in the creditworthiness of borrowers in his definition of the cost of credit intermediation. Because our goal is to

To derive our new scaled measure of financial distress, we read the *OECD Economic Outlook* to see if OECD analysts described a rise in the cost of credit intermediation for individual countries. To narrow the amount of the volumes we need to study closely, we start with a keyword search for terms likely to appear in accounts of financial distress. The most important are "bank" and "financial," but we also search for "crisis," "rescue," "bailout" (and "bail-out"), "crunch," and "squeeze."[2] Importantly, our assessments of the health of countries' financial systems are not based on a mechanical rule, such as the frequency with which these words are used. Instead, we read the material surrounding the places where these words occur to see if the OECD appeared to be describing financial distress. We also read all the potentially relevant information about a country in the *Economic Outlook* if we find information elsewhere in the document suggesting that there were financial-market difficulties in the country, or if the previous issue of the *Economic Outlook* suggested financial distress in the country.

Starting with the December 2007 issue of the *OECD Economic Outlook*, the references to "bank," "financial," "crisis," and so on become so frequent that we simply read the entire volume through the end of the entries on the individual countries. Rather than a change in methodology, this change reflects the widespread nature of the 2008 financial crisis. The keyword searches would have identified essentially the same material to read, and so would have resulted in the same identification and scaling of financial distress.

In interpreting the material in the *OECD Economic Outlook*, we put the most weight on factors that are clear markers for increases in the cost of intermediation. We look for discussions of such developments as increases in financial institutions' costs of obtaining funds relative to safe interest rates; general increases in the perceived riskiness of financial institutions; reductions in financial institutions' willingness to lend; disruptions in normal borrower-lender relationships that make it harder for financial institutions to evaluate

examine the effects of financial distress and because considering the creditworthiness of borrowers blurs the line between loan supply and loan demand, we focus only on the condition of financial firms.

[2] We also experimented with searching for "credit" in a few issues of the *Economic Outlook*. This did not yield any noteworthy passages that were not identified by the other search terms.

prospective borrowers; and difficulties of creditworthy borrowers in obtaining funds because of problems at financial institutions. In addition to looking for descriptions of factors directly linked to the cost of intermediation, we look for references to developments likely to weaken financial institutions, and so reduce their ability to perform their normal functions. Examples include rising loan defaults, increases in nonperforming loans, balance sheet problems, and erosion of their capital.

For the accounts that suggest financial distress, we group them according to the severity of the difficulties. To scale the degree of financial distress, we look for signs of more or less change in the indicators mentioned above. Was the rise in the perceived riskiness of financial institutions relatively minor, or so large that it is described as a widespread panic? Was the effect on the willingness to lend described as minor or extreme? Was the rise in nonperforming loans thought to be small or large?

We also consider some indirect proxies for the size of the rise in the cost of intermediation. For example, we put some weight on descriptions of government intervention in the financial system as an indicator of the perceived severity of balance sheet and funding problems. However, we do not use this information mechanically. We try to take into account the fact that aggressive government intervention, rather than indicating a large rise in the cost of intermediation, might prevent any significant rise; or that greatly delayed intervention might clean up institutions that had long since become insolvent and whose lending activities had already been superseded by healthier institutions. Likewise, we tend to use discussions of widespread bank failures as an imperfect indicator of a more severe loss of confidence in financial institutions, and hence of a more dramatic increase in the cost of credit intermediation. We again try to be cognizant of the fact that institutions' cost of credit intermediation, and hence their ability to lend, can change greatly without their outright failure—particularly in the presence of regulatory forbearance, or of just enough government intervention to prevent outright failure. Finally, the OECD's description of the actual or anticipated impact of financial troubles on spending and the economy is often a useful summary indicator for the perceived severity of financial distress.[3]

We view a central aspect of this classification as comparative: we attempt to group problems that the *OECD Economic Outlook* describes in similar terms together, and to place ones that it describes as more severe in higher categories. Thus, much of our classification involves comparing episodes to try to make our assignments as consistent as possible.

Although the descriptions of countries' conditions in the *OECD Economic Outlook* are relatively consistent in scope and detail, they tend to be longer and more detailed for larger countries, and to become more detailed over time. This is particularly true for the smaller OECD countries. From the beginning of our sample through 1979 (a period when financial-market disruptions were uncommon), the *Economic Outlook* either had no material specifically devoted to developments in the smaller countries or grouped the discussions together. However, major developments in these countries were noted in material in the first part of the volume. We try to account for this variation in constructing our classification. For example, we interpret a decision by the OECD to devote two sentences to describing financial-market problems in a country as suggesting more serious difficulties if they are part of a one-page summary of the country's situation than if they are part of a three-page analysis.

Because we did not read each issue of the *OECD Economic Outlook* in real time, our new measure is not necessarily immune from bias resulting from information about subsequent outcomes. We take a number of steps to minimize such bias. First, and most important, we set out relatively clear criteria for classifying episodes based on the descriptions in the *Economic Outlook*, and we document the key passages and descriptions that lead us to classify episodes as we do. This forces us to be rigorous in our assessment of the narrative accounts, and allows others to check our classification. Second, we base our interpretation of the health of a country's

[3] Importantly, we see no evidence in the *Economic Outlook* that OECD analysts were deducing financial distress from declines in spending and output. Rather, they viewed distress as one influence on those outcomes.

financial system at a point in time only on information in the *Economic Outlook* available up through that time. We never revisit our interpretation of the description of a situation based on later descriptions of developments in the country. Third, we did not examine any data on economic outcomes until after we completed our classification. Because we are dealing with a large number of countries, our prior knowledge of the high-frequency macroeconomic history of most of the countries in our sample was very limited.

C. <u>Criteria for Different Categories</u>

The categories to which we assign episodes have natural interpretations. Our main ones are "credit disruption," "minor crisis," "moderate crisis," "major crisis," and "extreme crisis." We think of a credit disruption as a situation where lending by some institutions is impaired or their cost of credit intermediation has risen, but the effects do not appear to be either widespread or large. At the other end of the spectrum, an extreme financial crisis is a situation where there are severe impediments to normal financial intermediation throughout virtually all of the financial system. In the middle is a moderate crisis, where there are widespread problems in the financial system and significant consequences for the supply of credit.

In keeping with the fact that the accounts suggest that financial-market problems fall along continuum, we subdivide each category into "regular," "minus," and "plus." Thus, for example, an episode of relatively minor financial distress could be classified as "credit disruption–minus," "credit disruption–regular," or "credit disruption–plus." In our empirical work, we convert these categories into a numerical scale. Cases where there is no financial distress are assigned a zero. Positive levels of distress start at 1 for a credit disruption–minus and go through 15 for an extreme crisis–plus. Table A1 lists the full set of categories and the values we assign to them.

As much as possible, we try to use specific criteria to classify episodes into categories. It is therefore useful to describe the characteristics common to the various groupings.

***<u>Credit Disruptions</u>*.** The hallmark of the episodes that we identify as credit disruptions is that the OECD perceived strains in financial markets, funding problems, or other indicators of an increase in the cost of credit intermediation that were important enough to be mentioned, but that it did not believe were having significant macroeconomic consequences. A common form for this to take was for the OECD to describe the problems not as directly affecting its outlook for the country, but as posing a risk to the outlook. Other possibilities are that the OECD viewed the problems as affecting only a narrow part of the economy; that it mentioned them in passing or explicitly identified them as minor; or that it described the financial system as improved but not fully healed following a situation that we classify as a minor crisis.

Our subdivision of credit disruptions into minus, regular, and plus is based on the specifics of the discussions within this general rubric. For example, we tend to place disruptions that the OECD described as posing substantial risks to the outlook in higher categories than ones that it viewed as posing only mild risks. Similarly, if the OECD reported that a disruption was serious enough that it had caused authorities to make some type of intervention in credit markets to improve credit flows, we tend to classify the disruption as more serious. And as mentioned above, we interpret a given amount of discussion of financial-market problems as suggesting a smaller disruption when it is part of a long entry on a country than when it is part of a short one.

As noted above, comparisons—both within countries over time and across countries—are a central part of our classification. For example, suppose the previous issue of the *OECD Economic Outlook* had described a country's situation in a way that led us to code it as a credit disruption– plus, and the current issue said that the situation had improved slightly, or described it in a slightly more positive way. We would view those comments as pointing strongly toward classifying the current half-year as a credit disruption–regular.

***Minor Crises*.** A canonical case of a minor crisis has three characteristics: a perception by the OECD that there were significant problems in the financial sector; a belief that they were affecting credit supply or the overall performance of the economy in a way that was clearly nontrivial, and not confined to a minor part of the economy; and a belief that they were not so severe that they were central to recent macroeconomic developments or to the economy's prospects.

Of course, not all cases exactly match this pattern. Sometimes entries for small countries are quite short and so do not spell out consequences in detail. In such cases, if the OECD described important problems in the banking system, but did not explicitly link them to falls in credit supply or the macroeconomy, we nonetheless code the episode as a minor crisis. In other cases, the OECD did not explicitly draw a link to macroeconomic outcomes but described the problems as posing an important risk to the outlook. In these cases, we consider the severity of both the financial-sector problems and the perceived risks to outcomes. A related complication is that in some cases, rather than saying that credit supply had been reduced, the OECD said that the usual monetary transmission mechanism was not working. We interpret such comments as an indirect way of describing shifts in credit supply.

As with credit disruptions, the division of minor crises into subcategories is based on the details of the cases. We consider such factors as the length and detail of the description of the financial-sector problems (judged relative to the overall length of the entries); the scale and scope of government intervention in the financial system (if any); and the prominence of the OECD's discussion of the financial problems in its overall discussion of the country.

***Moderate Crises*.** A moderate crisis, in our classification, involves problems in the financial sector that are widespread and severe, central to the performance of the economy as a whole, and not so serious that they could reasonably be described as the financial system seizing up entirely.

One specific criterion we use is whether the OECD mentioned financial-sector problems prominently, for example in the opening summary of the entry on a country. This criterion may also take the form of occasionally using the term "crisis." Another is whether the OECD discussed impacts on credit supply or real activity repeatedly or in strong terms. For example, did it mention a credit squeeze or crunch? We also take descriptions of sizeable government interventions in the financial system as a suggestive (though not definitive) indicator of a moderate crisis.

As before, in some cases we rely heavily on comparisons. This is especially true for the smaller countries, for which the entries in the *OECD Economic Outlook* are generally shorter. Most importantly, if the previous issue of the *Economic Outlook* had described problems that caused us to identify a minor crisis and the current issue made clear that the situation had become significantly worse, we are likely to identify a moderate crisis in the current period, even if the OECD did not explicitly draw a strong link to the performance of the economy. And, as with credit disruptions and minor crises, our division of moderate minor crises into minus, regular, and plus is based on the details of the cases and relies heavily on comparisons across episodes.

The dividing line between minor and moderate crises in our classification appears broadly similar to the cutoff between non-systemic and systemic crises in other chronologies, such as Caprio et al. (2005), Reinhart and Rogoff (2014), and Laeven and Valencia (2014). For example, we identify seven periods before the 2008 global financial crisis when the countries in our sample were in moderate crises or worse; Caprio et al. also identify seven systemic crises in this period and sample of countries, and Reinhart and Rogoff and Laeven and Valencia identify eight.[4] While the episodes we identify are often broadly similar to those in the other chronologies, the particulars of the timing are often quite different.[5]

[4] These totals count Japan in 1997–1999 and 2002 as two distinct episodes and Norway in 1991–1992 as one in our classification, and count the crises starting in Turkey in 1982 and 2000 as two distinct episodes in Caprio et al. and the IMF chronology.

[5] However, our approach differs from those of the other authors not just in the sources used and our reliance on real-time information, but also conceptually, at least somewhat. The earlier authors define crises in terms of a wide range of possible disruptions to the economy. Laeven and Valencia (2014), for example, state that a banking crisis occurs "when a country's corporate and financial sectors experience a large number of defaults and financial institutions and corporations face great difficulties in repaying contracts on time" (p. 63). They go on to list as possible symptoms, "nonperforming loans increase sharply," "all or most of aggregate banking system capital is exhausted," "depressed asset prices (such as equity and real estate prices) on the heels of run-ups before the crisis," "sharp increases in real interest rates," "a slowdown or reversal of capital flows," "depositor runs on banks," "a general realization that systemically important financial institutions are in distress," "the introduction of a deposit freeze or blanket guarantee," and "extensive liquidity support or bank interventions" (p. 63). In contrast,

<u>Major and Extreme Crises</u>. Major and extreme crises are situations where there are large impediments to normal financial intermediation throughout virtually all of the financial system. As with the other categories, we use a mix of absolute and comparative criteria to identify these crises. The absolute criteria center on whether the OECD believed that most or all of the financial system was in severe danger. We look for such markers as the frequent use the term "crisis" in referring to the financial system, and the unreserved use of such terms as "dire," "grave," "unsound," and paralysis." We also look for clear-cut statements that the financial-sector disruptions were having an important effect on credit supply and macroeconomic outcomes. In addition, we view references to major government interventions as suggesting that the problems were severe. The comparative criteria involve stronger language than that used to describe episodes that we classify as moderate crises, or explicit statements that the situations were worse than in such episodes.

D. <u>Episode-by-Episode Descriptions</u>

The remainder of the appendix provides episode-by-episode explanations of the analysis and discussion in the *OECD Economic Outlook* that lead to our classification for all cases where we identify a positive level of financial distress. Because so much of our classification is based on comparing episodes, we find it easiest to explain our choices by ordering the episodes where we identify financial distress by their severity. This organization keeps episodes that we classify similarly together, and shows how the descriptions of the problems in the *Economic Outlook* become more severe as we move up the scale. Within each group, we order the episodes chronologically.

Table A2 presents a complete list of the episodes where we find a positive level of financial distress. In panel (a), they are grouped first by country, then chronologically within each

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conceptually what we look for is increases in the cost of credit intermediation. Because many of the symptoms that the earlier authors look for are likely to be associated with increases in the cost of intermediation, however, in practice the fact that our definition differs somewhat from those of earlier authors does not appear to be highly consequential.

country. In panel (b), they are grouped first by severity, then chronologically within each category.

TABLE A1
Scale Used to Rank Financial Distress

Category	Numerical Value
No distress	0
Credit disruption–minus	1
Credit disruption–regular	2
Credit disruption–plus	3
Minor crisis–minus	4
Minor crisis–regular	5
Minor crisis–plus	6
Moderate crisis–minus	7
Moderate crisis–regular	8
Moderate crisis–plus	9
Major crisis–minus	10
Major crisis–regular	11
Major crisis–plus	12
Extreme crisis–minus	13
Extreme crisis–regular	14
Extreme crisis–plus	15

TABLE A2
Financial Distress in OECD Countries, 1967:1–2012:2

a. By Country

Australia
2008:1 Credit disrupt.–reg.
2008:2 Minor crisis–minus
2009:1 Credit disrupt.–minus

Austria
2008:2 Moderate crisis–minus
2009:1 Moderate crisis–minus
2009:2 Minor crisis–minus
2010:1 Minor crisis–minus
2010:2 Credit disrupt.–minus
2011:1 Credit disrupt.–minus
2011:2 Credit disrupt.–plus
2012:1 Minor crisis–reg.
2012:2 Credit disrupt.–plus

Belgium
2008:2 Minor crisis–minus
2009:1 Credit disrupt.–plus
2009:2 Credit disrupt.–reg.
2011:2 Credit disrupt.–reg.

Canada
2007:2 Credit disrupt.–plus
2008:1 Minor crisis–minus
2008:2 Minor crisis–reg.
2009:1 Minor crisis–reg.
2009:2 Credit disrupt.–plus

Denmark
2008:1 Credit disrupt.–minus
2008:2 Minor crisis–plus
2009:1 Moderate crisis–minus
2009:2 Minor crisis–plus
2010:1 Credit disrupt.–plus
2011:2 Credit disrupt.–plus
2012:1 Credit disrupt.–reg.
2012:2 Credit disrupt.–minus

Finland
1992:1 Credit disrupt.–reg.
1992:2 Minor crisis–plus
1993:1 Moderate crisis–reg.
1993:2 Minor crisis–reg.
1994:1 Credit disrupt.–plus
2008:2 Minor crisis–minus
2009:1 Minor crisis–minus
2009:2 Credit disrupt.–minus

France
1991:2 Credit disrupt.–minus
1995:1 Credit disrupt.–reg.
1995:2 Minor crisis–minus
1996:1 Minor crisis–reg.
1996:2 Minor crisis–reg.
1997:1 Credit disrupt.–plus
2007:2 Credit disrupt.–plus
2008:1 Credit disrupt.–reg.
2008:2 Moderate crisis–minus
2009:1 Minor crisis–plus
2009:2 Minor crisis–minus
2010:1 Credit disrupt.–plus
2010:2 Credit disrupt.–minus
2011:1 Credit disrupt.–minus
2011:2 Minor crisis–reg.
2012:1 Minor crisis–minus
2012:2 Credit disrupt.–minus

Germany
1974:2 Credit disrupt.–reg.
2003:1 Credit disrupt.–minus
2007:2 Credit disrupt.–reg.
2008:1 Minor crisis–minus
2008:2 Minor crisis–plus
2009:1 Minor crisis–reg.
2009:2 Minor crisis–minus
2010:1 Minor crisis–minus
2010:2 Credit disrupt.–reg.
2011:1 Credit disrupt.–minus
2011:2 Credit disrupt.–plus
2012:1 Credit disrupt.–reg.
2012:2 Credit disrupt.–reg.

Greece
2008:2 Minor crisis–minus
2009:1 Moderate crisis–minus
2009:2 Minor crisis–plus
2010:1 Moderate crisis–reg.
2010:2 Moderate crisis–minus
2011:1 Moderate crisis–minus
2011:2 Moderate crisis–minus
2012:1 Moderate crisis–reg.
2012:2 Moderate crisis–reg.

Iceland
2006:2 Minor crisis–reg.
2007:1 Credit disrupt.–reg.

Iceland (continued)
2007:2 Credit disrupt.–plus
2008:1 Moderate crisis–reg.
2008:2 Major crisis–reg.
2009:1 Extreme crisis–reg.
2009:2 Moderate crisis–plus
2010:1 Moderate crisis–minus
2010:2 Moderate crisis–minus
2011:1 Moderate crisis–minus
2011:2 Minor crisis–minus
2012:1 Credit disrupt.–reg.

Ireland
2007:2 Credit disrupt.–minus
2008:2 Minor crisis–plus
2009:1 Moderate crisis–minus
2009:2 Minor crisis–plus
2010:1 Moderate crisis–reg.
2010:2 Moderate crisis–minus
2011:1 Moderate crisis–reg.
2011:2 Minor crisis–plus
2012:1 Minor crisis–reg.
2012:2 Minor crisis–plus

Italy
1997:1 Credit disrupt.–minus
2007:2 Credit disrupt.–minus
2008:1 Minor crisis–minus
2008:2 Moderate crisis–minus
2009:1 Minor crisis–plus
2009:2 Minor crisis–reg.
2010:1 Minor crisis–plus
2010:2 Minor crisis–minus
2011:1 Credit disrupt.–reg.
2011:2 Minor crisis–reg.
2012:1 Moderate crisis–minus
2012:2 Moderate crisis–reg.

Japan
1990:2 Credit disrupt.–plus
1991:1 Credit disrupt.–minus
1991:2 Minor crisis–reg.
1992:1 Credit disrupt.–plus
1992:2 Minor crisis–minus
1993:1 Minor crisis–minus
1993:2 Minor crisis–reg.
1994:1 Credit disrupt.–plus
1994:2 Credit disrupt.–plus

TABLE A2 (continued)

a. By Country (continued)

Japan (continued)

1995:1	Minor crisis–minus
1995:2	Minor crisis–reg.
1996:1	Minor crisis–plus
1996:2	Minor crisis–minus
1997:1	Minor crisis–reg.
1997:2	Moderate crisis–minus
1998:1	Major crisis–reg.
1998:2	Extreme crisis–minus
1999:1	Moderate crisis–plus
1999:2	Minor crisis–plus
2000:1	Minor crisis–minus
2000:2	Credit disrupt.–plus
2001:1	Minor crisis–plus
2001:2	Minor crisis–plus
2002:1	Moderate crisis–reg.
2002:2	Moderate crisis–minus
2003:1	Minor crisis–plus
2003:2	Minor crisis–reg.
2004:1	Minor crisis–minus
2004:2	Credit disrupt.–plus
2005:1	Credit disrupt.–reg.
2008:2	Credit disrupt.–plus
2009:1	Minor crisis–minus
2009:2	Credit disrupt.–plus
2010:1	Credit disrupt.–minus

Luxembourg

2008:1	Credit disrupt.–reg.
2008:2	Minor crisis–reg.
2009:1	Credit disrupt.–plus
2009:2	Credit disrupt.–reg.
2010:1	Credit disrupt.–minus
2011:2	Credit disrupt.–reg.

Netherlands

2008:1	Credit disrupt.–minus
2008:2	Credit disrupt.–plus
2009:1	Minor crisis–minus
2009:2	Credit disrupt.–minus
2011:2	Credit disrupt.–minus
2012:1	Minor crisis–minus
2012:2	Credit disrupt.–reg.

New Zealand

2007:2	Credit disrupt.–reg.
2008:1	Credit disrupt.–plus
2008:2	Minor crisis–plus
2009:1	Minor crisis–plus
2009:2	Minor crisis–minus
2010:1	Credit disrupt.–minus

New Zealand (continued)

2010:2	Credit disrupt.–minus
2011:2	Credit disrupt.–plus
2012:1	Credit disrupt.–minus

Norway

1991:2	Moderate crisis–plus
1992:1	Minor crisis–reg.
1992:2	Moderate crisis–reg.
1993:1	Minor crisis–plus
1993:2	Credit disrupt.–plus
1994:1	Credit disrupt.–reg.
2007:2	Credit disrupt.–minus
2008:1	Minor crisis–minus
2008:2	Moderate crisis–minus
2009:1	Moderate crisis–plus
2009:2	Minor crisis–reg.

Portugal

2008:1	Minor crisis–plus
2008:2	Moderate crisis–minus
2009:1	Moderate crisis–reg.
2009:2	Minor crisis–reg.
2010:1	Minor crisis–plus
2010:2	Moderate crisis–plus
2011:1	Moderate crisis–reg.
2011:2	Moderate crisis–minus
2012:1	Moderate crisis–reg.
2012:2	Moderate crisis–reg.

Spain

2008:1	Minor crisis–plus
2008:2	Moderate crisis–minus
2009:1	Minor crisis–plus
2009:2	Credit disrupt.–plus
2010:1	Minor crisis–minus
2010:2	Minor crisis–reg.
2011:1	Minor crisis–minus
2011:2	Moderate crisis–minus
2012:1	Moderate crisis–minus
2012:2	Moderate crisis–reg.

Sweden

1992:2	Minor crisis–reg.
1993:1	Moderate crisis–reg.
2008:1	Minor crisis–minus
2008:2	Moderate crisis–minus
2009:1	Minor crisis–reg.
2009:2	Minor crisis–minus
2010:1	Credit disrupt.–plus
2010:2	Credit disrupt.–reg.

Switzerland

2007:2	Credit disrupt.–reg.
2008:1	Minor crisis–minus
2008:2	Credit disrupt.–plus
2009:1	Credit disrupt.–minus
2012:1	Credit disrupt.–minus

Turkey

2001:1	Moderate crisis–reg.
2001:2	Moderate crisis–reg.
2002:1	Minor crisis–plus
2002:2	Minor crisis–minus
2003:1	Minor crisis–minus
2003:2	Credit disrupt.–reg.
2008:2	Minor crisis–reg.
2009:1	Credit disrupt.–plus
2009:2	Credit disrupt.–minus

United Kingdom

2007:2	Minor crisis–plus
2008:1	Moderate crisis–minus
2008:2	Major crisis–minus
2009:1	Moderate crisis–plus
2009:2	Moderate crisis–minus
2010:1	Minor crisis–reg.
2010:2	Minor crisis–reg.
2011:1	Credit disrupt.–reg.
2011:2	Credit disrupt.–plus
2012:1	Credit disrupt.–reg.
2012:2	Credit disrupt.–plus

United States

1986:1	Credit disrupt.–minus
1990:1	Minor crisis–reg.
1990:2	Moderate crisis–minus
1991:1	Minor crisis–minus
1991:2	Credit disrupt.–plus
1992:1	Credit disrupt.–reg.
1998:2	Credit disrupt.–plus
2007:1	Credit disrupt.–minus
2007:2	Moderate crisis–minus
2008:1	Moderate crisis–plus
2008:2	Extreme crisis–reg.
2009:1	Major crisis–minus
2009:2	Moderate crisis–minus
2010:1	Minor crisis–plus
2010:2	Credit disrupt.–plus
2011:2	Credit disrupt.–reg.
2012:1	Credit disrupt.–minus
2012:2	Credit disrupt.–minus

TABLE A2 (continued)

b. By Severity

Credit disruption–minus
- United States, 1986:1
- Japan, 1991:1
- France, 1991:2
- Italy, 1997:1
- Germany, 2003:1
- United States, 2007:1
- Ireland, 2007:2
- Italy, 2007:2
- Norway, 2007:2
- Denmark, 2008:1
- Netherlands, 2008:1
- Australia, 2009:1
- Switzerland, 2009:1
- Finland, 2009:2
- Netherlands, 2009:2
- Turkey, 2009:2
- Japan, 2010:1
- Luxembourg, 2010:1
- New Zealand, 2010:1
- Austria, 2010:2
- France, 2010:2
- New Zealand, 2010:2
- Austria, 2011:1
- France, 2011:1
- Germany, 2011:1
- Netherlands, 2011:2
- New Zealand, 2012:1
- Switzerland, 2012:1
- United States, 2012:1
- Denmark, 2012:2
- France, 2012:2
- United States, 2012:2

Credit disruption–regular
- Germany, 1974:2
- Finland, 1992:1
- United States, 1992:1
- Norway, 1994:1
- France, 1995:1
- Turkey, 2003:2
- Japan, 2005:1
- Iceland, 2007:1
- Germany, 2007:2
- New Zealand, 2007:2
- Switzerland, 2007:2
- Australia, 2008:1
- France, 2008:1
- Luxembourg, 2008:1
- Belgium, 2009:2
- Luxembourg, 2009:2

Credit disrupt.–reg. (cont.)
- Germany, 2010:2
- Sweden, 2010:2
- Italy, 2011:1
- United Kingdom, 2011:1
- Belgium, 2011:2
- Luxembourg, 2011:2
- United States, 2011:2
- Denmark, 2012:1
- Germany, 2012:1
- Iceland, 2012:1
- United Kingdom, 2012:1
- Germany, 2012:2
- Netherlands, 2012:2

Credit disruption–plus
- Japan, 1990:2
- United States, 1991:2
- Japan, 1992:1
- Norway, 1993:2
- Finland, 1994:1
- Japan, 1994:1
- Japan, 1994:2
- France, 1997:1
- United States, 1998:2
- Japan, 2000:2
- Japan, 2004:2
- Canada, 2007:2
- France, 2007:2
- Iceland, 2007:2
- New Zealand, 2008:1
- Japan, 2008:2
- Netherlands, 2008:2
- Switzerland, 2008:2
- Belgium, 2009:1
- Luxembourg, 2009:1
- Turkey, 2009:1
- Canada, 2009:2
- Japan, 2009:2
- Spain, 2009:2
- Denmark, 2010:1
- France, 2010:1
- Sweden, 2010:1
- United States, 2010:2
- Austria, 2011:2
- Denmark, 2011:2
- Germany, 2011:2
- New Zealand, 2011:2
- United Kingdom, 2011:2
- Austria, 2012:2
- United Kingdom, 2012:2

Minor crisis–minus
- United States, 1991:1
- Japan, 1992:2
- Japan, 1993:1
- Japan, 1995:1
- France, 1995:2
- Japan, 1996:2
- Japan, 2000:1
- Turkey, 2002:2
- Turkey, 2003:1
- Japan, 2004:1
- Canada, 2008:1
- Germany, 2008:1
- Italy, 2008:1
- Norway, 2008:1
- Sweden, 2008:1
- Switzerland, 2008:1
- Australia, 2008:2
- Belgium, 2008:2
- Finland, 2008:2
- Greece, 2008:2
- Finland, 2009:1
- Japan, 2009:1
- Netherlands, 2009:1
- Austria, 2009:2
- France, 2009:2
- Germany, 2009:2
- New Zealand, 2009:2
- Sweden, 2009:2
- Austria, 2010:1
- Germany, 2010:1
- Spain, 2010:1
- Italy, 2010:2
- Spain, 2011:1
- Iceland, 2011:2
- France, 2012:1
- Netherlands, 2012:1

Minor crisis–regular
- United States, 1990:1
- Japan, 1991:2
- Norway, 1992:1
- Sweden, 1992:2
- Finland, 1993:2
- Japan, 1993:2
- Japan, 1995:2
- France, 1996:1
- France, 1996:2
- Japan, 1997:1
- Japan, 2003:2
- Iceland, 2006:2

TABLE A2 (continued)

b. By Severity (continued)

Minor crisis–regular (cont.)
Canada, 2008:2
Luxembourg, 2008:2
Turkey, 2008:2
Canada, 2009:1
Germany, 2009:1
Sweden, 2009:1
Italy, 2009:2
Norway, 2009:2
Portugal, 2009:2
United Kingdom, 2010:1
Spain, 2010:2
United Kingdom, 2010:2
France, 2011:2
Italy, 2011:2
Austria, 2012:1
Ireland, 2012:1

Minor crisis–plus
Finland, 1992:2
Norway, 1993:1
Japan, 1996:1
Japan, 1999:2
Japan, 2001:1
Japan, 2001:2
Turkey, 2002:1
Japan, 2003:1
United Kingdom, 2007:2
Portugal, 2008:1
Spain, 2008:1
Denmark, 2008:2
Germany, 2008:2
Ireland, 2008:2
New Zealand, 2008:2
France, 2009:1
Italy, 2009:1
New Zealand, 2009:1
Spain, 2009:1
Denmark, 2009:2
Greece, 2009:2
Ireland, 2009:2

Minor crisis–plus (cont.)
Italy, 2010:1
Portugal, 2010:1
United States, 2010:1
Ireland, 2011:2
Ireland, 2012:2

Moderate crisis–minus
United States, 1990:2
Japan, 1997:2
Japan, 2002:2
United States, 2007:2
United Kingdom, 2008:1
Austria, 2008:2
France, 2008:2
Italy, 2008:2
Norway, 2008:2
Portugal, 2008:2
Spain, 2008:2
Sweden, 2008:2
Austria, 2009:1
Denmark, 2009:1
Greece, 2009:1
Ireland, 2009:1
United Kingdom, 2009:2
United States, 2009:2
Iceland, 2010:1
Greece, 2010:2
Iceland, 2010:2
Ireland, 2010:2
Greece, 2011:1
Iceland, 2011:1
Greece, 2011:2
Portugal, 2011:2
Spain, 2011:2
Italy, 2012:1
Spain, 2012:1

Moderate crisis–regular
Norway, 1992:2
Finland, 1993:1

Mod. crisis–regular (cont.)
Sweden, 1993:1
Turkey, 2001:1
Turkey, 2001:2
Japan, 2002:1
Iceland, 2008:1
Portugal, 2009:1
Greece, 2010:1
Ireland, 2010:1
Ireland, 2011:1
Portugal, 2011:1
Greece, 2012:1
Portugal, 2012:1
Greece, 2012:2
Italy, 2012:2
Portugal, 2012:2
Spain, 2012:2

Moderate crisis–plus
Norway, 1991:2
Japan, 1999:1
United States, 2008:1
Norway, 2009:1
United Kingdom, 2009:1
Iceland, 2009:2
Portugal, 2010:2

Major crisis–minus
United Kingdom, 2008:2
United States, 2009:1

Major crisis–regular
Japan, 1998:1
Iceland, 2008:2

Extreme crisis–minus
Japan, 1998:2

Extreme crisis–regular
United States, 2008:2
Iceland, 2009:1

Notes: Based on the *OECD Economic Outlook*. The sample period is 1967:1–2012:2 for all countries except Australia (1971:2–2012:2), Finland (1969:1–2012:2), and New Zealand (1973:1–2012:2). We only consider the 24 OECD member countries as of 1973.

EPISODE-BY-EPISODE DESCRIPTIONS

CREDIT DISRUPTIONS

Credit disruption–minus:

United States, 1986:1. In a long entry on the United States, there was one mention that "The recent drop in the prices of oil and other commodities has further weakened petroleum and resource-exploiting companies, as well as banks with large loans outstanding to domestic and foreign oil producers" (p. 81). And in a generally positive assessment of the outlook, there was a remark that, "However, it has to be remembered that some sectors of the economy remain under severe financial pressure, particularly agriculture, energy, real estate, and banking. ... the decline in oil prices carries a threat to certain sectors and regions, particularly the energy-rich states and banks with large loans outstanding to domestic and foreign oil producers" (p. 86). This discussion was included in a section entitled "Risks to the forecast" (p. 85), and there was no mention that it was having any macroeconomic consequences or affecting lending. We therefore classify this episode as a credit disruption–minus.

Japan, 1991:1. The 1990:2 *OECD Economic Outlook* had identified some risks of financial instability in Japan but stated that there did not yet appear to be any effect on lending. As described below, we code that episode as a regular credit disruption. In this issue, the OECD stated, "the partial recovery in the stock market and the take-up of subordinated bank debt by financial institutions seem to have reduced, if not removed, the danger of a 'credit crunch' induced by financial fragility" (p. 58; there is a similar remark on p. 54). Given that there was still some concern about the possibility of financial-market troubles but that they were smaller than in 1990:2, we code this episode as a credit disruption–minus.

France, 1991:2. In a long entry, there was a discussion that the modest fall in the growth rate of lending (p. 84):

> was connected with the slowdown of activity, but also, it seems, with a change of banks' credit supply behaviour because of the greater risks involved, particularly in respect of consumer credit and home-purchase loans (as reflected in the passing of the Act on households' overindebtedness), and with balance-sheet constraints, such as the need to comply with the BIS ratio. Also, the average cost of credit has not fallen in line with market rates, as the banks have sought to reconstitute their margins.

Thus, the OECD appeared to believe that financial-market issues were having some effect on lending, but it did not emphasize them or imply that they were having large effects. We therefore code this episode as a credit disruption–minus.

Italy, 1997:1. The OECD did not emphasize any financial-market problems or discuss any impact on lending or on credit supply. But it did say, "the Italian banking sector faces serious problems, with the amount of non-performing loans being aggravated by the cyclical downturn. These problems are more prevalent in the south, where banks are burdened by high operating costs, and low profitability and productivity" (p. 65). The combination of the clear statement that there were problems in the banking sector with the absence of any discussion of macroeconomic consequences leads us to classify this episode as a credit disruption–minus. One helpful comparison is with France in 1995:1, where the financial-market problems appear to be clearly worse and which we code as a regular credit disruption.

Germany, 2003:1. In its long entry on Germany, the OECD reported, "Bank lending has been stagnating in nominal terms. Apart from subdued economic activity, this development might also reflect some tightening of credit supply as a result of deteriorating bank profits and balance sheets, notably on account of accelerating bankruptcies among industrial firms" (pp. 46–47). And in a discussion early in the volume under the heading, "Financial stress has eased" (p. 4), it stated, "some sectors of the financial markets (life insurers in the United Kingdom, banks in Germany) are still suffering balance sheet strains, with repercussions on their own equity market value and on share prices generally" (p. 6). It also commented, "In Germany, bank lending is contracting in real terms, but this may be partly explained by the fact that real interest rates are relatively high compared with other euro area countries" (p. 6). Thus, the OECD perceived some possible impact of credit supply conditions on credit availability, but the tone was tentative and it appeared to see the effects as at most minor. We therefore classify this episode as a credit disruption–minus.

United States, 2007:1. Near the end of the long entry on the United States, the OECD described "a downside risk" to the outlook (p. 66):

> One uncertainty about this projection concerns the recent turmoil in the sub-prime mortgage market. Though important for financial markets, the macroeconomic implications of these developments may be small. At the time of writing, there appears to have been little flow-on effect, so far, to fixed-rate sub-prime lending, prime mortgages, or other credit markets, such as for automobiles. There will probably be some further reduction in home lending, though that should also be small relative to the sharp decline already seen to date. But these conjectures may prove too optimistic, so there is a risk of larger effects.

Thus, at this point the OECD perceived these events as a minor caveat to its forecast and as unlikely to have large effects. We therefore classify this episode as a credit disruption–minus.

Ireland, 2007:2. The OECD's entry on the euro area discussed the development of "tighter credit conditions" (p. 76) and the risk that "liquidity problems lead to an across the board tightening in bank lending, ... having a stronger effect on housing and equipment investment than expected" (p. 80). The entry on Ireland focused almost entirely on the "current meltdown in the housing market," and the related slump in residential investment (p. 133). The one reference to financing conditions is in the closing paragraph on risks to the outlook. It stated: "The downturn in the housing market could be more severe as house prices appeared more overvalued than in other OECD countries and credit standards have tightened" (p. 135).

The fact that the OECD mentioned that credit standards had tightened suggests some rise in the cost of credit intermediation. At the same time, there was no discussion that the rise in CCI could be of a size that would have substantial macroeconomic effects. The only effects mentioned were focused narrowly on housing prices. For this reason, we categorize this episode at the lowest level of positive distress, a credit disruption–minus.

Italy, 2007:2. The OECD's entry on the euro area discussed the development of "tighter credit conditions" (p. 76) and the risk that "liquidity problems lead to an across the board tightening in bank lending, ... having a stronger effect on housing and equipment investment than expected" (p. 80). The entry for Italy painted a similar, but less severe picture of financial distress. Financial problems were not mentioned in the opening summary. Under the heading "It is difficult to see any effects of financial turmoil to date," the OECD wrote: "Financial market turbulence was initially reflected in some widening of interest rate spreads, which had been largely reversed by November, but it is difficult to observe any direct effects on the real economy so far" (pp. 91–92). That there was some widening of spreads suggests at least a short-lived rise in the cost of credit intermediation during the second half of 2007. However, the OECD did not seem to think the rise was large enough to affect the overall economy. In discussing the risks to the outlook, the OECD wrote (p. 95):

> These projections show little lasting impact from financial market developments: signs of a slowdown in housing were already apparent, and financing of business investment in Italy seems likely to be relatively insensitive to changes in the cost of funds on the markets most closely affected. There is nevertheless a risk that these effects could be stronger, and that the impact on Italy of negative developments in other countries could be greater.

Because the OECD saw at least a temporary rise in the cost of credit intermediation, but did not think it was large enough to have an impact on domestic demand, we categorize this episode as a credit disruption–minus.

Norway, 2007:2. Most of the entry focused on the rapid growth of the Norwegian economy and concerns about possible overheating. The central bank raised the policy interest rate by 1.5 percentage points in 2007, and further increases were expected in 2008 (p. 152). Two comments in the concluding risks paragraph, however, gave some hint of financial distress. The OECD wrote: "The sub-prime-related global financial turmoil and the cooling housing market may exert a drag on the mainland economy" (p. 153). It also said: "a serious correction of the housing market would be a risk to growth, especially if financial market disturbances make it much harder for Norwegian banks to continue to borrow abroad to finance housing loans" (p. 153). The fact that the OECD said that financial turmoil abroad could cause funding difficulties for Norwegian banks suggests some vulnerability of the financial system. Such vulnerability would likely have been felt by financial institutions and so affected their willingness to lend.

Since there is just a hint of possible credit supply problems, we categorize this episode at the lowest positive level of financial distress: a credit disruption–minus.

Denmark, 2008:1. Financial developments were not central enough to be mentioned in the opening summary. Later in the entry, the OECD discussed the housing boom and its implications for the Danish economy, saying (p. 136):

> Following the spectacular house prices increases and high mortgage debt levels built up over recent years, Denmark would at first glance seem vulnerable to financial turmoil. Yet, so far, none of the major banks has reported significant losses related to bad loans. Mortgage lending standards have tightened and forced sales are becoming more frequent, but the latter still run at only a fifth of the rate observed on average in the 1980s. How much financial stress may yet surface is hard to predict, but in any case construction activity is projected to contract markedly.

When discussing risks to the outlook, the OECD only mentioned that "Global financial turmoil and its international reverberations are casting shadows over the near-term outlook" (p. 137).

This is a case where the OECD seemed to go out of its way to say that financing conditions were relatively stable—explicitly mentioning that banks were not suffering loan losses. At the same time, the OECD did mention that mortgage lending standards had tightened, and that more financial stress could yet emerge—suggesting some rise in the cost of credit intermediation. Because there is no discussion that the rise was large enough to impact the overall economy, we scale this episode at the lowest positive level: a credit disruption–minus.

Netherlands, 2008:1. The entry for the euro area indicated a noticeable rise in the cost of credit intermediation. It stated (p. 94):

> International financial market turmoil, and the associated re-pricing of risk, has contributed to tighter financial conditions in the euro area. Bank lending standards have tightened, financial market sentiment has declined and money-market spreads have widened. Spreads between the average interest rates charged for new long-term loans to the private sector and government bond rates have risen by more than 50 basis points since the onset of the financial crisis, pushing up the effective cost of borrowing.

In discussing the risks to the outlook for the euro area, the OECD wrote: "the negative impact of domestic financial market strains and, for some countries, housing market downturns, could be steeper and more protracted than projected" (p. 97).

The opening summary for the entry on the Netherlands said that "the Dutch economy softened in early 2008, reflecting tighter international financial conditions and slower world trade" (p. 162). There was also a later reference to the fact that "Business investment is likely to soften only temporarily, reflecting tighter monetary conditions" (p. 163). Finally, the risks paragraph said: "Downward risks continue to be related to international developments, notably high uncertainty on financial markets" (p. 164).

The reference to "tighter international financial conditions" is somewhat ambiguous and there was no discussion of problems in the domestic banking sector or of credit supply. Nevertheless, given the more explicit discussion in the euro area entry about tightening credit standards and rising spreads, it seems likely that the OECD was describing at least a small rise in the cost of credit intermediation in the Netherlands. Since any such rise was discussed in mild terms and the real effects were thought to be small and temporary, it is appropriate to scale this as a credit disruption–minus.

Australia, 2009:1. Australia, which had suffered a minor crisis–minus in the previous half year, appeared to have almost no financial distress in 2009:1. The opening summary contained no discussion of domestic financial problems, and the closing paragraph on risks only mentioned the possibility of "A more adverse external situation ... if the financial disorder lasts longer than expected" (p. 110). Also, there was no discussion that financing conditions were affecting domestic demand.

In discussing Australian monetary policy, the OECD did say: "A resilient financial sector managed to pass on much of the rate cuts to final borrowers. Some signs of stabilisation on the financial markets appeared in early 2009, as demonstrated by the stock market rally since February 2009" (p. 109). The fact that "much" of the rate cut was passed on implies that some was not—suggesting a rise in spreads. Likewise, the reference to "some" stabilization on financial markets could be a sign that other parts of the financial system were still troubled.

Given that the crisis in Australia was never very severe, and that there was scant evidence of current problems in the financial sector, we categorize this episode as a credit disruption–minus. We did not take the level of distress down all the way to zero because of the indirect reference to rising spreads. Also, the fact that the OECD did not emphasize dramatic improvement suggests that at least a small amount of distress remained from the previous half year.

Switzerland, 2009:1. We scaled Switzerland as a credit disruption−plus in 2008:2. The OECD's description of conditions in 2009:1 suggests decidedly less financial distress than in the previous half year, but still a small amount. The evidence of improvement mainly took the form of few indications of distress. Financial conditions were not discussed in either the opening summary or the closing risks paragraph. A graph showing policy and market interest rates indicated little spread between the two (p. 170). And in discussing current conditions, the OECD said: "Residential construction has remained resilient thus far, reflecting low levels of household indebtedness, relatively stable house prices in recent years and little indication of supply tightening in credit markets" (p. 170). The context suggests that not only were credit conditions not worsening, but the level of credit supply tightness was not elevated.

The OECD discussed two new interventions Swiss authorities were making in credit markets. First, the Swiss National Bank "widened the scope of its instruments to increase the supply of base money. In particular, it began purchasing bonds from private issuers and intervened in foreign exchange markets to prevent further appreciation of the Swiss Franc" (p. 171). Second, "the federal government extended credit guarantee lines for exporters" (p. 171). Both these actions could suggest that credit markets were not functioning completely normally. This would be consistent with at least a small rise in the cost of credit intermediation.

On net, we scale this episode as a credit disruption−minus. There were signs of some rise in the cost of credit intermediation, but they were not mentioned prominently. Instead, the OECD was quite explicit that credit market conditions were not holding back domestic demand.

Finland, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130−131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

Finland was a minor crisis−minus in 2009:1. That entry detailed aggressive actions being taken by authorities to deal with the financial stress, and the impact of that stress on consumption and investment. The entry for 2009:2 is striking in how little it said about credit conditions. There was nothing about banks or credit supply in the opening summary or the closing risks paragraph. In discussing current conditions, the OECD said: "Residential investment should pick up towards the end of this year with house prices recovering, interest rates remaining low and underlying demand, particularly in the Helsinki region, becoming a more important factor" (p. 176). Though not very informative, this statement can be seen as consistent with mortgage credit being fairly available.

On its own, it would be hard to scale this entry as anything but a zero because it says so little about financial developments. Two factors lead us to scale it as the lowest positive level of financial distress (a credit disruption−minus) instead. One is that conditions were relatively distressed in the previous half year. If financial conditions had genuinely returned to normal, we would have expected extensive discussion of that improvement. The second reason for identifying at least a small amount of distress is that financial conditions in the euro area overall were still quite grim. This makes it implausible that Finland had not financial distress at all.

Netherlands, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

The entry on the Netherlands contained very little information about financial conditions. The opening summary did not mention credit or banking issues. To the degree that the entry discussed financial problems, it focused solely on the impact of the financial crisis on Dutch pension funds. It said: "The financial crisis made most pension funds technically insolvent and led households to increase precautionary savings. The mandatory pension fund recovery plans focus on hiking contribution rates, postponing payout indexation and injecting capital in some company pension funds. Such measures reduce disposable income and hence damp consumption spending" (p. 200). Similarly, the closing risks paragraph mentioned that "The main downside risk to the projections lies in additional financial market disturbance, which may spark further increases in pension fund contribution rates, reducing disposable income and raising labour costs" (p. 201).

Based on the Netherlands entry alone, it is hard to see any financial distress. Two considerations, however, lead us to scale this episode at the lowest positive level of distress (a credit disruption–minus). One is the much grimmer discussion of financial conditions in the euro area more generally. The second is that the Netherlands was a minor crisis–minus in 2009:1. If distress had genuinely fallen to zero, we would expect to see at least some discussion of radical improvement.

Turkey, 2009:2. The entry for 2009:2 suggests a significant reduction in financial distress. The opening summary mentioned "a decline in risk premia" (p. 226). Under the heading "Financial conditions are supportive," the OECD wrote (pp. 226–227):

> A sharp decline in risk premia and real interest rates is a strong supportive force in the recovery. The central bank cut lending rates from 19.75% in October 2008 to 9.25% in October 2009, backed by strengthening investor confidence. As a result, domestic financial conditions have significantly improved. ... Banks have been competing for market share and started to reduce lending rates and relax credit conditions. Commercial and household loans have started to grow, albeit slowly. However, business demand for investment loans has remained particularly weak.

And, the concluding paragraph on risks did not mention financial conditions at all.

In 2009:1, the OECD had described Turkish authorities as taking steps to ensure credit flows, and reported that credit conditions remained tight. We scaled conditions in that episode as a credit disruption–plus. The 2009:2 entry said that banks were lowing lending rates and relaxing credit conditions. The discussion suggests to us about a two-step reduction in financial distress. At the same time, there is evidence that some distress remained. In particular, each description of improvement began with the words "started to." This suggests that distress was falling, but not all the way down to zero. Thus coming from both directions—the degree of improvement and the absolute level of distress—leads us to scale this episode as a credit disruption−minus.

Japan, 2010:1. Japan had been a credit disruption−plus in 2009:2. The *OECD Economic Outlook* for 2010:1 suggests that financial distress had fall substantially. First, a chart in the overview chapter showed that money market spreads were essentially back to normal for Japan (p. 17). The entry on Japan did not mention financial conditions in the opening summary. It went on to say: "As the economy has recovered, the number of bankruptcies has fallen and financial conditions have improved, with risk premiums for low-rated borrowers declining sharply" (p. 83). The OECD also noted that the Bank of Japan was "phasing out a number of crisis-driven measures to provide liquidity, including a scheme that lent short-term funds to banks" (p. 86)—again suggesting that financial distress had largely dissipated.

The one statement that suggested some distress came in a discussion of falling land prices. Continued declines implied "a risk that balance-sheet adjustments could put pressure on the banking sector. The effect of falling land prices is compounded by the low level of equity prices, which are still about 25% below their pre-September 2008 levels" (p. 85). Such risk likely resulted in some continued elevation in the cost of credit intermediation. However, given that the risks sound relatively mild, and that financing conditions were not described as affecting consumption or investment, we scale this episode at the lowest level of financial distress (a credit disruption−minus). This is also consistent with the clear improvement, which we interpret as a roughly two step decline in distress from the half year before.

Luxembourg, 2010:1. The entry for the euro area overall described a slight improvement from 2009:2, but still substantial distress. Under the heading "Financial conditions improved gradually but risks remain," the OECD wrote (pp. 89–90):

> Financial conditions have gradually improved as policy rates remain low and confidence recovers, although fragilities have been exposed by the recent financial market volatility. While short interbank rates have remained at extremely low levels, reduction in lending rates for non-financial corporations and households only partly reflected the fall in banks' funding rates. High lending spreads compared with historical norms may in part reflect higher risk premia but competition may also have suffered as a result of the crisis. Credit growth has weakened further with bank credit to non-financial corporations continuing to contract, although issuance of corporate debt has been strong. Concerns about credit quality and the health of the European banking sector remain as European banks are unlikely to have cleaned their balance sheets of all toxic assets.

The OECD suggested that credit problems were affecting demand when it said: "Investment is likely to recover only gradually in the coming quarters, held back by remaining excess capacity, continued credit constraints and weak growth prospects" (p. 92). Finally, the entry also discussed "strong pressures on sovereign bonds of some members and risk of contagion to other financial markets," (p. 91)—suggesting that sovereign debt problems in Greece and other countries could impair private credit availability.

Luxembourg had been a credit disruption in the previous period. The entry for 2010:1 suggests both some improvement, and financial conditions that were noticeably less troubled than in the euro area overall. The opening summary had nothing about financial conditions. In discussing the recovery underway, the OECD wrote: "Growth has been driven by a sharp pick up in net exports, particularly of financial services, following the recovery in equity prices and improved financial market conditions" (p. 154). Though somewhat ambiguous, this statement most likely refers to the direct impact of improved financial conditions on Luxembourg's large financial services industry, rather than indirect effects through easier credit. Under the heading "Domestic demand remains weak," the entry said: "Growth of credit to households and non-financial business has slowed but the supply of credit does not appear to be acting as a significant constraint on lending" (p. 154). This statement could suggest that credit conditions were fairly normal.

Three considerations, however, argue against scoring this episode as a zero. First, the reference above that "the supply of credit does not appear to be acting as a significant constraint" raises the possibility that it could be acting as some constraint. Second, there is one reference to "lower bank profits" (p. 156), which could imply some pressure on financial institutions to restrict lending. And third, the overall discussion of the euro area still suggests substantial financial distress. Since each of these factors is fairly weak evidence of continued distress, we scale this episode as a credit disruption−minus.

New Zealand, 2010:1. New Zealand was a minor crisis−minus in 2009:2. The entry for 2010:1 describes a dramatically less financially distressed economy. Financial conditions were not mentioned in either the opening summary or the closing risks paragraph. The entry said: "Residential construction also began to grow again in response to easy monetary and credit conditions" (p. 163). It went on to say that "Credit to businesses is still falling, as firms continue to reduce debt. Likewise, households are cautious as their debt levels remain high" (p. 163). The fact that the OECD seemed to blame falling credit on low demand rather than supply constraints is consistent with the sense that credit markets were functioning relatively normally.

The one sign that credit markets might not be fully healed came in a discussion of the Reserve Bank's plan to begin raising rates soon. The OECD said: "Compared with previous recoveries, policy impacts may be enhanced by higher risk premia in borrowing costs and recent steepening of the yield curve" (p. 164). That it saw spreads as high relative to historical averages suggests that the cost of credit intermediation was still somewhat elevated. However, the OECD did not see large impacts of these spreads on domestic demand in the near term—only a possibility that the central bank would not need to tighten as aggressively to achieve its desired inflation objective.

Given that financial conditions had been quite distressed the period before and that there was still some evidence of an elevated cost of credit intermediation, we do not scale credit distress in this episode as a zero—even though credit conditions were described as "easy." Instead, we scale this episode as a credit disruption−minus.

Austria, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

Austria had been a minor crisis−minus in 2010:1. The entry for 2010:2 provides very little information on financial conditions. There was no discussion of banking or credit conditions in the opening summary or the closing risks paragraph. In discussing the outlook, the OECD wrote: "Modest wage gains and improved household confidence arising from the improving labour market, along with low real interest rates, will contribute to somewhat stronger household consumption growth, which is however held back by increasing mortgage debt servicing costs" (p. 119). This statement is frustratingly ambiguous. On the one hand, "low real interest rates" could suggest reduced spreads and greater credit availability; on the other hand, the reference to "higher mortgage debt servicing costs" could indicate some continued elevation in the cost of credit intermediation.

Because there was no other discussion of troubled credit conditions, effects on domestic demand, or government intervention to ensure credit flows, we do not feel we can scale this episode as having much financial distress. However, given the one ambiguous reference to credit conditions, the continued financial distress in the euro area overall, and the fact that Austria had been quite distressed in the previous period, we feel that there was at least a minimal amount of financial distress in 2010:2. We therefore scale this episode as a credit disruption−minus.

France, 2010:2. The entry said relatively little about the health of the financial system. The only discussion came under the heading, "Financial conditions have been supportive," and said, "The four French banks stress-tested by the Committee of European Banking Supervisors showed slightly greater resistance than the European Union average .... Credit to the private sector has expanded at 3% over the past year thanks to residential mortgage lending in a context of favourable credit supply conditions" (pp. 95−96). In addition, as described in our entry for Austria in 2010:2, the OECD saw noteworthy financial distress in the euro area as a whole.

Two considerations lead us to classify this episode as a credit disruption−minus rather than as no financial distress. First, we classify France in 2010:1 as a credit disruption−plus, and the current entry does not include any clear-cut statement that the financial system is fully healed. Second, the facts that the OECD described significant ongoing distress in the euro area as a whole, that France is a major euro area economy, and that the OECD characterized the stress tests only as showing that major French were only healthier than average argue for identifying some distress. At the same time, the fact that the OECD said very little about France's financial system and said explicitly that credit supply conditions were favorable argue for no more than a very low level of distress. We therefore classify this episode as a credit disruption−minus.

New Zealand, 2010:2. The OECD made two references to credit intermediation and credit supply. First, it said, "Farmers are paying down debt rather than increasing spending, as both they and their bank lenders are being cautious" (p. 163). Second, it reported, "The cost of credit has declined much less than policy rates because of increased risk aversion and tighter bank wholesale funding regulations, while deposit rates have actually risen somewhat, contributing to a growing wedge between policy and retail rates" (p. 162). However, an accompanying chart makes clear that this statement refers to late 2008 and early 2009; more recently, policy rates had been rising slightly with little change in lending rates, so that spreads were in fact falling (p. 162). (Further, to the extent that spreads were elevated because of regulation rather than disruptions to the financial system, this would not be relevant to our classification, which is concerned with financial disruption.)

We classified New Zealand in 2010:1 as a credit disruption−minus. Here, there is merely a reference to banks being cautious in their lending to one class of borrowers, plus some evidence that interest rate spreads, though declining, might not have fallen all the way to distress-free levels. We therefore classify this episode as a credit disruption−minus as well.

Austria, 2011:1. The OECD's entry on the euro area gave a generally upbeat assessment of the health of the financial system, but suggested some lingering distress overall and serious problems in some countries. The opening summary said, "financial conditions have improved" (p. 90). The entry went on to say, "Improved overall financial conditions are contributing positively to growth, while non-standard policy measures and government support for the financial sector are being gradually wound down" (p. 92). It also cited "more favourable financial conditions" as one reason that "Private non-residential investment will bounce back" (p. 94). But it also saw residual problems, referring to "remaining weakness in the banking system" and the need "to ensure that credit availability does not constrain the recovery" (p. 92). In addition, the OECD indicated that the situation was considerably more serious in some euro countries: "For several countries, sovereign spreads remain at very high levels and the state of the banking system, as well as financial conditions, is still fragile" (p. 92). It made a similar remark in its concluding discussion of risks, but without being as clear about how broadly its concerns applied: "Weaknesses in government and bank solvency could lead to wider financial tensions and contagion, which would test the European Financial Stability Fund (EFSF) and the banking system" (p. 94).

The entry on Austria made only one reference to the financial system, which came in the concluding discussion of risks: "Further turbulence associated with sovereign debt problems in euro area countries would be likely to affect Austria negatively through trade and bank exposure" (p. 124). In light of this one comment about a risk and the tone of the discussion of the overall euro area that financial distress was low but above zero in many countries, we classify this episode as a credit disruption−minus. The classification is consistent with the fact that we also code Austria in 2010:2 as a credit disruption−minus and the current entry does not describe any change in financial health or risks.

France, 2011:1. The OECD was generally upbeat about credit supply in France. It said, "credit conditions remain appropriately accommodative for France" (p. 100), referred to "a prolonged period of easy finance" in discussing the housing market (p. 101), and said, "investment and exports should be buoyant, helped by accommodative credit conditions and robust global activity" (p. 103). However, the concluding discussion of risks warned, "debt restructuring in EU peripheral countries could prolong turmoil on sovereign bond markets, harming French banks, which are highly exposed to these countries. A correction of the French housing market might also weaken the banking sector" (p. 103). In addition, as described in our entry for Austria in 2011:1, the OECD saw some lingering financial distress in much of the euro area.

The combination of the statements about the general health of the financial system and the identification of risks lead us to classify this episode as a credit disruption−minus. One potentially helpful comparison is with Austria in 2011:1, where we also identify a credit disruption−minus. Relative to that episode, the current entry has explicit statements about the health of the financial system but a slightly stronger statement about risks, suggesting little overall difference. And as with Austria, we also code France in 2010:2 as a credit disruption–minus, and the OECD did not say that credit conditions had changed.

Germany, 2011:1. The OECD said relatively little about the financial system in its entry. The opening summary noted that "government debt rose significantly in 2010, for the most part owing to measures to stabilise the banking sector" (p. 95; see also p. 98); however, this statement does not appear to refer to any policies undertaken recently. The concluding paragraph on risks said, "A deterioration of financial conditions or the situation in the banking sector, potentially related to a government debt restructuring in the euro area periphery, would hurt investment" (p. 98). And, as described in our entry for Austria in 2011:1, the OECD saw some lingering financial distress in much of the euro area.

In light of the one comment about a risk and the tone of the discussion of the overall euro area that financial distress was low but above zero in many countries, we classify this episode as a credit disruption–minus. Again, a useful comparison is with Austria in 2011:1, where the OECD's entry also said little beyond a comment about risks, and which we also classify as a credit disruption–minus. One minor difference is that we code Austria in 2010:2 as a credit disruption–minus while we code Germany in 2010:2 as a credit disruption–regular. However, in light of the overall similarities between the discussions of the two countries in 2011:2, this is not enough of a difference to warrant classifying Germany in 2011:2 as a credit disruption–regular.

Netherlands, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

In contrast, the entry for the Netherlands mentioned financial distress only once: in the discussion of risks, the OECD said, "construction could prove weaker than projected in case of a stronger payback of last winter's mild weather induced boom or if credit supply tightens more than assumed" (p. 158). (There were also several references to "financial turmoil," but it is fairly clear from the context that these referred to international developments, and the OECD did not discuss any impact on the health of the domestic system.) By itself, the statement is mild—it refers only to construction and puts credit supply on a par with weather-related developments. But it implies that the OECD was expecting some tightening in credit supply. Based on this and the negative assessment of the overall euro area, we therefore classify this episode as a credit disruption–minus. One useful comparison is with Luxembourg in 2011:2, where the OECD's discussion is similar but describes an actual impact on one sector of the economy, and which we code as a regular credit disruption.

New Zealand, 2012:1. The OECD made only one reference to possible financial distress, saying, "Business credit growth is turning positive, notwithstanding higher bank funding costs"

(p. 142). Since the OECD reported that monetary policy was not tightening, this suggests a rise in the cost of credit intermediation. This fits our criteria for the lower end of the credit disruption range: the OECD mentioned the issue only in passing and only in the context of one sector, and did not tie it to any outcomes. We therefore classify this episode as a credit disruption−minus.

Switzerland, 2012:1. In its 500-word entry, the OECD did not discuss any financial distress. But it mention a risk, saying, "While direct exposure of Swiss banks to countries most affected by the euro area crisis is modest, the two largest Swiss banks maintain very low levels of loss-absorbing capital, raising the potential risk for the Swiss economy if global financial turmoil persists" (p. 166; the opening summary contained a similar but less clear-cut statement). Because the OECD only identified a risk and cited a reason that it was small, we classify this episode as a credit disruption−minus.

United States, 2012:1. The OECD painted a generally upbeat picture of the U.S. financial system. For example, in the material preceding the country entries, it said, "In the United States, the banking sector ... now seems to have been restored to good health overall" (p. 16); and, "Growth in the United States is expected to pick up gradually through the projection period, against a backdrop of supportive financial conditions and accommodative monetary policy" (p. 30). Similarly, in the entry on the United States, it said, "Financial conditions will remain supportive of growth" (p. 68). But there were two notes of caution. First, and most importantly, the OECD warned, "Although the negative spillovers from the euro-area sovereign debt crisis to the United States seem to be limited thus far, the potential effects of future credit market disruptions remain a major source of concern" (p. 69). Second, the OECD said, "Banks are likely to become increasingly willing to lend, thus helping reinforce the recovery in household spending" (pp. 68–69), which perhaps suggests that there were currently some limitations on banks' willingness to lend.

Given that the OECD described the U.S. financial system as fundamentally healthy, the presence of two notes of caution in a large amount of material on the United States does not indicate more than a quite low level of distress. Another consideration pointing to the same conclusion is that we classify the United States in 2011:2 as a regular credit disruption, and the OECD's assessment here is clearly more positive. Nonetheless, the reference to a major source of concern suggests that coding this episode as no distress at all would not be appropriate. We therefore classify it as a credit disruption−minus.

Denmark, 2012:2. The OECD's discussion of the financial system was confined to two sentences: "Long-term interest rates have fallen below Germany's due to Denmark's safe haven status, which reflects sound public finances and a more limited exposure to the euro area crisis. However, lending conditions are tight due to low risk appetite by banks" (p. 122). These comments suggest a quite small but nonetheless positive level of distress. The OECD made only a passing reference to limitations on credit supply, and did not attribute them to any significant problems in the financial sector. Moreover, the OECD's assessment was more positive than it was for Denmark in 2012:1, where the entry included a heading stating that financial conditions had not yet normalized; we classify that episode as a regular credit disruption. We therefore classify this episode as a credit disruption−minus.

France, 2012:2. The OECD's entry for the euro area was similar to that for 2012:1: it made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary implied problems in the functioning of the financial system when it said, "private demand will pick up as confidence and the functioning of the financial sector improve" (p. 83).

The summary also commented, "Stronger bank balance sheets and a full banking union would reduce the adverse feedback loop between sovereigns and the banking system" (p. 83). Under the heading, "Financial conditions are difficult," the entry reported, "The sovereign debt crisis in the euro area has led to an adverse feedback loop between sovereigns and banks. This has impaired credit in some euro area countries and reduced the effectiveness of monetary policy transmission" (p. 84). In addition, it warned that a range of factors "will continue to create difficulties for domestic banking systems so long as bank balance sheets have not been strengthened sufficiently" (pp. 84–85). And in discussing policy, it said, "The financial system needs to be repaired" (p. 86), and, "Further measures are required to clean up bank balance sheets and ensure that the banking system is well capitalised" (p. 86). Finally, the concluding discussion of risks referred to "the crisis" (although this appeared to be a reference to the overall health of the euro area rather than to the financial system specifically), and listed as one risk "a failure to restore the financial sector" on the part of policymakers (p. 87).

The entry on France, in contrast, said almost nothing about financial problems: there was merely a statement that "lending policies have been cautious" (p. 92) in a discussion of the mortgage market. Two considerations lead us to code this as a small positive level of distress. First, we classify France in 2012:1 as a minor crisis–minus, and the current entry does not contain any statements that conditions had improved greatly. Second, poor conditions in the euro area overall suggest that at least some problems likely remained in one of the area's largest members. We therefore classify this episode as a credit disruption–minus.

United States, 2012:2. The OECD said relatively little about the health of the U.S. financial system. Two statements pointed to a system that was even healthier than in 2012:1 (which we code as a credit disruption–minus): the OECD referred to "the continued easing in financial conditions" (p. 78), and under the heading, "Improvements in financial conditions will support aggregate demand," it listed "a continued easing in lending conditions" as one of three factors that "should contribute to a pick-up in aggregate demand going forward" (p. 77). But pointing to little change and at least some ongoing problems, the material before the country entries included a passing comment that "the mortgage lending standards remain tight" in the United States (p. 22). And using language very similar to that in 2012:1, the discussion of risks warned, "the potential credit market disruptions associated with the ongoing crisis in the euro area remain a major concern" (p. 78).

In 2012:1, the OECD characterized the U.S. financial system as fundamentally healthy but noted some concerns, and we classify that episode as a credit disruption–minus. The OECD's overall tone in 2012:2 was of further improvement, but it also included a few notes of caution similar to those it expressed in 2012:1. Thus, the only issue is whether to code this episode as no distress or to again put it in the credit disruption–minus category. Both the warning and the comment about tight mortgage standards are sufficiently clear that they indicate some residual distress. We therefore classify this episode as a credit disruption–minus.

Credit disruption–regular:

Germany, 1974:2. The OECD reported that during the summer, "considerable losses of exchange reserves and the imminent danger of a confidence crisis imposed particular strains on the banking system," and that "Special credit facilities were extended to small and medium-sized companies and reserve requirements were reduced in September and October" (p. 26; see also p. 51). And in a discussion of Germany, the United Kingdom, and the United States, it stated, "Recent strains on the banking system in all three countries have underlined the unfavourable climate in bank lending markets. ... There is evidence in all three countries that smaller companies have been particularly severely rationed or priced out of bank lending markets" (p. 50). Notably, there was no mention of financial-market difficulties in the section that was specifically devoted to Germany. Given that omission, it is clear that the OECD did not view financial-market problems as being a major factor in the behavior of the German economy. On the other hand, it identified strains on the banking system, and Germany had perceived a need for special facilities to support lending to certain types of businesses.

This disruption seems similar to that in the United States in 1992:1 (which we classify as a regular credit disruption), and less serious than that in the United States in 1991:2 (which we classify as a credit disruption–plus). We code this episode as a credit disruption–regular.[6]

Finland, 1992:1. The OECD devoted a page (about 500 words) to Finland. It listed four sources of the country's severe recession, and did not include financial-market or banking problems on that list. However, the last sentence of the entry is, "A major risk to these projections is related to the possible adverse implications that banks' weak balance sheets may have for the financing of the recovery" (p. 94). The fact that the OECD did not believe that financial-market problems were currently having a major influence on the economy leads us to not identify any type of financial crisis. At the same time, the OECD said explicitly that it viewed those problems as a major risk. We therefore classify this episode as a credit disruption–regular.

United States, 1992:1. The OECD reported, "There has been concern that the difficulties faced by the financial sector and historically high levels of household and corporate debt may reduce demand growth and weaken the recovery. ... However, concerns about the adequacy of banks' capital and about credit restriction more generally have faded in recent months as banks' balance sheets and their share prices have improved" (p. 53). And in a discussion of various factors contributing to the slow recovery, it stated, "There is anecdotal evidence that credit became more difficult to get, as banks sought to restore margins, improve their capital ratios and reduce the risk of their loan portfolios. Credit growth did slow, and even turned negative, but this mainly reflected a fall in loan demand" (p. 50). Similarly, it commented, "Concerns about weakness in the banking sector also led the Federal Reserve to relax reserve requirements in early 1991 and again in April 1992" (pp. 52–53).

Thus, credit-market problems were mentioned several times, but the disruptions were characterized as only a minor factor affecting the economy and as less severe than in the previous issue of the *OECD Economic Outlook* (which we classify as a credit disruption–plus). We therefore code this episode as a credit disruption–regular.

Norway, 1994:1. In its 700-word discussion, the OECD included one reference to credit-market difficulties, saying that "the significant improvement of banks' balance sheets in the course of 1993 has markedly reduced the risk of credit constraints choking off the ongoing recovery" (p. 104). That is, it saw a risk of financial-market problems having an important effect on the recovery, but did not view them as currently having a major impact or as being as severe as in 1993:2. The lack of emphasis on credit-market problems and the view that they were not currently having large effects means that this episode fits our criteria for a credit disruption rather than a crisis. As described below, we code the 1993:2 episode as a credit disruption–plus. We therefore classify this episode as a credit disruption–regular.

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[6] Because there is no further discussion of financial-market problems in the United Kingdom and the United States in the volume beyond the discussion on p. 50, while there are three references to difficulties in Germany, we do not identify credit disruptions for those other countries in 1974:2.

France, 1995:1. In the course of a long entry, the OECD described significant problems in the banking sector, but did not link them in any way to credit availability or macroeconomic performance. It reported that the banking sector "is already suffering from low profitability and large provisions for bad debts" (p. 64). It went on to say (p. 64):

> The latter are to a large extent due to the depressed state of the real estate sector and the large number of bankruptcies during the recession. Higher interest rates could aggravate the problems of the real estate sector and the banks. The State has already provided support for five banks, the most spectacular case being the Crédit Lyonnais. The rescue plan for Crédit Lyonnais is based on state guarantees, with the bank covering losses over a long period, so that short-term budgetary costs are likely to be limited.

There was no other mention of these difficulties elsewhere in the entry. The conjunction of what appear to be serious problems in the banking sector with no sense that they were having macroeconomic effects leads us to classify this episode as a credit disruption−regular.

Turkey, 2003:2. After having devoted considerable attention to financial-market problems in Turkey in each of the previous five issues, here the OECD confined itself to a comment that "The restructured banking supervision framework has begun to enhance credit allocation" (p. 116). In light of the fact that it had previously perceived serious financial-market problems (for example, we classify both 2002:2 and 2003:1 as minor crisis−minus), and that the OECD said the situation had improved but had not been entirely resolved, we code this episode as a credit disruption−regular.

Japan, 2005:1. The 2004:2 issue of the *OECD Economic Outlook* had described a financial system that was improving but not fully healed. As described below, we classify that episode as a credit disruption−plus. In this issue, the OECD saw a continuation of that trend. It reported, "The slowing of land price deflation, according to the most recent survey, should have a positive impact on the banking sector, which has returned to profitability. The major banks appear to have achieved the government's target of reducing the non-performing loan ratio to about half of the March 2002 level of 8.4% by March 2005" (p. 46). It also referred to "the improvement in the financial sector" (p. 46), and commented that "the improved health of the banking sector" was one factor "expected to sustain business investment" (p. 48). But it said in its summary, "Further progress in strengthening the banking sector is needed to help sustain economic growth" (p. 45). That the OECD perceived continued credit-market problems but viewed them as less serious than in 2004:2 leads us to classify this episode as a credit disruption−regular.

Iceland, 2007:1. In its 700-word entry, the OECD's only reference to financial-market challenges came in the summary, where it said, "Renewed financial market nervousness and downward pressure on the exchange rate could ... complicate the adjustment process and make for a hard landing of the economy" (p. 124). Since the OECD perceived financial-market problems as posing a risk but not as currently having a major effect on the economy, we classify this episode as a credit disruption−regular.

Germany, 2007:2. The OECD's entry on the euro area discussed the development of "tighter credit conditions" (p. 76) and the risk that "liquidity problems lead to an across the board tightening in bank lending, ... having a stronger effect on housing and equipment investment than expected" (p. 80). The entry on Germany did not mention domestic financial developments in either the opening summary or the closing risks paragraph. The entry, however, said (p. 82):

> Recent turbulence in financial markets has worsened financing conditions, as financing costs have increased somewhat and banks have tightened their credit standards. The overall effects of this development on investment are surrounded by considerable uncertainty. However, due to past improvements in their balance sheets as well as their solid profit situation, domestic companies in aggregate may be less dependent on external financing than in prior years and thus somewhat insulated from the financial turmoil, at least in the short term.

Given that the OECD saw a clear increase in the cost of credit intermediation but suggested that the impact on credit availability and investment demand would likely be modest, this episode fits our description of a credit disruption.

New Zealand, 2007:2. The opening summary stated: "Monetary conditions have been tightened, while domestic risk spreads have widened in conjunction with the international financial-market turbulence" (p. 148). While the monetary tightening reflected a decision by the central bank to raise policy rates to counteract inflationary pressures, the rise in spreads reflected at least some rise in the cost of credit intermediation. This sense is reinforced by the OECD's observation that "Financial turbulence has also implied an extra de facto tightening because of higher domestic lending margins and the failure of some non-bank financial institutions" (p. 149).

Importantly, the OECD did not give any indication that it felt that the rise in CCI was large enough to affect the economy. In discussing the outlook, it listed several reasons why consumption might slow, but the list did not include credit supply constraints. Likewise, it also expected investment spending to be "relatively resilient" (p. 150). And in considering the risks from financial turbulence, the OECD only mentioned that "world demand growth could be reduced by more extensive financial-market adjustments than assumed" (p. 150).

Because there was some rise in spreads and reference to the failure of some financial institutions, it is clear that there is non-trivial financial distress in this episode. But, the absence of any perceived risk to the economy from these developments suggests that the level of distress was relatively low. We therefore code this as a credit disruption–regular.

Switzerland, 2007:2. Though financial conditions were not mentioned in the opening summary, they were discussed later in the entry. Because of vigorous growth, the central bank continued to raise policy interest rates during the second half of 2007. The OECD observed (p. 170):

> Spreads between corporate and government bonds have risen modestly in the aftermath of the global financial-market turbulence in August 2007, suggesting a moderate impact on the costs and availability of credit thus far, and Swiss exporters have continued to benefit from gains in price competitiveness in recent months, albeit at a reduced pace. However, the impact of the recent global financial-market turmoil on activity is as yet uncertain, and its continuation cannot be excluded.

The risks paragraph said that "A continuation of financial-market turbulence could further tighten credit conditions and trigger an appreciation of the Swiss franc, which would reduce export growth to below its projected rate" (p. 171).

The fact that spreads rose modestly and that the OECD saw some effect on credit availability suggests there was at least some financial distress in Switzerland in the second half of 2007. However, the tone of the entry does not suggest fear that the rise in the cost of credit intermediation was large enough to trigger effects on domestic demand. For this reason, we scale this episode as a credit disruption–regular.

Australia, 2008:1. The opening summary said that growth was likely to slow "because of tighter financial conditions and the worsening external environment" (p. 123). Subsequent discussion indicated that the Reserve Bank had raised policy rates by 1 percentage point and that "The monetary policy tightening was accentuated by the increased cost of bank borrowing caused by the international credit crunch, with the result that the three-month interbank rate rose by 1.5 percentage points" (p. 124). Thus, only about a third of the tighter financial conditions was due to rising spreads. The concluding paragraph said that "Tighter financial conditions and mounting uncertainty is expected to check household demand and stimulate saving. The slowdown in corporate investment should be moderate" (p. 125).

That there was some rise in spreads due to the international financial turmoil suggests a rise in the cost of credit intermediation. At the same time, the rise in spreads was fairly small, and the expected effects of both the policy tightening and rising spreads on household demand and investment was expected to be small—suggesting that the OECD did not see a significant decrease in credit availability. For this reason, we scale this episode as a credit disruption–regular.

France, 2008:1. The entry for the euro area indicated a noticeable rise in the cost of credit intermediation. It stated (p. 94):

> International financial market turmoil, and the associated re-pricing of risk, has contributed to tighter financial conditions in the euro area. Bank lending standards have tightened, financial market sentiment has declined and money-market spreads have widened. Spreads between the average interest rates charged for new long-term loans to the private sector and government bond rates have risen by more than 50 basis points since the onset of the financial crisis, pushing up the effective cost of borrowing.

In discussing the risks to the outlook for the euro area, the OECD wrote: "the negative impact of domestic financial market strains and, for some countries, housing market downturns, could be steeper and more protracted than projected" (p. 97).

The entry for France was somewhat more sanguine. Financial developments were not mentioned in the opening summary, and there was reference to the fact that "bank lending to enterprises has thus far shown surprising resilience" (p. 103). However, the OECD went on to say: "even though financial market turbulence has not had a major impact so far on household and business credit, the expected tightening of bank lending conditions, the higher cost of financing on securities markets and the flattening of real estate prices should cause housing investment to stagnate and business investment to slow significantly later this year" (p. 105). The closing paragraph on risks to the outlook did not mention credit conditions at all.

In this case, the OECD seemed to emphasize that little had happened to credit supply so far. At the same time, the OECD did project that bank lending conditions would tighten in the near future, and tighten enough that housing and business investment would be affected. Such a projection makes it likely that financial institutions also foresaw deteriorating financial conditions, and so would have felt some increased vulnerability. This would have increased the cost of credit intermediation at least somewhat even in the near term. The fact that the CCI for the euro area as a whole was clearly rising is consistent with this view. For these reasons, we scale the episode as a credit disruption–regular.

Luxembourg, 2008:1. The entry for the euro area indicated a noticeable rise in the cost of credit intermediation. It stated (p. 94):

> International financial market turmoil, and the associated re-pricing of risk, has contributed to tighter financial conditions in the euro area. Bank lending standards have tightened, financial market sentiment has declined and money-market spreads have widened. Spreads between the average interest rates charged for new long-term loans to the private sector and government bond rates have risen by more than 50 basis points since the onset of the financial crisis, pushing up the effective cost of borrowing.

In discussing the risks to the outlook for the euro area, the OECD wrote: "the negative impact of domestic financial market strains and, for some countries, housing market downturns, could be steeper and more protracted than projected" (p. 97).

The opening summary of the Luxembourg entry said that "The global financial turmoil has been taking its toll since the end of the year, as investors became more cautious and lower equity prices hit commission fees, weakening activity in 2008" (p. 156). A later discussion referred to the fact that "Domestic demand has remained rather buoyant, but the turmoil on international financial markets has started to impact on activity from mid-2007 onwards, reducing growth in exports of services" (p. 156). Together, these comments make clear that the OECD was discussing effects of financial turmoil directly through financial services exports rather than through a shift back in credit supply. The entry, went on to say: "The financial sector appears to have escaped nearly unscathed from the subprime mortgage debacle, but financial institutions have nevertheless made a seven-fold increase in banking provisions, reducing financial results and hitting public tax receipts" (p. 156).

While the impact of financial turmoil on services exports does not suggest a rise in the cost of credit intermediation, the reference to the increase in provisions does. If banks were worried about losses, it is likely that they were changing their behavior toward greater caution in lending. The rise in spreads and tightening of standards in the euro area more broadly is consistent with this interpretation. Given that the OECD analysts did not mention possible effects of such a rise in CCI on domestic demand in Luxembourg, it is likely that they viewed the level of financial distress as fairly small. We therefore code this episode as a credit disruption–regular.

Belgium, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

The entry for Belgium provided painfully little information about credit conditions in Belgium itself. The opening summary contained nothing about credit conditions. The closing risks paragraph only mentioned "uncertainties regarding the global financial and economic recovery" (p. 168). In discussing current conditions, the OECD said: "Since mid-2009, the economy has been slowly recovering from the almost year-long recession under the influence of renewed growth in world trade, improved financial conditions and expansionary monetary and fiscal policies" (p. 166).

Belgium was a credit disruption−plus in 2009:1. The reference to improved financial conditions leads us to think there was some reduction in distress (however, because the OECD tends to mix credit standards, equity prices, and property prices into the term "financial conditions," one has to be cautious about this interpretation). At the same time, the absence of bold statements of improvement leads us to think there was still some distress in 2009:2. This is consistent with the fact that conditions in the euro area overall were still highly distressed. For this reason, we scale this episode as a credit disruption−regular.

Luxembourg, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130−131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

Luxembourg is a somewhat difficult case because of its specialization in financial services. The OECD was not always clear about the effects of financial turmoil working through financial services exports and those working through credit disruption. The opening summary of the 2009:2 entry seemed to focus on the effects directly through financial services. It said: "The economy has been hit severely by the international financial crisis through its exposure to financial services and trade" (p. 193). Likewise, when the OECD discussed the pace of recovery, it said: "Activity will recover towards long-term trend growth rates in the next two years as financial conditions improve and world trade strengthens. The rise of European stock markets and inflows into funds based in Luxembourg point to higher exports of financial services in the near term" (p. 194). However, when it said that "unsettled financial conditions could restrain the pick-up in investment" (p. 194), it is possible that the effects were seen as working at least partly through reductions in credit supply affecting domestic demand.

The fact that there is no discussion of spreads, banking problems, or credit availability suggests that there was not much financial distress in this episode. At the same time, the substantial distress evident in the entry on the euro area overall, together with the ambiguous reference to the possible effect of unsettled financial conditions on investment, leads us to conclude that there was at least a small amount of distress. We therefore scale this episode as a credit disruption. This is consistent with the fact that the 2009:2 entry indicated slightly less distress than the 2009:1 entry (which we scaled as a credit disruption−plus).

Germany, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is

> increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks up[s] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

In its entry on Germany, the OECD made two references to healthy financial conditions: "Firms continue to benefit from favourable financial conditions" (p. 90), and, "The improved financial situation of households and favourable financing conditions should contribute to growth in residential investment" (p. 92). The concluding paragraph on risks, however, warned that "financial conditions, notably the situation in the banking sector, may deteriorate with adverse consequences for investment spending" (p. 93).

The references to favorable conditions make clear that this episode does not rise to the level of a minor crisis. At the same time, the explicit statement of a downside risk and the fact that the OECD saw noteworthy ongoing financial distress in the euro area as a whole indicate that the episode cannot reasonably be coded as involving no distress. We therefore classify it as a credit disruption−regular. This classification is consistent with the fact that we code Germany in 2010:1 as a minor crisis−minus and that the evidence here points to a financial system that is notably improved but not yet fully out of danger.

Sweden, 2010:2. In it entry, the OECD did not mention financial issues in its opening summary or in its concluding discussion of risks. But the body of the entry contained several references. It said, "Business fixed investment has been supported by rising profits and more favourable financing terms" (p. 183). A paragraph headed, "Financial conditions are mixed" mainly discussed credit quantities without addressing the roles of supply and demand; but it concluded by noting that "since the start of the year, interbank spreads have risen" (p. 183). Finally, the OECD said, "Low interest rates and less need for precautionary saving, as financial conditions normalise and unemployment falls, will encourage consumers to increase spending" (p. 185).

This episode fits our criteria for a credit disruption well. There is a passing mention of an increase in interest rate spreads, suggesting that financial intermediation is not functioning completely normally, but the rise is not cited in the OECD's analysis of recent macroeconomic developments or of the outlook. Likewise, the reference to likely developments as financial conditions normalize suggests that the OECD viewed the financial system as improved relative to 2010:1 (which we code as a credit disruption−plus) but as not fully healed—suggesting some residual distress. We therefore classify this episode as a credit disruption−regular. An additional piece of evidence in support of this classification is that the entry is similar to that for Sweden in 2010:1, but mentions more favorable financing terms and omits any discussion of risks from banks' exposure to Eastern Europe.

Italy, 2011:1. The OECD's entry on the euro area gave a generally upbeat assessment of the health of the financial system, but suggested some lingering distress overall and serious problems in some countries. The opening summary said, "financial conditions have improved" (p. 90). The entry went on to say, "Improved overall financial conditions are contributing positively to growth, while non-standard policy measures and government support for the financial sector are being gradually wound down" (p. 92). It also cited "more favourable financial conditions" as one reason that "Private non-residential investment will bounce back" (p. 94). But it also saw residual problems, referring to "remaining weakness in the banking system" and the need "to ensure that credit availability does not constrain the recovery" (p. 92). In addition, the OECD indicated that the situation was considerably more serious in some euro countries: "For several countries, sovereign spreads remain at very high levels and the state of the banking system, as well as financial conditions, is still fragile" (p. 92). It made a similar remark in its concluding discussion of risks, but without being as clear about how broadly its concerns applied: "Weaknesses in government and bank solvency could lead to wider financial tensions and contagion, which would test the European Financial Stability Fund (EFSF) and the banking system" (p. 94).

The OECD said relatively little about the health of Italy's financial system. The only explicit statement was quite positive: "Bank lending continues to accelerate, while there has been no change in overall credit conditions; a number of banking groups successfully raised equity capital in early 2011" (p. 105). But there also were also two oblique references to potential financial distress. The material preceding the country entries mentioned Italy (together with Belgium and Spain) as a country where, "to a more limited extent" than in Greece, Ireland and Portugal, "sovereign risk spreads over Germany remain elevated"; and it went on to say, "Concern about the value of government bonds is tied closely to fears about banks' solvency" (p. 51). And the concluding discussion of risks in the entry on Italy included the comment, "Prolonged turmoil in the euro area periphery might also affect investment prospects negatively" (p. 108).

This evidence indicates that the OECD did not view financial distress as high. Nonetheless, two considerations lead us to identify some distress. First, we classify Italy in 2010:2 as a minor crisis−minus. In light of that, the statement in the current entry that there had been no change in financial conditions (although hard to take literally in light of any concrete discussion of problems in the financial sector) suggests that there had not been a dramatic recovery. Second, the discussion of lingering problems in much of the euro area and the hints of possible problems involving risks to bank solvency and adverse effects on investment suggest some amount of distress and risks. We therefore code this episode as a credit disruption−regular.

<u>United Kingdom, 2011:1</u>. The OECD devoted little attention to the health of the United Kingdom's financial system. Under the heading, "Financial conditions continue to improve," it said, "Financial conditions remain highly expansionary and access to credit for firms and households continues to improve" (p .110). And in the material before the country entries, it said, "Banking sector exposures to commercial property markets ... remain a clear concern, especially in the euro area and the United Kingdom" (p. 52).

The passing comment about banks' exposures to commercial property markets fits well with our criteria for a small credit disruption. On top of that, we classify the United Kingdom in 2010:2 as a regular minor crisis, and here the OECD referred to conditions as continuing to improve but did not say they were fully healed. In light of these two considerations, we classify this episode as a credit disruption−regular.

<u>Belgium, 2011:2</u>. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

The OECD's discussion of issues involving Belgium's financial revolved around the possibility that adverse developments in the sovereign bond market could spill over to banks. In the material preceding the country entries, the OECD cited Belgium as a country where "Major negative turns in market sentiment ... could have dire consequences for the public finances and the banking sector" (p. 45); the OECD put Belgium in the same category as Spain, but viewed the risk as less serious than in Greece, Ireland, Portugal, or Italy. The entry on Belgium appeared to refer to this concern obliquely when it said, "Sustained fiscal consolidation is needed to calm financial markets' concerns over high Belgian sovereign debt" (p. 115), and, "The main downside risk is that fiscal consolidation does not suffice to calm financial markets, with negative effects on spreads and confidence" (p. 116). But other than these indirect references, the entry was silent about financial distress.

Thus, the OECD did not identify any current financial distress in Belgium, but merely described a risk. It is not clear how likely it thought the risk was, but it viewed the consequences as severe if the risk materialized. We therefore classify this episode as a credit disruption–regular. One helpful comparison is with Austria in 2011:2, where the risks are more concrete and which we classify as a credit disruption–plus.

Luxembourg, 2011:2. In its entry, the OECD made one reference to financial distress, saying, "Investment will slow, reflecting deteriorating business confidence and more difficult financing conditions" (p. 151). (There were also references to the impact of financial turmoil on exports of financial services, but this is not relevant to our scaling of disruptions to the functioning of the financial system.) In addition, as described in our entry for Belgium for 2011:2, the OECD saw significant financial distress in the euro area as a whole. The reference to more difficult financing conditions affecting investment in an entry that was otherwise silent about financial distress fits with our criteria for a credit disruption–minus or credit disruption–regular: it was a quite minor aspect of the OECD's assessment of the economy. In light of the OECD's negative assessment of the overall euro area, we classify the episode as a credit disruption–regular.

United States, 2011:2. The OECD offered a range of comments about the health of the U.S. financial system. On the upbeat side, the opening summary referred to "some signs of healing in financial markets" (p. 70); the entry reported, "There have been some indications that credit supply conditions are improving, though at a slower pace than earlier in the year, and survey data indicate that banks are more willing to extend new loans" (p. 80); and a long paragraph on the U.S. outlook in the material preceding the country entries did not mention financial issues (pp. 21–22). Moreover, we classify the United States in 2010:2 as having no distress, so the comments about improvement suggest no more than a very low level of distress. But other aspects of the OECD's analysis were more negative. It said, "many financially stressed but otherwise creditworthy households are still unable to refinance their debt at low mortgage rates because they have little or no remaining equity in their homes or because they face other institutional hurdles" (p. 74). It also warned that "financial institutions would come under even greater stress if downside risks materialise" (p. 74)—implying that they were already under some stress. And in the material before the country entries, the OECD said, "bank credit default swap rates have increased sharply, in both Europe and the United States, reflecting renewed concerns about banks' solvency .... The funding pressures on the banking sector are likely to result in moves towards tighter credit standards" (p. 14).

The United States always receives more attention from the OECD than any other country. Given this, the fact that the OECD never mentioned any impact of financial distress on economic activity suggests that this episode does not rise to the level of a minor crisis. The positive comments point to the same conclusion. But the comments about stress and funding pressures indicate some distress. We therefore classify this episode as a credit disruption–regular.

Denmark, 2012:1. The OECD saw only small problems in credit supply. The only discussion of the financial system came under the heading, "Financial conditions have not normalised yet," where it said: "Despite the introduction of a temporary three-year loan facility by the Danish National Bank in December 2011, bank lending to companies remains low, partly due to weak demand" (p. 110). This language is both quite mild in an absolute sense and milder than the language the OECD used in 2011:2 (which we classify as a credit disruption–plus). But the statements that financial conditions had not yet normalized and that low demand was only partly responsible for low lending both point to some residual distress. Based on the facts that the OECD felt that financial conditions warranted a heading in the entry and that it described a new policy action that appeared to be intended to deal with problems in credit availability, we classify the episode as a credit disruption–regular.

Germany, 2012:1. The OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary began, "Activity has stagnated after contracting in end-2011 and unemployment is set to rise further, owing to weak confidence and difficult financial conditions related to the sovereign debt crisis" (p. 74). The summary also identified "how to simultaneously address needs of governments and banks" as an important challenge, and said that "bank balance sheets should be strengthened" to support growth (p. 74). Under the heading, "The economy has stagnated," the entry said: "in the latter half of 2011 ... tensions increased in the interbank market," and, "Risk spreads on government debt of some countries increased, ... putting further funding pressures on banks" (pp. 74–75). The entry also reported: "bank balance sheets remain weak, despite increased liquidity provision from the European Central Bank. ... The April 2012 ECB Bank Lending Survey points to a further tightening in bank lending standards to households and corporations, through at a slower rate than in late-2011" (pp. 75–76). Finally, the OECD warned, "The risks are large and mainly on the downside," and listed as one of two main downside risks, "the possible intensification of the sovereign debt crisis, which would further undermine confidence and the financial system" (p. 77). The entry concluded, "On the upside, more rapid repair of the financial system and ambitious structural reforms would improve the growth outlook" (p. 77)—implying that problems in the financial system were affecting growth.

The entry on Germany made several references to healthy credit conditions. The opening summary listed "favourable financing conditions" as one of three factors that "will contribute to the rebound in private consumption and investment over the projection period" (p. 78). The entry also said, "Financial conditions are improving .... Residential construction should particularly benefit from low financing costs" (p. 78). And it listed one likely positive development as "loan-financed investment" (p. 81).

Amid this upbeat assessment, there were two less positive notes. First, the entry contained the somewhat confusing statement, "Financing conditions will continue to support investment, with little tightening in credit standards and limited increases in borrowing costs" (p. 81). And the discussion of risks warned, "The main downside risk relates to international developments. In particular, further stress in euro area sovereign debt markets could weaken domestic bank balance sheets and lead to tighter financing conditions" (p. 81).

We classify Germany in 2011:2 as a credit disruption–plus. Despite the one statement in the current entry about a slight tightening of credit standards and increase in borrowing costs, the entry does not fit with a higher level of distress: there are numerous references to healthy conditions, and the statement about risks is much weaker than in 2011:2. Instead, the weight of the evidence points to improvement. But the statement suggesting that conditions might have tightened suggests that the improvement was not large. Likewise, the negative assessment of the overall euro area financial system and the fact that the OECD said that euro area problems created a risk of tighter financing conditions point to a low but positive level of distress. We therefore classify this episode as a credit disruption–regular.

Iceland, 2012:1. The OECD made only one explicit reference to problems in intermediation in its entry, saying, "While much progress has been made in debt restructuring, firms and households remain highly leveraged and banks still have a high level of non-performing loans" (p. 123). In addition, the entry said, "Monetary policy will need to be tightened further to reduce the risk of high wage increases flowing into second-round price increases and to pave the way for the gradual liberalisation of capital controls" (p. 123; the opening summary contains a similar remark). Since earlier entries on Iceland had implied that capital account liberalization depended on healing of the financial system, this could be an indirect reference to remaining financial sector problems.

This evidence points to mild remaining problems. We classify Iceland in 2011:2 as a minor crisis–minus. Here the language is more upbeat, with no explicit statement of financial stress or of possible problems with banks' capacity to lend. But the reference to a continued high level of nonperforming loans, the view that the economy was not yet ready for capital account liberalization, and the absence of any statement of a dramatic improvement all suggest some remaining problems. We therefore classify this episode as a credit disruption–regular.

United Kingdom, 2012:1. The OECD mentioned financial issues in two places in its long entry. First, it said, "Weak domestic and foreign demand, tight credit conditions and large uncertainties regarding the evolution of the world economy translate into low investment" (p. 90). Second, the discussion of risks included the comment, "Global financial turmoil might result in tighter financial conditions" (p. 93).

This episode matches our criteria for a credit disruption reasonably well. Financial issues received very little emphasis: they were mentioned only as one of four factors affecting investment and as a possible risk. Moreover, the OECD's assessment was more upbeat than in 2011:2, where we identify a credit disruption–plus. The 2011:2 entry discusses possible new government actions to support the financial sector and has a more extensive discussion of risks of additional financial distress. In addition, the current entry includes a chart showing that bank credit default swap rates had fallen since late 2011, though they were still slightly elevated relative to normal (p. 15). Another useful comparison is with Denmark in 2012:1, which we classify as a credit disruption–regular. In that case, like this one, the OECD put little emphasis on financial issues but described modest ongoing problems. The entry on Denmark described a new government action to support the financial system, while the entry on the United Kingdom mentioned a risk; on net, this suggests little difference between the two cases. All of these considerations lead us to classify this episode as a credit disruption–regular.

Germany, 2012:2. The OECD's entry for the euro area was similar to that for 2012:1: it made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary implied problems in the functioning of the financial system when it said, "private demand will pick up as confidence and the functioning of the financial sector improve" (p. 83). The summary also commented, "Stronger bank balance sheets and a full banking union would reduce the adverse feedback loop between sovereigns and the banking system" (p. 83). Under the heading, "Financial conditions are difficult," the entry reported, "The sovereign debt crisis in the euro area has led to an adverse feedback loop between sovereigns and banks. This has impaired credit in some euro area countries and reduced the effectiveness of monetary policy transmission" (p. 84). In addition, it warned that a range of factors "will continue to create difficulties for domestic banking systems so long as bank balance sheets have not been strengthened sufficiently" (pp. 84–85). And in discussing policy, it said, "The financial system needs to be repaired" (p. 86), and, "Further measures are required to clean up bank balance sheets and ensure that the banking system is well capitalised" (p. 86). Finally, the concluding discussion of risks referred to "the crisis" (although this appeared to be a reference to the overall health of the euro area rather than to the financial system specifically), and listed as one risk "a failure to restore the financial sector" on the part of policymakers (p. 87).

The OECD did not say a great deal about the health of Germany's financial system. On the positive side, it cited "favourable financing conditions" (p. 91) in a discussion of forces that would boost investment, and the material preceding the country entries included a chart that showed that interest rates on loans were declining (p. 27). On the less favorable side, the OECD said, "The spread between lending rates and policy rates is relatively high and commercial banks raised their reserve holdings at the European Central Bank following the increase in euro area sovereign debt tension in July" (p. 89). In addition, the discussion of risks was headed, "The euro area crisis poses the main risk to the outlook," and said, "If stress in euro area sovereign debt markets remains high, German exports may not recover to the extent projected and domestic bank balance sheets could deteriorate, tightening financing conditions" (p. 91).

This entry is quite similar to that for Germany in 2012:1, which we classify as a regular credit disruption. As in 2012:1, here the OECD described a financial system that was basically healthy but sounded some notes of caution or concern. Moreover, nothing in the current entry showed a clear change in either direction relative to 2012:1. We therefore classify this episode as a credit disruption–regular.

Netherlands, 2012:2. As described in our entry for Germany for 2012:2, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The entry on the Netherlands, in contest, made only one reference to the financial system, saying, "The housing market crisis worsened in a context of tight mortgage credit conditions and uncertainty about the medium-term tax treatment of mortgage interest payments" (p. 150). In addition, the material preceding the country entries included a chart showing that loan interest rates in the Netherlands had fallen markedly, and were now similar to those in France and Germany (p. 27).

This episode fits our criteria for a credit disruption fairly well. There was evidence of fairly good overall financial health and only one mention of financial problems. Moreover, that mention concerned only one sector and was credit conditions put on a par with uncertainty about a specific feature of medium-term tax policy. A comparison with the Netherlands in 2012:1 also points to this episode being a credit disruption. We code that episode as a minor crisis–minus. The current entry expressed much less concern; but at the same time, it did not trumpet any dramatic improvement. We therefore classify this episode as a credit disruption–regular.

Credit disruption–plus:

Japan, 1990:2. The OECD reported (p. 56):

> The decline in stock values has had repercussions on the banking sector .... [T]he ratio of capital to assets in most banks is reported to have been pushed down below the level entailed by BIS requirements at the end of September 1990, in spite of efforts to raise their capital through the issue of subordinated debt. In the longer run, if the current equity market weakness continues, commercial banks may be induced to restrain lending, but no significant change in bank lending behaviour on account of balance-sheet constraints is yet apparent.

It also said, "the impact of a marked fall in financial asset prices could adversely affect credit availability and business confidence. Thus far, financial-market developments appear to have only moderated growth rather than halted it" (p. 54). And in its general discussion of financial developments in the OECD, it referred to "some downward adjustment of financial asset prices, which reduces the value of bank capital and loan collateral," and went on to say, "This, together with the more generally reduced quality of balance sheets, risks a tightening of lending criteria by financial institutions in order to improve their creditworthiness, in particular in the United States and perhaps also eventually in Japan" (p. 14).

Thus, the OECD perceived significant weaknesses in banks; but, with the exception of the one reference to the developments moderating growth, it said they were not yet affecting the economy. We therefore classify this episode as a credit disruption–plus.

United States, 1991:2. The OECD stated (p. 64):

> There have been widespread concerns that tighter regulatory supervision and higher capital requirement[s] may have led to credit supply problems in the banking industry. Default rates on bank loans have drifted up for some time with a shift towards riskier assets, and banks have attempted to restore margins by raising spreads on loans. However, the macroeconomic consequences of these developments have been muted by changes in the financial system during the past several years that have increased the availability of non-bank funding.

Likewise, it said, "There are concerns that problems faced by the banking industry may limit the availability of credit and so retard the recovery," but the "macroeconomic importance [of these problems] is difficult to assess. The development of the commercial paper market and the securitisation of mortgages and other assets over the past decade have opened up new alternatives to bank credit, at least for some borrowers" (p. 67). Finally, it reported, "There is a risk that the recovery could even be weaker than projected if demand growth is restrained by the currently high levels of household and corporate debt and if credit supply is limited by banks facing financial difficulties" (p. 64). Since the OECD viewed financial-market problems as genuine but mainly as posing a risk to the outlook rather than as having major effects, we code this episode as a credit disruption–plus.

Japan, 1992:1. This episode is similar to the United States in 1991:2: the OECD believed that financial-market challenges were present, but viewed them mainly as posing a risk going forward and as only having minor effects at the time. It made no mention of limitations on loan supply in a paragraph of the causes of a recent fall in output. But then it reported, “banks' capital base has been eroded by lower stock values at the same time as their assets have been threatened by falling prices of land, used as collateral for loans. As a result, banks have become more cautious in their lending” (p. 54). It also said that a “deflationary risk attaches to share prices, where a further marked decline could have adverse repercussions on bank lending capacity” (p. 55), and referred to “signs of financial weakness in the stock market and banks. ... Because of prudential considerations, banks have not been competing so aggressively for deposits, and have become more risk-conscious in their lending” (p.57). And it commented, “the fall in asset prices, the higher cost of corporate capital and lower corporate profits all seem likely to make for a long period of adjustment in lending and borrowing patterns, particularly as far as business fixed investment and its finance are concerned,” but went on to say, “An important element here is that banks should be able to sustain a moderate growth of domestic lending” (p. 59). Finally, it said that a weaker outcome than what it was projecting “cannot be ruled out, particularly because of the prevailing financial uncertainty, but several considerations argue against it” (p. 59). We therefore classify this episode as a credit disruption–plus.

Norway, 1993:2. The OECD's analysis of the health of the financial system was confined to a self-contained paragraph (p. 103):

> The significant decline in interest rates has accelerated the trend towards improved bank profitability, as evidenced by banks' balance sheets for the first half year of 1993 showing the best operating results since the mid-1980s. In particular, loan losses have been on a declining trend, reflecting diminishing bankruptcies, while improving credit supply conditions have reduced the need for further public injections of capital into the banking sector.

On the one hand, the fact that financial-market problems were not mentioned at all in the summary or in the discussion of the current or prospective performance of the macroeconomy leads us not to classify this episode as any type of crisis. On the other hand, the reference to the need for government intervention in the banking sector, and the description of the financial system as improving rather than as healthy (and the fact that, as we describe below, we identify a minor crisis–plus in 1993:1), show that the OECD perceived nontrivial financial-market problems. We therefore code this episode as a credit disruption–plus.

Finland, 1994:1. This case is very similar to that of Norway in 1993:2. The health of the financial system was again the subject of a self-contained paragraph (p. 90):

> Banks' balance sheets have benefited considerably from the improved economic climate with a significant fall in operating losses in 1993. As a result, the provision of state funds to troubled banks declined markedly in 1993 compared with previous years. The risk of credit supply constraints hampering the recovery has thus been reduced.

As with Norway in 1993:2, financial-market challenges were not mentioned as a factor influencing recent economic developments, nor in the general discussions of economic prospects. But the banking system was described as healthier rather than as healthy; credit supply constraints were still perceived as a risk to the recovery; there was a need for continuing government support of banks; and, as discussed below, we identify a moderate crisis–regular in 1993:1 and a minor crisis–regular in 1993:2. We therefore code this episode as a credit disruption–plus.

<u>Japan, 1994:1</u>. The previous issue of the *OECD Economic Outlook* described financial-market problems that lead us to code that episode as a minor crisis–regular. In the opening summary of its entry on Japan in this issue, the OECD stated, "Further progress in banks' balance sheet adjustment, supported by continued easy money market conditions, would contribute to generating the faster growth of money and credit needed for a long-lasting economic recovery" (p. 52). The only other mention of the health of the banking system over the course of the long entry was a comment that "the steepening of the yield curve should mean that the banks will be better placed to increase operating profits and reduce the under-provisioning of bad loans, thereby allowing them eventually to increase lending" (p. 56). Thus, the OECD viewed the health of the banking system as hurting the performance of the economy, but did not view it as central. Moreover, the OECD clearly perceived financial-sector problems as less serious than previously. We therefore classify this episode as a credit disruption–plus.

<u>Japan, 1994:2</u>. The OECD reported (p. 60):

> Bank lending fell slightly in the [year to September 1994], mainly reflecting slow credit demand: according to borrowers' responses to the Bank of Japan "Tankan" survey, banks appeared to be easing their lending attitudes. The gap between the average new lending rate and the CD rate remains relatively high, however, suggesting a greater awareness of risk among banks than in the past.

It also stated (p. 61):

> Another downside risk stems from the implications for banks' lending policies of the continued weakness of their balance sheets. Small enterprises, which are particularly dependent on bank credit, may continue to have some difficulty in financing all of their projects, which might lessen the prospect for a recovery in investment. However, the increased competition on Japanese credit and capital markets should limit the impact of such a risk for the most creditworthy companies.

This episode appears broadly similar to the previous one. One the one hand, credit availability was described as improved, and banking problems were not mentioned in the summary. On the other, banks were described as more concerned about risk, and credit-supply problems were viewed as potentially affecting a wide class of firms. In addition, the description of financial-market problems appears less serious than for Japan in 1992:2, which we classify as a minor crisis–minor. We therefore conclude that this episode is a credit disruption–plus.

<u>France, 1997:1</u>. In the course of a long entry, the OECD devoted two sentences to financial-sector problems (p. 61):

> Even though bank profitability improved considerably during 1996, sluggish lending activity and large provisions for bad debts continue to weigh on the performance of the financial sector. The government, which has already supported several banks and one insurance company, will provide further capital injections to Crédit Lyonnais and GAN, a large insurance company.

This episode appears similar to Norway in 1993:2 and Finland in 1994:1. There were significant problems in the banking sector, including a need for government support. But the OECD did not link these problems to credit supply or macroeconomic performance. And it described the problems in considerably less serious terms than in 1996:2, which we classify as a minor crisis–regular, but as still significant. We therefore code this episode as a credit disruption–plus.

United States, 1998:2. The OECD made several mentions of risks to the outlook from credit-market developments. For example, in its opening editorial, it said, "fears emerged that a possible credit crunch and negative wealth effects might affect private investment and consumption in the United States" (p. ix). In its overview of the world macroeconomic situation, it said, "nervousness and uncertainty in financial markets in OECD countries have been reflected in volatile equity prices and, especially in the United States, sharply increased spreads in credit markets" (p. 1). In its entry on the United States, it referred to "strains in the financial system" and to "financial turbulence that raised risk premia world wide and resulted in a substantially higher gap between the yields of high quality corporate bonds and government securities," and it reported that "credit standards appear to have been tightened" (p. 39). The OECD viewed "the possibility of a marked reduction in credit flows" as a major risk to the projections, though it singled out possible falls in borrowers' credit ratings rather than reductions in credit supply as a potential cause (p. 40). Since the OECD perceived financial-market problems as posing significant risk to the outlook, but did not describe them as yet having an important impact, we classify this episode as a credit disruption–plus.

Japan, 2000:2. In 2000:1, the *OECD Economic Outlook* had described a financial system that was improving but still limiting some firms' access to credit and posing a significant risk to the economic outlook. As described below, we classify that episode as a minor crisis–minus. In this issue, the OECD said, "The focus of policy in Japan is shifting from crisis to recovery management" (p. 33). And it remarked, "Banks want to lend" (p. 43), and, "lending attitudes of banks are judged to be accommodative" (p. 44). But it also commented in its summary that "there is a danger that long-term interest rates will rise, thereby ... subjecting the financial sector to stress" (p. 42); and in its concluding discussion of risks to the outlook, it stated, "banks remain vulnerable to any marked decline in bond and share prices—an issue that may become urgent if the latter remains at the low levels prevailing in November" (p. 46). The description of the banking system was clearly more positive than in 2000:1, and the OECD viewed financial-market problems as not currently having a major impact on the macroeconomy. At the same time, it clearly viewed the banking system as still quite fragile. We therefore classify this episode as a credit disruption–plus.

Japan, 2004:2. As in 2000:2, the OECD painted a mixed picture of the health of the banking system. On the one hand, it noted "encouraging progress in reducing the stock of non-performing loans" (p. 25); mentioned, "Other signs of structural adjustment in the financial sector" (p. 26n); referred to "an improvement in the health of the banking sector" (p. 40); reported that "the banks recorded ordinary profits in 2003 for the first time since 1992" (p. 40); and said, "High levels of profits in the business sector, combined with the improved health of the banking sector, should sustain business investment" (p. 42). On the other, it said, "The contraction of bank lending has limited the effectiveness of the quantitative easing policy adopted by the Bank of Japan in 2001" (p. 40), which hints that it saw problems in credit intermediation.

The fact that the OECD described the banking system as improving rather than as healthy, combined with the fact in the three previous issues of the *OECD Economic Outlook*, the OECD had described the banking problems in ways that meet our criteria for a minor crisis, causes us to conclude that there were still financial-sector difficulties. At the same time, the OECD viewed the situation as improved, and did not cite the problems as currently having a major influence on the economy. We therefore code this episode as a credit disruption–plus.

Canada, 2007:2. Financial distress in Canada in the second half of 2007 was not significant enough to be mentioned in the opening summary. Under the heading "The fundamentals remain sound," the OECD wrote: "The impact of recent financial turbulence and the credit squeeze has been modest so far, and domestic demand has remained resilient" (p. 101). There were, however, references to "higher cost of credit" (p. 102) and "credit restrictions stemming from the global financial turbulence of late summer" (p. 103) that suggest some rise in the cost of credit intermediation. The OECD expected that those "tighter credit conditions would have a small negative effect on these components of domestic demand [consumption and business investment]" (p. 104), but gave as a possible risk to the outlook that "The impact of diminished credit availability on private consumption and investment could also prove stronger than currently envisaged" (p. 105).

That the OECD saw a rise in CCI, but expected the macroeconomic effects to be modest puts this episode squarely in the credit disruption category. That these developments were mentioned repeatedly and seen as posing a risk of somewhat stronger impacts led us to classify it as a credit disruption–plus.

France, 2007:2. The OECD's entry on the euro area discussed the development of "tighter credit conditions" (p. 76) and the risk that "liquidity problems lead to an across the board tightening in bank lending, ... having a stronger effect on housing and equipment investment than expected" (p. 80). While the entry for France did not mention financing conditions in the opening summary, in discussing the outlook the OECD wrote: "On the downside, the tightening of bank lending conditions and widening of interest-rate spreads on corporate bonds may hold back business investment, despite rising capacity bottlenecks in a number of sectors" (p. 89). In discussing the risks to the outlook, the OECD said (p. 90):

> At this point, the impact of financial-market turmoil is expected to be mainly indirect via weaker growth in export markets. However, even though there is no sub-prime mortgage lending in France, the exposure of domestic banks to securities backed by such loans as well as the knock-on effect from the freezing of wholesale markets on credit extension to retail borrowers are not yet fully known.

This episode has the hallmarks of a credit disruption: a clear rise in the cost of credit intermediation, but one small enough that the effects on consumption and investment were expected to be small. Because the perceived risks related to financial market turmoil were somewhat more significant, we scaled this episode at the high end of the credit disruption category.

Iceland, 2007:2. In the opening summary, the OECD wrote: "the slow and uneven adjustment process leaves the economy vulnerable to changes in foreign-investor sentiment, especially in a context of fragile global financial-market conditions, and has increased the risk of a harder landing of the economy" (p. 130). It elaborated on this risk later in the entry, saying that "financial-market developments ... might limit the access to inexpensive foreign financing" (p. 131). This discussion mimics that in the 2007:1 entry (which we classified as a credit disruption–regular) and suggests that banks and other borrowers might be vulnerable to changes in foreign sentiment.

The OECD also mentioned that "Household demand appears to have remained robust in the third quarter, although leading indicators suggest some softening following the financial-market turmoil in August; this had adversely affected the exchange rate and the stock market and entailed higher borrowing costs" (p. 130). The risks paragraph gave as one risk that "Household demand contracts in response to high interest rates" (p. 132), but it is unclear whether the high rates are thought to be the result of changes in foreign sentiment or tighter domestic monetary policy.

Overall, this entry suggests slightly more financial distress than in 2007:1. There was a clear rise in the cost of credit intermediation, but it was small enough that its effects on consumption were expected to be modest. The risks were also seen as fairly mild. For these reasons, we categorize conditions as a credit disruption–plus.

New Zealand, 2008:1. The opening summary said that “Real exchange rate appreciation, tight credit and widening credit spreads, together with drought conditions, are provoking slower growth in 2008” (p. 165). It also pointed out that “heavy foreign debt is a point of vulnerability, especially if external funding were to dry up” (p. 165). The entry went on to say: “Housing investment faltered by year-end, reflecting the pass-through of high policy interest rates into borrowing costs, topped up by widening interest margins” (p. 165). Finally, the closing paragraph said: “Further global financial turbulence could harm growth prospects, given substantial external indebtedness” (p. 165).

The two references to widening credit spreads is direct evidence of a rise in the cost of credit intermediation. More subtle, but perhaps more significant, were the two mentions of New Zealand’s vulnerability to a drying up of foreign funding. This is very similar to the OECD’s description of Iceland in 2007:2. Since the drying up of foreign lending was only a seemingly remote risk, not a reality, this episode does not rise to the level of a minor crisis. But it does correspond to the top of the credit disruption range (a credit disruption–plus).

Japan, 2008:2. The OECD’s entry described problems in the financial sector mainly in terms of risks to the outlook rather than current impacts on the economy. In the opening summary, the only mention of domestic financial disruption was a comment that the Bank of Japan should provide “sufficient liquidity to the market to limit the impact of financial stress and mitigate deflationary pressures” (p. 89). In a more extended discussion, the OECD said (pp. 90–91):

> Equity prices have dropped steeply—by 24% in October alone—leading to tighter financial conditions and reducing household wealth. The collapse of a real estate investment trust and a life insurance company in October 2008 raises concerns that Japan’s financial market, which thus far has been largely untouched by the turmoil sweeping through world financial markets, may be negatively affected. In addition, the interest rate spread between government and corporate bonds has widened.

Similarly, in its discussion of risks, the OECD commented, “Although ... the banking sector is now adequately capitalised, the global financial crisis could disrupt Japan’s financial sector, reducing both private consumption and investment” (p. 93).

The assessment in the material preceding the country entries was similar. The OECD said that “Japan’s banking sector and financial system initially appeared to be relatively unharmed by the crisis,” but that the effects of the crisis “will increase bad loans and force large global Japanese banks to write down the value of their equity portfolios” (p. 21). It reported that banks were not tightening lending standards (p. 23), but described policy actions to relax mark-to-market rules for banks and to inject liquidity and to guarantee loans (pp. 21n and 76).

This description of a financial system that was broadly healthy but that posed significant risks to the economy, coupled with only minor suggestions of current effects on intermediation, leads us to classify this episode as a credit disruption–plus. One useful comparison is with Iceland in 2007:2, where the OECD also saw significant risks but made no more than mild references to current effects on the cost of credit intermediation, and which we also classify as a credit disruption–plus.

Netherlands, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

Against this backdrop, the entry for the Netherlands was notable for its much less dire tone. Financial conditions were not mentioned in the opening summary and only tangentially mentioned in the closing risks paragraph. The OECD wrote that "The financial crisis has had a direct impact by reducing the value of assets held by pension funds, some of which already announced that payouts will not be increased in line with inflation for 2009, or that contributions will rise. This may further undermine consumer confidence, which has been falling for the past eighteen months, and private consumption" (p. 163). Thus, the OECD saw effects of the crisis on demand through asset prices, but did not mention effects through declines in credit supply.

The entry said that "The government's acquisitions in the financial sector may help secure confidence, but will increase gross debt by an estimated 5% of GDP; these operations are set to be reprivatised once markets calm" (p. 164). This echoes statements in the overview chapter that a Benelux bank required a capital injection and partial nationalization (p. 21). The Netherlands also increased the limit on deposit insurance (p. 74).

The presence of interventions to stabilize the financial system and the discussion of significant financial distress in the euro area as a whole lead us to identify some rise in the cost of credit intermediation in the Netherlands in the second half of 2008. At the same time, the lack of any direct discussion of distress or possible impacts on domestic demand argues against classifying this as a minor crisis of any sort. We therefore scale the episode as a credit disruption–plus.

Switzerland, 2008:2. The entry makes clear that there was some financial distress in Switzerland in this episode, but less than in the first half of 2008. One indication that financial conditions were not particularly troublesome is that they were not mentioned in either the opening summary or the closing discussion of the risks to the outlook. Similarly, there was no discussion that financial developments were affecting consumption, investment, or lending.

The entry did mention that "Following the onset of international financial market turbulence, the central bank stabilized the interbank interest rate, the operational target of monetary policy, allowing overnight interest rates for repurchase operations to fall significantly" (p. 185). This echoes a discussion in the overview chapter of the benefits of the Swiss approach to monetary policy. By targeting a market interest rate, the Swiss central bank could more consistently counteract rising spreads (p. 58). That they felt the need to use this approach suggests that rising spreads were a concern. The OECD also mentioned that the central bank "has decided to provide a loan worth up to $54 billion (equivalent to 70% of official foreign currency reserves) to a fund that will purchase illiquid assets (at no more than mark-to-market value) from a major domestic bank, UBS, which faced large asset write-offs" (p. 186). The federal government also supplied a loan to UBS equal to 1.1% of GDP (p. 186).

The balancing of the fairly sanguine tone of the entry with the evidence of a very troubled major financial institution and concern about rising spreads leads us to categorize this episode as a credit disruption−plus. This is consistent with the fact that Switzerland had been a minor crisis−minus in 2008:1, and this entry suggests that financial distress was at least slightly less severe.

Belgium, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78−79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81−82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The entry for Belgium was somewhat short and not very informative about financing conditions. It said: "The economy began a severe contraction at the end of 2008, as world trade shrank at an unprecedented pace and domestic demand fell due to a worsening labour market outlook and tighter credit market conditions" (p. 114). The OECD projected that in 2010 "economic expansion should return on the back of monetary easing, fiscal stimulus, a recovery in world trade, and a waning of the financial market turbulence" (p. 115). In discussing Belgium's fiscal challenges, the OECD mentioned that "intervention in the financial sector boosted the public gross debt-to-GDP ratio by about 7 percentage points" (p. 115).

This description suggests just slightly less financial distress in Belgium in 2009:1 than in 2008:2 (which we classified as a minor crisis−minus). The reference to the recession being caused in part by tight credit market conditions, and the fact that those conditions were not expected to go away until 2010, suggests continued financial distress, as does the reference to financial sector interventions. Similarly, the grim financial conditions in the euro area overall suggest that conditions in Belgium likely remained at least somewhat troubled. Several factors, however, suggest that there had been some improvement. There was no discussion of effects of tight credit on consumption or investment, and credit problem were not given as a risk to the outlook. For these reasons, we scale this episode as a credit disruption−plus.

Luxembourg, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78−79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

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The OECD's description of financial conditions in Luxembourg was noticeably less grim than that for the euro area more generally. The discussion of current economic performance noted that "The economy has been hit severely through the financial sector" (p. 140)—suggesting that most of the effects of financial turbulence were the result of reduced financial services exports. In describing why consumption and investment were weakening, the OECD mentioned multiple factors, none of which involved credit conditions (p. 140).

We scaled conditions in Luxembourg in 2008:2 as a minor crisis. The main difference between that episode and conditions in 2009:1 was that in late 2008, Luxembourg was spending a large amount of money on rescuing troubled financial institutions and there was mention of increasing bank provisions. Given there was no such discussion in 2009:1, and little discussion of tight credit conditions, we scale down the level of financial distress somewhat. We categorize the episode as a credit disruption–plus. We do not take it down further both because the general euro area description was quite grim and because the entry for Luxembourg did not indicate dramatic improvement.

Turkey, 2009:1. Turkey had been a minor crisis in 2008:2. The entry for 2009:1 indicated that the severe strains on the financial system that had been feared in the previous half year had not come to pass. Overall, the OECD projected significantly less unease about financial conditions.

Among the concrete signs of improvement was the fact that credit conditions were not mentioned in either the opening summary or the closing risks paragraph. The OECD also said that "There has been no major strain in external funding to date despite the ongoing decline in capital inflows" (pp. 173–174).

In discussing Turkish monetary policy, the OECD stated: "the Central Bank was able to reduce its policy rate in several steps from 19.75% in October 2008 to 11.75% in April 2009. Commercial lending rates have not fallen proportionally so far, and credit standards remain tight, but further cuts in policy rates and a stronger pass-through to lending rates are expected given the broadly robust banking sector" (p. 174). The reference to the "broadly robust banking sector" is consistent with the view that financial distress was relatively low. At the same time, the OECD indirectly noted that spreads had risen, and mentioned that credit standards remained tight—consistent with a rise in (or at least an elevated level of) the cost of credit intermediation. The OECD also noted that "Interest rate subsidies and guarantees have also been offered to enterprises, and new government guarantees on outstanding and new corporate debt are considered" (p. 175). This, too, suggests that credit markets were not functioning normally.

Given the noticeable improvement in financial conditions, it is appropriate to scale this episode lower than 2008:2. Objectively, this case fits the description of the higher end of the credit disruption range. There were signs that the cost of credit intermediation had risen, but the rise was not described as large or in any way ominous. Also, there was no discussion that credit conditions were likely to impact domestic demand. For these reasons, we scale this episode as a credit disruption–plus.

Canada, 2009:2. Canada was a minor crisis in 2009:1. Several statements in the *OECD Economic Outlook* lead us to think there was a noticeable reduction in financial distress in 2009:2. First, in the general overview chapter, the OECD referred to the fact that "demand for special short-term liquidity programmes has diminished significantly in Canada" (p. 48). Financial conditions were not mentioned in either the opening summary or the closing risks paragraph of the entry on Canada. The OECD said "the second quarter provided some encouragement for a pick-up, with two main causes of the Canadian recession – the fall in commodity prices and the global credit crunch – beginning to turn," and that "financial conditions improved steadily" (p. 155). In discussing the recovery, it noted: "improving financial market conditions, the very low interest rates that currently prevail, recovering housing markets and increased business and household confidence are supporting the recovery in business investment and driving a pick-up in consumer spending" (p. 157).

While the entry emphasized improvement, there terminology was also consistent with some remaining distress. The reference to the global credit crunch "beginning to turn" suggests some crunch was still in effect. Similarly, the fact that "improving financial conditions" were supporting a pick-up in consumption and investment implies that conditions had been problematic. The fact that the OECD also said that "Measures to support liquidity are no longer needed but may have to be called upon again if downside risks to the current scenario materialise" (p. 159) is consistent with the view that the OECD (and, presumably Canadian financial institutions) saw some risk of renewed crisis. All of this is consistent with continued low-level financial distress.

The one statement that perplexed us was "Favourable credit conditions will continue to allow households and businesses to take advantage of low borrowing costs" (p. 158). That almost made it sound as though financial conditions had healed completely. However, given that conditions had been fairly tight in 2009:1 and that other statements suggested continuing distress, we interpreted this statement as another indication of improvement, rather than as a sign that conditions were favorable in an absolute sense. We therefore scale this episode as a two-step improvement over 2009:1 (a credit disruption–plus).

Japan, 2009:2. Japan had been a minor crisis–minus in 2009:1. The OECD's description of conditions in 2009:2 suggests both some improvement and some remaining distress. Financial conditions were not mentioned in the opening summary. In discussing current conditions, the OECD wrote: "financial conditions have improved overall" (p. 125). Though the OECD sometimes lumped together credit availability and things like asset prices under the term "financial conditions," this statement likely reflects a reduction in financial distress. The entry also said that "Risk premiums for low-rated borrowers remain high and bank lending has decelerated due to weak demand" (p. 126). Both of these statements are interesting mainly for what they did not say. They did not say that spreads were high for everyone; they did not say that bank lending was decelerating because of supply constraints.

There were, however, signs that nontrivial distress remained. The OECD said: "land prices in July 2009 were down by 4% from a year earlier, with surveys indicating that a further decline is expected, implying a risk of balance sheet adjustments that would put pressure on the banking sector" (p. 127). Such risks likely kept the cost of credit intermediation elevated. Japanese authorities continued to take actions to stabilize the financial sector. The OECD wrote (pp. 128–129):

> Fiscal stimulus has been accompanied by measures by the Bank of Japan to sustain credit flows and stabilise financial markets. A scheme to lend short-term funds to banks to facilitate their lending to firms had provided 6.9 trillion yen (1.4% of GDP) by September 2009 and will be phased out at the end of FY 2009. In addition, the Bank launched a programme, which will expire at the end of 2009, to purchase commercial paper and corporate bonds. Moreover, it will purchase up to 1 trillion yen.

Likewise, a table of financial relief measures added "guarantee or buy bank debt" for Japan between 2009:1 and 2009:2 (p. 51). That the government was taking numerous actions is consistent with there being some remaining distress. Consistent with the sense of improvement, however, was the OECD's statement that "these measures have been successful in improving financial market conditions and flattening the yield curve, thereby facilitating corporate financing" (p. 129). The closing paragraph on risks to the outlook said that "An early withdrawal of the emergency measures to stabilise financial markets could have negative consequences for domestic demand" (p. 129). It is plausible that private institutions also saw this risk and so faced a higher cost of credit intermediation.

That there was some sense of improvement argues for scaling this episode at least a step below 2009:1. At the same time, the discussion of continuing measures to keep credit flowing and the warning that early withdrawal of emergency measures could hurt consumption and investment are consistent with some financial distress. For this reason, we scale this episode as a credit disruption–plus.

Spain, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

The entry on Spain also indicated a substantial decline in financial distress. Credit and financial developments were not mentioned in either the opening summary or the closing risks paragraph. In a paragraph on the outlook, the OECD wrote (p. 219):

> Credit supply standards have eased and the rise in non-performing loans appears to have slowed. The share of such loans remains modest compared to previous downturns. Low interbank interest rates, to which mortgage rates are often indexed, will continue to provide relief to the financial situation of households in

> 2010, offsetting some of the cutbacks in real disposable income resulting from lower employment and higher tax rates.

The reference to low interbank rates is consistent with a lowering of spreads, and the OECD believed that lower rates would stimulate consumer spending.

At the same time, it sounds as though a modest amount of financial distress still remained. The statement that credit supply standards had "eased" could suggest that standards were still tight—particularly given that they still tight in the euro area more generally. The reference to the rise in nonperforming loans slowing is also significant. NPLs were viewed as a problem in 2009:1; that the level was higher in 2009:2 is consistent with the cost of credit intermediation remaining somewhat elevated. Taken together, the clear improvement and the remaining distress lead us to classify this episode as a credit disruption–plus.

Denmark, 2010:1. Denmark experienced a minor crisis–plus in 2009:2. The entry for that episode described tightened credit standards, substantial risk from loan defaults, and effects of financial difficulties on investment. Relative to that, the entry for 2010:1 is surprising in how little financial conditions were discussed. Credit, banking, and financial turmoil were not mentioned in either the opening summary or the closing risks paragraph. Under the heading "Financial and housing markets have stabilised," the OECD wrote: "Credit standards are no longer being tightened and bank lending to households and companies has stabilised" (p. 133). In discussing both current conditions and the outlook, the OECD mentioned a number of factors—fiscal stimulus, monetary expansion, erosion of competitiveness, and improvements in business confidence—as affecting the economy (pp. 133 and 135). Credit availability and financing conditions were notably absent from the list.

The lack of discussion of financial conditions makes this a particularly hard entry to scale. The reference to credit standards no longer being tightened and bank lending having stabilized would seem to point to stasis—implying that the fairly high level of financial distress from 2009:2 continued. But nothing in the entry gave a sense that financial disruptions were large enough to have been central to the outlook (a crucial feature of a minor crisis or higher). Rather, a wide range of other developments were thought to be driving the economy. Given this uncomfortable inconsistency, we essentially split the difference. We take the level of distress down substantially, but leave it noticeably elevated (a credit disruption–plus).

France, 2010:1. The entry for the euro area overall described a slight improvement from 2009:2, but still substantial distress. Under the heading "Financial conditions improved gradually but risks remain," the OECD wrote (pp. 89–90):

> Financial conditions have gradually improved as policy rates remain low and confidence recovers, although fragilities have been exposed by the recent financial market volatility. While short interbank rates have remained at extremely low levels, reduction in lending rates for non-financial corporations and households only partly reflected the fall in banks' funding rates. High lending spreads compared with historical norms may in part reflect higher risk premia but competition may also have suffered as a result of the crisis. Credit growth has weakened further with bank credit to non-financial corporations continuing to contract, although issuance of corporate debt has been strong. Concerns about credit quality and the health of the European banking sector remain as European banks are unlikely to have cleaned their balance sheets of all toxic assets.

The OECD suggested that credit problems were affecting demand when it said: "Investment is likely to recover only gradually in the coming quarters, held back by remaining excess capacity, continued credit constraints and weak growth prospects" (p. 92). Finally, the entry also discussed "strong pressures on sovereign bonds of some members and risk of contagion to other financial markets," (p. 91)—suggesting that sovereign debt problems in Greece and other countries could impair private credit availability.

Against this quite grim Euro area description, the entry for France sounded more upbeat. Financial developments were not mentioned in the opening summary. The OECD wrote (p. 99):

> Before the outbreak of the Greek crisis, the ongoing normalisation of financial markets enabled the euro-area monetary policy stimulus to be transmitted through more attractive credit conditions. After having stalled in 2009, credit to the non-financial private sector accelerated to grow at an annualised rate of more than 4% in the first quarter of 2010. This pick-up reflects the improved solvency of the financial sector due to recapitalisations, including by the government, which raised the average tier-one ratio of the five largest banks to 10.2% at the end of 2009.

The indirect discussion of reduced spreads and improved solvency is consistent with some reduction in the cost of credit intermediation.

Four factors, however, suggest that the reduction in financial distress had not been dramatic. The first is the reference above to "Before the outbreak of the Greek crisis," which would seem to indicate that financial problems had risen recently. The second is a reference to "Additional spending in 2010 has been announced to subsidise employment, support SME financing and extend unemployment benefits" (p. 101), which suggests that credit was not flowing normally to smaller businesses. The third is that the closing risks paragraph said that "changes in financial-sector regulation, prospective interest-rate increases and possible contagion from the Greek crisis all pose risks of uncertain magnitude" (p. 102). Such risks of contagion likely weighed on French financial institutions and affected lending standards. Finally, grim conditions in the euro area overall suggest at least some problems likely remained in one of the area's largest member countries. Combining these factors suggesting continued distress with the previous discussion of improvement leads us to scale this episode as a credit disruption−minus (which is one step below what France was in 2009:2).

Sweden, 2010:1. Sweden had been a minor crisis−minus in 2009:2. The entry for 2010:1 suggests continuing financial distress, but at a slightly reduced level. Financial conditions were not discussed in the opening summary. Later, under the heading "Financial conditions have generally been stable," the OECD wrote: "Money and bond markets have generally been fairly stable over recent months. Bank lending to households has started to inch up relative to a year earlier but credit to firms is still declining" (p. 181). Though we typically do not read much into discussions of the quantity of lending (because they could reflect demand or supply movements), the fact that lending was not moving much in either direction reinforces the sense of continuity in credit conditions.

In discussing monetary policy, the OECD said: "With financial conditions normalising, the central bank's recent moves to unwind unconventional monetary policy measures are timely" (p. 182). This reference both suggests some improvement and continued distress: conditions were normalizing, not normal. Likewise, the closing risks paragraph said: "Swedish banks' exposure to Eastern Europe could impede recovery should conditions in that part of the world fail to improve" (p. 183). The expression of this risk is similar to, but less forceful, than that in the previous period—again suggesting some improvement. However, the fact that there were still some risks to the financial system that could impede recovery suggests continued distress. That the OECD saw risks, rather than actual effects, is consistent with this episode being some sort of credit disruption. That the degree of improvement was small leads us to scale it toward the higher end of that range (a credit disruption–plus).

United States, 2010:2. We classify the United States in 2010:1 as a minor crisis–plus. Here, the OECD described a financial system that was considerably improved, but not yet fully healthy. On the positive side, the material before the country entries mentioned "looser credit conditions" in the United States (p. 17); said, "Bank lending surveys for the third quarter showed a continued gentle relaxation in lending standards in the United States" (p. 18); and reported, "The Federal Reserve closed down access to all its special liquidity provision facilities by the end of June" (p. 54). Further, financial issues were not mentioned in either the opening summary of the U.S. entry or in its concluding paragraph on risks.

However, two passages in the entry pointed to some ongoing problems. The OECD said, "High interest margins and improving market conditions have boosted financial industry current-period profits since late 2008, but markdowns and writeoffs, which are not included in such profits, continue to weigh heavily on financial industry balance sheets" (p. 77). It also reported (pp. 77–78):

> the significant backlog of delinquencies and foreclosures which have yet to be put on the market will be an impediment to residential construction, house price increases and financial industry balance sheets over the next couple of years. Related troubles also weigh down the commercial real estate market, though there are signs that the contraction in that market has ended.

The fact that the OECD mentioned high interest margins and problems with financial firms' balance sheets, but did not cite financial distress as a source of recent macroeconomic development or as an influence on the economy's prospects, is consistent with the high end of the credit disruption range. The high end of that range also fits with the fact that the OECD was considerably more upbeat than in 2010:1 and describes improvements in the health of the financial system, but stops well short of saying that it had completely healed. We therefore classify this episode as a credit disruption–plus.

Austria, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

The OECD did not mention financial issues in the opening summary of its entry on Austria. But the entry did note, "Sovereign bond spreads widened again," with an accompanying chart showing a recent spike of about 100 basis points relative to Germany (p. 112). Given the OECD's perception of important links between sovereign risk and banking problems, this may be an indication of some distress. More importantly, the OECD devoted much of its discussion of risks to potential difficulties in the banking sector (p. 114):

> Downside risks are mainly related to a further deterioration of the euro area sovereign debt crisis and especially the situation in Italy, to which Austria maintains important trade and financial linkages. A particular risk for the outlook also concerns the exposure of Austrian banks to countries outside the euro area in central-eastern and south-east Europe. If the economic outlook for these countries weakens significantly, this might cause additional stress for the Austrian banking system with repercussions on the real economy through the credit channel.

Since the OECD never explicitly mentioned actual distress in Austria, this episode does not meet our criteria for a minor crisis. At the same time, the emphasis on risks to the financial system and the negative assessment of the health of the overall euro area financial system suggest that it is close. We therefore classify it as a credit disruption–plus. This classification is consistent with the fact that we code Austria as a credit disruption–minus and the current episode appears markedly but not dramatically worse.

Denmark, 2011:2. The OECD mentioned issues involving the financial system twice in its entry. First, it reported, "With declining global liquidity, Danish banks face funding challenges despite the expansion of the credit facilities at the Central Bank. This holds back bank lending to households and firms" (p. 124). Second, at the end of its discussion of risks, it said, "More expensive loans to the corporate sector by banks facing funding pressures and further [deterioration] in global conditions would curtail investment" (p. 124). It did not mention financial issues in its opening summary, and it listed numerous factors other than credit supply in its discussions of consumption, investment, housing, and exports. The combination of the reference to a shift in credit supply that was not emphasized in the assessment of the economy and the relatively mild mention of a risk lead us to classify this episode as a credit disruption–plus.

Germany, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

The OECD referred to the financial system in two places in its entry on Germany. First, it said, "Financial conditions remain very easy and there are pent-up investment opportunities" (p. 87). Second, the discussion of risks began (p. 87):

> The main risks around this forecast are a more marked slowing in world trade and a substantial deterioration in domestic bank balance sheets in the context of

> further stress in euro area sovereign debt markets. The latter could lead to sustained problems in credit availability which would adversely affect the outlook, in particular for domestic spending.

The statement that financial conditions were very easy obviously argues on the side of low or no distress. But two considerations argue in favor of some distress. The first is the strong statement about risks, particularly the reference to the possibility of sustained problems in credit availability that could have negative effects on the economy. The second is the significant distress in the euro area as a whole; since Germany is the largest euro area economy, this likely conveys at least some information about Germany. The statement about very easy conditions leads us to stop short of the minor crisis range, since it so clearly contradicts the criteria of significant problems that were having a nontrivial impact on the economy. But the severity of the other evidence leads us to go just below that. We therefore classify this episode as a credit disruption–plus.

<u>New Zealand, 2011:2</u>. The OECD did not mention financial issues in its opening summary. But it went on to make several references to them. The first two suggested some mild current distress. One was the statement, "Business investment will be held back by continuing economic uncertainty and, perhaps, weakened credit supply" (p. 160). The other was a reference to "rising risk margins" as one of three reasons that "monetary conditions have tightened" (p. 160). There was also a stronger statement in the discussion of risks. The OECD said, "Further fiscal slippage and renewed widening of the current account deficit could provoke sharply increased international funding costs, jeopardising growth prospects and increasing debt service burdens" (p. 162).

The presence of financial distress that the OECD viewed as important enough to be mentioned but that it did not put much weight on in its assessment of the overall performance of the economy points to a credit disruption. The addition of a significant risk suggests that the upper end of that range is appropriate. We therefore classify this episode as a credit disruption–plus.

<u>United Kingdom, 2011:2</u>. The OECD's only reference to current financial distress was the statement, "Given ongoing weakness in lending to small firms, targeted measures, as currently discussed by the government, could be useful" (pp. 101–102). The OECD also implied that government support for banks might be needed, saying, "Fiscal risks remain in terms of existing exposure and potential need for further support to the banking sector" (p. 102). In addition, the discussion of risks warned, "The materialisation of international risks, and their potential repercussions on the banking sector and overall confidence, would weaken both domestic demand and exports" (p. 104). Finally, a chart in the material preceding the country entries showed a recent rise in credit default swap rates for U.K. banks.

With its combination of evidence of mild current distress and notable risk, this episode is similar to New Zealand in 2011:2, which we code as a credit disruption–plus. Another useful comparison is with the United States in 2011:2, which we classify as a credit disruption–regular. The evidence from that episode is similar to the current one, but includes some positive statements about the health of the financial system. We therefore classify the United Kingdom in 2011:2 as a credit disruption–plus.

<u>Austria, 2012:2</u>. The OECD's entry for the euro area was similar to that for 2012:1: it made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary implied problems in the functioning of the financial system when it said, "private demand will pick up as confidence and the functioning of the financial sector improve" (p. 83). The summary also commented, "Stronger bank balance sheets and a full banking union would reduce the adverse feedback loop between sovereigns and the banking system" (p. 83). Under the heading, "Financial conditions are difficult," the entry reported, "The sovereign debt crisis in the euro area has led to an adverse feedback loop between sovereigns and banks. This has impaired credit in some euro area countries and reduced the effectiveness of monetary policy transmission" (p. 84). In addition, it warned that a range of factors "will continue to create difficulties for domestic banking systems so long as bank balance sheets have not been strengthened sufficiently" (pp. 84–85). And in discussing policy, it said, "The financial system needs to be repaired" (p. 86), and, "Further measures are required to clean up bank balance sheets and ensure that the banking system is well capitalised" (p. 86). Finally, the concluding discussion of risks referred to "the crisis" (although this appeared to be a reference to the overall health of the euro area rather than to the financial system specifically), and listed as one risk "a failure to restore the financial sector" on the part of policymakers (p. 87).

The entry on Austria, in contrast, included several positive comments about the health of the financial sector. The opening summary listed "generally favourable financing conditions" (p. 112) as one factor that was helping economic performance. In discussing the outlook, the OECD said, "As confidence and external demand gradually improve, and financing and income conditions remain broadly supportive, growth is projected to pick up gradually" (p. 113). A more nuanced assessment reported, "Financing conditions are also supportive as banks have passed on low funding costs to customers without significantly tightening lending conditions" (pp. 112–113). The entry also included two less upbeat notes. First, it said, "Additional measures to support the banks ... are in the pipeline" (p. 113). Second, the concluding discussion of risks warned, "Downside risks relate mainly to a renewed deterioration of the sovereign debt crisis in the euro area and a weaker outlook in central, eastern and south-east Europe, which would harm export growth and exacerbate financial sector and fiscal risks" (p. 114).

This episode fits well with the upper end of the credit disruption range. The OECD characterized the financial system as fundamentally healthy. But at one point it merely said that banks had not significantly tightened lending conditions; it alluded to possible new actions to aid banks; and it described risks to the financial system from both euro area sovereign debt problems and developments elsewhere in Europe. The upper end of the credit disruption range is also consistent with the fact that we code Austria in 2012:1 as a regular minor crisis and that the current entry is considerably more positive but does not trumpet improvement. (And, despite the one comment about banks not significantly tightening conditions, the entry as a whole is highly inconsistent with the view that there had not been noticeable improvement.) We therefore classify this episode as a credit disruption–plus.

United Kingdom, 2012:2. The OECD repeated its two mentions of U.K. financial issues in the 2012:1 *OECD Economic Outlook* almost word-for-word. First, it said, "Weak demand and confidence, tight credit conditions and the bleak world economy translate into low investment" (p. 100). Second, it commented in the discussion of risks, "Global financial turmoil might result in tighter financial conditions" (p. 104). But the current entry included an additional element: new policy actions to support credit supply. It said, "The Funding for Lending Scheme in place since July 2012 is expected to provide incentives to banks to increase domestic lending through cheap funding. Reserve and collateral requirements have also been reduced to increase credit supply" (p. 103).

We classified the United Kingdom in 2012:1 as a regular credit disruption, on the grounds that financial problems were mentioned but received very little emphasis and that the OECD's assessment was more upbeat than in 2011:2 (where we identify a credit disruption–plus). The fact that authorities were undertaking new measures suggests that financial distress may have been higher than they had believed before. We therefore take our categorization up by one notch and classify this episode as a credit disruption–plus.

MINOR CRISES

Minor crisis–minus:

United States, 1991:1. In the opening paragraph of its entry on the United States, the OECD cited "financial difficulties faced by some banks" as a factor that was contributing to the weak performance of the economy (p. 47). It also saw "a risk that banks will not expand their lending enough to sustain robust growth" (p. 47). However, it saw the current situation as considerably improved relative to a year earlier (p. 48; see also p. 50):

> Credit growth began to fall in early 1990, largely due to tight monetary policy and flagging demand. Moreover, banks began tightening their loan criteria amid perceptions of increased risks and concerns that falling real estate values and a rising number of non-performing loans were eroding their capital base and, in some cases, the confidence of their depositors. Regulatory changes, such as stiffer capital requirements and restrictions on the assets of thrift institutions, may also have made banks more reluctant to lend. ...
>
> By the beginning of the second quarter of 1991, most of these factors had been reversed.

Thus, the OECD appeared to see an effect of banking system problems on the performance of the economy, but not to view those problems as central. We therefore classify this episode as a minor crisis–minus. This classification is consistent with the fact that we code the 1990:2 episode as a moderate crisis–minus, and that this issue describes the banking system as considerably improved relative to then, but as far from fully healed.

Japan, 1992:2. The opening summary paragraph of the entry on Japan read (p. 65):

> GDP growth has been slowing and labour market conditions have eased in the manufacturing sector. Against the background of declining industrial production, weakening consumer spending and concern about the effects of falling asset prices on the health of financial institutions, a comprehensive package of economic measures was announced in August. This aimed at increasing public investment, strengthening financial market confidence and containing the effects of non-performing loans on bank balance sheets. The measures were followed by a partial recovery in equity prices and should provide the basis for a return to moderate short-term growth. However, uncertainty attaches to their longer-run effectiveness.

The remainder of the OECD's analysis was consistent with this mixed assessment. For example, it said that "Bank lending has been held back by balance-sheet weaknesses," that "banks have been able to widen their interest-rate spreads," and that "banks have become more cautious in their lending behaviour: the criteria for loans are formally unchanged but customer collateral and income are being evaluated much more conservatively" (p. 66). But it also reported, "recovery in stock prices allowed the city banks to meet the interim BIS capital-adequacy targets," that "banks were also able to make a further issuance of subordinated loans," and that "Some relief has also come from increased operating profits" (p. 66). And the OECD did not mention the banking system in its three-paragraph discussion of economic prospects at the conclusion of the entry (pp. 68–69).

The facts that the OECD believed that banking-sector problems were clearly having an effect on the economy, but as not being central or as likely to prevent moderate growth, leads us to code this episode as a minor crisis–minus.

__Japan, 1993:1__. This episode is similar to the previous one. The banking system was not mentioned in the summary paragraph. However, the OECD reported (p. 63):

> Concern has remained about the surge in problem loans at financial institutions, as a result of continued weakness in real-estate prices, especially for commercial property. Land prices are estimated to have fallen by 8 per cent on average in 1992, with residential prices declining slightly less than commercial ones. To boost their operating income and strengthen their capital base in the face of mounting loan losses, the banks have adopted a cautious credit stance, tightening previously lenient credit standards and not offering lower lending rates to higher-risk customers. Despite this, overall bank profits fell substantially in FY 1992 due largely to write-offs of bad loans. Nevertheless, helped by increases in subordinated debts and the recovery in the stock market, all the city banks and long-term credit banks easily achieved the BIS target capital/asset ratio of 8 per cent at the end of March 1993.

The OECD also mentioned that the government had taken modest steps to improve the access of small and medium-sized firms to credit (p. 65); commented, "Increasing office-vacancy rates, falling rents and the effects of bad property loans on bank lending are also likely to act as a drag on commercial real estate investment throughout the projection period" (p. 65); and referred to "the problem of non-performing bank loans, which may inhibit bank lending for several years to come" (p. 66).

Thus, the OECD again believed that financial-sector difficulties were having an effect on the economy, but did not see them as central and described the health of the banking system in mixed terms. Another fruitful comparison is with two episodes in the United States: the problems here appear more serious than in the United States in 1991:2, which we classify as a credit disruption–plus, but less serious than in the United States in 1990:1, which we classify as a regular minor crisis. For all these reasons, we classify this episode as a minor crisis–minus.

__Japan, 1995:1__. This episode was similar to those in 1992:2 and 1993:1. The OECD said that "while the weakness of the banking sector does not appear to be a dominant factor holding back the recovery at this stage, its risk averseness is tending to weaken the response of bank credit supply to changes in monetary conditions" (p. 53). It identified "weak loan demand" as the main reason that "bank lending continued to stagnate" (p. 52). But it remarked, "the banking sector remains weak, as the capital position of the banks has suffered from the drop in the stock market" (p. 52). In addition, the description of the health of the banking system in this issue of the *OECD Economic Outlook* was more negative than those in 1994:1 and 1994:2, both of which we code as a credit disruption–plus. We therefore classify this episode as a minor crisis–minus.

__France, 1995:2__. The previous issue of the *OECD Economic Outlook* had described serious problems in the banking system but had not linked them to the performance of the macroeconomy; we therefore classify that episode as a regular credit disruption. In this issue, the OECD described the banking problems as slightly more severe (p. 60):

> The banking sector is suffering from structural weaknesses, resulting from its slowness to adapt to the liberalization of financial markets in the mid-1980s. Cyclical developments have aggravated these problems: while the wave of business bankruptcies peaked in 1993, difficulties in the real estate sector continue. Bank profitability has also suffered from upward pressure on short-term interest rates since mid-1992 and the sharp rise in loan loss provisions. ... The state has also provided financial support to five banks and one insurance company, the most important being the rescue package for Crédit Lyonnais.

Importantly, the OECD now tentatively linked the problems to potential reductions in credit supply: "Lending to the business sector ... has shown only a slight recovery, which reflects the high level of business savings, but could also be due to constraints on the supply of bank credit" (pp. 58–60). Since the OECD perceived the banking sector as being in worse shape than in 1995:1 and since it saw the possibility of constraints on credit supply, we code this episode as a minor crisis–minus.

Japan, 1996:2. The previous issue of the *OECD Economic Outlook* had described an economy with significant disruptions to credit supply; as described below, we classify that episode as a minor crisis–plus. Here, the OECD said relatively little about the financial system. Its comments were largely confined to one extended passage (p. 52):

> the fall in interest rates has given a boost to the operating profits of the major banks, thus contributing to the rebuilding of the capital base of the banks, eroded by substantial non-performing loans. The prospect of the financial system being destabilised by the failure of the *jusen* lending companies—which held about ¥ 13 trillion ($120 billion) of assets, most of which were of poor quality—has been avoided. The *jusen* themselves have been liquidated and a new public corporation now owns their assets. Both financial institutions and the government have funded the immediate writing-off of about half the *jusen*'s total assets.

The OECD's tone was that the banking system was noticeably improved but still far from fully healthy, and it did not explicitly link the financial-sector problems to credit supply or overall macroeconomic performance. On the other hand, it was clear that it viewed the banking system as far from fully healthy; and a government bailout, which had only been in the planning stages previously, had now occurred. These considerations lead us to code this episode as a minor crisis–minus.

Japan, 2000:1. This episode is similar to that in 1996:2. The OECD said, "Financial adjustment is continuing" (p. 57), and, "Surveys of overall credit supply conditions report a significant improvement, but smaller companies still mention tough bank lending attitudes" (p. 58). It also discussed banks in the context of "significant" downside risks: "any important rise in domestic interest rates would worsen the balance sheet in a number of sectors. The fiscal situation would become more difficult and banks could be faced with substantial capital losses, which would lower their lending capacity" (p. 61). Finally, it mentioned "the extension of government credit guarantees for small firms for another year" (p. 57).

Thus, as in 1996:2, the OECD viewed the situation as considerably improved relative to its previous assessment (which, as described below, we code as a minor crisis–plus), and did not view restrictions on credit supply as critical to the macroeconomic outlook. But it also saw limitations on credit availability to some borrowers, continued moderate government intervention in credit markets, and large risks to the outlook coming from the financial sector. We therefore classify this episode as a minor crisis–minus.

Turkey, 2002:2. In the previous issue of the *OECD Economic Outlook*, the OECD had described financial-sector problems that led to large government intervention, and that it believed were likely to significantly slow the economy's recovery from a recession. As described below, we code that episode as a minor crisis–plus. In this issue, the OECD put less emphasis on financial-sector problems, but still seemed to view them as significant. It said that "financial market turbulence has clouded the picture," but the specifics it focused on involved high interest rates and exchange rate depreciation, not rises in the cost of credit intermediation (p. 109). In the conclusion of its 800-word entry, however, it said: "Another source of downside risk is bank lending to the corporate sector, as non-performing loans continue to rise and put pressure on banks' capital" (p. 110).

Thus, the OECD continued to view the banking system as troubled—indeed, the only comparison it made with the earlier situation referred to an increase in nonperforming loans—and as potentially affecting growth. But it was considerably less sure than before that the difficulties would affect the economy's performance. We therefore classify this episode as a minor crisis–minus.

Turkey, 2003:1. In its 850-word entry on Turkey, the OECD made two references to the financial system. First, in its opening summary, it stated, "Slower growth is projected in 2003, mainly because of the continuing reluctance of domestic banks to lend, higher real interest rates, and the war in Iraq" (p. 109). Second, it said, "final domestic demand remained weak because of still high unemployment and the continued cautiousness by banks in their lending activities during the bank restructuring" (p. 109). It did not mention the banking system in its discussion of risks to the outlook (p. 111). Thus, the OECD perceived no noteworthy change in the health of the banking system from 2002:2. It believed that banking troubles were having a notable but not overwhelming effect on the macroeconomy. We therefore code this episode as another minor crisis–minus.

Japan, 2004:1. This episode, like Japan in 1996:2 and 2000:1, is one where the OECD described the financial system as improving but as still not healthy. As described below, we classify Japan in 2003:2 as in a regular minor crisis. Here, in its introductory section on policies and financial conditions, the OECD said, "In Japan, the financial environment has become less restrictive, except for firms with high credit risk" (p. 17). It also reported that "the major banks have made significant progress in cutting non-performing loans" (p. 47; see also p. 25). But it reported that "legislation to facilitate public capital injections into banks is being prepared" (p. 25); commented that "falling land prices have had a negative impact on bank balance sheets" (p. 46); and said that "the effectiveness of monetary policy remains limited by the problems in the banking sector that are contributing to the decline in lending" (p. 47; see also pp. 25 and 46). Because the OECD viewed the health of the financial system as improved but as still having a noteworthy impact on the economy, we classify this episode as a minor crisis–minus.

Canada, 2008:1. In its opening summary, the OECD said, "Economic growth is expected to bounce back in 2009 when credit market difficulties are worked out and the US economy recovers," and mentioned "the consequences of financial-sector stresses" as one factor that was hurting the economy (p. 118). It also said, "Credit conditions have worsened" (p. 118), and projected, "Business investment will ... suffer from the higher cost of capital as well as from weaker export prospects" (p. 121). And in discussing risks to the outlook, it highlighted "the credit crisis and adjustment in the US housing market," although it saw the risks from those factors to be largely symmetric (p. 122). At the same time, however, the OECD also stated: "despite not having been completely immune to the global credit contraction that started in mid-2007, Canadian banks are well capitalised, and asset write downs related to US mortgages have been relatively modest" (pp. 118–119).

This episode fits our criteria for a minor crisis very well: there were problems in the financial sector, they were nontrivial, and they were expected to have an impact on the economy that was noticeable but not major. Two considerations lead us to code the episode at the bottom end of the minor crisis category. The first is the fairly strong statement about the health of the banking system. The other is that a few of the references to financial difficulties (such as the discussion of "the credit crisis and adjustment in the US housing market") could be interpreted as referring to spillovers from financial problems in the United States on real activity in Canada rather than to increase in the cost of credit intermediation in Canada.

Germany, 2008:1. The entry for the euro area indicated a noticeable rise in the cost of credit intermediation. It stated (p. 94):

> International financial market turmoil, and the associated re-pricing of risk, has contributed to tighter financial conditions in the euro area. Bank lending standards have tightened, financial market sentiment has declined and money-market spreads have widened. Spreads between the average interest rates charged for new long-term loans to the private sector and government bond rates have risen by more than 50 basis points since the onset of the financial crisis, pushing up the effective cost of borrowing.

In discussing the risks to the outlook for the euro area, the OECD wrote: "the negative impact of domestic financial market strains and, for some countries, housing market downturns, could be steeper and more protracted than projected" (p. 97).

The entry for Germany gave a somewhat mixed assessment. On the one hand, the opening summary said, "So far, there is little evidence of significant adverse effects on the real economy coming from the financial turmoil" (p. 98), and that assessment was repeated later in the entry (p. 100). On the other hand, the OECD described the financial turmoil as causing "tighter credit standards and higher costs of capital for most companies" (p. 100), and it reported, "Growth in business investment is projected to ease throughout the projection horizon, reflecting growth trends as well as the tightening of financial conditions" (p. 102). It also saw an important risk to the economy "if the financial turmoil turns out to be deeper and longer lasting than assumed" (p. 102).

The fact that the OECD believed that the cost of credit intermediation had increased economy-wide, but that it did not view this development as central to the outlook, leads us to classify this episode as a minor crisis. The facts that it saw the increase as having relatively little impact on the economy and mainly as posing a risk suggest that it did not view it as severe, and so causes us to put the episode in the bottom part of the minor crisis range.

Italy, 2008:1. This episode is similar to Germany in 2008:1. The OECD saw a clear-cut but not overwhelming rise in the cost of credit intermediation: "Interest rate spreads widened in Italy as elsewhere, under the influence of the turmoil in financial markets, and indicators suggest that credit is more difficult to obtain for firms, though conditions for households may have eased" (p. 108). And in the opening summary, it said that it expected some impact on economic activity: "The weakening external environment and knock-on effects from tighter credit conditions will constrain growth to below its potential rate ... this year" (p. 108). But it also saw only "Limited direct effects of financial turmoil" (p. 108), and reported, "According to the Bank of Italy, Italian banks have been able to access funds available in the Eurosystem refinancing facility on relatively favourable terms" (p. 109). In the same spirit, the OECD saw risks, but did not believe them to be dire: "although there may still be unpleasant surprises in store, the likelihood that Italy is vulnerable to domestic financial risk seems less than it did a few months ago" (p. 112). Finally, as described in our entry for Germany for 2008:1, the OECD detected a noticeable rise in the cost of credit intermediation in the overall euro area.

Thus, as with Germany, the OECD believed that the cost of credit intermediation had increased economy-wide and was having an effect on the overall performance of the economy, but it did not view this development as central to the outlook. We therefore classify this episode as a minor crisis–minus.

Norway, 2008:1. In its entry, the OECD made several references to noticeable financial disruptions. In the opening summary, it merely said that "financial conditions are uncertain" (p. 168). But in the body of the entry, it stated: "Although there are few signs of serious credit crunch effects, monetary conditions are becoming more restrictive. Credit growth to the private sector has started to suffer from tighter lending conditions in the wake of international financial turbulences" (pp. 169–170). It also reported that tight monetary policy was being "augmented by the higher-than-usual spread between money market and policy interest rates" (p. 170). And in its discussion of risks, the OECD said: "Tighter lending conditions, which are already affecting the private sector, may also turn out to be more severe if there are further tensions in financial markets where Norwegian banks are significant borrowers" (p. 170). Because the OECD saw a clear rise in the cost of credit intermediation but saw it as having only minor effects on the economy and mainly as posing a risk to the outlook, we classify this episode as a minor crisis–minus. The episode appears similar to Canada and Germany in 2008:1 (both of which we classify as minor crises–minus) and as slightly more severe than New Zealand in 2008:1 (which we classify as a credit disruption–plus).

Sweden, 2008:1. The OECD may no mention of financial disruption in the opening summary of its entry. But it devoted most of a paragraph of the entry to financial market problems, under the heading, "Tighter financial conditions constrain domestic demand" (p. 184). It reported: "While international financial market turmoil does not appear to have significantly affected the Swedish financial system so far, the cost of borrowing has increased due to widening credit spreads and tighter monetary policy" (p. 184). The only component of demand that it said clearly would be affected by these developments was residential investment, which was "likely to be affected by higher financing costs and weak consumer confidence" (p. 184). In addition, the discussion of risks to the outlook devoted considerable attention to possible problems arising from financial disruption: "if international financial market stress were to spill over more seriously to the Swedish financial sector, borrowing costs would rise and confidence would deteriorate further, compounding the slowdown in domestic demand. Of particular concern is the high exposure of Swedish banks to the Baltic States" (p. 185).

Thus, the OECD identified a clear rise in the cost of credit intermediation and said it would have some impact on the economy. At the same time, it did not appear to view it as central to the outlook. We therefore classify this episode as a minor crisis–minus. It is similar to Germany in 2008:1.

Switzerland, 2008:1. The OECD stated, "Financial turmoil has tightened monetary conditions somewhat" (p. 187), and reported, "The recent asset write-downs by the two largest Swiss banks ... could have some impact on lending conditions, although about half of the resulting losses have been offset by subsequent equity issuance" (p. 187). It expected "Declining external demand and more restrictive credit terms will damp investment activity" (p. 188), but it did not mention any impact on consumption. In addition, in its discussion of risks, it said, "Additional asset write-offs in the banking sector ... could lead to significant tightening of domestic lending conditions" (p. 188).

The OECD's discussion of asset write-downs and tighter credit show that it saw a rise in the cost of credit intermediation. Moreover, it believed the rise would have some impact on the economy and posed a downside risk. At the same time, it did not suggest that the rise was severe or central to the outlook. We therefore classify this episode as a minor crisis–minus. (The OECD also saw adverse effects of financial turmoil operating through worse "business prospects in asset management, in which Swiss banks are specialised" [p. 187] and lower "financial-sector value added" [p. 188]. However, these are not related to the cost of credit intermediation, and so do not affect our scaling of the episode.)

Australia, 2008:2. The OECD described significant disruptions to the financial system that prompted substantial government intervention. The opening summary referred to "the need to preserve the stability of the financial system" (p. 123), and the entry reported that the government had "guaranteed bank deposits and the borrowings of financial institutions to facilitate their access to international credit markets" (p. 124). But the OECD did not describe large effects on credit availability or economic activity. The opening summary said that "despite the depressed international environment, the impact of the financial crisis and the fall in the terms of trade should be relatively contained" (p. 123). And the body of the entry said only that "the expansion of credit, access to which has become more difficult, has slowed" (p. 123). Finally, the discussion of risks in the conclusion of the entry placed considerable emphasis on global financial turmoil but made no explicit mention of disruptions to domestic credit supply (p. 125).

The combination of significant financial disruption and noticeable but not enormous effects on credit availability or the overall economy leads us to classify this episode as a minor crisis–minus. One potentially useful comparison is with Canada in 2008:2, which is similar but slightly more severe and which we code as a minor crisis–regular.

Belgium, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

In addition, the material preceding the country entries described extensive actions by Belgian authorities to stabilize the financial system: expenditures of 6.2 percent of GDP to recapitalize four banks (p. 63), increased deposit insurance (p. 74), and loan guarantees (p. 76). In comparison, the entry for Belgium placed much less emphasis on financial disruption. The only discussion was in the concluding paragraph on risks, which referred to "financial market turbulence," "financial turbulence," and the possibility of "decisive action to bolster the financial sector" (p. 131).

The severity of the overall euro area problems and the large interventions indicate that this episode is more than a credit disruption. But the absence of any explicit discussion of disruptions to domestic credit supply or impacts on the Belgian economy suggests that it is only slightly above this range. We therefore classify it as a minor crisis–minus.

Finland, 2008:2. Neither the opening summary of the entry nor the concluding paragraph on risks made any mention of disruptions to credit supply. But the body of the entry invoked them several times and viewed them as affecting the performance of the economy. The OECD said that "the housing market has turned, reflecting higher interest rates and tighter credit conditions" (p. 138). And a longer discussion stated: "Business investment will suffer from the weakening outlook, tight credit conditions and further downsizing in the capital-intensive pulp and paper industry. Housing investment will also be affected by tighter credit conditions" (p. 139). The OECD also reported that the government had increased deposit insurance and provided loan guarantees (p. 76). Finally, as described in our entry for Belgium for 2008:2, the OECD perceived a significant rise in the cost of credit intermediation in the overall euro area.

This episode matches our definition of a minor crisis: the OECD saw significant problems in the financial sector, believed they were having a nontrivial effect on credit supply and overall economic performance, and did not view them as severe enough to be central to economic developments. The facts that the OECD did not think the disruptions warranted mention in the opening or conclusion of the entry and that it put their impact on a par with such developments as the investment impact of downsizing in paper and pulp lead us to classify the episode as a minor crisis–minus. One useful comparison is with Belgium in 2008:2. Relative to that episode, the description of financial disruptions and policy interventions here is somewhat weaker, but the discussion of economic effects somewhat stronger. The two episodes thus seem similar in overall severity.

Greece, 2008:2. This episode is similar to Finland in 2008:2. Neither the opening summary of the entry nor the concluding paragraph alluded to increases in the cost of credit intermediation. But the body of the entry said that "consumption was weighed down by surging energy and food prices and tighter credit conditions" (p. 141), and stated, "Economic activity is projected to remain sluggish over the next few quarters reflecting the impact of the financial turmoil and the associated tightening of credit standards, weaker consumer and business confidence, a softer external environment, and the somewhat tighter fiscal stance" (pp. 142–143). The OECD also reported increases in deposit insurance, loan guarantees, and capital injections (p. 76). Finally, as described in our entry for Belgium for 2008:2, the OECD perceived a significant rise in the cost of credit intermediation in the overall euro area.

In light of the fact that the OECD saw clear disruptions to credit supply that were affecting the economy, but that it did not make them at all prominent in its assessment of the economy or its prospects, we code this episode as a minor crisis–minus.

Finland, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have

> raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that “Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies” (pp 81–82). It also said that “There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy” (p. 82).

The opening summary of the entry on Finland reported that the government had responded to a deteriorating economy “with assistance to banks to maintain liquidity and confidence” (p. 122). The OECD also said, “While Finnish banks were not exposed to toxic assets, the intensification of the global financial crisis reduced credit availability and heightened levels of uncertainty” (p. 122). It went on to say that these developments had hurt the economy, but did not cite a direct impact through lower credit supply: “These shocks hit both business and consumer confidence, leading to weakening business investment and household consumption” (p. 122). The OECD also described policy actions to relieve financial distress: “The government has also prepared a support package for banks with capital injections and credit guarantees, although the relatively sound banking sector has not yet had to access these facilities. The government has also provided assistance to businesses through credit supply support and trade finance” (p. 123). Finally, in its discussion of risks, it said, “While financial conditions are improving, considerable uncertainty remains regarding the outlook as the slowdown will hit bank balance sheets” (p. 124).

On net, there appears to have been little change in the OECD’s assessment of Finland’s financial system relative to 2008:2, which we classify as a minor crisis−minus. On the one hand, here the OECD said that financial conditions were improving and put much more emphasis on the fundamental soundness of the system. On the other, financial problems were mentioned in the opening summary and in the discussion of risks, and the government was taking some additional actions. We therefore also classify this episode as a minor crisis−minus. This is consistent with the facts that the OECD perceived distress that was affecting the economy, but that it did not view the system as being remotely close to a crisis and did not focus on distress in its overall assessment of the state of the economy or its prospects.

Japan, 2009:1. There was no mention of financial distress in the opening summary of the entry. Likewise, two one-paragraph overviews of the situation in Japan in the material preceding the country entries made no mention of distress (pp. 20 and 40−41). There was also a comment in the material before the country entries that, based on surveys of bank lending standards, “credit conditions have remained broadly stable, with a slight improvement for medium-sized firms” (p. 33n). The body of the entry contained a much more extended discussion of the financial system (pp. 73−74):

> Financial-market conditions tightened as risk premia widened and the capitalisation of the Tokyo Stock Exchange fell by one-half, reducing household wealth. These developments forced large firms to return to indirect financing, resulting in a significant pick-up in the growth of bank lending. However, a decline in loans to small and medium-sized enterprises contributed to a sharp increase in the number of bankruptcies.

The OECD also said that a further drop in land prices was likely, “creating a risk of balance-sheet adjustments that would put additional pressure on the corporate and financial sectors”

(p. 75). It reported that the Bank of Japan was "implementing a number of measures to provide extra liquidity," and said that the measures "have improved credit conditions" (p. 76). Finally, the discussion of risks commented, "Although the banking sector is adequately capitalised at present, the sharp fall in output could further disrupt the financial sector, putting additional downward pressure on economic activity" (p. 77).

This evidence is consistent with financial disruption that was more than narrow or trivial and that prompted some policy response, but that was not extensive and not close to central to macroeconomic developments. We therefore classify this episode as a minor crisis−minus. This episode is similar to Japan in 2008:2, which we classify as a credit disruption−plus, but included more explicit discussion of impacts on current credit availability.

Netherlands, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The entry on the Netherlands made almost no mention of financial distress, citing numerous other factors that were affecting the economy or that posed risks. But it did report, "Government interventions aiming at stabilising the financial markets have increased the gross public debt by roughly 12.6% of GDP in 2008" (p.148). This was considerably higher than the figure given in the 2008:2 issue of the *OECD Economic Outlook*, and so suggests significant recent intervention. More importantly, the entry included one very strongly worded statement about financial problems that is unrelated to the rest of the entry: "despite the government interventions, credit conditions have been tightening more sharply than in the euro area at large, exacerbating liquidity constraints" (p. 147).

If distress in the Netherlands was actually worse than in the euro area as a whole, it would have been very high. Yet this is hard to square with the complete lack of emphasis on distress, with the absence of any explicit discussion of sharply increasing distress from 2008:2 (for which we classify the Netherlands as a credit disruption−plus), and with the fact that all that the OECD says about the impact of the tighter credit conditions was that they exacerbated liquidity constraints. Instead, since the evidence is similar to the 2008:2 episode but suggests new interventions and includes the statement that credit conditions had worsened, we move up one notch from 2008:2 and classify this episode as a minor crisis−minus. A possible interpretation of the statement about tightening conditions that is consistent with this classification is that perhaps the OECD was saying that conditions in the Netherlands had tightened since 2008:2 while those in the euro area had changed little, so that conditions in the Netherlands had tightened relative to those in the overall euro area since 2008:2, but were not tighter than in the euro area.

<u>Austria, 2009:2</u>. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

The entry for Austria did not focus on financial conditions. But it provided one extended discussion under the heading, "Financial market conditions have improved" (p. 164):

> Austrian government bond spreads *vis-à-vis* Germany narrowed to below 40 basis points at end-October, reflecting lower perceived risks to the financial sector in Austria. The interbank spreads in the euro area have narrowed. Since the start of 2009, new credit to households has increased slightly and new credit to companies has remained broadly unchanged.

In addition, the discussion of risks said, "The risk of a financial crisis in Central and Eastern Europe has diminished, but rising non-performing loan ratios would put the Austrian banking sector under pressure, entailing a downside risk to fiscal projections" (p. 165).

We code Austria in 2009:1 as a moderate crisis−minus. The language here consistently refers to improvements and diminished risks. But it does not say that the financial system has healed and it explicitly notes that risks remain. Likewise, improving financial conditions are never mentioned as a factor helping the economy, suggesting that the financial recovery was short of dramatic. Moreover, the general discussion of the euro area suggests important ongoing financial problems. Taken together, this suggests nontrivial but not large ongoing financial problems and risks. We therefore move three steps down from our scaling in 2009:1, and classify this episode as a minor crisis−minus.

<u>France, 2009:2</u>. The entry's one significant discussion of the health of the financial system came in a self-contained paragraph (p. 141):

> Deft use of both conventional monetary policy and unconventional tools, by both the European Central Bank and the government, has succeeded in bolstering confidence in the banking sector, thereby mitigating the effects of the financial crisis. French banks have been among the first European institutions to raise private capital to repay the government. However, it is not yet clear if the quality of banks' balance sheets has been sufficiently restored. Easy monetary conditions have not been fully transmitted to credit growth because of banks' attempts to rebuild their margins.

The entry also included two other references to the "financial crisis" (pp. 140 and 143), although it is not clear whether the OECD was referring to the global crisis or to domestic problems. Finally, as described in our entry for Austria for 2009:2, the OECD believed that credit market conditions in the euro area at large had improved over the previous half year, but remained substantially troubled.

Both the entry on France and the discussion of the overall euro area suggest some improvement in France from 2009:1, which we code as a minor crisis–plus. Moreover, financial sector problems were far from central to the OECD's analysis, since it confined its discussion of them to one paragraph. Nonetheless, the OECD still saw nontrivial financial distress. It said that actions had merely mitigated the effects of the crisis; noted remaining doubts about the quality of bank balance sheets; said that banks' troubles were causing them to not pass lower policy rates fully into credit availability; and described ongoing problems in the euro area. We therefore classify this episode as a minor crisis–minus.

Germany, 2009:2. The OECD did not mention financial distress in its opening summary. The remainder of the entry points to a financial system that was somewhat but not dramatically improved relative to 2009:1. It said, "The situation in the banking sector has stabilised over recent months, even though credit growth remains weak, primarily due to a lack of demand for funds" (p. 136). Similarly, the assessment of risks stated, "developments in financial markets which could go either way. On the downside, banks could restrain credit growth if increasing loss provisions hit already weak bank balance sheets, thus inhibiting investment spending" (p. 139). The OECD also cited "easier financial conditions" as one factor contributing to rising investment (p. 136). In the material preceding the country entries, it reported that "a framework to deal with impaired assets was approved by Parliament in early July," but that "Demand for the programme has been weak" in part "due to improved financial conditions" (p.52). It said, "It remains to be seen whether" the government's actions to help banks "will be enough to facilitate their recapitalisation" (p. 53)—suggesting that the OECD viewed banks as undercapitalized. Finally, as described in our entry for Austria for 2009:2, the OECD believed that credit market conditions in the euro area at large had improved over the previous half year, but remained substantially troubled.

Based on this evidence, we lower our assessment by one notch relative to 2009:1, and so classify this episode as a minor crisis–minus. This classification is consistent with the fact the OECD clearly viewed the financial system as a considerable distance from fully healed, but that it did not emphasize financial distress in its assessment of the condition of the economy.

New Zealand, 2009:2. In its opening summary, the OECD said that "the recovery could be hampered" by four factors, one of which was "ongoing credit contraction" (p. 202). It also said that the investment rebounded that it projected was "premised ... on an eventual easing of credit conditions to businesses" (p. 204), implying that the OECD viewed those conditions as currently tight. It also discussed weak credit growth, but seemed to attribute it more to demand than supply: "Credit growth continues to decline, boding poorly for private demand. Indeed, unlike in previous recoveries, businesses may be loathe to hire and invest in a major way any time soon" (p. 203). Finally, the OECD mentioned a small new policy action: "The retail deposit insurance scheme has also been extended for another year (following Australia), albeit with tighter limits on eligibility" (p. 203).

The OECD's description suggest notable improvement relative to 2009:1 (which we classify as a minor crisis–plus), with no discussion of interest rate spreads or of risks from the financial sector. But it also suggests that financial problems were affected overall economic performance in a nontrivial way. We therefore classify this episode as a minor crisis–minus.

Sweden, 2009:2. The OECD did not mention financial problems in its opening summary, and it went on to describe a financial system that was improved from 2009:1 but well short of fully healed. It said, "Financial market conditions have ... improved, with spreads on interbank and mortgage rates having reverted towards more normal levels. Lending to households has started to accelerate, although lending to firms is still slowing" (p. 220). An accompanying chart showed that spreads were declining but still elevated (p. 220). The OECD also commented, "Additional longer-term refinancing operations may be needed to ensure proper functioning of the money market" (p. 221). And its discussion of risks was headed, "Financial instability remains a key risk," and said (p. 222),

> In addition to the uncertainties surrounding the global financial and economic recovery, Swedish banks' exposure to Eastern Europe remains a key issue. The impact of further substantial losses in the Baltics would be cushioned by the Swedish government's financial sector measures, but the process of absorbing such losses could be extended and could delay the overall recovery.

This episode is similar to Germany in 2009:2. As in that episode, the OECD viewed the financial system as improved but as well short of fully healed, and financial distress as still present but not as central to the outlook. Relative to Germany, the discussion of risks was more negative; but the OECD's negative assessment of the health of the overall euro area was directly relevant to our assessment of Germany's situation but not to that of Sweden. We therefore also classify this episode as a minor crisis−minus. Another relevant comparison is with Sweden in 2009:1. We code that as a minor crisis−regular, and the description here is slightly less negative and states explicitly that conditions had improved.

Austria, 2010:1. The entry for the euro area overall described a slight improvement from 2009:2, but still substantial distress. Under the heading "Financial conditions improved gradually but risks remain," the OECD wrote (pp. 89–90):

> Financial conditions have gradually improved as policy rates remain low and confidence recovers, although fragilities have been exposed by the recent financial market volatility. While short interbank rates have remained at extremely low levels, reduction in lending rates for non-financial corporations and households only partly reflected the fall in banks' funding rates. High lending spreads compared with historical norms may in part reflect higher risk premia but competition may also have suffered as a result of the crisis. Credit growth has weakened further with bank credit to non-financial corporations continuing to contract, although issuance of corporate debt has been strong. Concerns about credit quality and the health of the European banking sector remain as European banks are unlikely to have cleaned their balance sheets of all toxic assets.

The OECD suggested that credit problems were affecting demand when it said: "Investment is likely to recover only gradually in the coming quarters, held back by remaining excess capacity, continued credit constraints and weak growth prospects" (p. 92). Finally, the entry also discussed "strong pressures on sovereign bonds of some members and risk of contagion to other financial markets," (p. 91)—suggesting that sovereign debt problems in Greece and other countries could impair private credit availability.

The OECD did not mention the financial system in the opening summary of its entry on Austria or in a long concluding paragraph on risks to the outlook. But it reported, "Investment ... kept declining due to demand uncertainty and still tight financing conditions" (p. 121). And in a paragraph headed, "Financial markets are normalizing," it said (p. 122):

> Austrian government bond spreads *vis-à-vis* Germany have narrowed, reverting to around pre-crisis levels. ... Total credit continued to shrink, reflecting both demand and supply factors, but credit to households expanded marginally. The rising costs of risk provisioning (mainly due to foreign operations) affected Austrian banks' profitability in 2009, although they enjoyed healthy operating profits.

This evidence points to nontrivial financial problems, and thus to at least some type of minor crisis. At the same time, the financial problems are cited in regard to specific points rather than being made a key part of the overall assessment, and the OECD's general tone in describing the financial system is not at all dire. Thus, the episode clearly does not rise to the level of a moderate crisis. Moreover, the OECD's view was that if anything the financial system had improved, and we classify Austria in 2009:2 as a minor crisis−minus. We therefore place this episode in the same category.

Germany, 2010:1. The only discussion of financial distress in the entry on Germany came in the concluding paragraph on risks, which said, "a deterioration of the situation in the banking sector may adversely impact credit availability and costs and thus investment growth" (p. 97). In the material preceding the country entries, the OECD discussed "concern that the possibility of a default in Greece could generate losses that might destabilise the banking sectors of creditor countries," including Germany, but it judged the possible losses "manageable" (p. 20). It went on to say, however, that in the event of contagion to Portugal and Spain, "the impact on the capital of French and German banks could be more challenging" (p. 20). Finally, as described in our entry for Austria for 2010:1, the OECD saw substantial distress in the euro area as a whole and only slight improvement from 2009:2, and it raised the possibility of spillovers from problems in sovereign bond markets to private credit availability.

We view this episode as on the margin between a credit disruption and a minor crisis. First, there are the statements of risks, which alone put the episode well into the credit disruption range. Second, we classify Germany in 2009:2 as a minor crisis−minus, and the current entry makes no mention of any improvement; this argues against going much below a minor crisis−minus. Finally, Germany is the largest economy in the euro area, and the OECD described substantial ongoing financial distress in the euro area as a whole. In our view, this tips the appropriate classification of Germany to minor crisis−minus. One useful comparison is with France in 2010:1, which we classify as a credit disruption−plus. As with Germany, we code France in 2009:2 as a minor crisis−minus. However, the 2010:1 entry on France, in contrast to that on Germany, describes improvement in the financial system, suggesting that it is appropriate to categorize distress in 2010:1 as slightly greater in Germany than in France.

Spain, 2010:1. The opening summary of the entry made no mention of the financial system. But the remainder of the entry contained several references. It reported: "Non-performing loan ratios have continued to rise, albeit at a declining pace, and are still modest by historical standards. Delinquency ratios have risen more strongly for housing developers. Banks most affected by deteriorating loan portfolios appear not to have tightened lending" (p. 180). It also said, "housing transactions remain close to the crisis trough, even though banks eased credit conditions" (p. 178)—a statement that at first glance suggests recent improvement, but for which a more likely interpretation is that current credit conditions are being compared with those at the crisis trough. In addition, the discussion of risks raised concerns: "A slower improvement of the labour market would lead to a higher government deficit, damp consumer confidence and weaken banks' loan portfolios, raising the risk of more restrictive lending" (p. 180). Finally, as described in our entry for Austria for 2010:1, the OECD saw substantial distress in the euro area as a whole and only slight improvement from 2009:2, and it raised the possibility of spillovers from problems in sovereign bond markets to private credit availability.

Relative to the entry on Spain in 2009:2, which we classify as a credit disruption–plus, the current entry is slightly more negative: it mentions some rise in nonperforming loans and cites a risk of reduced credit supply. We therefore classify this episode as a minor crisis–minus. This classification is consistent with the fact that the OECD did not see a large impact of current distress on the economy, but perceived some current disruption and notable risk, as well as a financial system in the overall euro area suffering from substantial distress.

Italy, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

The OECD did not discuss financial distress in the opening summary of its entry on Italy. But it went on to say,

> The economy has been recovering from the strong decline in 2009 and picked up through the first half of 2010, led by a strong bounceback in both exports and investment. To a considerable extent this was due to greater confidence in credit markets, which reduced the need for companies to economise on working capital and investment.

And in the concluding paragraph on risks, it said:

> the main domestic risk to the growth projections is on business investment. If the surge in the first half of 2010 is due more to government incentives than improved prospects and financial conditions then it may fade, but there is also a possibility that it could grow considerably faster if businesses are willing and able to finance more normal levels of investment.

The OECD's view of Italy financial situation had clearly improved markedly from 2010:1 (which we classify as a minor crisis–plus). Then, the OECD referred repeatedly to tight credit conditions; here, instead, it mentioned improvement. But there are still indications of nontrivial distress: the OECD referred to a reduced need to economize on working capital (implying that there was still some need); it expressed uncertainty about whether rising investment was due to improved financial conditions; it implied that firms might not currently be able to finance normal levels of investment; and it described still noteworthy distress in the euro area as a whole. We therefore classify this episode as a minor crisis–minus. This is consistent with both the OECD's description of notable improvement since 2009:2 and the evidence of nontrivial ongoing distress.

Spain, 2011:1. The OECD's entry on the euro area gave a generally upbeat assessment of the health of the financial system, but suggested some lingering distress overall and serious problems in some countries. The opening summary said, "financial conditions have improved" (p. 90). The entry went on to say, "Improved overall financial conditions are contributing positively to growth, while non-standard policy measures and government support for the financial sector are being gradually wound down" (p. 92). It also cited "more favourable financial conditions" as one reason that "Private non-residential investment will bounce back" (p. 94). But it also saw residual problems, referring to "remaining weakness in the banking system" and the need "to ensure that credit availability does not constrain the recovery" (p. 92). In addition, the OECD indicated that the situation was considerably more serious in some euro countries: "For several countries, sovereign spreads remain at very high levels and the state of the banking system, as well as financial conditions, is still fragile" (p. 92). It made a similar remark in its concluding discussion of risks, but without being as clear about how broadly its concerns applied: "Weaknesses in government and bank solvency could lead to wider financial tensions and contagion, which would test the European Financial Stability Fund (EFSF) and the banking system" (p. 94).

The entry on Spain included a long discussion revolving around the health of the banking system (p. 190):

> The authorities have taken several measures to reduce investors' risk perceptions. Banks have been required to publish detailed information on real estate exposures. Capital requirements have been raised. Savings banks, which have undergone restructuring but face substantial exposure to the housing developers, will need injections worth 1.4% of GDP, partly from the government, to meet these new requirements.

In addition, the concluding discussion of risks stated, "A persistent interest rate spread on government debt could result in a deterioration of funding conditions in the private sector" (p. 190). Finally, the material preceding the country entries mentioned Spain (together with Belgium and Italy) as a country where, "to a more limited extent" than in Greece, Ireland and Portugal, "sovereign risk spreads over Germany remain elevated"; and it went on to say, "Concern about the value of government bonds is tied closely to fears about banks' solvency" (p. 51).

Thus, the OECD clearly saw nontrivial problems in the banking sector. Authorities took a range of policy actions; the comment about investors' risk perceptions suggests that banks' funding costs may have been elevated; and the OECD saw significant risks. This episode therefore appears to rise above a credit disruption. On the other hand, there was no explicit discussion of reduced credit supply or of any impact on the economy, and the discussion was slightly less negative than that for Spain in 2010:2, which we code as a regular minor crisis. We therefore classify this episode as a minor crisis−minus.

Iceland, 2011:2. The OECD's discussion of the health of the financial system was confined to an extended passage under the heading, "Financial stress is receding and monetary accommodation is gradually being withdrawn" (p. 140):

> Considerable progress is now being made in restructuring nonperforming loans to households and small businesses, improving their financial situation and increasing banks' capacity to lend to viable clients. The main banks appear to be well capitalised. ... The government is ... advancing on ... the strategy to lift capital controls, although this is unlikely to occur by 2013.

We classified Iceland in 2011:1 as a moderate crisis−minus. The current entry shows that the OECD viewed the financial system as considerably improved. But several elements indicate that the OECD still saw nontrivial distress: the reference to financial stress merely as receding, the fact that the OECD viewed the financial system as not being close to ready for the removal of capital controls, and the statement implying that banks' capacity to lend could still be increased. The first two of these in particular point to notable continuing distress, and thus to the minor crisis range. But the clear statements of considerable improvement, as well as the absence of any explicit reference to impacts of the distress on overall economic performance, point to the bottom of the range. We therefore classify this episode as a minor crisis−minus.

France, 2012:1. The OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary began, "Activity has stagnated after contracting in end-2011 and unemployment is set to rise further, owing to weak confidence and difficult financial conditions related to the sovereign debt crisis" (p. 74). The summary also identified "how to simultaneously address needs of governments and banks" as an important challenge, and said that "bank balance sheets should be strengthened" to support growth (p. 74). Under the heading, "The economy has stagnated," the entry said: "in the latter half of 2011 ... tensions increased in the interbank market," and, "Risk spreads on government debt of some countries increased, ... putting further funding pressures on banks" (pp. 74–75). The entry also reported: "bank balance sheets remain weak, despite increased liquidity provision from the European Central Bank. ... The April 2012 ECB Bank Lending Survey points to a further tightening in bank lending standards to households and corporations, through at a slower rate than in late-2011" (pp. 75–76). Finally, the OECD warned, "The risks are large and mainly on the downside," and listed as one of two main downside risks, "the possible intensification of the sovereign debt crisis, which would further undermine confidence and the financial system" (p. 77). The entry concluded, "On the upside, more rapid repair of the financial system and ambitious structural reforms would improve the growth outlook" (p. 77)—implying that problems in the financial system were affecting growth.

The OECD did not mention problems in the financial sector in the opening summary of its entry on France. But the entry addressed financial issues in several places. It said, "While capital formation and credit to non-financial companies have withstood the headwinds, firms' margins and self-financing rates have fallen to low levels. Hence, business investment and employment are projected to be more affected by sluggish demand than until now" (p. 82). The implication seemed to be the outside credit might be difficult to obtain. The entry went on to say, "The extent to which banks' further capitalisation needs will squeeze credit supply is unclear" (p. 82). The entry also said, "The housing market has started to weaken due to a combination of lower public support, tighter credit conditions, reduced affordability and lower income prospects" (p. 83), and it listed "cautious bank lending policies" (p. 83) as one of four factors likely to affect construction. Finally, the OECD projected that "the strength of the pick-up in business investment might be limited by weakened financing capacity" (p. 85; this may have been an allusion to the earlier point about self-financing).

This episode appears to be at the lower end of the minor crisis range. The OECD saw bank capital needs and constraints on credit supply, described impacts on the economy and risks, and discussed significant problems in the euro area as a whole. All of this points to some type of minor crisis. But its language was often tentative (with terms such as "unclear" and "might") or mild (with the OECD referring to lending merely as "cautious," or only implying a problem in credit supply, or listing numerous factors in addition to credit supply). One useful comparison is with France in 2011:2, which we classify as a regular minor crisis. That episode is similar to the present one, but the OECD's language in that case is starker. We therefore classify this episode as a minor crisis–minus.

Netherlands, 2012:1. As described in our entry for France for 2012:1, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. In the opening summary of its entry on the Netherlands, the OECD did not discuss financial issues. But the entry reported, "Housing markets have weakened as banks have tightened mortgage credit reflecting their reduced access to capital markets in the wake of the euro area crisis" (p. 139). And the concluding discussion of risks began, "A main downside risk is further substantial declines in house prices, which would put additional pressure on banks and further depress private consumption"—which, among other things, implied that banks were already under pressure.

This evidence is consistent with the lower end of the minor crisis range. The OECD described increases in the cost of credit intermediation and risks. And it neither downplayed them as limited nor used strong language to describe them. Moreover, it did not mention them in its introductory summary, and it only discussed consequences for the macroeconomy through the housing sector. We therefore classify this episode as a minor crisis–minus.

Minor crisis–regular:

United States, 1990:1. Over the course of a long entry, the OECD referred to credit-market problems several times. For example, it reported: "domestic financial conditions are rather unsettled, due largely to insolvencies in the thrift industry, a stricter regulatory stance, defaults on 'junk' bonds, and problem real estate loans in some regions. As a result, borrowing costs have risen for some categories of borrowers. Higher borrowing costs may also be related to the rise in interest rates world-wide" (pp. 53–54). Similarly, it mentioned "signs that banks have restricted credit to certain classes of borrowers," and said, "The Federal Reserve has expressed concern about the deterioration in indicators of financial stress among some borrowers, with implications for lenders, including commercial banks" (p. 56). It also stated, "Commercial bank profits in some regions (notably New England) have been adversely affected by problem real estate loans. As a result, banks have restricted credit to below-investment grade companies and reduced construction loans to builders" (p. 56).

In assessing the overall effects of these issues, the OECD's judgment was mixed. On the one hand, it commented, "There does not appear to be a generalised credit squeeze" (p. 56); and it said, "The effects of recent financial disturbances should remain limited and localised, and financial tensions are more likely to amplify a downturn than precipitate one" (p. 58). On the other, it said, "there are substantial uncertainties attaching to monetary policy effects which could yet have marked effects on credit availability" (p. 58).

This episode clearly fits our criteria for a minor crisis. The OECD had no doubt that there was a reduction in credit supply. It viewed it as noteworthy but not pervasive, and as posing significant risks. We therefore code this episode as a minor crisis–regular.

Japan, 1991:2. This episode is similar to the United States in 1990:1. The OECD reported (pp. 68–69):

> The banking sector is undergoing a balance sheet adjustment which has made it more cautious in its lending. ... There has now been a shift towards a quality-oriented

> lending strategy, based on the Bank for International Settlements' (BIS) capital adequacy guidelines. Lending institutions have adopted a more disciplined and prudent credit policy, based on the need for enhanced risk management and strengthened capital positions. The consolidation process has been complicated because the fall in equity prices during 1990 weakened the banks' capital base. Together with tighter monetary policy, the result of this process has been a substantial rise in the cost of capital and a deterioration in the business investment climate.
>
> One consequence is that the ratio of business fixed investment to GNP is likely to fall further in 1992 from the historical peak attained in 1990.

It also said (p. 71):

> because of prudential considerations, banks have not been competing aggressively for deposits and have become more risk-conscious in their lending. ... because part of the banks' capital base includes the capital gains from equity holdings, the fall in the stock market has reduced their willingness to extend credit. ... financial institutions appear to be less eager to extend credit than at any time since the early 1980s.

Finally, it remarked, "the need to strengthen bank balance sheets, though making for slow credit growth, is not currently so severe as to imply the existence of a 'credit crunch' " (p. 73).

Thus, the OECD perceived several factors that were causing a notable reduction in credit supply, but did not see a severe reduction. Thus, this episode fits our criteria for a minor crisis–regular.

Norway, 1992:1. In 1991:2, the OECD had reported severe financial-market problems in Norway that, as described below, we classify as a moderate crisis–plus. In its 500-word entry on Norway in 1992:1, the OECD reported: "Adversely affected by the contraction in important export markets, high real interest rates and a troubled financial sector, heavily indebted households and companies further reduced their expenditure" (p. 100). It also said, "The cost of the rescue operations of troubled banks amounted to about 2 per cent of GDP in 1991, while significantly increasing the state's participation in the banking sector" (p. 101). In its summary paragraph on the outlook, it said that "financial consolidation will continue both in the household and the corporate sectors," but did not mention the banking system (p. 101). The OECD's tone about financial-sector problems was substantially less serious than in 1991:2, but it still viewed the problems as important to the performance of the economy, and there had been a large bailout. We therefore classify this episode as a minor crisis–regular.

Sweden, 1992:2. The OECD made no mention of problems in the banking system either in its opening summary paragraph or in its concluding paragraph on the macroeconomic outlook. But it stated, "The recession has particularly hit the financial sector, where loan losses arising from the collapse of the commercial property market and depreciations of financial assets are rapidly eroding capital bases" (p. 116). It also reported, "Loan losses in the banking sector are estimated to exceed SKr 55 billion in 1992, up from SKr 48 billion in 1991. Official rescue operations are officially estimated to burden the 1992/93 budget by some SKr 12.5 billion" (p. 117). Finally, it said, "In October, the Government proposed to establish a public safety net for financial institutions, effectively providing budgetary cover for future losses in the banking system" (p. 118).

This episode is difficult to classify. On the one hand, the OECD described severe problems in the banking sector, with rapidly eroding capital bases, large loan losses, and large-scale government intervention. On the other, in its 1400-word entry, the OECD drew no link between those problems and either credit supply or the recent or prospective path of the economy. As a compromise between these conflicting signals, we code this episode as a minor crisis–regular.

<u>Finland, 1993:2</u>. As described below, the 1993:1 issue of the *OECD Economic Outlook* had described severe problems in Finland's banking system, which we classify as a regular moderate crisis. Here, the OECD did not mention financial-sector problems in its opening summary, in its concluding analysis of risks to the outlook, or in its discussion of factors affecting consumption or investment. Instead, its commentary on those problems occurred in a self-contained paragraph (p. 93):

> Falling interest rates, rising share prices (the stock exchange being dominated by the highly performing export-oriented companies) and stabilising house prices have somewhat reduced the strain on the financial system. This has allowed major Finnish commercial banks to launch new share issues in order to strengthen their capital. With loan losses still high, however, banks' financial positions remain fragile, which has tended to delay the process of restructuring in the banking industry.

Thus, as with Sweden in 1992:2, this episode is somewhat hard to classify. However, the conjunction of the magnitude of the problems in 1993:1 together with the facts that the OECD viewed the financial system as only somewhat improved and as still fragile leads us to conclude that it believed the financial-market problems remained serious. Thus, we classify this episode as a minor crisis–regular.

<u>Japan, 1993:2</u>. The OECD made several mentions of banking-sector problems as a drag on the economy. For example, in its opening summary paragraph, it said, "the burden of non-performing bank loans shows little sign of easing," and saw that as one reason that "any recovery in economic activity is expected to be slow" (p. 53). In its most extensive discussion, it referred to "the prevailing reluctance of private financial institutions to resume more active risk-taking in the credit market," and went on (p. 54):

> Non-performing loans held by banks have continued to increase. Moreover, bad loans arising from bankruptcies due to the recession are rising in addition to those related to the real-estate industry. Against this background, banks are continuing to be more cautious in their lending than in previous phases of monetary expansion, and according to the August *Tankan* Survey, Japanese corporations, in general, feel that credit availability has not eased as much as in similar phases of previous business cycles.

And in its concluding paragraph, the OECD said, "Possibilities for bringing a more rapid end to the recession would seem to rest on a normalisation of the banking sector's role in financial intermediation and credit creation" (p. 58).

This episode clearly fits our criteria for a minor crisis. The OECD viewed credit supply as notably impaired, but did not view the situation as dire. Moreover, its tone was slightly more negative than in 1993:1, which, as discussed above, we classify as a minor crisis–minus. We conclude that this episode is a minor crisis–regular.

<u>Japan, 1995:2</u>. This episode appears similar to Sweden in 1992:2. As in that case, the OECD described significant problems in the banking sector. After commenting that, "the major banks have been progressively reducing their exposure to non-performing loans," the OECD continued (p. 48):

> However, the problems are greater in the second-tier of deposit-taking institutions, as was evidenced by the need of the authorities to resolve the difficulties of two credit co-operatives and one second-tier regional bank during the summer. Last September, deposit-taking institutions as a whole were officially estimated to have ¥ 37 trillion of non-performing or restructured loans, though about two-thirds of this total was covered by provisions or the residual value of collateral. The housing loan companies, which have borrowed ¥ 12 trillion from deposit-taking institutions, only part of which has been classified as problem loans by these institutions, also face severe difficulties, with 74 per cent of their own total lending officially considered as non-performing. A government committee, which recently reported on the steps necessary to restore stability of the financial system, has not ruled out the use of public money. Measures involving prompt corrective action are expected to be announced by the Government soon.

But, again as in Sweden in 1992:2, the OECD did not draw a strong connection between these problems and credit supply or macroeconomic performance. Indeed, it said, "So far, the banks' financial difficulties do not appear to have constrained the supply of credit" (p. 48). It did, however, see a risk of adverse effects: "a persistent weakness of commercial land prices would risk exacerbating the balance-sheet problems of financial institutions, which, in turn, could adversely affect corporate confidence" (p. 50). We follow our treatment of Sweden in 1992:2, and so balance the description of serious problems in the banking system with little perception that they were having macroeconomic consequences by coding this episode as a minor crisis–regular.

France, 1996:1. The OECD reported (p. 78):

> In 1995, the banking sector continued to suffer from low credit demand, high refinancing and operating costs and large provisions for bad debts. As a result, profitability has been very low by international comparison. The State has provided financial support to some banks and insurance companies, and several financial companies have created special corporate structures in order to assure that prudential ratios are higher than required. Lower short-term interest rates will reduce refinancing costs and help the financial sector to restore profitability. However, the current level of provisions still does not cover all doubtful credits as the real estate market has softened again and the restructuring of the banking sector is advancing only slowly.

The combination of the significant problems in the banking sector, the statement that banks faced high refinancing costs, and the fact that the banking problems were not given a central role in the OECD's discussion of the outlook causes us to identify this episode as a minor crisis–regular. This classification is consistent the fact that we classify France in 1995:2 as a minor crisis–minus, and that the description of the health of the banking sector in this issue is slightly more negative.

France, 1996:2. As in the previous episode, the OECD described a very troubled banking system, but did not assign it a central role in the outlook. It stated (p. 61):

> Sluggish lending activity and large provisions for bad debts continue to drag down bank profitability. In addition, the fall in refinancing costs has been passed on to

> customers because of strong competition in large segments of the lending market. The State has already provided financial support to several banks and insurance companies. Recently, it stepped in again to save at least part of the activities of Crédit Foncier de France, and Crédit Lyonnais will receive additional capital injections.

The health of the banking system appeared to have on net changed little from the previous issue. On the one hand, refinancing costs had fallen, which suggests a decline in the cost of credit intermediation. On the other, bank profitability had fallen, and the government had felt additional intervention was needed. We therefore code this episode as another minor crisis–regular.

<u>Japan, 1997:1</u>. We classify Japan in 1996:2 as a regular crisis–minus. In this issue, the OECD described a banking system that was on net in slightly worse health. Its discussion of financial troubles was almost entirely confined to one self-contained paragraph (p. 52):

> Major city banks have improved their balance sheets through continued provisions against non-performing loans. Moreover, the commercial property market has strengthened somewhat in recent months, especially after the announcement that the government might purchase land from the Housing Loan Administration Corporation, which was established to liquidate the debt of bankrupt property finance companies. Nevertheless, bank shares and those of other financial institutions have been particularly weak since the failure of the Hanwa bank at the end of 1996, with markedly more bad debts than previously declared, and the announcement of a planned deregulation of the financial sector by 2001. This weakness was accentuated by the announcement of the plan to restructure one and merge another of the major 20 banks and to close the largest mutual life insurance company. In March 1996, the non-performing loans of the two problem banks represented almost 14 per cent of their outstanding loans. A further three banks had a non-performing loan ratio of over 10 per cent.

The OECD's only other mention of financial-market problems was the comment, "if the problems of still weak financial institutions were to worsen, this could adversely affect the rebound in the stock market and business confidence, thereby slowing the recovery of investment and overall private demand more generally" (p. 53).

In many ways, this episode is similar to Japan in 1995:2, which we code as a minor crisis–regular: there were serious problems in the banking sector, but the OECD characterized them only as a risk to the outlook. Thus, the comparisons with Japan both in 1996:2 and in 1995:2 lead us to classify this episode as a minor crisis–regular.

<u>Japan, 2003:2</u>. As discussed below, the previous several issues of the *OECD Economic Outlook* had described a financial system that was slowly healing, and we classify Japan in 2003:1 as a minor crisis–plus. Here, the OECD provided a mixed report, but viewed the overall pattern as one of improvement. Notably, it summarized its discussion of the financial sector by saying, "There has been progress in dealing with problems in the banking sector" (p. 45). On the downside, the OECD said that "Financial-sector restructuring, including the reduction of non-performing loans, should be a priority" (p. 43, in the opening summary of the entry; see also p. 35); it reported "a serious shortage of capital in the fifth largest private bank" and "the injection of public funds into the bank" (p. 44; see also pp. 28–30); and it referred to "serious problems in the banking sector" as one factor contributing to the continuing decline in bank lending (p. 45). On the positive side, it said that policy actions had "maintained stability in financial markets" (p. 44), and provided a long discussion of various improvements in the health of the banking system (p. 45):

> the implementation of the Financial Revival Programme launched in October 2002 is addressing underlying problems of weak bank capital. Concerns in this regard have also been eased somewhat by the buoyancy of the stock market, which has generated capital gains for banks that exceed their losses resulting from the correction in bond prices. Stricter self-assessment of assets by banks, reinforced by the second round of special inspections of large borrowers, has led to increased loan loss reserves. In addition, the major banks' stock of non-performing loans (NPLs) fell from 8.4 to 7.2 per cent of total loans in the year to March 2003.

Thus, the mild improvement from 2003:1 suggests that this episode should be classified as a minor crisis–regular. And direct consideration of our criteria for a minor crisis points to the same conclusion. There were significant problems in the financial sector, and the OECD viewed them as affecting credit availability; but it did not give them a central role in its analysis of macroeconomic developments or prospects. We therefore code this episode as a minor crisis–regular.

Iceland, 2006:2. The 700-word entry on Iceland included one sentence about disruptions to credit supply. After saying, "There are indications that torrid economic growth ... has slowed markedly," the OECD stated: "This turnaround was triggered by a sudden change in the attitude of foreign investors towards Icelandic risk earlier in the year and the resulting decline in lending by commercial banks due to tighter foreign funding" (p. 89). It went on to note that the change "was reinforced by policy measures aimed at reducing demand pressures" (p. 89). On the one hand, the OECD clearly perceived a reduction in credit supply that was having significant effects. On the other, its failure to devote more than a sentence to these developments suggests that it believed the problems were not overwhelming. Moreover, after explaining that "Growth is projected to resume in mid-2007," the OECD said, "another sharp correction in the exchange rate remains a risk to the outlook, as it would necessitate higher-than-assumed interest rates to achieve the inflation target," with no mention of financial problems as a risk (p. 90). The OECD therefore appeared view the difficulties as significant, but not as greatly more than that. Thus, although this episode is difficult to classify, we code it as a minor crisis–regular.

Canada, 2008:2. The OECD painted a somewhat mixed picture of the financial system. On the one hand, it stressed that its overall condition was relatively sound. The opening summary said, "The domestic banking and housing sectors are in relatively good shape" (p. 118), and the entry went on to say that "Canada's banking sector harbours fewer toxic assets and is better capitalised than that of most other OECD countries" (p. 119). Similarly, there was no mention of the financial system in the discussion of risks to the outlook (p. 122). At the same time, the OECD made clear that it saw nontrivial financial disruption. It said that banks "have not been immune to global financial-market strains" and that "banks and non-financial businesses are facing higher borrowing costs" (p. 120). It also reported that the Bank of Canada had reduced interest rates "to help alleviate financial market pressures" (p. 119) and said, "The government has responded with a plan to help ease banks' funding pressures" (p. 120). It also listed other policy actions to help the financial system (p. 76), and at one point used the term "crisis" to describe the problems: "The Bank of Canada has responded to the crisis by providing extra liquidity to the financial system" (p. 121). Finally, it made one reference to an expected impact of the financial disruption on economic activity, saying: "Tighter credit conditions and lower profits will hold down business investment" (p. 122).

This episode fits our criteria for a minor crisis. The OECD clearly saw significant financial disruptions and described extensive actions in response, but it did not view them as significant enough to endanger the overall health of the financial system, and it saw some but not a major impact on economic activity. The episode appears to be slightly more severe than Canada in 2008:1, which we classify as a minor crisis–minus, and slightly less severe than New Zealand in 2008:2, which we classify as a minor crisis–plus. We therefore put it in the minor crisis–regular category.

Luxembourg, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The OECD's discussion of Luxembourg described substantial financial disruption, but did not consistently distinguish between its effects on activity in the financial services sector (which is not relevant to our scaling) and its impact on the cost of credit intermediation. The opening summary of the entry said, "The international financial crisis is sharply reducing economic growth, initially in the financial sector, but subsequently in broader domestic demand" (p. 156). Similarly, the OECD described Luxembourg as one of the four OECD countries "most directly affected by financial turmoil" (p. 44), but did not specify the channels.

Some evidence speaks more directly to whether the OECD saw a rise in the cost of credit intermediation. The material preceding the country entries described extensive actions by domestic policymakers to stabilize the financial system: expenditures of 7.6 percent of GDP (higher than in almost any other country) to recapitalize two banks (p. 63), increased deposit insurance (p. 74), and loan guarantees (p. 76). The OECD also reported, "The international financial crisis forced the financial sector to increase banking provisions" (p. 156). On the other hand, there was no explicit mention of tighter lending standards or higher interest rate spreads, and the discussions of the reasons for weaker consumption and investment (which were brief) did not mention reduced credit supply.

The severity of the overall euro area problems and the large interventions indicate that this episode is more than a credit disruption. The absence of any clear-cut discussion of disruptions to domestic credit supply or impacts on the economy indicate that it less than a moderate crisis. We therefore classify it as a minor crisis–regular. One useful comparison is with Belgium in 2008:2, which we classify as a minor crisis–minus. The scale of Belgium interventions was slightly smaller, and the country entry for Belgium contained fewer suggestions of disruptions to intermediation.

Turkey, 2008:2. The OECD saw substantial risks to the financial system. The opening summary said, "If systemic liquidity risks emerge in the financial system, the government should be prepared to introduce contingency support mechanisms to preserve the hard-won stability of the financial sector" (p. 188). A longer discussion elaborated (p. 190):

> As Turkey continues to depend on foreign capital to finance its large external deficit and to roll over its external debt, accessing foreign resources may become more difficult and costly in the months ahead. Supporting investor confidence will therefore be crucial. The authorities should monitor closely the impacts of increased exchange and interest-rate volatility on the stability of the financial system, and be ready to phase in adequate contingency support mechanisms to offset any emerging systemic risks.

In addition to identifying a significant risk, the OECD also made a reference to higher interest rate spreads and an impact on the economy: "The rise of interest rates as a result of monetary policy tightening and higher risk premia in the deteriorating international environment has dampened domestic demand" (p. 188). It also reported that the authorities had injected liquidity into the financial system (p. 76). Finally, the discussion of the economy's prospects included the phrase "as financial strains ease" (p. 190), suggesting the presence of such strains; but the OECD did not make clear whether it was referring to strains in domestic or international financial markets.

Thus, the OECD saw large risks and some impact of financial disruption on the overall performance of the economy, but it did not see the disruption as central to the economy's performance. We therefore classify this episode as a minor crisis–regular. One comparison is with New Zealand in 2008:2, where the OECD also perceived significant risks but was more explicit about current impacts of financial disruption on the economy; we code that episode as a minor crisis–plus.

Canada, 2009:1. The OECD did not mention financial problems in the opening summary of its entry. The remainder of the entry portrayed credit conditions as moderately tight and financial conditions as weakening the economy. It reported, "Although business credit conditions remain tight, they are more favourable than elsewhere" (p. 105). Similarly, it commented that "business credit spreads remain elevated" (p. 107). There were also several references to the importance of "financial conditions" to the outlook and risks, although the OECD was not specific about what it was referring to. For example, it said, "Canada is expected to remain in recession through the third quarter and then begin a mild recovery as confidence slowly returns and financial conditions improve" (p. 106). Finally, it stated, "Spreads in short-term bank funding markets have come down significantly" (p. 105), although the comparison appears to be with the peak level of spreads rather than with their level as of the previous issue of the *OECD Economic Outlook*.

This episode matches our criteria for a minor crisis well: the OECD believed that the cost of credit intermediation was materially elevated and that it was having an impact on the economy that was broad and nontrivial, but it did not view the financial system as deeply impaired. The episode is also broadly similar to Canada in 2008:2, which we classify as a minor crisis–regular. We therefore put this episode in the same category.

Germany, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to

> tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

Both the opening summary of the entry on Germany and its discussion of the fall in output did not feature financial disruption (p. 83). However, the discussion of the outlook projected "a rebound in private investment as financial conditions ease" (p. 86), suggesting that the OECD saw those conditions as tight. The OECD's description of the downside risks to the outlook was that "growth could be weaker if world trade does not recover as envisaged or if problems in the financial sector turn out to be larger than currently assessed" (p. 87). The entry also included an extended discussion of policy actions that were being taken to support the financial system, including a program that "can guarantee bond issues by financial sector enterprises and provides recapitalisation," and plans "to relieve banks' balance sheets of their toxic assets" (p. 86). A goal of the latter policy was described as "fostering future bank lending" (p. 86), suggesting that policymakers viewed low lending as a problem.

The fact that financial problems were not more prominent in the OECD's discussion implies that this episode does not rise to the level of a moderate crisis. But the facts that the OECD cited financial distress in the investment outlook and in the discussion of risks, that policymakers were intervening to support the financial sector in various ways, and that the OECD's assessment of the overall euro area financial system was so severe imply that it does rise to the level of a minor crisis. One useful comparison is with Germany in 2008:2, which is similar but where the OECD explicitly described a rise in the cost of credit intermediation, and which we code as a minor crisis–plus. We therefore classify this episode as a minor crisis–regular.

Sweden, 2009:1. The OECD saw financial distress that was affecting lending and economic activity. Other than an allusion to possible "measures to reduce market interest rates," financial distress was absent from the opening summary. But the body of the entry reported, "Lending by financial institutions has slowed and is likely to weaken further as Swedish banks' loan losses mount" (p.167); and, "Consumption is projected to fall further due to reductions in household wealth, rising unemployment and reduced credit growth" (p. 169). The OECD also highlighted financial issues in its discussion of risks, under the heading, "Financial instability remains a key risk," saying that "Swedish banks' exposure to Eastern Europe remains a key issue" (p. 169). The entry also mentioned potential actions "to reduce market interest rates and credit spreads" that "may boost the effectiveness of monetary policy" (p. 168), suggesting that the OECD viewed spreads as elevated. Finally, the OECD described conditions as better than in 2008:2: "Financial conditions have improved since late 2008, with interest rate spreads in money and bond markets moving towards more normal levels" (p. 167).

All of this fits our criteria for a minor crisis. There was material financial distress that was having a nontrivial impact on the economy, but that was not central to the OECD's assessment. We therefore classify this episode as a minor crisis–regular. This is consistent with the fact that we classify Sweden in 2008:2 as a moderate crisis–minus and that the description here is less negative and says that the situation had improved since late 2008.

Italy, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

In the opening summary of its entry on Italy, the OECD said, "Improved financial conditions have helped rebuild confidence and bolster domestic demand" (p. 145). Likewise, the assessment of risks commented that "growth in 2011 could increase further if the influence of improving financial conditions has been under-estimated" (p. 149). The body of the entry included an extensive discussion of financial conditions (p. 148):

> Although interest rate spreads suggest less tension in financial markets, credit conditions remain tight and banks in Italy, as elsewhere, seem to be rebuilding capital, partly through increased margins on a barely increasing volume of lending. ... The two major banking groups intend to raise private capital directly, and some smaller banks have made, or intend to make, use of public funds through the government recapitalisation scheme. The main route by which financial conditions affected domestic demand was through a squeeze on both inventories and fixed investment. ... As financial conditions continue to improve, stockbuilding activity should remain stronger.

The fact that the negative comments about the financial system are confined to a single paragraph indicates that the OECD did not view financial distress as central to the outlook. But that paragraph refers to tight credit conditions, higher bank margins, government recapitalization, and adverse impacts on fixed investment and inventories. The episode therefore matches our criteria for a minor crisis well, and so we classify it as a minor crisis–regular. This classification is consistent with the fact that we code Italy in 2009:1 as a minor crisis–plus and that the current entry is somewhat more upbeat and describes conditions as improved.

Norway, 2009:2. The OECD's discussion of the financial system was much more upbeat than in 2009:1, which we classify as a moderate crisis–plus. The opening summary stated, "Growth in private investment will resume next year, once consumption growth is well established and credit markets return to normal" (p. 205). The OECD also said, "Overall the financial system was quite resilient to the crisis" (p. 206). Indeed, in the material preceding the country entries, Norway was listed as one of a handful of countries "Where financial systems have been more resilient" (p. 47). The OECD appeared to attribute the rapid financial turnaround partly to strong policy actions: "The authorities ... took important measures to provide liquidity and equity capital in the banking system, thus easing credit conditions" (p. 205). But the OECD also said, "Credit conditions for the business sector are somewhat less favourable [than for households]; the global recovery under way is still sluggish and access to credit has not improved as strongly as for households" (p. 206). Finally, it saw some remaining financial risks: "Downside risks have diminished, but possible negative shocks to the shipping sector's activity may further depress banks' profitability, given their large exposure to this business. Similarly, defaults on loans to the commercial property sector may increase" (p. 207).

Since the OECD viewed Norway's financial markets as healthier than most and as on a path to being normal, this episode clearly does not fall in the moderate crisis range. At the same time, the OECD viewed the financial system as recovering rather than as recovered from the high level of distress in 2009:1, saw noteworthy problems in credit availability for businesses, and perceived continued risks from the financial sector. This points to more than a credit disruption. We therefore classify the episode as a minor crisis–regular.

Portugal, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: "Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries" (pp. 130–131). The fact that "credit markets [are] still impaired" (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: "While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions" (p. 134).

The entry on Portugal said relatively little about the financial system. The OECD said that "financial tensions have eased considerably, with a marked reduction in risk *premia*" (p. 211), but a chart on the same page suggests that this may be a reference mainly to sovereign risk spreads. The entry's discussion of risks raised the possibility that "credit conditions for both the state and private borrowers might significantly deteriorate" (p. 213). Finally, there are hints that there were additional government actions to address financial problems: there is a reference to "support to firms" (p. 212), and a comparison of the information in this issue of the *OECD Economic Outlook* and the previous one suggests that Portugal had recently engaged in bank nationalization (2009:2, p. 51, and 2009:1, p. 44).

This episode is somewhat difficult to evaluate. On the one hand, there is no clear-cut discussion of any current distress. On the other, the overall euro area discussion, the strong statement about risks, the indications of recent policy interventions, and the fact that the 2009:1 entry describes considerable distress (which we classify as a moderate crisis–regular) while the current entry contains only one comment about improvement all point to material ongoing distress. Since the absence of explicit discussion of current difficulties appears to rule out a moderate crisis and the other evidence argues against a credit disruption, we classify the episode as a minor crisis–regular.

United Kingdom, 2010:1. The OECD began its opening summary by saying, "The recovery is gaining traction, supported by improving financial conditions, rebounding exports and a temporary surge in stockbuilding. High inflation and lingering effects from the credit crunch, together with necessary fiscal tightening, will nevertheless keep growth subdued in 2010" (p. 108). In a longer discussion of the banking sector, it said, "In the banking sector, deleveraging continues with substantial capital injections and a pick-up in earnings contributing to increasing the capital base. Still, while overall conditions in financial markets continue to improve, access to credit for small firms and households remains constrained" (p. 108). The discussion of risks was headed, "Improving financial conditions could herald a stronger recovery" (p. 112). It said, "The normalisation of financial conditions could underpin a stronger rebound in household consumption which, together with an even swifter recovery in exports, could spur investment and raise growth further," and went on to refer to "the substantial improvement in banking sector health" (p. 112). Finally, the material before the country entries showed that bank credit default swap rates, though far below their peak levels, were still elevated (p. 19), and reported that government guarantees of bank debt had expired at the end of 2009 (p. 64).

Thus, the OECD saw considerable improvement relative to 2009:2, which we classify as a moderate crisis–minus, and it viewed the risks as skewed toward an improving financial system. But it also saw lingering effects from the credit crunch and constrained access to credit, suggesting that there was still material financial distress. We therefore classify this episode as a minor crisis–regular.

Spain, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

The OECD devoted a paragraph of its entry on Spain to financial issues, under the heading, "Financial market tensions linger" (p. 182):

> The turmoil in euro area financial markets raised funding costs for the government and in the inter-bank market in May and June, although liquidity provision by the European Central Bank limited the impact on businesses and households. Non-performing loan ratios have levelled off at 5%. The publication of wide-ranging stress test results for Spanish banks in July and improving budget outcomes contributed to stabilising investor confidence. Interest rates on government debt and banks' funding conditions eased significantly, although the interest rate spread on Spanish government debt vis-à-vis Germany has remained substantial.

The OECD expressed a similar view in its discussion of risks: "A persistent interest rate spread on government debt could result in a deterioration of funding conditions in the private sector, especially when the European Central Bank withdraws extraordinary liquidity support" (p. 182).

This episode matches our definition of a minor crisis fairly well: the OECD clearly saw nontrivial problems in the financial sector and a risk to the economy, but it nowhere suggested that those issues were central to the outlook. We therefore classify the episode as a minor crisis–regular. Thinking in terms of changes rather than levels leads to the same conclusion: we code Spain in 2010:1 as a minor crisis–minus, and here the OECD's tone was slightly more negative and it mentioned higher funding costs in the interbank market because of financial turmoil.

United Kingdom, 2010:2. The OECD discussed financial issues at two points in its entry. First, it reported, "Financial conditions are improving slowly. However, lending is subdued, reflecting both weak demand and continued deleveraging in the banking sector, which constrains credit supply to small firms and households. Large firms are cash rich and able to access sources of nonbank financing" (p. 105). Second, the discussion of risks said, "The squeeze on households' disposable incomes from fiscal consolidation may bear down more than projected on household consumption, especially if access to credit remains constrained and the housing market weakens again. Similarly, renewed price falls on commercial property could trigger further losses in the banking sector" (p. 108).

This evidence suggests little net change from 210:1. On the one hand, the OECD said that there had been slow improvement. On the other hand, whereas in 2010:1 the discussion of risks from the financial system focused on upside possibilities, here the discussion focused on the downside. This points to putting this episode in the same group as the United Kingdom in 2010:1, which we code as a regular minor crisis. This classification is consistent with the fact that the OECD saw problems in credit supply to important segments of the economy, but did not emphasize them in it analysis. We therefore classify this episode as a minor crisis–regular.

France, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

The opening summary of the entry on France referred to "the sharp slowdown triggered by unresolved European sovereign-debt problems" (p. 90), but did not refer explicitly to the financial system. Similarly, the discussion of risks said, "A deepening of the European downturn carries by far the largest vulnerability" (p. 93). However, under the heading, "Financing conditions have been deteriorating," the OECD was much clearer in describing financial distress (p. 90):

> Credit growth has slowed recently, especially for household loans. ... the large exposure of the French banking system to countries at the core of market tensions has become a source of increasing uncertainty, contributing to the sharp rise in the government bond yield spread vis-à-vis Germany. With contagion having spread to France, higher borrowing costs will affect the whole economy.

The entry also included a passing reference to "current market stresses" (p. 91). Finally, there was a reference to banking problems in France in the material preceding the country entries: in discussing the possible impacts that a disorderly sovereign default might have, the OECD said that the largest impacts would likely be on banks in Greece, Ireland, and Portugal, but that "outside these three countries, pressures on banks could also become stronger, as has already been seen in France" (p. 45).

This episode fits our criteria for a minor crisis. The OECD saw a rise in the cost of credit intermediation that it believed was having a noticeable impact economy-wide, as well as a risk of greater financial distress; but it did not make the distress central to its assessment of macroeconomic developments or prospects, and it did not spell out effects on consumption, investment, or overall output. We therefore classify this episode as a minor crisis–regular.

Italy, 2011:2. The OECD did not mention the financial system in the opening summary of its entry on Italy. But in a discussion of weak recent growth, the OECD said, "Credit conditions have been tightening, more due to banks' difficulties in accessing external finance than to heightened perception of lending risk, though this has risen too" (p. 95). Similarly, after another reference to poor recent performance, it said, "This is partly because Italy is exposed to the same forces as other European economies, deteriorating confidence, weak export market growth and difficult financial conditions" (p. 97).

The OECD put considerable emphasis on problems in the sovereign bond market and suggested they could have wider implications, but generally only hinted at possible links to disruptions of intermediation. Under the heading, "Wavering policy commitment added to financial market worries," it referred to a "steep rise in interest rates on government debt" (pp. 95–96); it reported, "The financial market tension took the spread between Italian and German 10-year government bonds to as high as 500 basis points in November" (p. 96); and it said, "Growth could be somewhat higher if decisive action by the new government brings interest rate spreads down quickly and boosts confidence" (p. 98). The clearest statement of a potential link between possible sovereign debt problems and the health of the banking system came in the material preceding the country entries. The OECD cited Italy as a country where "Major negative turns in market sentiment ... could have dire consequences for the public finances and the banking sector" (p. 45), and put Italy just behind Greece, Ireland, and Portugal in terms of where this risk was most severe. In addition, as described in our entry for France for 2011:2, the OECD saw significant financial distress in the euro area as a whole and potentially important connections between difficulties in sovereign debt markets and banking system problems.

This episode is similar to France in 2011:2, which we classify as a regular minor crisis. As in that episode, the OECD mentioned tight credit conditions as a factor that was affecting the overall performance of the economy, but did not make them central to its assessment of the economy. And as in the case of France, the OECD saw a risk of increased distress. The statements about current effects were slightly milder for Italy than for France, but the statements about risks showed the opposite pattern. Thus overall, the episode appears very similar in severity to France in 2011:2, and so we classify it as a minor crisis–regular.

Austria, 2012:1. The OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary began, "Activity has stagnated after contracting in end-2011 and unemployment is set to rise further, owing to weak confidence and difficult financial conditions related to the sovereign debt crisis" (p. 74). The summary also identified "how to simultaneously address needs of governments and banks" as an important challenge, and said that "bank balance sheets should be strengthened" to support growth (p. 74). Under the heading, "The economy has stagnated," the entry said: "in the latter half of 2011 ... tensions increased in the interbank market," and, "Risk spreads on government debt of some countries increased, ... putting further funding pressures on banks" (pp. 74–75). The entry also reported: "bank balance sheets remain weak, despite increased liquidity provision from the European Central Bank. ... The April 2012 ECB Bank Lending Survey points to a further tightening in bank lending standards to households and corporations, through at a slower rate than in late-2011" (pp. 75–76). Finally, the OECD warned, "The risks are large and mainly on the downside," and listed as one of two main downside risks, "the possible intensification of the sovereign debt crisis, which would further undermine confidence and the financial system" (p. 77). The entry concluded, "On the upside, more rapid repair of the financial system and ambitious structural reforms would improve the growth outlook" (p. 77)—implying that problems in the financial system were affecting growth.

The OECD's entry on Austria said that the financial system had improved, but also described financial health more negatively than in 2011:2 (which we code as a credit disruption–plus). On the positive side, the entry began, "After slowing markedly over the course of 2011, activity stabilised in early 2012 as investor sentiment and financing conditions improved" (p. 101), and said, "since December 2011 ..., financial conditions have improved somewhat" (p. 101). On the negative side, the opening summary said, "the financial sector poses fiscal and financial stability risks. Additional government support might be required" (p. 101); and a longer discussion under the heading, "Consolidation goes on and the financial sector remains a drag," reported (p. 102):

> The strong expansion of the Austrian banking sector into central and south-eastern European markets prior to the crisis has created fiscal and financial stability risks and required the government to nationalise several banks. Balance sheet risks remain and may affect activity in the financial sector. Steps have been taken to strengthen macroprudential policies to ensure financial stability without provoking a credit squeeze.

Finally, the discussion of risks said, "Bank balance sheet risks, renewed turbulence associated with sovereign debt problems in the euro area and a weaker outlook in central, eastern and south-east Europe may exacerbate financial-sector tensions and weaken export growth" (p. 103).

The entry clearly described substantial financial problems. There was one explicit statement that financial sector problems were a drag on the economy, plus numerous statements about risks to financial stability and possible government actions. There was also a reference to a possible credit squeeze, albeit one where government policies rather than financial disruption was the most likely trigger. Based on these considerations, we classify this episode as a minor crisis–regular. We believe that the reconciliation of the more negative assessment here than in 2011:2 with the discussions of improving conditions can be found in a chart showing a sharp spike in late 2011 in government bond spreads versus Germany followed by a decline (p. 101), together with the OECD's comment that conditions had improved since December 2011. Since the previous issue of the *OECD Economic Outlook* was for November 2011, it appears that after the 2011:2 entry, financial conditions first worsened sharply and then improved.

Ireland, 2012:1. As described in our entry for Austria for 2012:1, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. In the opening summary of its entry on Ireland, the OECD did not refer explicitly to financial sector problems, but did say, "Progress in narrowing macroeconomic and financial imbalances is being made and needs to continue. It is the only way to gain further confidence of financial markets" (p. 125). The concluding discussion of risks did not allude to financial issues. But the OECD devoted a long passage to the health of the financial system under the heading, "Lending conditions are stable but banks have not fully returned to health" (pp. 125–126):

> Reflecting low ECB policy rates and declining market spreads, lending conditions are steady. The two main remaining domestic banks are well capitalised and operationally profitable but continue to make overall losses due to large debt write-offs. Reforms underway to speed up the process of mortgage loan resolution should help to clean up banks' balance sheets, boost investor confidence and make it easier for the banks to raise funding and therefore supply credit when demand picks up.

We classify Ireland in 2011:2 as a minor crisis–plus. The statement that lending conditions were steady suggests no great change. And the references to continuing losses and to the need to clean up bank balance sheets, along with the statement implying that banks faced funding challenges and were not yet in a position to supply credit if demand rose, point to material continuing problems. At the same time, the 2011:2 entry was much more explicit that credit supply problems were holding back the economy, and it discussed risks of further financial distress. We therefore lower our scaling by one notch and classify this episode as a minor crisis–regular.

Minor crisis–plus:

Finland, 1992:2. Financial-market problems were not a central focus of the OECD's entry, but were the subject of a full paragraph (p. 102):

> Falling asset values and increasing corporate bankruptcies have provoked a sharp increase in the share of non-performing loans and loan losses in banks' balance sheets since 1991. In order to limit the adverse repercussions of these disturbances on credit supply, the government has injected a substantial amount of capital into the banking sector. So far, however, bank lending capacity has hardly been constrained, as the deep recession and private-sector financial consolidation have considerably reduced credit demand.

In addition, the OECD said, "A major downside risk to the projection lies in the current fragility of the financial system. A further deterioration of banks' balance sheets could affect the supply of credit and hence the speed of the recovery" (p. 102).

The absence of any reference to credit-market problems in the summary (and in the subsequent four paragraphs as well) shows that the OECD did not view the problems as central to the condition of the economy, and thus that this episode does not satisfy our criteria for more than some type of minor crisis. Moreover, by itself, the statement that the credit-market disruptions had not yet constrained banks' ability to lend suggests no more than some type of credit disruption. However, the remainder of the discussion indicates difficulties that were clearly considerably more severe than the episodes we code as credit disruptions—a large increase in nonperforming loans, balance-sheet problems, substantial bailouts, and a major risk to the forecast. The decision to devote 100 words of a 900-word entry to financial-market problems is additional evidence that the OECD believed the problems were important. We therefore classify this episode as a minor crisis–plus.

<u>Norway, 1993:1</u>. This episode is similar to Finland in 1992:2. Financial-market problems were discussed in two places in the entry. The first was a self-contained paragraph (pp. 109–110):

> After several years of heavy losses, the banking sector experienced better operating results in 1992. However, in view of still large non-performing loans in banks' balance sheets, an additional injection of public funds (equivalent to about 1 per cent of GDP) was required to help certain banks meet the BIS capital adequacy standards. Further capital injections might be needed in 1993–94 unless the improvement of profitability, particularly in the main commercial banks, is sustained.

The other was as one of two risks to the outlook: "Another risk is the still precarious situation of the banking sector, which may constrain provision of credit to the private sector as economic activity improves" (p. 110).

Thus, the comparison with Finland in 1992:2 points to coding this episode as a minor crisis–plus. Another very relevant comparison is with Norway in 1992:2. As we describe below, in that episode, which we classify as a regular moderate crisis, the OECD perceived that firms' were having difficulty obtaining credit. Here, constraints on credit supply were only viewed as a risk, and bank profitability had improved. At the same time, the banking problems clearly remained serious. Thus, this comparison points to the same conclusion as the comparison to Finland in 1992:2. We therefore code this episode as a minor crisis–plus.

<u>Japan, 1996:1</u>. After referring to "the failure of several credit co-operatives and two second-tier regional banks during the summer of 1995 and spring of 1996," the OECD devoted a long paragraph to problems in the financial sector (p. 68):

> Although official support to financial institutions had reached ¥ 2.5 trillion ($24 billion) by April 1996, progress in improving the capital position of financial institutions has been slow. While the increase in stock market values and the continued operating profits of most institutions have helped to rebuild the capital base of the banks, the value of the collateral backing their non-performing loans, which are officially estimated at ¥ 38 trillion, has continued to decline as the fall in commercial property prices accelerated. Banks are now beginning to recognise the low value of these loans by increasing write-offs and provisions. The government plans to inject ¥ 685 billion from the general budget into the *Jusen* Resolution Corporation (JRC), which will acquire part of the bad loans of the housing loan companies (*jusen*). Parliament has authorised this expenditure but not yet passed the bill establishing the JRC. This law is being considered along with a reform of the deposit insurance system and a new regulatory framework for financial institutions, permitting prompt corrective action by the authorities when banks have problems. Against this background, the premia which Japanese banks have to pay on their international borrowing started to widen again in the spring.

Later, the OECD referred to the problems with the housing loan companies as "the *jusen* crisis" (p. 68).

The OECD did not view financial-market problems as central to the condition of the economy—for example, there was no mention of them in the summary or in the discussion of risks to the outlook. But it described serious difficulties, and said explicitly that banks' cost of funds had risen relative to other interest rates. Moreover, the assessment was slightly more negative than in 1995:2, which, as described above, we code as a regular minor crisis. We therefore classify this episode as a minor crisis–plus.

<u>Japan, 1999:2</u>. As described below, we classify Japan in 1999:1 as a moderate crisis–plus. Here, financial-sector issues were mentioned frequently, both in the entry on Japan and in the earlier overview sections of the *OECD Economic Outlook*. The OECD painted a picture of a financial system that was considerably improved but still far from healthy.

In the summary of its entry, the OECD referred to "resolution of the balance-sheet problems in the banking system" (p. 44). Another upbeat assessment was provided by the comment, "Risk premia have declined sharply, especially in the banking system, where the so-called 'Japan premium', for example, has been eliminated thanks to the successful recapitalisation of the major banks" (p. 46).

The OECD's prevailing tone, however, was that the problems were far from fully solved. For example, the OECD said, "The credit crunch has eased" (p. 44); reported, "Bank credit risks have fallen" (p. 45); and commented, "Perceptions of overall credit supply have improved" (p. 46). Even more negatively, the OECD described "whether the banking system is now capable of providing efficient financial intermediation" as a "major" open question (p. 46). Similarly, it strongly implied that the usual monetary transmission was not functioning properly: "Evidence that monetary transmission mechanisms are operating normally, and that the economy continues to recover, would be a signal to restore positive interest rates in the money markets" (p. 19). It also described series of significant government capital injections into banks (p. 19). And it reported (p. 26):

> The Japanese authorities have made considerable progress in dealing with the backlog of non-performing loans in the banking system and recapitalising it, but restructuring and adjustment are likely to take several years to complete and ultimate success is still not assured. Potentially large problems in the life-insurance industry have also not yet been addressed and require urgent action.

Finally, in discussing downside risks, the OECD said (p. 48):

> the projection crucially depends on the sustained recovery of consumer sentiment and is therefore vulnerable to any of several possible shocks to confidence, such as concerns about the pensions system, government fiscal conditions, bankruptcies of life insurance companies or other elements of instability in financial markets. It also relies on the ready availability of finance for creditworthy borrowers.

Thus, this discussion shows a financial system that was considerably improved but still far from healthy; where financial-sector problems were significant but not central; and where there were problems in financial intermediation and monetary transmission. We therefore code this episode as a minor crisis–plus.

<u>Japan, 2001:1</u>. The OECD made repeated references to significant problems in the financial sector that it viewed as risks, threats, or concerns. In the summary of its entry, the OECD said, "The low level of stock prices has also intensified concerns about financial stability, especially in the banking system, and this constitutes the greatest downside risk" (p. 52). And in the concluding paragraph, it said, "The most apparent risk is associated with the balance sheet problems of the banking sector. Although an accelerated disposal of non-performing loans is likely to generate some additional deflationary impact, any delay would likely result in further losses, magnifying risks in the future" (p. 56). It also referred to "additional non-performing loans, especially for banks," and to "concerns about tighter lending if bank capital proves insufficient" (p. 54). Similarly, in its overview material, the OECD said, "The prospect of the economy continuing to operate well below potential in coming years ... threatens to aggravate already serious problems in the financial system, which might ultimately lead to additional downward pressure on domestic demand" (p. 32). It also reported, "The failure of some life insurance companies in 2000 raised concerns about the financial health of the industry as a whole. Life insurance companies play a key role as large equity holders in banks .... Failures of large insurance companies might thus have serious adverse effects in financial markets" (p. 34).

There was also one reference to the problems already having an effect on the economy: "The poor health of the financial sector—largely related to the persistently high stock of 'bad' loans, and the poor performance of the stock market—is an additional source of weakness" (p. 8). Finally, the OECD provided a long discussion of balance-sheet problems and nonperforming loans at Japanese banks (pp. 32–35) that concluded, "Managing the loan clean-up will be a huge task for the authorities" (p. 35).

The OECD's repeated characterizations of the financial-sector problems in terms of risks, rather than as already having an important effect on the economy, implies that this episode does not fit our definition of a moderate crisis. At the same time, the repeated emphasis on those risks and their magnitude, together with the extensive discussion of troubles in the banking sector, show that it viewed the problems as quite serious. We therefore code this episode as a minor crisis–plus.

Japan, 2001:2. This episode was similar to the previous one. In the summary of its entry on Japan, the OECD said, "risks are mainly on the downside due to financial market fragility" (p. 54), and it mentioned those risks again in the concluding paragraph (p. 57). The only other discussion of banking-sector troubles in the entry was a paragraph devoted to the government's plans to deal with nonperforming loans (p. 55). However, in characterizing the reasons for slow credit growth, the OECD said, "Demand for bank credit remains limited" (p. 55).

The OECD was more explicit that the financial-market problems were affecting Japan's economic performance in the general material that came before the entries on individual countries. For example, in its opening "Editorial," it said, "Priority should be given to the problem of non-performing bank loans, which may imply some macroeconomic costs in the short run, but is necessary to restore a healthy banking system and encourage corporate restructuring. Lack of action in this area would lead to further financial fragility" (p. xi). It also said, "The vast amounts of bad loans in the financial sector and the poor performance of the stock market are continuing to be major sources of weakness" (p. 14), but that "there are no indications of a credit crunch" (p. 25). And in a page-long box entitled "Bad loans in Japan," it reported: "The Japanese Government is rightly stressing the need for banks finally to dispose of their bad loans, so as to restore the functioning of credit mechanisms and facilitate resource reallocation. ... The potential amount of such [non-performing] loans is large .... [W]eaknesses in bank balance sheets will be further exposed and ... an additional injection of public funds may be unavoidable" (p. 28).

Thus, as in 2001:1, the OECD saw serious banking problems in Japan, viewed them as posing a major risk, and believed they were having a noticeable but not overwhelming effect on the economy. We therefore classify this episode as a minor crisis–plus.

Turkey, 2002:1. As discussed below, the 2001:2 issue of the *OECD Economic Outlook* had described severe problems in Turkey's banking system, which we classify as a regular moderate crisis. In the summary of its entry in the current issue, the OECD continued to cite financial-sector problems: "the weakness of the financial sector and the burgeoning financial liabilities of the corporate sector suggest that per capita GDP will not return to 2000 levels by 2003" (p. 108). It also reported: "The comprehensive agenda of banking sector reform will continue to be implemented. This ... will be followed by equity injections by shareholders and subordinated debt investment funding by the State Deposit Insurance Fund in viable banks" (p. 109). And in its discussion of risks to the outlook, it said, "a fragile banking system and cash-constrained corporate sector could delay the expected domestic recovery" (p. 110).

The OECD's tone and description of the banking-sector problems was considerably less negative than in 2001:2, and suggests that it viewed the financial system as considerably improved but still far from fully healthy. It also made clear that it believed the problems were hurting the performance of the economy. We therefore code this episode as a minor crisis–plus.

Japan, 2003:1. The OECD described a financial system that was slightly improved from 2002:2—which, as we describe below, we classify as a moderate crisis–minus. Here, the OECD said, "The government has launched a number of initiatives to address problems in the financial and corporate sectors," and, "The non-performing loan problem is being addressed" (p. 41; see also p. 22). But it also said, "the monetary policy transmission mechanism is defective" (p. 21); "Bank balance sheets are saddled with very large amounts of non-performing loans" (p. 21); and, "the capital base of the banks is likely to remain weak, making them risk averse" (p. 42). And it described "continued financial sector fragility" as "a downside risk to the projection," and noted that there might be a need for "direct injection of public funds" (p. 41, in the summary of the entry; see also p. 44).

The fact that the OECD believed the situation was slightly improved from 2002:2 points to classifying this episode as a minor crisis–plus. Looking at this episode in isolation points to the same conclusion: banks had serious balance sheet problems and there was government intervention, but the OECD emphasized these factors mainly as posing risks to the outlook, with the exception of one reference to banks being risk averse. Thus, we code this episode as a minor crisis–plus.

United Kingdom, 2007:2. In its opening summary of its entry, the OECD said that "growth is expected to be weaker in coming quarters, as both investment and consumer demand are likely to be damped by much weaker activity in the housing market, together with tighter credit conditions" (p. 96). It went on to say, "Shocks to the financial sector have pushed up some borrowing rates [and] have restricted the availability of credit to some groups" (p. 96), and it referred to "tighter credit conditions for corporations and households" (p. 99). It also said, "Investment growth is also likely to slow significantly, due to more expensive and less readily available credit, together with increased uncertainty and profit downgrades in some sectors" (p. 99). Discussions of domestic financial disruption were largely absent from the discussion of risks to the outlook (p. 100). Finally, there were several references to financial disruptions in the United Kingdom in the material preceding the country entries. For example, the OECD said that "the threats posed by financial turmoil have required swift and substantial measures on the part of the monetary authorities in the United States, the euro area, the United Kingdom and Canada, aimed at ensuring that financial markets do not flounder for a lack of liquidity" (p.13). It also reported, "In the United Kingdom, there has also been a reduction in credit availability to the corporate sector as well as tighter price and non-price terms of loans (p. 26; see also pp. 28 and 49).

Thus, the OECD perceived significant financial disruption that it expected to have a clear impact on the economy. What leads us to classify this episode as a minor crisis–plus rather than some type of moderate crisis is that the OECD did not perceive it as central to the outlook: the opening summary gave a more central role to the housing slowdown; financial market problems were essentially absent from the discussion of risks; and the effects of tighter credit conditions were put on a par with "reduced financial sector bonuses" and several other factors in a discussion of the outlook for consumption (p. 49). This classification is also consistent with the fact that this episode appears slightly less severe than the United States in 2007:2, which we classify as a moderate crisis−minus.

Portugal, 2008:1. The entry for the euro area indicated a noticeable rise in the cost of credit intermediation. It stated (p. 94):

> International financial market turmoil, and the associated re-pricing of risk, has contributed to tighter financial conditions in the euro area. Bank lending standards have tightened, financial market sentiment has declined and money-market spreads have widened. Spreads between the average interest rates charged for new long-term loans to the private sector and government bond rates have risen by more than 50 basis points since the onset of the financial crisis, pushing up the effective cost of borrowing.

In discussing the risks to the outlook for the euro area, the OECD wrote: "the negative impact of domestic financial market strains and, for some countries, housing market downturns, could be steeper and more protracted than projected" (p. 97).

The *OECD Economic Outlook*'s entry on Portugal made clear that there had been a rise in the cost of credit intermediation and that it was having effects throughout the economy, but it consistently described them in moderate terms. The opening summary said, "Growth is expected to slow somewhat in 2008 and 2009 owing to a weaker world economy and tighter credit market conditions" (p. 174). The entry also reported: "Portuguese banks have tightened credit conditions since the summer of 2007" (p. 174); "private consumption is expected to be affected by banks' greater caution to lend and the lagged effects of past interest rate increases" (p. 175); "Slower export growth and tighter credit conditions are projected to moderate investment spending" (p. 175); and, in the discussion of risks, "Weaker-than-expected growth in the euro area and a long and protracted credit crisis in wholesale money markets could inhibit growth more than projected" (p. 176). The conjunction of the portrayal of a widespread rise in the cost of credit intermediation that was having effects throughout the economy and the absence of any strong language in describing its effects or of any hint of a genuine crisis lead us to classify this episode as a minor crisis−plus.

Spain, 2008:1. The OECD described a rise in the cost of credit intermediation that it viewed as having a significant impact on the economy, but that it did not highlight as central to the outlook. It made no mention of financial disruption in its opening summary (p. 180). But it devoted most of a paragraph of the entry to problems in credit markets, under the heading, "Financial conditions are tightening" (p. 181). It stated (p. 181):

> Spanish banks have not sustained losses from the subprime crisis, and solvency ratios remain elevated relative to regulatory requirements. However, the banks' exposure to the domestic residential construction sector is high, especially in the case of savings banks, which cannot easily raise external capital. This may contribute to a slowdown in credit growth. Borrowing rates have risen and lending standards have tightened. ... Nonperforming loans, while still low by international and historical standards, have increased significantly.

The OECD went on to identify “more restrictive financial conditions” as one factor likely to cause machinery and equipment investment to contract (p. 182), and “tight credit conditions” as one factor likely to cause consumption to “slow significantly” (p. 182). And in its discussion of risks, it said, “A large increase in non-performing loans, which could result from a more pronounced adjustment in the housing market, could have a bigger effect on credit conditions for firms and households, further weighing on activity” (p. 182). Finally, as described in our entry for Portugal for 2008:1, the OECD detected a noticeable rise in the cost of credit intermediation in the overall euro area.

This episode fits our criteria for a minor crisis very well: the OECD perceived significant problems in the financial sector, believed that they were affecting credit supply and economic performance in a way that was clearly broad and nontrivial, and did not think they were so severe that they were central to macroeconomic developments. The fact that the OECD saw both notable effects and a notable risk leads us to classify the episode as a minor crisis–plus.

Denmark, 2008:2. The opening summary did not mention domestic financial difficulties. However, the OECD devoted a paragraph of the entry to financial sector problems, under the heading, “Financial turmoil will have a material impact” (pp. 135–136):

> Credit has expanded strongly in recent years, but with rising defaults, notably by property developers, a couple of small banks have recently been taken over by competitors and a medium-sized bank was taken over and closed down by the central bank in the early autumn. The spread between secured and unsecured interbank interest rates has widened. Tighter credit conditions are likely to weigh on activity well into 2009, notwithstanding the unlimited Government-backed guarantee issued in October, covering all deposits and other bank liabilities except subordinated loan capital.

The OECD also reported that “six minor Danish banks have been sold, merged or bailed out by the state” (p. 21) and described other interventions to support the financial sector (p. 76). Finally, the concluding discussion of risks focused on “financial turmoil” (p. 137), but did not specify whether it was referring to domestic or international financial problems.

The fact that the OECD saw financial disruption that was having a “material” effect on the overall economy, but that it did not make it central to its assessment, matches our definition of a minor crisis. That there were significant policy actions to support the financial sector and that the OECD devoted a full paragraph to the disruptions and their macroeconomic consequences pushes the episode to the upper end of the range. We therefore categorize the episode as a minor crisis–plus. The episode is similar to Germany in 2008:2.

Germany, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The opening summary of the entry on Germany made no reference to financial disruptions. But under the heading, "The impact of the financial crisis is intensifying," the entry reported (pp. 100–101):

> With the situation in financial markets deteriorating noticeably, the slowdown in activity is set to continue. While credit growth had been holding up well over the past quarters, rising refinancing problems in money and capital markets are leading to tighter credit standards and higher lending rates, thereby restricting lending to companies and households.

The entry also cited limited credit availability as a force holding back consumption growth, saying, "consumption expenditures will continue to grow moderately, notwithstanding deteriorating credit and labour market conditions" (p. 101). The OECD also described a range of policy actions to support the financial sector (pp. 74–76 and 102). And the paragraph on risks to the outlook said, "The projection is surrounded by considerable uncertainty relating to the scale of the direct repercussions of the financial crisis on the real economy" (p. 103). It also referred to "once financial conditions normalise" (p. 103), implying that the OECD did not view those conditions as normal.

Thus, the OECD saw credit market disruptions that were having a nontrivial impact, that posed important risks, and that prompted policy responses to improve credit flows. But it did not describe the disruptions as having an enormous impact on the economy or as being central to the outlook. The episode therefore falls into the minor crisis range. The severity of the OECD's assessment of the overall euro area pushes the episode to the top part of the range, and so causes us to classify it as a minor crisis–plus.

Ireland, 2008:2. The opening paragraph of the entry implied that financial stability was at risk, saying, "To support the stability of the financial system, the ceiling on the deposit guarantee scheme has been raised and the government has introduced a scheme to guarantee bank liabilities" (p. 150). The entry devoted a full paragraph to the policy, noting that it "raises implicit government liabilities by around 2.5 times GNP," and saying that it was needed "to ensure banks access to funding" (p. 151). It also included several general remarks about adverse effects of financial problems on the economy, though without being precise about whether it was referring to domestic or international financial markets. For example, in the opening summary, it said, "Growth will recover in 2010 as the housing construction cycle bottoms out and the financial turmoil wanes" (p. 150). And later it projected, "Growth is likely to return towards the end of 2009 with the stabilisation of housing investment, improving financial conditions and low interest rates" (p. 152; see also the discussion of risks on p. 152). However, the entry did not include any explicit discussions of rising interest rate spreads, reduced credit availability, or impacts on consumption or investment. Finally, as described in our entry for Germany for 2008:2, the OECD perceived a significant rise in the cost of credit intermediation in the overall euro area.

The OECD clearly perceived very significant risks to the financial system, and it saw some impact of financial disruptions on overall economic performance. It also saw severe problems in the general euro area. Yet it did not emphasize difficulties in credit supply in its discussions of macroeconomic developments or prospects. We therefore place this episode at the upper end of the minor crisis range, and so classify it as a minor crisis–plus.

<u>**New Zealand, 2008:2**</u>**.** The OECD did not mention financial difficulties in its opening summary. But the entry described moderate impacts on the economy and important risks. In terms of impacts, it mentioned "rising credit spreads" (p. 165) and the fact that much of banks' funding "has become more expensive and harder to obtain" (p. 166); said, "monetary easing may not prove very effective in spurring domestic demand as the transmission mechanism's effectiveness may have been damaged by financial strains" (p. 166); and reported, "Business investment has held up better [than consumption], but higher labour, energy and finance costs have reduced profit margins, final demand prospects are poor and business confidence has plunged, suggesting substantial weakness going forward" (p. 165). In terms of risks, it said, "banks are well capitalised, with little direct exposure to other countries' troubled assets. Nevertheless, they are vulnerable insofar as one third of lending is financed by overseas borrowing" (p. 166). And the concluding paragraph on risks began, "The main risk is the possibility of increased costs of offshore funding" (p. 167). Finally, the OECD reported, "Several nonbanks, mainly engaged in property development, have failed. ... opt-in guarantee schemes have been introduced for all retail deposits and wholesale funding of qualifying bank and non-bank financial institutions" (p. 166).

All of this is consistent with the upper end of the minor crisis range. Spreads had risen and a higher cost of credit intermediation was affecting the economy, but the OECD did not portray them as severe. On top of that, there were financial risks that were significant but not dire. And there were failures and policy interventions, but they were not enormous. We therefore classify the episode as a minor crisis–plus.

<u>**France, 2009:1**</u>**.** The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

Neither the opening summary nor the concluding discussion of risks in the entry on France mentioned financial disruption. But the entry included an extensive discussion of the health of the financial sector and government actions to help it (p. 89):

> To support the financial system the authorities have created two vehicles, which provide a state guarantee for bank refinancing and equity to bolster solvency. These steps have allowed banks to continue lending, thus offsetting to some extent the drying-up of the primary securities market. It is generally believed that financial institutions in France are on average in a better situation than in other countries due to more conservative lending practices, but full information is lacking.

The entry went on to describe government actions aimed at "relieving cash-flow difficulties for small- and medium-sized enterprises" (pp. 89–90) and a "joint public-private scheme to improve banks' liquidity" (p. 91). And under the heading, "but the recovery will be weak," the OECD listed "tightened credit conditions by financial institutions trying to rebuild margins" as one of several factors that would "weigh on the strength of the recovery" (p. 91).

Because the OECD did not mention financial disruption in the overall summary or the concluding paragraph, and did not make it central to its discussion of economic performance, this episode does not fit our criteria for a moderate crisis. But the OECD nonetheless clearly viewed the disruption as quite significant. We therefore classify it as a minor crisis–plus. This assessment is consistent with the fact that we code France in 2009:2 as a moderate crisis–minus and that this episode appears to be slightly less severe.

Italy, 2009:1. In its the opening summary, the OECD said, "Falling export growth and deteriorating financial conditions have hit investment hard" (p. 93). Elaborating on the reasons for weak investment performance, it stated: "The fall in exports itself is partly a cause of this, in addition to the impact of tightening credit conditions, though the relative contribution of the two factors is difficult to assess" (p. 93). In addition, the OECD provided an extended discussion of the health of the financial system and policies to address it that painted a mixed picture (p. 96):

> As in most countries, despite tightening credit indicators, bank lending has continued to grow, though at a declining rate and rather slowly. Italian banks' exposure to losses on domestic lending continues to appear low and, while their risk-weighted capital ratios are not particularly high, overall capital-asset ratios seem to be comfortable. Some banks have applied to use the recently negotiated public facility for recapitalisation with hybrid convertible bonds.

Finally, as described in our entry for France in 2009:1, the OECD saw substantial financial distress in the euro area as a whole.

This episode is well described as a minor crisis–plus. Both the entry on Italy and the discussion of the euro area as a whole suggest significant financial distress, and policymakers felt impelled to take actions to support the financial sector. Moreover, an impact on the real economy was highlighted in the opening summary. At the same time, there was no mention of impacts on components of output other than investment, and the OECD portrayed the health of the banking system as mixed. We therefore code the episode as a minor crisis–plus.

New Zealand, 2009:1. This episode is similar to New Zealand in 2008:2, with the OECD describing moderate impacts of financial distress on credit supply and the economy, together with a significant risk of the distress worsening. The strongest statement of impacts came in the opening summary: "The multiple blows of housing market correction, collapsing world trade, rising risk spreads, tighter credit conditions and unsustainably high private-sector debt suggest a recession of atypical length" (p. 149). The other statements were milder: "The housing market correction, initially kicked off by domestic monetary tightening, has been aggravated by deteriorating global financial conditions, to which New Zealand is particularly vulnerable because of high private-sector indebtedness abroad, intermediated by the banks" (p. 149); and, "Mortgage rates have fallen ..., though by less than the [policy rate], given banks' higher financing costs" (p. 150). The discussion of risk came in the concluding paragraph: "Substantial downside risks remain, especially if global risk appetite were to falter, raising NZ borrowing costs" (p. 151).

As with New Zealand in 2008:2, this evidence is consistent with the upper end of the minor crisis range. There was significant financial disruption and a risk that it could become more serious. But there was only one mention of important overall effects on the economy, suggesting that the OECD did not judge the disruption to be central to the economy's performance. We therefore classify the episode as a minor crisis–plus.

Spain, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The entry on Spain included an extended discussion of credit conditions, which said, "The tightening of credit supply standards is reflected in lower bank lending" (p. 165) and, "Non-performing loans are likely to continue rising" (p. 166). In addition, the concluding paragraph on risks was headed, "Housing and financial markets pose risks," and began, "Rising non-performing loans may induce some banks to tighten credit standards further, notably among savings banks" (p. 166). Finally, the opening summary included two allusions to possible policies to help the financial system, suggesting that the OECD saw this as an important issue: "Small financial intermediaries with solvency problems should be allowed to fail," and, "Scope for the savings banks to raise equity from private external sources should be expanded and barriers to mergers removed" (p. 164).

Thus, the OECD saw financial market problems that were affecting credit supply and lending, emphasized possible policies to help the financial system, and identified the possibility of worsening financial problems as one of the main risks to the economy. But it did not come close to describing the financial system as being in crisis, and made only one reference to impacts of the reduced credit supply on overall outcomes. We therefore classify this episode as a minor crisis–plus. This classification is consistent with the fact that this episode appears slightly less serious than Spain in 2008:1, which we code as a moderate crisis–minus.

Denmark, 2009:2. The opening summary did not mention the financial system. But under the heading "Financial and housing markets are still under pressure," the OECD said (p. 173):

> Lending by banks and mortgage credit institutions has continued to slow, reflecting lower demand for loans but probably also caution on the part of financial institutions. They are exposed to significant credit risk as rising unemployment reduces the ability of households to service their debt and falling house prices lower

> the collateral value of loans. In the third quarter of 2009, financial institutions have continued to tighten credit standards for households and firms but were contemplating easing them somewhat by end-year.

The OECD also commented, “Business investment is also projected to gain momentum in the latter part of 2010 as financial conditions normalise and the uncertainty surrounding the recovery fades” (p. 174). Finally, the discussion of risks began, “The recovery could be weaker if the housing market fails to stabilise soon despite low interest rates or if financial market conditions normalise more slowly than expected notwithstanding the government’s measures to support the banking system” (p. 174).

The OECD clearly saw significant financial distress, with financial markets under pressure, cautious lending, tightening credit standards, financial conditions not yet normalized, and downside risk. At the same time, with the discussion of financial problems other than the references to the process of normalization confined to one paragraph that does not emphasize macroeconomic consequences, the episode does not meet our criteria for a moderate crisis. We therefore classify it as a minor crisis–plus. This classification is consistent with the fact that we code Denmark in 2009:1 as a moderate crisis–minus, and that the current entry (other than the reference to tightening credit standards) is somewhat more positive.

Greece, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: “Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries” (pp. 130–131). The fact that “credit markets [are] still impaired” (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: “While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions” (p. 134).

As in 2009:1, the opening summary for the entry on Greece in 2009:2 said nothing about financial problems. However, under the heading “The global crisis struck Greece with a lag,” the OECD wrote: “Output growth contracted in the first three quarters of 2009 as both domestic and external demand weakened. Investment, especially in housing, fell sharply over the period against a backdrop of tight credit and weak confidence. Despite large wage increases, private consumption contracted as the labour market and credit conditions deteriorated” (p. 178). The discussion of the outlook also said that “Economic activity is projected to contract somewhat further in the last quarter of 2009 and early 2010, as domestic demand continues to decelerate in the face of tight credit conditions and weak sentiment” (p. 179). The closing risks paragraph mentioned financial conditions only tangentially, saying: “The projections are subject to important risks, including the pace of recovery in Greece’s main trading partners in South-East Europe and uncertainty about the recovery of global financial markets” (180).

Compared with Greece in 2009:1, conditions in 2009:2 seem somewhat less worrisome. There was more discussion of risks to the financial system and aggressive action in 2009:1 than there was in 2009:2. The one reference to “credit conditions deteriorated” came in a section that refers to the first three quarters of 2009, so we do not think that is particularly informative about which half of the year was worse.

On an absolute scale, this episode corresponds to the high end of the minor crisis range. The reference to “tight credit” and “credit conditions deteriorated” is certainly evidence that there were significant problems in the financial sector. However, the fact that the word “crisis” is never used and that there is no discussion of risks to the financial system lead us to feel that this episode does not meet the criterion of a moderate crisis that the financial problems are severe and widespread. The reference to impacts on consumption and investment suggests that the OECD thought the financial problems were significant enough to affect the outlook. At the same time, the fact that other factors, such as external demand, feature more prominently, makes us think that financial problems were not central to the outlook—another important characteristic of a moderate crisis. We therefore classify this episode as a minor crisis–plus.

Ireland, 2009:2. The entry for the euro area indicated that credit market conditions had improved over the previous half year, but remained substantially troubled. The OECD stated: “Financial conditions have eased substantially since the beginning of the year due to a recovery in equity prices and a significant narrowing of interest-rate spreads in money markets. Nevertheless, bank lending standards are tight, credit growth to households and firms is weak and property prices are declining in many countries” (pp. 130–131). The fact that “credit markets [are] still impaired” (p. 133) was given as a reason for monetary policy to remain very accommodative. Finally, in discussing the risks to the outlook, the OECD noted: “While financial conditions have improved, rising household and corporate loan default rates could generate more instability in the banking sector and lead to further tightening in credit conditions” (p. 134).

In the opening summary of its entry on Ireland, the OECD said, “the government seeks to restore the banking system to health by recognising and dealing swiftly with losses, thus contributing to the recovery” (p. 187). Thus, the OECD implied that the banking system was not healthy and that this acting as a drag on the economy. The remainder of the entry, however, did not mention issues involving the financial system. But the entry is more descriptive and less analytical than typical, so it is difficult to know how much weight to put on this.

Both the discussion of the overall euro area and the opening summary point to important financial distress. Another consideration weighing in the same direction is that we classify Ireland in 2009:1 as a moderate crisis–minus and the current entry does not mention an improvement. At the same time, the facts that there is only one reference to financial issues in the 750-word entry, and that the reference is only moderately strong, indicates that the episode is less than a moderate crisis. We therefore classify it as a credit disruption–plus. Since this is a change of only one notch from 2009:1, it is consistent with the fact that the OECD did not see enough of a change in distress to highlight it.

Italy, 2010:1. The entry for the euro area overall described a slight improvement from 2009:2, but still substantial distress. Under the heading “Financial conditions improved gradually but risks remain,” the OECD wrote (pp. 89–90):

> Financial conditions have gradually improved as policy rates remain low and confidence recovers, although fragilities have been exposed by the recent financial market volatility. While short interbank rates have remained at extremely low levels, reduction in lending rates for non-financial corporations and households only partly reflected the fall in banks’ funding rates. High lending spreads compared with historical norms may in part reflect higher risk premia but competition may also have suffered as a result of the crisis. Credit growth has weakened further with bank credit to non-financial corporations continuing to contract, although issuance of corporate debt has been strong. Concerns about credit quality and the health of the European

> banking sector remain as European banks are unlikely to have cleaned their balance sheets of all toxic assets.

The OECD suggested that credit problems were affecting demand when it said: "Investment is likely to recover only gradually in the coming quarters, held back by remaining excess capacity, continued credit constraints and weak growth prospects" (p. 92). Finally, the entry also discussed "strong pressures on sovereign bonds of some members and risk of contagion to other financial markets," (p. 91)—suggesting that sovereign debt problems in Greece and other countries could impair private credit availability.

The OECD did not mention financial distress in the opening summary of its entry on Italy or in its concluding discussion of risks. But the body of the entry included several references, mainly in discussions of investment. The OECD said, "Improving financial conditions may help to stabilise business investment, although it remained weak in early 2010 as companies face cash-flow shortfalls and difficult access to external finance" (p. 103), and, "Business confidence has continued to improve ... despite declines in profitability and surveys that show credit conditions remaining tight, though no longer worsening, and bank lending to large firms still falling year-on-year" (p. 106). A longer discussion said (p. 106):

> Investment recovery would be helped by an improvement in credit conditions. Italian banks were less affected by losses on financial assets than in many countries and they have succeeded in raising capital ratios fairly steadily. Banks thus expect credit conditions for companies (but not for non-mortgage lending to households) to improve this year.

Thus, the OECD viewed credit conditions as tight for both firms and households, and said more than once that they were affecting investment, and it saw substantial distress in the overall euro area. But it also described Italian banks as healthier than many others, and never cited financial distress in its overall assessments of the economy. We therefore classify this episode as a minor crisis–plus. This classification is consistent with the fact that we code Italy in 2009:2 as a minor crisis–regular and that the current entry (despite the one reference to improving financial conditions) is slightly more negative, especially in its clear statements about adverse effects on investment.

Portugal, 2010:1. The OECD's discussion of financial distress focused on the possibility that difficulties in sovereign bond markets could spill over to the financial system and credit availability more broadly. The OECD appeared to refer to this concern obliquely in its opening summary, saying that recent moves toward fiscal consolidation were "essential to foster investor confidence in fiscal sustainability and ensure access to external financing" (p. 172). It was more explicit elsewhere in the entry. After a discussion of factors holding back investment, it said, "Concerns about sovereign risk are weighing on credit conditions more generally" (p. 172). And the concluding paragraph on risks was headed, "Financial investor confidence is still the main downside risk," and began, "If necessary fiscal consolidation measures are not implemented or if contagion from problems elsewhere should be prominent, the financing conditions for both the public and private sectors may deteriorate substantially, with potentially severe consequences for economic growth" (p. 174). Finally, as described in our entry for Italy for 2010:1, the OECD saw substantial distress in the euro area as a whole and only slight improvement from 2009:2, and it raised the possibility of spillovers from problems in sovereign bond markets to private credit availability.

This episode appears to be on the margin between a minor and a moderate crisis. The OECD discussed financial distress prominently and repeatedly, and it viewed the risks as severe.

However, the fact that there is only one clear-cut statement that there were current problems with credit supply rather than just risks, together with the fact that even that statement does not explicitly cite effects on the overall economy, leads us to classify the episode as a minor crisis–plus.

United States, 2010:1. The financial system had been gradually recovering since 2008:2; for 2009:2, we classify it as a moderate crisis–minus. Here, the opening summary offered a relatively upbeat assessment, saying only that "bank lending conditions have not fully normalised" (p. 78). But an extended discussion offered a more mixed view (pp. 79–80):

> The financial industry continues to recover strongly from the financial crisis. High interest margins and improving market conditions have allowed the financial industry to continue writing off a substantial amount of nonperforming loans while increasing compensation and profits to near prerecession highs. ... While credit conditions appear to be improving, lending activity remains very weak and small businesses continue to report that obtaining finance is a significant problem.

And a discussion of the real estate market mentioned several sources of financial stress (p. 81):

> Loan delinquencies are elevated by historical standards and the high unemployment rate suggests that they are likely to increase further. ... the significant backlog of foreclosures will continue to be a drag on residential construction, housing prices and financial industry balance sheets for the next couple of years. Related troubles in commercial real estate have yet to be fully realised and may take some time to fully develop. The smaller size of this market suggests that such problems should be significantly less severe for the broader economy although some smaller banks could be severely affected.

The concluding discussion of risks made no mention of financial distress. Finally, the material before the country entries showed that bank credit default swap rates, though far below their peak levels, were still elevated (p. 19), and listed "improved financial conditions" as one of three factors that "will help private investment to strengthen further" (p. 35).

This episode matches our criteria for a minor crisis well. There were still significant problems in the financial sector, and they were having noticeable effects on the economy and posed noticeable risks. But the problems were not central to the OECD's assessment of the economy. That the OECD mentioned high interest margins, significant problems for small firms in obtaining credit, and problems and risks for the financial sector stemming from real estate lead us to classify the episode as a minor crisis–plus. This classification is consistent with the fact that we code the United States in 2009:2 as a moderate crisis–minus and the current entry says that there had been improvement.

Ireland, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

The OECD's entry on Ireland described a financial system that was healing but far from fully healthy. The opening summary began, "After its severe banking crisis, Ireland has made good progress," and went on to say, "Following comprehensive stress tests, the banks were recapitalised through government and private sector contributions" (p. 142). The entry provided a more extended discussion under the heading, "The banking system has been recapitalised" (p. 142):

> The process of healing in the banking sector is underway. Encouragingly, private equity was raised by one financial institution and the banks have begun to sell-off foreign assets, which will help them to repay their large debt to the Eurosystem. The stabilisation of the banking system, the decision to reduce interest rates on EU official finance to Ireland, and resolute implementation of the fiscal consolidation programme have all improved financial-market confidence.

Despite the progress (and consistent with the fact that the OECD saw healing of the banking sector merely as underway), the OECD judged that financial distress was continuing hold back the economy. It said, "Deteriorating external conditions and tighter financial conditions will ... hem in consumer demand and business investment" (p. 142). The discussion of risks also suggested that credit supply constraints could harm the economy: "the banks must carry out a fine balancing act of selling assets and reducing in size while still maintaining new lending to support the recovery in a very difficult international financial environment" (p. 144). Finally, the material preceding the country entries raised the possibility that increases in government bond yields might "require some capital injection into domestic banks to offset losses on their holdings of domestic sovereign bonds" (p. 44).

Thus, the OECD saw problems in the financial system that were still significant, believed they were affecting overall outcomes, and perceived a risk of additional difficulties. At the same time, other factors, such as foreign demand, were given a larger role in the OECD's diagnosis of economic conditions and prospects. These considerations point to the upper end of the minor crisis range. This is consistent with the fact that we classify Ireland in 2011:1 as a regular moderate crisis and the current entry describes substantial but not overwhelming improvement. We therefore classify this episode as a minor crisis–plus. One useful comparison is with Italy in 2011:2, which we classify as a regular minor crisis. There, the OECD also saw effects on overall economic performance and some risks, but its statements about the current effects were somewhat milder than for Ireland.

Ireland, 2012:2. The OECD's entry for the euro area was similar to that for 2012:1: it made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary implied problems in the functioning of the financial system when it said, "private demand will pick up as confidence and the functioning of the financial sector improve" (p. 83). The summary also commented, "Stronger bank balance sheets and a full banking union would reduce the adverse feedback loop between sovereigns and the banking system" (p. 83). Under the heading, "Financial conditions are difficult," the entry reported, "The sovereign debt crisis in the euro area has led to an adverse feedback loop between sovereigns and banks. This has impaired credit in some euro area countries and reduced the effectiveness of monetary policy transmission" (p. 84). In addition, it warned that a range of factors "will continue to create difficulties for domestic banking systems so long as bank balance sheets have not been strengthened sufficiently" (pp. 84–85). And in discussing policy, it said, "The financial system needs to be repaired" (p. 86), and, "Further measures are required to clean up bank balance sheets and ensure that the banking system is well capitalised" (p. 86). Finally, the concluding discussion of risks referred to "the crisis" (although this appeared to be a reference to the overall health of the euro area rather than to the financial system specifically), and listed as one risk "a failure to restore the financial sector" on the part of policymakers (p. 87).

The entry on Ireland devoted considerable attention to the financial system. The opening summary said that "marked progress has been made in resolving the financial and banking crises," but also listed "low credit availability" as one of four factors acting as a drag on the economy. The entry listed "a timely recapitalisation of the banking sector" as one reason that "Ireland is on its way to addressing the main imbalances that had built up prior to the crisis" (p. 139). But under the heading, "Credit availability is a concern," it said (p. 139):

> Credit availability has fallen sharply since the onset of the banking crisis, and is now excessively tight. Non-performing loans are still around 21% of total loans and advances, although banks hold significant provisions against them, and 50% of mortgages holders have negative equity. As a result, credit institutions are reluctant to lend, hampering the recovery, especially of SMEs. Bank lending survey evidence shows that access to credit in 2011 was two-thirds more difficult than in 2009 and that Ireland suffers the second worst lending conditions for small businesses in Europe, after Greece.

The entry went on to give "tight credit conditions" as one of three reasons that "the recovery is expected to proceed at an only moderate pace" (p. 139).

Thus, the entry described problems in the banking system and with credit supply that were quite important to overall economic performance. There was also the statement that for small businesses, lending conditions were worse than in any other European economy except Greece (which along with Italy, Portugal, and Spain, we classify as a moderate crisis–regular in 2012:2). This evidence points to the moderate crisis range. But two considerations argue for a lower classification. First, some of the language was milder, such as the comment that lenders "were reluctant to lend, hampering the recovery" and the listing of tight credit as one of the factors that would moderate growth. Second, we classify Ireland in 2012:1 as a minor crisis–regular, and the current entry said that conditions had improved. The description of the financial sector problems in the current entry is sufficiently clear, and sufficiently more negative than the language in the 2012:1 entry, that we put more weight on it than on the comments about improvement. But it does not make sense to ignore the statements of improvement entirely. Balancing these various considerations, we therefore classify this episode as a minor crisis–plus.

MODERATE CRISES

Moderate crisis–minus:

United States, 1990:2. In the opening sentence of its entry, the OECD cited "fragility of financial markets" as one of three forces acting "to brake domestic demand" (p. 47). The conclusion cited as a downside risk, "Financial markets could encounter significant difficulties in absorbing even the moderate tightening assumed in this projection, leading to less lending and greater weakness in aggregate demand" (pp. 51–52). Elsewhere, the OECD made repeated references to financial-market difficulties, often in stronger terms. For example, in the material preceding the country entries, it said, "Concerns about debt-servicing difficulties of heavily-indebted companies have caused banks to tighten lending criteria, contributing to this apparent credit 'crunch' " (p. 14). It cited the fact that "the restructuring of the savings and loan industry and stricter regulation of other financial institutions have apparently led to tighter credit conditions" as one of two main factors contributing to low output growth (p. 48). And in an extended discussion, it said (p. 50):

> the squeeze on the assets of financial institutions, combined with tighter capital and prudential regulations, has raised concerns that credit may be unduly restricted even in the absence of active Federal Reserve policy and that the economy may be unusually sensitive to a tightening of the Federal Reserve's stance. Several factors have undermined the financial system: the difficulties faced by savings and loan institutions; the collapse of the junk bond market; sharp declines in real estate prices, especially in the North East; and declines in stock prices and bond ratings of banks.

Finally, there were several references to the costs of "the Savings and Loans rescue programme" (p. 16; see also pp. 3 and 48).

This episode clearly fits our criteria for some type of a moderate crisis. There had been problems requiring significant government intervention, and the OECD referred to an apparent credit crunch and to the financial system as having been undermined. Perhaps more importantly, financial-market problems were cited not just as a risk to the outlook or as a minor influence, but as one of the major influences on the path of the economy. At the same time, however, the OECD cited "tighter capital and prudential regulations" as one factor behind the shift in credit supply. Since this factor is more properly thought of as a credit action rather than financial distress, this fact argues for scaling this episode at the low end of the moderate range. We therefore classify this episode as a moderate crisis−minus.

Japan, 1997:2. The OECD described a financial sector with severe and growing problems: "the share prices of banks and securities houses slumped by around 40 per cent from their mid year peak .... Market concerns over the health of the financial sector led to government action to protect the depositors of one bank which had been among the weakest of the major credit institutions. In addition, the fourth largest brokerage house was placed in liquidation" (p. 71). Similarly, it reported: "Already, the process of adjustment in bank balance sheets has been adversely affected by the fall in the stock market and portfolio quality may also have been impaired by the recent turbulence in other Asian markets" (p. 71).

Crucially, rather than identifying these problems as a risk to the outlook, the OECD said they were likely to have important effects unless the government took prompt action. In the opening summary of the entry, it said, "In 1998, economic growth is projected to pick up somewhat, provided the current financial problems are resolved quickly" (p. 67). Similarly, its concluding comment was, "Unless the government quickly addresses the problems of the financial sector, lenders are likely to become increasingly cautious. This could result in difficulties for smaller and medium-sized companies dependent on credit for their expansion, so further weakening growth" (p. 71).

These considerations suggest that this episode qualifies as a moderate crisis−minus. The fact that the OECD described the financial-sector situation as considerably worse than in 1997:1, which we code as a regular minor crisis, points to the same conclusion. We therefore classify this episode as a moderate crisis−minus.

Japan, 2002:2. The OECD described a financial sector that was clearly extremely unhealthy. In contrast to its usual format, it devoted the second paragraph of its entry to developments in the financial sector. It reported (pp. 41–42; see also p. 18):

> A more robust approach by the authorities to classifying bank loans has resulted in the stock of non-performing loans (NPLs) increasing by ¥ 9½ trillion (2 per cent of GDP) to some ¥ 43 trillion (around 8 per cent of GDP) at the end of March 2002. The banks thus recorded net operating losses for the eighth straight year. Nevertheless, there remain concerns that the NPLs could be even larger and that banks are already under-provisioned. Their capital base could therefore be quite weak, making them risk averse. Bank capital is also vulnerable to prices of bonds and shares, of which the banks hold a significant amount.

It also said that the government had taken "Various measures [that] aim at repairing bank balance sheets" (p. 18), that "Impediments to the efficient operation of the banking system remain considerable" (p. 19), and that "bank closures or ... the injection of public funds" might be needed (p. 19).

There were several references to the macroeconomic consequences of the banking problems (in addition to the statement above concerning banks being risk averse). Notably, in its opening editorial, the OECD said that "decisive structural reform of the banking sector is now overdue in order to restore at least some effectiveness to monetary policy" (p. viii), with the implication that monetary transmission was currently completely ineffective. In the summary of its entry on Japan, it stated, "Financial sector strains ... represent major downside risks to the projection" (p. 41). And in the concluding paragraph, it said (p. 44),

> Financial market risks remain significant. ... An accelerated resolution of non-performing loans is crucial to engineer a long-lasting and robust recovery, but it could strengthen deflation in the short-run and weake[n] confidence if policies are not carefully co-ordinated. Any further fall in share prices would dampen business sentiment and amplify fragility in the financial sector, which in turn could constrain business activities.

In short, the OECD viewed the financial sector as severely impaired, and as central to the behavior of the economy. This episode thus fits our criteria for a moderate crisis. A useful comparison is with Japan in 2002:1 (described below), which we classify as a regular moderate crisis. Here, the OECD's tone was slightly less dire. We therefore code this episode as a moderate crisis–minus.

United States, 2007:2. The *OECD Economic Outlook* for 2007:2 made it clear that the collapse of the sub-prime market in the United States generated substantial financial distress. The overview chapter said that "Recently, the threats posed by financial turmoil have required swift and substantial measures on the part of the monetary authorities in the United States, the euro area, the United Kingdom and Canada, aimed at ensuring that financial markets do not flounder for a lack of liquidity" (p. 13). Under the heading "Financial markets have been in turmoil," the OECD wrote: "Mounting problems in the US sub-prime mortgage sector have acted as a catalyst for a general re-pricing of risk across OECD financial markets (Box 1.1). Markets for securitised loans, collateralised debt obligations (CDOs) and asset backed securities, where this reassessment is difficult, froze in mid-summer and have still not recovered" (pp. 14–15). It went on to say (pp. 27–28):

> In the United States, the growth rate of mortgage debt has continued to slow from very high rates, reflecting reduced demand and more difficult access to mortgage borrowing. There has been a recent sharp increase in the proportion of US banks which have tightened lending standards on prime mortgages, following an earlier tightening in standards on sub-prime mortgages. Access to other forms of household credit has also been tightened, but to a lesser degree and outstanding loans have so far not shown any signs of easing.

The entry for the United States was similarly grim. While financial turmoil was not mentioned in the opening summary, the term “crisis” appeared more than once in the entry. Under the heading “and financial markets are in turmoil,” the OECD wrote (pp. 66–67):

> The deterioration of the housing market contributed to the financial market crisis in early August. Increasingly bad news about the performance of sub-prime mortgages led to a surge in the yields of mortgage-backed securities, as investors reassessed their risk exposure and showed greater aversion to risk. The markets for commercial paper and non-conforming mortgages came to a halt and have been continuing to show sign of stress.

In discussing monetary policy, the OECD wrote: “The disruptions in financial markets and concerns about a credit crunch prompted the Federal Reserve to lower the federal funds rate” (p. 69). The OECD saw “No spillover to private consumption thus far” (p. 67), but did predict that “homebuilders, in the face of weaker demand amid a reduction in the availability of mortgage credit, will cut housing starts dramatically to prevent the accumulation of unwanted inventories” (pp. 69–70). The closing risks paragraph said (p. 70):

> The above projection is subject to substantial downside risks, as the financial turmoil and the housing slump may cause greater disruption to real activity than foreseen. ... Moreover, financial institutions may face greater difficulties managing their balance sheets, and the resulting credit crunch could quickly lead to a contraction of aggregate demand.

This episode fits our description of a moderate crisis reasonably well. The use of the terms financial “turmoil” and “crisis,” and discussion of the need for liquidity injections are consistent with financial problems being widespread and severe. It is clear that financial developments and the possibility of a credit crunch were central to the outlook. And, though markets for particular credit instruments were described as frozen, credit markets in general were not seen as paralyzed.

Two factors lead us to scale this episode at the lower end of the moderate crisis category. One was the fact that (surprisingly, given the rest of the entry) financial turmoil was not mentioned in the opening summary of the U.S. entry. The second was that consumption was described as holding up well so far, suggesting that the effects of credit disturbances on aggregate demand, while present, were not large. We therefore scaled this episode as a moderate crisis–minus.

United Kingdom, 2008:1. Financial problems in the United Kingdom were mentioned repeatedly in the overview chapter of the *OECD Economic Outlook* for 2008:1 (see pages 3, 23, 24, 31, and 48). Since all of the same issues were mentioned in the country entry as well, we focus on it.

The opening summary set the tone of the analysis, saying: "A further slowing is expected over coming quarters, as both investment and consumer demand are damped by tight credit conditions and housing market weakness" (p. 113). The OECD referred to "the deterioration in financial sector health" (p. 113). It went on to say (p. 114):

> bank lending conditions have tightened significantly, especially for the most risky borrowers, and are expected to remain tight, even after the Bank of England's recent steps to improve liquidity conditions of money markets by permitting banks and building societies to temporarily swap their higher quality mortgage-backed and other securities for UK Treasury Bills.

It also said that despite the recent cuts in policy rates "some mortgage rates on new lending have been raised, particularly for the riskiest borrowers, while the supply of some of the riskier lending products has disappeared" (p. 115).

Under the heading "Economic growth is slowing," the OECD wrote: "Given the deterioration in financial sector health and considerable weakness in survey indicators, many real economy indicators were surprisingly resilient over the first few months of 2008" (p. 113). However, the OECD expected financial troubles to have more effect on domestic demand in coming months. It wrote (p. 117):

> Looking forward, much tighter credit conditions and moderately falling house prices are expected to lead to a dissipation of the house value collateral and wealth effects, and a significant slowing in consumption growth and residential investment. Business investment is also likely to slow, due to less readily available credit, increased uncertainty and weaker domestic demand.

And in the closing risks paragraph, it said: "GDP growth could slow more markedly if financial sector health continues to deteriorate or if the housing market falls into a more significant slump" (p. 117).

This episode is a classic example of some type of a moderate crisis. The references to "deterioration in financial sector health" and "much tighter credit conditions" suggest that financial problems were widespread and severe, as does the fact that the Bank of England was taking extraordinary measures to improve liquidity conditions. At the same time, though there was reference to markets for some types of credit disappearing, there was no indication of general credit market paralysis, nor was the term "crisis" used—suggesting that the episode did not rise to the level of a major crisis. The OECD also drew a link between financial turmoil and domestic demand. However, most of the discussion was that financial problems would depress consumption and investment, not that it was doing so currently. Thus, the demand consequences were more a risk than a certainty. This leads us to scale the episode at the lower end of the moderate range (a moderate crisis−minus).

Austria, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further

> increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The opening summary for the entry on Austria did not mention financial conditions. However, the entry went on to say (p. 126):

> Spillovers from the global financial turmoil have intensified, with tumbling equity prices, heightened tensions in the banking sector, higher lending rates and corporate loan spreads, and tighter credit standards. In response, the Austrian authorities have raised bank deposit guarantees and introduced a sizeable state aid package to boost banks' capital. These swift measures may help contain contagion effects and negative fallout on the real economy.

The closing risks paragraph also discussed financial fragility in detail, saying (p. 128):

> Risks to the short-term outlook are skewed to the downside. They primarily relate to foreign demand and to banking sector responses to the intensification of the financial turmoil. Regarding the latter, ensuring financial stability and more international cooperation of financial supervisors are essential, especially in light of the Austrian financial sector's large exposure to Central and South-Eastern European countries and to foreign currency lending.

The OECD implied, but did not explicitly say, that financial distress was likely to affect domestic demand. For example, a sentence on the slowdown in investment was followed immediately by discussion of higher lending rates and corporate loan spreads—suggesting a possible link between the two (p. 126). Similarly, after writing that investment "is losing momentum following the recent deterioration in business confidence and economic prospects," the OECD said: "In addition, the global financial turmoil is likely to increase the cost and lower the availability of credit in Austria" (p. 127). However, in discussing consumption spending, several explanations for its slowdown were given, with no implicit or explicit link to financing conditions (p. 127).

This episode fits our definition of the moderate crisis range somewhat imperfectly. The discussion of financial troubles was, if anything, somewhat more severe than a typical moderate crisis. The OECD was very clear about problems in the Austrian banking sector, including increasing spreads and tightening lending standards. It even refers to the interbank market as being effectively frozen. Austrian authorities were described as taking a number of actions to stabilize financial markets, but the OECD said only that these measures "may help contain contagion effects and negative fallout on the real economy." Furthermore, the discussion of risks was also quite explicit. The OECD described the Austrian financial sector as particularly vulnerable to financial turmoil because of its "large exposure to Central and South-Eastern European countries and to foreign currency lending." At the same time, the entry does not say much about financial stresses being large enough to have real effects, which is a typical hallmark of descriptions of a moderate crisis. We conclude that the best way to balance these somewhat conflicting features of the entry is to scale the episode at the lower end of the moderate crisis range (a moderate crisis–minus.)

France, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The opening summary of the entry on France said "Growth is likely to fall below 1% in 2008 as a whole amid sharply deteriorating global economic conditions in the latter part of the year, due primarily to the financial crisis" (p. 104). Under the heading "A severe downturn is underway," the OECD wrote: "Recent information on the business climate and household confidence, combined with indications of a generalised tightening of access to credit, point to a further weakening of activity in the first half of 2009" (p. 104). The entry went on to explain: "The aggravation of the financial turbulence during September and October is expected to have a protracted impact on household consumption and, especially private investment, via both lower confidence and tighter access to credit" (p. 106). The concluding risks paragraph said that there were "large uncertainties related to the resolution of the financial-market crisis" (p. 107).

The overview chapter had a number of references to actions that France had taken to stabilize the financial system. These include recapitalization of six banks (p. 63) and a guarantee on bank lending (p. 74).

This episode is on the border between a minor crisis−plus and a moderate crisis−minus. The reference to a "crisis" and to tightening credit standards suggests financial problems that were widespread and severe. The fact that six banks required recapitalization also indicates significant financial problems. The crisis was clearly central to the outlook, as evidenced by the fact that the OECD thought it would lower consumption and investment for a protracted period. All of these characteristics, which are the hallmarks of a moderate crisis, were reinforced by the grim entry for the euro area overall.

We debated whether this might be a minor crisis−plus because the OECD did not paint a particularly scary picture of either the state of the financial system or the likely consequences of financial disruption. Also, it is somewhat ambiguous whether the references to the financial crisis in the opening summary and closing paragraph referred to domestic conditions or to the international situation. We concluded that substantial interventions in the financial sector and the reference to possibly protracted effects were enough to push this episode into the moderate crisis−minus range. This is consistent with the fact that the description of financial conditions in France in 2008:2 were slightly worse than those for Germany and New Zealand in 2008:2, which we felt were firmly minor crisis-pluses.

Italy, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The opening summary mentioned financial conditions only tangentially, saying: "Global financial turmoil hit an economy already weakened by several years of low productivity growth, deteriorating competitiveness and high public debt" (p. 108). However, later discussions made it clear that financial turmoil was affecting credit supply. Under the heading "Credit is tightening," the OECD wrote: "Credit conditions reported by banks for housing and consumption loans as well as for companies have continued to tighten in Italy" (p. 108). It also said: "Although the Italian financial sector is not over-exposed to the household property market, its profits fell sharply as a result of financial turmoil, beyond paying higher rates on the inter-bank market" (p. 109). Italian authorities were taking numerous actions to stabilize the financial system. The OECD noted (pp. 109–110):

> In early October the government announced that funds would be made available to supplement the existing deposit guarantee scheme and to finance Bank of Italy interventions to provide extraordinary liquidity assistance. Public funds may also be used to recapitalise banks in exchange for preference shares, subject to a government-approved three-year restructuring plan. Italian banks have made significant use of discounting facilities at the European Central Bank, but by end-October the only bank to have raised significant new equity capital did so without any public funds or guarantees.

The OECD indicated that "consumers are delaying purchases, and tightening credit conditions may also be making purchases on credit more difficult" (p. 108). Under the heading "Tighter credit and uncertainty play key roles in the outlook," the OECD wrote: "Three key influences will prolong the recession into 2009: tighter domestic credit; global financial turmoil and associated lower activity abroad; and continued losses of cost competitiveness. As stability returns to financial markets and credit flows more freely, the first two of these factors should begin to reverse by late 2009" (p. 111). "[F]inancial market turbulence" was listed as one of the "Italy-specific risks in the current outlook" (p. 112).

The OECD's description of conditions in Italy in this episode is similar to that for France in 2008:2 (which we classify as a moderate crisis–minus), and slightly worse than Germany in 2008:2 (which we classify as a minor crisis–plus). In an absolute sense, conditions in Italy appear to fit the description of some type of moderate crisis very well. The fact that spreads were up, credit conditions were tightening, and authorities were taking extensive actions suggests that financial problems were widespread and severe. The OECD explicitly stated that tighter credit conditions were central to the outlook. The fact that conditions in the euro area overall were similar reinforces the sense of significant financial distress in Italy. At the same time, the word "crisis" was never used in the entry, and there was reference to the fact that the Italian financial sector was not overly exposed to the housing market. This could suggest that financial conditions, while highly stressed, were not in grave danger. We therefore classify this episode at the lower end of the moderate crisis range (a moderate crisis–minus).

Norway, 2008:2. The opening summary said: "Domestic demand is moderating as a result of the increased cost of borrowing, falling house prices and declining terms of trade" (p. 168). It also said that the central bank should "pay increasing attention to the impact of financial turbulence on the real economy" (p. 168). Later discussion made clear that the increased borrowing costs were not the result of increased policy rates, saying: "the central bank cut policy rates twice in October to facilitate financial normalization" (p. 168). A graph entitled "The cost of borrowing has soared" indicated that the spread between the money market rate and the policy rate had increased by more than 1.5 percentage points. The overview chapter described a number of actions Norwegian authorities took to stabilize the financial system, including liquidity injections, a guarantee for bank loans, and a plan to buy mortgage backed securities (pp. 25 and 74).

The OECD predicted that these financial developments were large enough to have significant consequences for domestic demand. It said: "The liquidity problems facing financial institutions and the resulting strong increase in bank lending margins will reduce non-oil investment" (p. 169). It also forecast that "While financial markets are expected to remain under stress in the near term, their gradual normalization and cuts in policy rates will reopen access to liquidity and credit, allowing headwinds to ease in 2010" (p. 170). The closing risks paragraph suggested possibly severe consequences of financial market turmoil (p. 170):

> The main risks to the projections pertain to the uncertainty about the effects of financial market turmoil and inflation prospects. The private non-oil sector has borrowed abroad extensively in recent years, partially offsetting outflows through the Pension Fund (Global); the resulting dependence of Norway's money market on international ones may make the persistence or the deepening of financial turbulence more disruptive than now expected. Norwegian banks may face even greater difficulties in accessing US dollar lending, one of their main source of financing.

This episode has the essential characteristics of some form of moderate crisis. There were severe and widespread problems in the financial sector, as evidenced by the large rise in spreads, the risk that banks could face important funding problems, and the need for significant interventions in the financial sector. The fact that the OECD said such interventions "will reopen access to liquidity and credit" made it sound as though credit markets were quite troubled. Financial distress was also central to the outlook: increased spreads and decreased availability of credit were seen as likely to depress investment. While financial conditions were in the moderate crisis range, we feel they were toward the lower end. The effects of financial distress on investment, while discussed, did not sound enormous, and effects on consumption were not discussed. We therefore scale this episode as a moderate crisis–minus.

Portugal, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further

> increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

The entry for Portugal was similarly grim. The opening summary said: "In line with the recent intensification of the financial crisis and expectations of a significant slowing in Portugal's export markets, activity is expected to contract until the second half of 2009" (p. 174). The OECD went on to write: "Portuguese banks continue to tighten lending standards as the global financial crisis has intensified" (p. 174). The overview chapter detailed a number of actions Portuguese authorities had taken to deal with financial turmoil. These actions included a blanket guarantee of all banking system deposits (pp. 25–26), a guarantee of bank lending (p. 75), and capital injections (p. 76).

The financial distress was thought likely to depress demand. The OECD wrote (p. 175):

> Very tight credit conditions, a softening labour market and low levels of consumer confidence will constrain consumption. The same factors should keep residential investment weak, though Portugal is less exposed to an abrupt downturn because its housing market has been soft for many years. ... Weak exports, tighter credit conditions and subdued internal demand are projected to depress business investment in 2009.

The closing risks paragraph said: "The recent intensification of stress in global financial markets and the deterioration of economic conditions in Portugal's largest export markets mean that risks are firmly on the downside for activity and government finances" (p. 175).

Several factors push this episode into the moderate crisis range. First, in terms of changes, Portugal was a minor crisis–plus in 2008:1. The reference to banks continuing to tighten lending standards suggests that financial distress increased in 2008:2. Second, in terms of levels, credit conditions were described as "very tight," suggesting widespread problems in the financial sector. The fact that tight credit was project to depress consumption, housing investment, and business investment is consistent with financial distress being central to the outlook. At the same time, the relative infrequency of the term "crisis" and the absence of specific statements about bank failures or other concrete problems in the financial sector lead us to scale this at the lower end of the moderate crisis range (a moderate crisis–minus).

Spain, 2008:2. The entry for the euro area for this episode described a significant rise in the cost of credit intermediation. It said (pp. 95–96):

> Even before recent events, international financial market turmoil had tightened financial conditions. Widening interest rate spreads, more stringent bank lending standards and declining equity prices all raised the cost of financing and generated negative wealth effects on household spending. Credit growth has remained positive this year, but has clearly slowed, especially for households. ... More recently, financial pressures on banks, households and companies have intensified, with further increases in spreads and additional falls in equity prices. ... Interbank markets have effectively been frozen since mid-September.

It concluded that "One notable risk is that the current financial market crisis lasts for longer than assumed. It is also uncertain if monetary policy transmission will work as expected, given the difficulties faced by financial institutions" (p. 98).

Financial conditions were not mentioned in the opening summary of the entry on Portugal. But under the heading "Financial conditions will remain tight," the OECD wrote (p. 180):

> Financial conditions have tightened, as past rises in short-term interest rates have fed into mortgage rates and lending has slowed. Banks are well capitalised and profitable, but heavy exposure to the residential construction sector will lead to a further rise in non-performing loans and might restrict future credit growth. This is especially the case for savings banks, which are subject to restrictions on their ability to raise external capital.

The OECD also described substantial actions Spain had taken to stabilize the financial system, saying (p. 180):

> The government has increased the public guarantee for bank deposits fivefold to € 100 000, and a fund was established with up to € 50 billion (around 4.5% of GDP) to improve banks' liquidity by buying highly-rated bond issues from banks, which are facing difficulties in bond markets. In addition, the government stands ready to guarantee banks' new issues of bills and bonds of up to €100 billion in 2008.

In discussing the outlook for the economy, the OECD made clear that financial conditions were important. It wrote: "Private consumption growth will be slowed by declines in housing and stock market wealth, more restrictive financial conditions and employment losses. The slowdown in demand, tighter credit standards and falling profits are projected to result in a sharp fall in business investment" (p. 181). It also predicted that growth would pick up in 2010 as "financial turmoil recedes"—suggesting that financial turmoil was currently hurting growth (p. 181). The closing risks paragraph also raised the specter that (p. 181):

> Credit constraints could tighten further due to a rise in nonperforming loans, especially if employment losses and house price falls are large, and if the international financial crisis persists. Given the high level of household and business indebtedness and the prevalence of variable-rate mortgages, activity remains particularly sensitive to changes in short-term interest rates.

The description of financial conditions in this episode is very similar to that for Portugal in 2008:2 (which we classify as a moderate crisis−minus). The description is similar to, but slightly more grim than, that of Spain in 2008:1 (which we classify as a minor crisis−plus). In particular, Spanish authorities appear to be taking more actions and there is a reference to "Financial conditions have tightened." Also, the description of financial distress in the euro area overall was noticeably worse than in 2008:1.

In terms of the absolute level of distress, Spain in 2008:2 falls at the low end of the moderate crisis range (a moderate crisis−minus). That financial conditions were described as tight, authorities were taking extensive actions to maintain credit flows, and nonperforming loans were cited as a prominent risk, all suggest that financial problems were widespread and significant. But, the fact that the term "crisis" was rarely used and conditions were not described in dire terms indicate a lower level of severity than would be present in a moderate crisis or a moderate crisis−plus. Essential to our decision to classify this as a crossing over into the moderate crisis−minus range was the fact that financial problems were central to the outlook. The OECD said that tight financial conditions were depressing both consumption and business investment.

Sweden, 2008:2. The opening summary said that "The Swedish economy stalled in the first half of 2008 and is expected to weaken in the near term, as the effects of the international financial crisis take their toll. Consumption is projected to pick up late next year as the turmoil subsides" (p. 182). Under the heading "Financial market turbulence affects the real economy," the OECD wrote (p. 182):

> International financial market turmoil has affected the Swedish financial system, in particular through higher and more volatile interest rates in the interbank and mortgage bond markets. By the end of October, two financial institutions had taken out special loans from the Riksbank to ease liquidity constraints and, in early November, one of them was taken over by the Government.

The overview chapter discussed other actions that Swedish authorities had taken to try to stabilize the financial sector, including a plan to buy mortgage-backed securities (pp. 25 and 63), an increase in the ceiling for deposit insurance (p. 63), and guarantees for bank loans or debt (p. 76).

Other than the implicit suggestion in the opening summary that financial turmoil was depressing consumption, the OECD did not draw a link from financial distress to demand. However, it did say that "Lending to households and businesses has slowed almost as much as in the euro area, but significantly less than in the United States. Ongoing turbulence is expected to lead to a further slowdown in lending" (p. 183). This suggests that financial turmoil was shifting back the supply of credit, and therefore was likely to depress consumption and investment spending.

In many ways, the most telling part of the entry was the closing risks paragraph. It detailed a number of ways that financial conditions could deteriorate further. The OECD wrote (p. 184):

> Given the turmoil in the global financial markets, the slowdown may turn out to be deeper or longer than currently anticipated. A number of measures have been introduced to support Swedish financial markets. However, the potential for further spill-over of deteriorating financial conditions in other countries remains. This could come through problems accessing funding in foreign markets, as has recently been the case with Iceland, or through write-downs in the value of foreign assets owned by Swedish institutions, some of which are exposed in the Baltic States. Also, domestic developments, notably a weaker housing market, might feed back into the financial markets, compounding financial stress.

The description of financial conditions in Sweden in 2008:2 is similar to that for both Austria and Norway in 2008:2—which we classify as a moderate crisis–minus. In an absolute sense, the episode also meets the requirements for a lower-level moderate crisis. Financial problems were widespread and severe. They were mentioned in the introductory summary, and there were references to increased spreads, liquidity problems, and one bank requiring nationalization. The closing risks paragraph indicated that financial conditions could deteriorate substantially, which suggests an even larger rise in the cost of credit intermediation than current conditions might imply. Swedish authorities were taking numerous actions to stabilize the financial system—something that is also consistent with high levels of financial distress. The OECD suggested that financial developments were central to the outlook through their effect on lending and consumption. For these reasons, we classify this episode as a moderate crisis–minus.

Austria, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The opening summary of the entry for Austria said: "The policy measures taken since last September are mitigating the downturn and stabilizing financial markets. Further financial-sector support might be needed to deal with downside risks should they materialise" (p. 111). Under the heading "Financial market conditions have begun to improve," the OECD wrote (p. 112):

> Following the European Central Bank interest rate cuts and the euro-area-wide and Austrian financial market measures, conditions in financial markets have started to improve, although credit standards in Austria tightened further in early 2009. Financial market strains related to the perceived riskiness of Austrian banks' positions in a number of countries in Central and Eastern Europe have abated somewhat.

The overview chapter listed as the actions the Austria authorities had taken: increasing deposit insurance, guaranteeing or buying bank debt, and injecting capital (p. 44). One indication that these measures were substantial was that the OECD mentioned the recapitalization of banks as one of the factors leading to a significant rise in the public debt-to-GDP ratio (p. 112).

The OECD also suggested that financial distress was affecting aggregate demand and output. It wrote: "The economic downturn is primarily due to falling exports, reflecting the collapse in world trade, and shrinking investment, in the light of the tightened credit standards and uncertainty about the outlook" (p. 111). Similarly, it wrote of the outlook: "Given lower capacity utilisation, constrained financing and the still gloomy outlook, business investment is also projected to fall in 2009" (p. 113). The closing risks paragraph was even more explicit about the importance of financial conditions to the outlook. It said: "The Austrian outlook hinges crucially on foreign demand and developments in financial markets. Further financial strains in Central and Eastern Europe would threaten financial and fiscal stability in Austria" (p. 113).

The description of financial conditions in 2009:1 indicates little improvement between 2008:2 (which we classify as a moderate crisis–minus) and 2009:1. There was reference to policy measures "stabilizing financial markets," which suggests stasis. In another section, the OECD did say that "conditions in financial markets have started to improve," but also indicated that "credit standards in Austria tightened further in early 2009." This is consistent with conditions overall in the first half of 2009 being little improved over the second half of 2008.

On an absolute scale, this episode has all of the hallmarks of a moderate crisis of some type. The references to "constrained financing," "tightened credit standards," and extensive financial market interventions (including bank recapitalization) indicate that financial market problems were widespread and severe. There was also a significant risk that financial stability could deteriorate further and the financial sector could require additional support. Finally, the OECD was explicit that the "outlook hinges crucially on ... developments in financial markets." That financial conditions in the euro area more generally were similarly distressed reinforces the sense that there were significant financial market disruptions.

At the same time, while the Austrian financial system was clearly very troubled in 2009:1, the OECD suggested that the actions being taken were helping and financial conditions were starting to improve. This suggests that conditions were at the lower end of the moderate crisis range. We therefore classify this episode as a moderate crisis−minus.

Denmark, 2009:1. The opening summary said that "The Danish economy is currently experiencing its worst recession in over four decades. The downturn, which started with the unwinding of the property boom, has now been compounded by the trade and financial effects of the global economic crisis" (p. 119). Under the heading "Financial stress and weak property markets persist," the OECD wrote (p. 119):

> Growth in lending by banks and mortgage credit institutions has slowed from the rapid rates of a few years ago. Smaller institutions in particular have had difficulty raising funds to finance lending. Increasing loan losses will depress bank profitability, although the government's capital injection package should provide support for lending. Subdued lending growth may also reflect an easing of demand for mortgage loans.

The overview chapter indicated that Danish authorities had taken a number of actions to curb financial problems including: increasing deposit insurance, guaranteeing or buying bank debt, injecting capital, and funding asset-backed securities (p. 44).

The OECD provided some indication that financial problems were important to the outlook. It said: "Slowing lending growth, low share prices and low capacity utilisation will restrain capital formation" (p. 121). Similarly, the closing risks paragraph mentioned that "Economic developments in Denmark could be weaker still if the feedback effects of higher unemployment, lower house prices and rising loan losses lead financial institutions to cut back lending even more. This risk is mitigated somewhat by the government's offer to inject capital into banks and mortgage credit institutions" (p. 121).

This description of financial conditions was a little more severe than that in 2008:2 (which we classify as a minor crisis−plus). The main deterioration was that the risks of further financial problems were more explicit and make it sound as if financial problems were more clearly central to the outlook.

Financial conditions in Denmark in 2009:1 were on the border between a minor crisis−plus and a moderate crisis−minus. The OECD talked of lending growth slowing because financial institutions were having trouble raising funds—suggesting a significant disruption of normal functioning. It also saw substantial risk of further financial deterioration, which points to financial problems being significant. There were also references to financial market problems affecting investment and to substantial government intervention in financial markets—two other characteristics of a moderate crisis of some type. However, the OECD expressed optimism that government interventions would help ease financial strains, and the perceived effects on demand did not sound large. The fact that conditions had also deteriorated slightly from 2008:2, leads us to resolve the ambiguity in favor of classifying this episode as a moderate crisis–minus.

Greece, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

Given the troubled conditions in the euro area more broadly, the opening summary of the entry on Greece was surprisingly sanguine. It said: "Growth weakened in 2008 under the weight of the global economic crisis, despite a sound financial sector and sustained domestic demand" (p. 125). The first paragraph of the text, however, told a more nuanced story. It said (p. 125):

> Tighter credit conditions and weaker consumer and business confidence led to a sharp decline in investment, especially in housing, and started to bear on consumption. Activity was sustained by continued exports to the Balkans, low exposure to toxic assets, large wage increases, and the relative strength of the large service sector.

Likewise, the outlook section said that "Economic activity is projected to contract by ⅓ per cent in 2009 – the first decline since 1993 – as domestic demand decelerates further due to tight credit standards and weak confidence" (p. 127).

Under the heading "Banks benefit from a financial support package," the OECD wrote (pp. 126–127):

> The government provided a support package of € 28 billion (11½ per cent of GDP) to boost confidence and liquidity in the banking sector. In view of the risks, especially related to the large exposure of Greek banks to South–East Europe, this package appears to provide enough assistance to ensure financial stability for now. Supervisors should nevertheless remain prepared to deal with evolving risks, as the

> strains induced by the crisis in the banking sector are likely to be compounded by the impact of the projected recession on bank portfolios.

The closing risks paragraph reiterated this negative possibility, saying: "The impact of the weaker economy on the financial sector poses another risk to growth" (p. 127). It also included a vague reference to the Balkans posing a risk to the Greek financial system when it said: "A greater deterioration of the external environment, especially in the Balkans – an important export and financial market which absorbs almost a fourth of Greek exports, would cut growth" (p. 127).

We found this entry somewhat schizophrenic. On the one hand there was reference to the "sound financial sector;" on the other, there was discussion of substantial risks to the financial system and a government support package to the banking sector of 11½% of GDP. On net, we conclude that the episode includes most of the hallmarks of some type of a moderate crisis. There was discussion of tight credit standards and the risks posed by Greek banks' large exposure to South-East Europe. There was also substantial government intervention in the financial sector. In many ways, the statement "this package appears to provide enough assistance to ensure financial stability for now" was the clearest indication that the Greek financial system was on the edge. These descriptions, along with the high level of financial distress in the euro area more generally, suggest financial problems in Greece were widespread and severe. There were also statements that financial developments were affecting demand and growth, indicating that financial troubles were central to the outlook. Because there is some ambiguity in the entry and because the risks to the financial system do not appear enormous, we scale this at the lower end of the moderate crisis range (a moderate crisis–minus).

Ireland, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The opening summary of the entry on Ireland said: "The economy is experiencing a severe contraction as large domestic imbalances correct, compounded by the global downturn and financial crisis" (p. 134). It also said that "Problems in the banking sector must be resolved at a reasonable cost" (p. 134). Under the heading "Banking sector weakness is being addressed," the OECD described credit conditions and the various measures being taken to improve credit flows. It wrote (p. 136):

> An adequate flow of bank finance will be essential for any recovery. Stability of the banking system has been aided by guarantees of bank liabilities and deposits. Banks' ability to lend, however, is constrained by potential losses from extensive property-related lending in earlier years. The authorities have recapitalised the two largest banks and nationalised another. The National Asset Management Agency (NAMA) is being set up to take property development loans off banks' balance sheets. The government stands willing to provide additional capital if this leads to large banking losses. These measures should allow banks to provide new credit.

One indication of how significant these interventions were is that the "impact of support to the banking system" was one of the reasons the OECD thought fiscal consolidation was appropriate despite rapid economic contraction (p. 136).

Most of the discussion of the fall in output focused on the collapse of housing investment. The OECD wrote: "Economic activity contracted by 6% in the second half of 2008. The precipitous fall in housing investment was the main driver of the slowdown but a sharp drop in machinery investment and falling consumption have also contributed substantially to the slowdown" (p. 134). The only sign that credit conditions were important to the outlook was the statement: "The economic turnaround is likely to begin in 2010, as the housing cycle correction reaches its trough and the wider economy adjusts. Accommodative monetary policy and improving financial conditions will support growth" (p. 135).

This was a somewhat difficult entry to scale. The OECD described problems in the financial sector that sound quite severe and widespread. For example, saying that "An adequate flow of bank finance will be essential for any recovery" suggested that bank finance was not flowing presently. The wide range of extreme actions being taken also suggested substantial financial problems. Similarly, the statement "These measures should allow banks to provide new credit" could indicate some doubt about whether the actions would be helpful. At the same time, the entry said remarkably little about possible effects of financial developments on demand and output—a usual feature of a moderate crisis of some type.

Despite the lack of much discussion about possible impacts on demand, we nevertheless classify this episode as a moderate crisis−minus. The description of difficulties in the financial system was sufficiently severe that we feel confident that the cost of credit intermediation was significantly elevated. The fact that the Irish authorities were taking a large number of extreme measures to deal with credit disruptions and banking problems also argues for pushing this episode into the moderate crisis−minus range. That financial conditions in the euro area more generally were quite distressed further convinced us that this classification was appropriate. In addition, Ireland had been a minor crisis−plus in the previous period and conditions were slightly worse in 2009:1. In 2009:1 there was more of a tone that the financial system was not functioning normally. This too argues for classifying the episode at the low end of the moderate crisis range.

United Kingdom, 2009:2. The opening summary set an optimistic tone. It said: "The economy is set for recovery, supported by improving financial conditions, an expansionary monetary policy and stronger international growth. However, the pick-up will be slow" (p. 150). It also stressed the importance of policy interventions, saying: "Financial sector support, monetary easing and fiscal stimulus have cushioned the downturn" (p. 150). In discussing current conditions, the OECD wrote: "with house prices turning around since the spring, deleveraging pressures have eased for both households and the financial system" (p. 150).

Later in the entry, however, the OECD was decidedly less upbeat. Under the heading "Financial conditions have improved, but credit remains a drag on growth," the OECD wrote (p. 151):

> Financial conditions have improved significantly since end-2008 with expansionary monetary policy, the weak sterling and the wide range of policy measures to support the banking system contributing to the improvement. However, margins on credit remain high, especially on mortgages, and hamper growth. Further recapitalisation of the banking system would leave room for lower margins and increase the robustness of the financial system in the face of possible new shocks.

The closing risks paragraph sounded similarly cautious. It warned: "slowing income growth and continued poor access to credit could cause a further fall in [house] prices. Such a scenario would imply further balance-sheet adjustments among households and renewed concerns about credit losses, pointing to the urgency of recapitalisation and cleaning up balance sheets in the banking sector" (p. 154).

This description of conditions is clearly less severe than that for 2009:1 (which we classify as a moderate crisis−plus). Most obviously, the OECD said explicitly that financial conditions had improved. Several factors, however, suggest there was still significant financial distress in the United Kingdom in 2009:2. The OECD said that credit margins remained high and referred to "continued poor access to credit." It also discussed a significant risk of additional problems in the financial sector and pointed to the "urgency of recapitalisation." The OECD indicated that credit conditions were important to the outlook when it wrote: "credit remains a drag on growth." That financial problems were still widespread and severe and central to the outlook suggests classifying this episode as some type of moderate crisis. Given that the problems do not sound particularly grim and that the linkages to domestic demand were not portrayed as large suggest that the lower end of the range (a moderate crisis−minus) is the appropriate classification.

United States, 2009:2. The opening editorial sounded relatively optimistic about the resolution of the financial crisis throughout the OECD. Of the United States, it said: "The US economy is recovering on the back of policy stimulus, improving financial conditions," and three other factors (p. 7). The overview chapter discussed that "In the United States, spreads between unsecured three-month interbank rates and average expected overnight rates have fallen to levels that are now close to their pre-August 2007 averages," and that "The cost of insuring bank bonds against default has fallen from about 3% of par value in March 2009 to 1.1% ... in early November 2009. Banks have also been able to attract private capital to offset losses associated with write-downs of impaired assets" (p. 15).

The overview chapter also contained some notes of caution. While discussing the increase in capital ratios for U.S. banks, the OECD said: "Banks have, however, not yet acknowledged all potential losses on legacy securities and loans continue turning bad because of the recession. In particular, the weakness in the commercial property market is likely to result in a large increase in non-performing loans of small and medium-sized regional banks" (p. 16). It also said: "In this environment, bank lending growth has kept falling to very low or even negative year-on-year rates of change across a wide range of loan categories in the United States," and that "it is likely that recent trends in bank lending reflect a mixture of both supply constraints and weak demand" (p. 17). In discussing the U.S. outlook, the OECD signaled both continuing financial problems and optimism that problems were resolving, saying: "The ongoing improvement in financial conditions and final demand will help to gradually strengthen private investment through next year" (p. 33).

The opening summary for the entry on the United States struck a similarly mixed tone. It said: "The risk of new large bankruptcies in the banking system has diminished, but equity capital will need to be replenished to offset financial losses. ... Sizable macroeconomic stimulus and easing financial conditions will support growth, though it will be somewhat weaker than during past recoveries" (p. 120). The OECD credited policy with helping ease financial problems. It wrote: "In the financial markets, the historically low federal funds rate along with considerable Federal Reserve intervention in buying mortgage-backed securities has helped drive down mortgage rates and largely reverse the surge in commercial paper and corporate bond spreads that occurred late last year" (p. 122).

In discussing the outlook, the OECD said that "Over the longer term, a greater impetus will come from the improvements in firm profitability, lower corporate bond rates, and easing in the availability of bank loans which will greatly relax supply constraints on business investment" (p. 123). Under the tagline "Renewed financial stress would weigh on the recovery, but there are also upside risks," the closing risks paragraph said: "There is a risk that financial institutions may incur more losses than envisaged, notably on commercial real estate loans, impinging on their capacity to lend and hence to support economic growth" (p. 124).

It is clear that financial conditions were much improved in 2009:2 relative to 2009:1 (which we classify as a major crisis–minus). The OECD said spreads were largely back to normal and made many references to improvement in credit availability. At the same time, there was still significant financial distress. The OECD said that lending was low or even falling because of a mix of supply and demand forces. It also highlighted the possibility of losses on commercial real estate loans as a significant risk to the financial sector and its capacity to lend. Furthermore, the discussion that improving financing conditions should support investment in the longer term may indicate that conditions were currently not conducive to domestic demand recovery. All of this suggests that financial problems were still widespread and severe—which is with consistent with classifying the episode as some type of moderate crisis.

Three factors, however, suggest that conditions in this episode correspond to the lower end of the moderate crisis range. One was the discussion of lower spreads and other signs that credit was flowing somewhat. The second was the statement that risks were greatly diminished. The third was that credit conditions, while important to the outlook, were listed as only one of several developments thought to be important. For these reasons, we classify the episode as a moderate crisis–minus.

Iceland, 2010:1. In 2009:1, Iceland was suffering extraordinary financial distress, and we classify that episode as an extreme crisis–regular. The 2009:2 *OECD Economic Outlook* described a financial system that was no longer dysfunctional but still in considerable difficulty; we code that episode as a moderate crisis–plus. Here, the OECD discussed financial issues in two places in its entry on Iceland. First, the opening summary said, "Capital controls should be liberalised once the medium-term fiscal consolidation plan is well underway, the banking sector has been put back on its feet, and there are adequate international reserves" (p. 145). Second, there was a more extended discussion of the health of the financial sector (p. 146):

> Capital controls have been liberalised for new foreign-currency inward investments, but further liberalisation is on hold until there is greater certainty about the timing of external financing and more progress on restructuring of the financial sector. Recapitalisation of the main banks was completed in December 2009 and recapitalisation of savings banks is expected to be completed soon.

Problems in credit supply were not mentioned in any of the OECD's analysis of factors driving output or in the discussion of risks to the outlook. For example, it said, "Business investment remained very weak owing to depressed economic conditions, deleveraging and the end of large energy-intensive projects" (p. 145).

On net, the entry suggests improvement, but not dramatic improvement, since 2009:2. Most notably, the OECD described considerable progress in recapitalizing the banking system, and it no longer said that financial distress was affecting macroeconomic outcomes. At the same time, three considerations suggest that there was still considerable distress. First, we classify Iceland in 2009:2 as a moderate crisis–plus, and here the OECD did not say that progress had been dramatic. Second, the statements that savings banks had not yet been recapitalized and that the availability of external funding was uncertain point to noteworthy continuing problems. And third, the remark that liberalization of capital controls should not occur until the banking sector was on its feet implies that the sector was not currently on its feet. Although we do not want to put excessive weight on a single phrase, this comment surely weighs on the side of distress still being high. Putting these considerations together, we classify this episode as a moderate crisis–minus. This fits with the facts that the OECD appears to describe significant continuing distress, and notable but not overwhelming improvement.

Greece, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

The OECD discussed credit problems in two places in its entry on Greece. First, it said, "Private consumption ... contracted in the second quarter in view of the worsening labour market, fiscal retrenchment and a further slowdown in credit (p. 135). Second, it said, "The economy is projected to continue contracting in 2011 by 2¾ per cent under the weight of fiscal retrenchment, tight credit conditions and weak sentiment" (p. 137). The OECD also discussed financial distress in Greece in the material preceding the country entries. It reported (p. 40):

> Specific risks continue to emanate from banks. A number of fiscally weak euro area countries have banking sectors that are still highly dependent on liquidity support from the ECB .... If these banks cannot regain market confidence in the coming quarters, they may experience funding difficulties when, as expected, the ECB stops its exceptional liquidity facilities.

An accompanying chart showed that the country whose banks were by far the most dependent on ECB liquidity support was Greece (p. 43).

Three elements of this evidence point to substantial financial distress. First, the OECD viewed tight credit conditions as a key driver of the outlook, and twice put them on a par with fiscal retrenchment—which it described as “sizeable” and “sharp” (p. 135). Second, the OECD highlighted actions to help banks and risks to the banking sector in the material preceding the country entries, which is highly unusual for a small country. Third, we classify Greece in 2010:1 as a moderate crisis–regular, and here the OECD did not explicitly say that conditions had improved (and indeed, at one point it referred to a further slowdown in credit), which suggests that it did not see a dramatic improvement. Taken together, this evidence indicates that the episode falls in the moderate crisis range.

At the same time, the OECD’s discussion is in fact somewhat less grim than in 2010:1. The earlier entry devoted more attention to the health of Greece’s financial system, discussed the impact of tight credit on the recent behavior of investment in addition to the recent behavior of consumption, and was more explicit in citing an important risk to the outlook from the financial system. We therefore classify the current episode as a moderate crisis–minus.

Iceland, 2010:2. The OECD did not discuss financial issues in the opening summary of its entry or in its analysis of factors that had been driving falls in investment and consumption. But it discussed them extensively elsewhere in the entry. First, it said, “The next step in liberalising capital controls, which will involve lifting them on long-term assets, is conditional on banks having enough liquidity to handle possible outflows and sufficient capital to buffer against any losses” (pp. 142–143). Second, the OECD devoted a paragraph to a recent development with an important impact on the banking sector (p.143):

> A recent Iceland Supreme Court ruling that foreign exchange indexation clauses in domestic currency loans are illegal will cause large losses to Iceland’s banks. The authorities will require the owners of the three new commercial banks to recapitalise them. If any of the banks does not meet capital adequacy requirements within the designated time frame, the government will inject Tier 1 capital using an instrument structured to isolate it from potential future losses.

Finally, financial issues featured prominently in the discussion of risks (p. 143):

> The Supreme Court decision on foreign exchange indexed loans could delay private sector debt restructuring and discourage FDI in Iceland, which would depress growth prospects. Administrative delays and financing difficulties could also hamper energy-intensive projects in 2011, although this could represent an upside risk for 2012 if such investment is simply delayed by one year. ... if a final agreement with the British and Dutch governments concerning Icesave deposits were to be reached, this would facilitate Iceland’s reintegration into global capital markets and increase FDI in Iceland.

Thus, the financial system was quite prominent in the OECD’s analysis, with references to potential capital and liquidity problems, possible needs for capital injections, and lack of integration into world capital markets. At the same time, the OECD did not characterize the financial system as close to unsound or not functioning. This points to some type of moderate crisis. The fact that there were only mild references to macroeconomic consequences of the distress (in the form of risks to foreign direct investment and energy-intensive investment) points to the lower end of the range.

A comparison with Iceland in 2010:1, which we classify as a moderate crisis–minus, leads to the same conclusion. In the current entry, the OECD did not appear to describe any notable progress in relaxing capital controls; and while the current entry described the Supreme Court decision as a setback, the entry omitted the comment from the earlier one that suggested that the banking system was not yet on its feet after the intense crisis of 2009:1. Thus, on net there appears to have been little change. We therefore classify this episode as a moderate crisis–minus.

Ireland, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

The OECD discussed the financial system in three places in its entry on Ireland. First, the opening summary said:

> The banking restructuring strategy aims at transferring risky land, development and associated loans to a government-backed asset management agency, and then injecting public funds into undercapitalised banks. While this approach has the merit of preserving banking stability, it comes at a high cost for the public finances and is creating stress in the Irish sovereign debt market.

Second, the concluding assessment of risks began with a similar passage (p. 146)

> Ireland's approach to address problems in the financial sector has the merit of being transparent and it may finally restore the restructured banking sector to health. But the challenge is to wean the banking sector off public support and stabilise public debt despite the weak recovery and market concerns about sovereign risks.

Third, the OECD noted that "the headline budget deficit will be pushed temporarily higher by the cost of rescuing the banking sector" (p. 146).

The OECD also discussed financial distress in Ireland in two places in the material preceding the country entries. Most directly, it said, "In Ireland, renewed financial market stress due to ongoing concerns about the health of the banking system may lead to a renewed tightening of credit conditions" (p. 28). It also reported (p. 40):

> Specific risks continue to emanate from banks. A number of fiscally weak euro area countries have banking sectors that are still highly dependent on liquidity support from the ECB .... If these banks cannot regain market confidence in the coming quarters, they may experience funding difficulties when, as expected, the ECB stops its exceptional liquidity facilities.

An accompanying chart showed that Ireland's banks were significantly dependent on ECB liquidity support, though less so than banks in Greece and Portugal (p. 43).

This discussion of the health of the health of the financial system is quite similar to that for Ireland in 2010:1, but a shade less severe. The current episode points to significant distress, especially in the reference to restoring the financial system to health (with the obvious implication that it was not healthy), the repeated references to actions to help the banking sector, and the fact that the OECD mentioned problems in Ireland's financial sector twice in the material before the country entries (which is rare for a small country). But the opening summary in 2010:1 had considerably stronger language about financial distress than the 2010:2 summary, including a reference to getting credit flowing again (implying that it was not flowing).

In both 2010:1 and 2010:2, the OECD did not emphasize financial distress in its discussions of factors negatively affecting macroeconomic performance. Here, a discussion of the outlook said, "Spending will remain weak, as unemployment is set to remain high and further fiscal austerity measures will restrain the growth of domestic demand" (p. 144). And the opening summary implied a link between financial problems and unemployment but did not emphasize them, saying, "Past imbalances are unwinding in banking, the housing market, the government budget and the labour market, leaving a large impact on public debt and unemployment" (p. 144). These statements are similar to ones in 2010:1.

The combination of clear and substantial financial distress with only a mild statement about macroeconomic consequences leads us to classify this episode as a moderate crisis–minus. This classification is consistent with the fact that we code Ireland in 2010:1 as a regular moderate crisis and that there appears to have been a slight improvement. This episode is also similar to Iceland in 2010:2 and Spain in 2012:1, both of which we place in the moderate crisis–minus group.

Greece, 2011:1. The OECD's entry on the euro area gave a generally upbeat assessment of the health of the financial system, but suggested some lingering distress overall and serious problems in some countries. The opening summary said, "financial conditions have improved" (p. 90). The entry went on to say, "Improved overall financial conditions are contributing positively to growth, while non-standard policy measures and government support for the financial sector are being gradually wound down" (p. 92). It also cited "more favourable financial conditions" as one reason that "Private non-residential investment will bounce back" (p. 94). But it also saw residual problems, referring to "remaining weakness in the banking system" and the need "to ensure that credit availability does not constrain the recovery" (p. 92). In addition, the OECD indicated that the situation was considerably more serious in some euro countries: "For several countries, sovereign spreads remain at very high levels and the state of the banking system, as well as financial conditions, is still fragile" (p. 92). It made a similar remark in its concluding discussion of risks, but without being as clear about how broadly its concerns applied: "Weaknesses in government and bank solvency could lead to wider financial tensions and contagion, which would test the European Financial Stability Fund (EFSF) and the banking system" (p. 94).

The OECD referred to financial issues twice in its entry on Greece, saying, "Private consumption fell sharply in 2010, due to worsening labour markets, falling incomes and a decline in consumer credit" (p. 143), and, "Industrial production, retail trade and consumer credit all suggest weak activity in the months ahead" (p. 143). The OECD also discussed financial distress in Greece in the material preceding the country entries. It reported, "banks in Greece, Ireland and Portugal have been cut off from market finance and are dependent on liquidity provided by the ECB" (p. 36), and it referred to "the fragile financial systems" of those countries (p. 69).

The facts that banks did not have access to market finance, that the OECD viewed the financial system as fragile, and that it mentioned distress in Greece twice in the material before the country entries (which is rare for a small country) suggest more than a minor crisis. That the OECD saw tight credit as one of three reasons for a sharp fall in consumption, and as one of three drivers of the short-run outlook, points largely to the same conclusion; at the same time, the absence of stronger language about macroeconomic impacts and of any discussion of risks to the outlook from the financial system argue against placing this episode high in the moderate crisis range. A useful comparison is with Greece in 2010:2, which we classify as a moderate crisis−minus. Here, the language about the financial system is broadly similar but slightly more negative, while the language about the macroeconomic effects is broadly similar but slightly less negative. Thus on net, there appears to be little difference between the two episodes. We therefore also classify this episode as a moderate crisis−minus.

Iceland, 2011:1. The OECD began the opening summary of its entry by saying, "After a period of severe adjustment to eliminate imbalances and restructure the banking system, the Icelandic economy is projected to begin to grow again in 2011" (p. 149). The summary also stated, "There is considerable uncertainty about the impact of the rejection of the Icesave Agreement on the normalisation of international financial relations and on the attractiveness of Iceland for investment" (p. 149). The entry referenced financial issues in several other places. First, there were passing mentions of "net income payments of credit institutions in winding-up proceedings" (p. 150) and "called loan guarantees" (p. 150) in discussions of the current account balance and the government budget deficit. Second, the OECD reported, "Capital controls are unlikely to be removed by 2012" (p. 150). Third, the entry devoted a paragraph to a recent development affecting the financial system, under the heading, "Rejection of the Icesave Agreement may weigh on the economic recovery" (p. 151):

> The electorate recently rejected the Icesave Agreement, which would have resolved disputes with the British and Dutch governments and had been expected to add about 2% of GDP to government debt. This dispute is now likely to be settled in court. Credit ratings on Iceland sovereign debt remained unchanged, but the vote and the subsequent legal process could delay the removal of capital controls, reduce investment, and delay Iceland's EU accession negotiations.

Finally, the concluding discussion of risks said, "The main risks to the economic outlook concern the effects of the recent vote against the Icesave agreement and the timing of large energy-intensive investment projects" (p. 151). In addition, the OECD did not cite the financial system in its discussion of factors behind the recent behavior of consumption, residential investment, and business investment.

The opening sentence makes clear that the OECD saw considerable progress from the intense crisis of 2009:1 (which we classify as an extreme crisis−regular). But the entry also conveys a clear sense of ongoing problems, with allusions to government actions to help the financial sector, the statement that the system was far from ready for the removal of capital controls, and the extensive discussion of the rejection of the Icesave agreement. Unfortunately, the OECD was vague about the channels through which the rejection would affect the economy, though the fact that it thought it would delay the removal of capital controls points to some effects through the health of the financial system. In short, the entry suggests notable ongoing distress, but is not highly informative about its precise level.

To determine exactly how to classify this episode, we put considerable weight on a comparison with Iceland in 2010:2, which we classify as a moderate crisis–minus. Three considerations point to little change from that episode. First, and most importantly, the extensiveness of the discussion of the financial system, its tone, and the lack of emphasis on the financial system in the analysis of recent developments are all similar to that episode. Second, the OECD did not convey any clear sense of overall improvement or deterioration. And third, in both 2010:1 and 2010:2, the OECD viewed relaxation of capital controls as very dependent on the health of the financial system. Thus, the fact that it appeared to see little progress toward their removal suggests that it saw little change in the health of the financial system. We therefore classify this episode as a moderate crisis–minus.

Greece, 2011:2. The OECD's entry for the euro area described significant financial distress, and notable deterioration since 2011:1. The opening summary began, "The recovery has stalled as confidence has weakened and financial conditions have deteriorated as a result of the sovereign debt crisis" (p. 80). The summary also said, "The main risks centre on the interactions of slow growth, sovereign debt and weaknesses in the banking system" (p. 80). The entry went on to mention "continued balance sheets weaknesses in banks," the fact that "The functioning of the interbank market has become impaired," and "a renewed tightening of loan standards for businesses and households" (p. 80). It also linked the distress to economic performance: "investment will be weak as projects are put on hold and financing becomes scarcer .... The recovery will be muted ... as a result of weakened labour market conditions, the continued need to resolve underlying economic imbalances in some countries and remaining fragilities in financial conditions" (pp. 81–82). Finally, the OECD said, "A rigorous and credible assessment of all risks to the banking sector is required and measures taken to ensure that all banks are well capitalised" (p. 83).

In its entry for Greece, the OECD reported (under the heading, "The economy remains mired in a serious recession"), "Output contracted sharply in 2011 driven by a collapse in domestic demand, falling incomes, worsening labour market conditions, and limited access to credit" (p. 133). It went on to say, "The banking sector's limited capacity to support growth poses additional risks to the outlook" (p. 135), and, "Channelling liquidity to the economy is crucial for the recovery" (p. 135). In addition, in the material preceding the country entries, the OECD mentioned plans made at the euro area level to provide "the additional resources required for the recapitalisation of Greek banks" (p. 37).

Thus, the OECD saw financial distress that was having major effects on the economy. It put limited access to credit on a list that included collapsing demand as a reason for a sharp output contraction; it said that the banking sector had only a limited capacity to support growth, and that this created additional risks; and it described providing liquidity as crucial. All of this points to at least some type of a moderate crisis. At the same time, the OECD did not come close to describing the financial system as unsound or not functioning; thus, the episode does not qualify as a major crisis.

The episode is similar to Greece on both 2010:2 and 2011:1, both of which we put in the moderate crisis–minus category. Of the two, it is most similar to 2010:2, when the OECD also characterized the effects of distress in reasonably strong terms but used somewhat milder language when discussing the health of the financial system directly. We therefore also classify this episode as a moderate crisis–minus.

Portugal, 2011:2. The OECD's discussion of this episode suggested significant distress but was not highly informative about the specifics. In the material preceding the country entries, the OECD said, "If a sovereign debt restructuring in Greece raised perceived default probabilities in one or both" of Portugal and Ireland, the consequences might "require some capital injection into domestic banks to offset losses on their holdings of domestic sovereign bonds" (pp. 43–44). In its entry on Portugal, the OECD alluded to the financial system in three places. First, it said, "Output losses are estimated to intensify in the final quarter of the year with deteriorating global conditions weakening exports, bank deleveraging continuing and additional tax hikes hitting disposable income" (p. 169). Second, a chart was titled, "Credit has stopped growing" (p. 169). And third, the entry referred to "the transfer of banking sector pension funds to the state" (p. 170). In addition, as described in our entry for Greece for 2011:2, the OECD saw significant financial distress in the euro area as a whole and potentially important connections between difficulties in sovereign debt markets and banking system problems.

Because the entry does not provide a great deal of guidance, we rely heavily on comparisons to determine the exact classification of this episode. One important one is with Portugal in 2011:1, which we code as a regular moderate crisis. That entry described very large problems in the financial sector; and in the context of that discussion, it commented that credit growth had slowed, implying that it attributed the slowing growth to credit supply issues. Given that background, the references in the current entry to continuing bank deleveraging and credit having stopped growing suggest that the OECD did not see much improvement in the financial system. The discussions of additional actions to help the financial system point to the same conclusion. On the other hand, the language describing the financial problems in the current entry was not as grave as in 2011:1. Both entries mentioned likely macroeconomic consequences, but neither spelled them out in detail.

A second useful comparison is with Ireland in 2011:2. The OECD's discussion of Ireland in 2011:1 is similar to its discussion of Portugal in 2011:1, and we also classify that episode as regular moderate crisis. In 2011:2, the OECD saw continuing significant problems in the Irish financial system and significant effects on the economy, but was also very clear that it saw notable improvement from 2011:1. We classify that episode as a minor crisis–plus.

The facts that the OECD discussion of Portugal's financial system was somewhat less negative than in 2011:1, but not qualitatively different and did not explicitly say that things had improved, argues for lowering our scaling slightly from that episode. The comparison with Ireland argues against taking it down to a minor crisis–plus or below. We therefore classify this episode as a moderate crisis–minus.

Spain, 2011:2. The OECD made numerous references to problems in the financial system and their impact on the economy in its entry. The opening summary began, "Economic growth is projected to contract in the last quarter of 2011, reflecting slowing world trade and the impact of the euro area debt crisis on confidence and domestic funding conditions" (p. 178). The entry went on to say, "High risk *premia* on government debt are being passed on to private sector funding conditions to some extent. House prices continue to decline, weakening bank balance sheets, especially for the savings banks, which are particularly exposed to the housing sector" (p. 178). Under the heading, "Budgetary consolidation has been strengthened and banks recapitalised" (p. 178), the OECD wrote, "Comprehensive stress tests have strengthened transparency on the banks' capacity to absorb losses. All the major banks have met the requirement to hold core capital of at least 8 or 10% of risk-weighted assets, mostly with private sector injections" (p.179). In discussing the outlook, it said, "Subdued export prospects and tight lending conditions are projected to keep economic growth low in 2012. ... Financial conditions may improve gradually as budgetary consolidation progresses" (p. 180). Finally, the discussion of risks was headed, "A renewed rise in yields would deepen the crisis," and said (p. 180):

> A further increase in the yields on Spanish government bonds would raise private sector funding costs and prolong the housing crisis. In view of relatively high indebtedness of the private non-financial sector and the exposure of the banking sector to real estate risks, the impact on economic activity could be substantial.

In addition, the material preceding the country entries listed Spain as a country where "Major negative turns in market sentiment ... could have dire consequences for the public finances and the banking sector" (p. 45). Finally, as described in our entry for Greece for 2011:2, the OECD saw significant financial distress in the euro area as a whole and potentially important connections between difficulties in sovereign debt markets and banking system problems.

This episode fits well with the lower end of the moderate crisis range. The OECD referred repeatedly to significant problems in the financial sector. Moreover, it cited those problems as one of the two main drivers of the outlook and as tied to the largest risk facing the economy. Thus, the OECD saw widespread problems in the financial sector that were central to the economy's overall performance. At the same time, with the exception of the remark about the possible effects of a major negative turn in sentiment, the OECD's comments concerning the financial problems were numerous but far from grave. We therefore classify this episode as a moderate crisis−minus. The episode is similar to Greece in 2011:2, which we also classify as a moderate crisis−minus.

Italy, 2012:1. The OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary began, "Activity has stagnated after contracting in end-2011 and unemployment is set to rise further, owing to weak confidence and difficult financial conditions related to the sovereign debt crisis" (p. 74). The summary also identified "how to simultaneously address needs of governments and banks" as an important challenge, and said that "bank balance sheets should be strengthened" to support growth (p. 74). Under the heading, "The economy has stagnated," the entry said: "in the latter half of 2011 ... tensions increased in the interbank market," and, "Risk spreads on government debt of some countries increased, ... putting further funding pressures on banks" (pp. 74–75). The entry also reported: "bank balance sheets remain weak, despite increased liquidity provision from the European Central Bank. ... The April 2012 ECB Bank Lending Survey points to a further tightening in bank lending standards to households and corporations, through at a slower rate than in late-2011" (pp. 75–76). Finally, the OECD warned, "The risks are large and mainly on the downside," and listed as one of two main downside risks, "the possible intensification of the sovereign debt crisis, which would further undermine confidence and the financial system" (p. 77). The entry concluded, "On the upside, more rapid repair of the financial system and ambitious structural reforms would improve the growth outlook" (p. 77)—implying that problems in the financial system were affecting growth.

The OECD did not discuss financial issues in the opening summary of its entry on Italy. But it addressed them at three points in the entry. First, it said, "renewed weakness in output and uncertainty, probably exacerbated by the difficulty some firms have in maintaining levels of working capital in the face of tightening access to bank credit, has prompted employers to increase layoffs" (pp. 86–87). Second, under the heading, "Tightening credit conditions have constrained demand," it reported, "The impact of real income losses on consumption is likely to be accentuated by tight credit, although credit conditions ameliorated somewhat in early 2012" (p. 89). And third, in its discussion of risks, it said: "A major risk is ... higher interest rates on public debt. The repercussions on domestic banks could also accentuate the credit squeeze and further damp growth" (p. 89).

In addition, the OECD addressed Italy's financial system in the material preceding the country entries. In discussing sovereign bond yields, it said, "renewed concerns about fiscal and banking sustainability, and about possible spillovers from developments in Greece, have led to some backing-up, most notably in Spain and Italy" (p. 14). And in discussing fiscal policy in Italy, Portugal, Greece, and Spain, it said, "fiscal multipliers could be unusually large in some of these countries at present, due to fragile banking systems that limit the possibility of consumption smoothing, weak confidence and no scope for monetary policy reaction at the domestic level" (p. 58).

This episode clearly fits the criteria for some type of moderate crisis. The OECD mentioned distress in Italy twice in the material before the country entries, alluded to concerns about banking sustainability, characterized the banking system as fragile, repeatedly referred to credit as tight, and at one point referred to a credit squeeze. Further, it reported that some firms were having trouble obtaining working capital, said that tight credit was affecting consumption, and saw an additional downside risk to the economy from banking problems. At the same time, several factors militate against going high in the moderate crisis range: the OECD did not convey a sense of crisis or urgency; it did not describe any new actions or mention financial distress in its opening summary; it reported that credit conditions had recently improved somewhat; and we classify Italy in 2011:2 as a minor crisis regular, and the OECD does not highlight deterioration since then. We therefore classify this episode as a moderate crisis–minus.

Spain, 2012:1. As described in our entry for Italy for 2012:1, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. In its entry for Spain, the OECD discussed the financial system in two places. First, it devoted a long passage to the health of the financial system (pp. 160–161):

> Non-performing loans have risen to around 8% of total bank lending. Recent measures will raise banks' specific buffers to cover losses from exposures to real estate developers from 7 per cent of GDP at the end of 2011 to 14 per cent of GDP by 2013. Exposures to real estate developers amount to about 30% of GDP. The government is expected to provide capital injections worth 1.5% of GDP to the banking sector. It has also partially nationalised a large savings bank group.

Second, it concluded its discussion of risks to the outlook by saying, "A further increase in the risk premium on yields of Spanish government bonds would raise private sector funding costs and deepen the recession" (p. 161).

The OECD also addressed Spain's financial system in the material preceding the country entries. In discussing sovereign bond yields, it said, "renewed concerns about fiscal and banking sustainability, and about possible spillovers from developments in Greece, have led to some backing-up, most notably in Spain and Italy" (p. 14). And in discussing fiscal policy in Italy, Portugal, Greece, and Spain, it said, "fiscal multipliers could be unusually large in some of these countries at present, due to fragile banking systems that limit the possibility of consumption smoothing, weak confidence and no scope for monetary policy reaction at the domestic level" (p. 58).

The OECD was clearly describing a financial system with serious problems: it mentioned distress in Spain twice in the material before the country entries (which is unusual for a country outside the G7), alluded to concerns about banking sustainability, characterized the banking system as fragile, devoted considerable attention to nonperforming loans and other sources of balance sheet risks, and discussed new government actions to support the financial sector. By itself, this evidence points to distress solidly into the moderate crisis range. The OECD's discussion of the consequences of the distress, however, was more muted: it implied that problems in credit supply were reducing consumption, and it identified an important risk for the financial sector. This milder language weighs on the side of identifying somewhat lower distress. We therefore classify this episode as a moderate crisis−minus. One informative comparison is with Spain in 2011:2, which we also classify as a moderate crisis−minus. In that episode, the OECD used somewhat weaker language in directly describing the health of the financial health, but somewhat stronger language in describing the effects of the distress; on net, this suggests no great difference between the two episodes.

Moderate crisis−regular:

Norway, 1992:2. As described above, in 1992:1 Norway faced significant financial-market problems, which we classify as a regular minor crisis. Here, the OECD described a worsening of the situation (p. 112):

> The sharp fall in real estate prices and the prolonged economic stagnation, together with tighter capital standards, have led to a significant deterioration in the financial situation of banks, which have experienced large and mounting loan losses over recent years. As a result, small and medium-sized companies have been facing increasing difficulties in financing their investment projects. A number of measures have been taken to cope with these developments. Most recently, the central bank explicitly extended the liquidity guarantee to most nonbank financial institutions.

In addition, the end of the entry stated, "A further deterioration in the financial position of the banking sector could also aggravate the difficulties in financing new investments, thereby delaying the projected pickup of activity" (p. 112). Finally, there was an oblique reference to "High capital costs" as one of two factors leading "to a slump in non-oil investment activity" (p. 111)

The references to significant deterioration, increasing difficulties, and additional government actions show that the OECD viewed the situation as considerably worse than in 1992:1. At the same time, there was no implication that the financial system had completely ceased to function. We therefore code this episode as a moderate crisis−regular.

Finland, 1993:1. This episode is similar to Norway in 1992:2. As discussed above, we classify Finland in 1992:2 as a minor crisis−plus. Here, the OECD described a worsening financial situation (p. 99):

> Falling asset values and increasing bankruptcies have continued to cause severe pressure on the financial system. In order to secure the stability of the system, the Government injected substantial amounts of capital (Mk 32 billion) into the banks during 1992. In view of the banks' expected losses in 1993 and 1994, additional public funds may be required to keep the banks' capital base adequate. To this effect the Parliament recently agreed to earmark Mk 20 billion additional resources, while stating its intention to bail out the Finnish banking system under all circumstances.

In addition, the OECD said that one of the two "main uncertainties attached to the projections" concerned "the ability of the banks to provide funds to the private sector as activity starts picking up" (p. 99).

The description of the change from the previous issue of the *OECD Economic Outlook* is perhaps slightly milder than in the case of Norway in 1992:2. But the financial system was starting from a slightly worse position (a minor crisis–plus rather than a minor crisis–regular). And the references to severe pressure, the need to secure the stability of the system, and the government's unconditional guarantee show that the deterioration was nonetheless significant. We therefore classify this episode as a moderate crisis–regular.

Sweden, 1993:1. In the summary of its entry, the OECD said, "Steeply falling property values have led to a sharp increase in corporate bankruptcies and heavy loan losses in banks' balance sheets" (p. 113). A paragraph devoted to the financial system reported (p. 115):

> Falling asset values and corporate bankruptcies linked to the collapse in the commercial property market have provoked an unprecedented increase in banks' loan losses. These reached Skr 70 billion in 1992 (7.7 per cent of outstanding loans), up from Skr 36 billion in 1991. Losses are widely expected to remain high in 1993. With the capital bases of most major banks rapidly eroding, the Government has guaranteed that banks can meet their commitments. Government rescue operations are officially estimated to burden the 1992/93 budget by Skr 22 billion (1½ per cent of GDP), with off-budget loans and guarantees amounting to an additional Skr 46 billion (over 3 per cent of GDP). It is not known what scale of rescue operations will be needed in the 1993/94 budget.

Finally, in discussing risks to the outlook, the OECD stated, "greater weakness of demand could be accentuated by rising capital costs in the event of larger loan losses. This would ... risk reducing credit supply" (p. 115).

This episode is similar to Norway in 1992:2 and Finland in 1993:1. The most obvious difference is that in this case, the OECD devoted a sentence in its summary to the financial-market problems. But the financial system was starting from a slightly better position than Finland's was (as described above, we code Sweden in 1992:2 as a minor crisis–regular, whereas we classify Finland in 1992:2 as a minor crisis–plus). And, in contrast to the discussion of Norway, there was no explicit reference to firms facing difficulties in obtaining financing. We therefore also classify this episode as a moderate crisis–regular.

Turkey, 2001:1. The OECD described a pair of "crises" in Turkey, but appeared to be referring to the failure of an IMF-supported stabilization program and exchange rate turmoil, not banking crises specifically (pp. 21, 134–135, 136). For example, it said, "the crises in November 2000 and again in February 2001 took place against the background of mounting concerns over the health of the banking system" (p. 21); and it referred to "The collapse of the stabilisation programme supported by the International Monetary Fund" (p. 134, in the summary of its entry).[7]

Nonetheless, there were serious financial-sector problems. In the summary of the entry, the OECD stated, "The banking system requires a massive restructuring, including the take-over, sale or liquidation of many insolvent banks, and the capitalisation and privatisation of the state banks" (p. 134). It also reported, "In November, evidence of banking-sector problems led

[7] The December 2000 issue of the *Economic Outlook* reported, "The projections on which the policy assessments presented in this edition are based were finalised on 7 November" (p. iii), and the opening "Editorial" was dated 17 November (p. xii). As a result, the "crisis" of November 2000 was not reflected in that issue.

to a drying-up of the interbank market, provoking a financial crisis that in turn drained reserves and pushed real interest rates back up to around 40 per cent" (p. 134).

In a more extended description of financial-market problems, the OECD said (p. 135):

> Bank restructuring is the most urgent of these [needed structural] reforms, and the government has made this a high priority. The combined interest and exchange-rate shock of the crisis has greatly exacerbated balance sheet problems of the banking system. The rise in interest rates, especially in the overnight market upon which many banks (in particular, the state banks) are dependent for funding, has meant heavy losses in view of relatively large pre-existing longer-term asset positions. The devaluation of the currency has sharply increased the domestic currency value of uncovered foreign currency borrowings by the banks (net open positions), which were quite large prior to the crisis. Furthermore, economic weakness and balance sheet problems in the corporate sector are expected to increase the amount of non-performing loans.

The OECD also mentioned "the high costs of the bank clean up (backed by a full guarantee of domestic deposits and foreign liabilities)" (p. 136). Finally, in the concluding paragraph of the entry, it said, "The chief danger is an inability to stabilise the exchange rate and bring down the country risk premium due to the difficulty in rebuilding confidence. Not only would this magnify banking system problems and fiscal stress, but it could also usher in a return to accelerating inflation and budget instability, locking Turkey into a prolonged period of slow growth" (p. 136).

Thus, Turkey was undergoing severe financial-market disruptions that were playing an important role in the behavior of the economy. In addition, there was large government intervention. At the same time, the OECD did not explicitly draw a strong link between these problems and economic performance or credit supply. Instead, it emphasized the effects of generally high real interest rates and loss of confidence, rather than rises in the cost of credit intermediation or difficulties in obtaining credit, as the sources of the economy's poor performance. Thus, this episode does not appear to meet our criteria for a major or extreme crisis. We therefore classify it as a moderate crisis–regular.

<u>Turkey, 2001:2</u>. This episode showed little change on net from the previous one. On the one hand, the OECD described some improvements in the banking system. But on the other, it reported that there had been a need for massive government intervention. Early in the volume, the OECD commented, "Turkey is a special case, given the crisis it has been experiencing for some time now" (p. 15)—suggesting no dramatic change from before. Similarly, in the summary of its entry, it said, "financial conditions have not stabilised since the twin crises of November 2000 and February 2001" (p. 122). But elsewhere in the summary it referred to "accelerated structural reforms, notably in the banking sector" (p. 122), implying at least some improvement in the banking system.

Early in the entry, the OECD provided a detailed discussion of the financial system (pp. 122–123):

> The fragility of the banking sector has involved sizeable fiscal costs and distorted the functioning of monetary policy. Besides structural weaknesses in the state-owned banks, a steady erosion of solvency in private banks led to a growing number of take-overs by the State Deposit Insurance Fund (SDIF) from just prior to the November 2000 crisis. The resultant accumulation of large losses has had to be borne by the

> government. In this respect, the financial restructuring programme has entailed the elimination of 'duty losses' and recapitalisation of state-owned and SDIF banks. This operation was funded through Treasury issuance of securities of an amount equal to 24 per cent of GNP, half of which had been already scheduled in 2000.

Finally, in contrast to similar episodes, potential problems in the banking system were not cited as a risk to the forecast (p. 124).

Thus, this episode was broadly similar to the previous one. The progress in improving the banking system points in the direction of the situation being somewhat improved; but the need for government intervention on such a large scale points in the opposite direction. But neither factor appears especially large, and they seem to roughly offset one another. Thus, we classify this episode as a moderate crisis−regular.

Japan, 2002:1. This episode appears broadly similar to Norway in 1992:2, Finland in 1993:1, and Sweden in 1993:1. The OECD described a financial sector that was very unhealthy, and clearly in worse health than in 2002:1 (which, as described above, we classify as a minor crisis−plus). Its strongest language was, "the financial sector ... is teetering under the ever rising burden of bad loans" (p. 24). An example of a more typical assessment came in the opening summary of its entry, where it cited "financial sector weakness" as one of two "Major downside risks," and said, "Emphasis needs to be placed urgently on resolving bad loans held by banks and on containing the risks to the financial system" (p. 40).

The OECD reported that recent government inspections "showed the magnitude of the non-performing loans problem to be even worse than recognised a few months ago .... [P]rovisioning remain[s] woefully insufficient .... Further capital injections into the banking sector will therefore be required at some point" (p. 24; see also p. 41). It also reported that the government "affirmed that every means would be used to avoid a crisis in the banking system" (p. 42), with the implication that there was not yet a full-fledged crisis, and described a series of moderate government interventions (p. 25).

Over the course of a long entry (and of considerable material devoted specifically to Japan in the general material preceding the country entries), there were several references to links between the banking troubles and reductions in credit supply or increases in the cost of credit intermediation. For example, the OECD said, "Investment demand will continue to be depressed by banking sector ills" (p. x); referred to "the inability of a severely weakened banking system to take on risk and translate monetary policy impulses into credit supply expansion" (p. 23); and reported, "share prices of banks fell relative to the market and the risk premia paid by them rose significantly" (p. 41). In addition, in its concluding discussion, it said (p. 43):

> Important downside risks are associated with the financial sector's fragility and the rising level of public debt, both of which tend to increase the danger of a deflationary spiral. Shifting perceptions about credit risk could raise the risk premium paid by banks or the government and weaken balance sheets. Consumers and firms could then cut back expenditures, exacerbating economic contraction and deflation.

This episode therefore fits our criteria for a moderate crisis. There were repeated references to very serious problems in the banking sector and their impacts on the performance of the economy. Yet the OECD stopped short of saying that the financial system had seized up entirely or that there were vast disruptions of credit supply. We therefore code the episode as a moderate crisis−regular.

Iceland, 2008:1. The overview chapter highlighted problems in Iceland, saying (p. 23):

> banks' credit default spreads have increased dramatically in Iceland, where banks' foreign branches have become so big in relation to the size of the economy (bank assets are nine times GDP) that serious doubts have emerged about the capacity of the Icelandic central bank to act as a lender of last resort to these banks.

It also said: "Those countries which are most affected, judged by the degree to which output is projected to be pushed below potential output" include "those most directly affected by financial turmoil, notably the United States and Iceland" (p. 45).

The entry for Iceland also suggested substantial financial distress. The opening summary mentioned that "bilateral currency swap agreements reached with Nordic central banks in mid-May 2008 have bolstered international liquidity available to the Central Bank of Iceland, thus helping to rebuild confidence" (p. 147). Under the heading "Financial turmoil has severely restricted access to foreign capital," the OECD wrote (p. 148):

> The economy is highly exposed to the global financial turmoil that began in mid-2007. The country's three largest banks have expanded aggressively offshore in recent years, increasing their total assets from less than 100% of GDP in 2000 to nine times that in 2007. Although these banks have little direct exposure to subprime loans in the United States and have relatively high capital and liquidity ratios, concerns have grown about their lack of access to a credible lender of last resort facility. Consequently, the price of credit default swaps (CDSs) for these banks has soared, reaching a peak of 1 000 basis points in late March, although this price has since declined by about 600 basis points. This has made borrowing in foreign markets expensive for these banks.

The closing risks paragraph said "The major risk surrounding this forecast is that the global credit crunch turns out to be more protracted than anticipated, deepening the economic downturn and causing further exchange rate depreciation" (p. 149).

This episode has most of the features of a moderate crisis. The discussion of the dramatic increase in spreads and the collapse of foreign funding suggest that financial problems were severe and widespread. There can be little doubt that the cost of credit intermediation rose substantially. At the same time, the fact that domestic financial markets were not described as frozen suggests that Iceland's experience was not in the major crisis range. The fact that government actions were being taken to calm markets is another hallmark of a moderate crisis. The one feature of a moderate crisis that is missing somewhat is discussion of a direct link between credit disruptions and domestic demand. Such a link was perhaps implied by the statement that Iceland was a country very directly affected by financial turmoil and where there was a large output decline. But, while the entry discusses a pessimistic forecast for consumption and residential construction, it does not draw a more direct link to the financial turmoil. Nevertheless, given that Iceland gets a relatively short entry and distress was clearly very substantial, we scale this episode as a moderate crisis–regular.

Portugal, 2009:1. The OECD's description of conditions in the euro area indicated substantial financial distress. It said (pp. 78–79):

> Financial conditions, which tightened further in the first quarter of 2009, have begun to ease somewhat, helped by the recovery in equity prices and a narrowing of interest rate spreads in money markets. But bank lending standards continue to

> tighten (although at a diminishing rate), credit growth to households and non-financial firms is slowing further, house prices are still declining and widespread concerns remain about the health of the European banking sector. These factors have raised financing costs for companies, generated negative wealth effects on household spending and added to uncertainty about economic prospects.

The OECD believed that "Private investment is likely to be particularly hard-hit, reflecting on-going housing market corrections in some member states, as well as the impact of tight financial conditions and heightened uncertainty on companies" (pp 81–82). It also said that "There remains a risk that declining activity and a resulting surge in loan default rates will intensify pressures on financial institutions, leading to further tightening of financial conditions and additional negative effects on the real economy" (p. 82).

The entry for Portugal was quite similar in tone to that for the euro area overall. The opening summary said (p. 158):

> Portugal is in the midst of a deep recession as the collapse of external demand and tight financial conditions have affected all parts of the economy, particularly exports and investment. Activity is expected to contract throughout 2009, before recovering very slowly in 2010 as the global economy and financial conditions gradually improve.

In describing current conditions, particularly weak investment, the OECD wrote: "Financial conditions for the private sector remain tight as stricter lending standards and wide bond spreads have offset the ECB's low policy rate and credit support initiatives" (p. 158). A chart showing the results of the Bank of Portugal Bank Lending Survey was titled "Bank lending standards are tightening" (p. 158). Though not mentioned in the entry itself, the overview chapter indicated that Portuguese authorities were taking a range of actions to deal with financial distress, including increasing deposit insurance, guaranteeing or buying bank debt, and injecting capital (p. 44). The closing risks paragraph suggested that financial conditions could deteriorate further, saying: "On the downside, rising default rates due to the recession could add to pressures on domestic bank balance sheets from the financial crisis" (p. 159).

The OECD made clear that financial problems were central to the country's outlook. It wrote (p. 159):

> Tight credit conditions, a rapidly weakening labour market and low consumer confidence will reduce consumption. The large drop in activity in major export markets points to further important falls in exports. Together with tighter credit conditions and weak internal demand, this will significantly reduce investment. The deterioration in economic conditions will lead to large falls in employment and the unemployment rate is likely to surpass 10%. The economy is expected to recover only gradually in 2010, supported by an easing in financial conditions and firming external demand.

However, the closing risks paragraph also raised the possibility that "if financial conditions ease earlier than anticipated and growth in Portugal's major trading partners picks up more than expected, the recovery could be somewhat faster in 2010" (p. 160).

The description of financial conditions in Portugal in this episode was slightly worse than that in 2008:2 (which we classify as a moderate crisis–minus). In 2009:1, there were references to bank lending standards tightening, and the opening paragraph paints a noticeably grimmer picture of the real fallout from the financial distress. We feel financial conditions in Portugal were not quite as severe as those in Norway in 2009:1 (which we classify as a moderate crisis–plus) because there was more discussion of financial markets not functioning in the Norwegian case.

In absolute terms, this episode is a canonical moderate crisis. The repeated references to tight financial conditions suggest that financial market problems were widespread and severe. But the infrequency of the use of the term “crisis” and the lack of reference to credit markets being paralyzed or not functioning suggest that the episode did not rise to top of the moderate crisis range (or higher). Portuguese authorities were taking some actions to deal with financial problems, but these actions were not as extensive as in some countries in 2009:1. And, financial conditions were central to the outlook. That conditions in the euro area more generally were described in very similar terms reinforces our classification of this episode as a moderate crisis–regular.

Greece, 2010:1. The entry for the euro area overall described a slight improvement from 2009:2, but still substantial distress. Under the heading “Financial conditions improved gradually but risks remain,” the OECD wrote (pp. 89–90):

> Financial conditions have gradually improved as policy rates remain low and confidence recovers, although fragilities have been exposed by the recent financial market volatility. While short interbank rates have remained at extremely low levels, reduction in lending rates for non-financial corporations and households only partly reflected the fall in banks’ funding rates. High lending spreads compared with historical norms may in part reflect higher risk premia but competition may also have suffered as a result of the crisis. Credit growth has weakened further with bank credit to non-financial corporations continuing to contract, although issuance of corporate debt has been strong. Concerns about credit quality and the health of the European banking sector remain as European banks are unlikely to have cleaned their balance sheets of all toxic assets.

The OECD suggested that credit problems were affecting demand when it said: “Investment is likely to recover only gradually in the coming quarters, held back by remaining excess capacity, continued credit constraints and weak growth prospects” (p. 92). Finally, the entry also discussed “strong pressures on sovereign bonds of some members and risk of contagion to other financial markets,” (p. 91)—suggesting that sovereign debt problems in Greece and other countries could impair private credit availability.

The OECD did not mention financial issues in the opening summary of its entry on Greece. But they featured prominently and repeatedly throughout the rest of the entry. In discussing recent macroeconomic developments, the OECD said: “Investment, especially in housing, plunged as financing conditions tightened and confidence weakened. Private consumption also contracted as the labour market weakened and credit slowed down. ... Rising spreads and refinancing costs are stretching bank balance sheets and bearing on credit growth” (p. 41). Similarly, in discussing the outlook, it said, “Economic activity is projected to contract further both in 2010 and 2011, by 3¾ per cent and 2½ per cent respectively, under the weight of the sizeable fiscal adjustment, tight credit conditions and weak sentiment” (p. 141). The entry also devoted a separate brief paragraph to the financial system, under the heading, “Potential risks in the financial sector need to be monitored carefully.” It said: “The financial package aiming at boosting liquidity in the banking system should help sustain credit to support activity as it picks up. However, bank supervision needs to monitor risks associated with deteriorating asset quality and rising non-performing loans as the economy weakens” (p. 141). Finally, it cited as one of the “very large risks” to the outlook, “The weak economy and high spreads could affect the financial sector more than anticipated, and notwithstanding the support that has been provided” (p.141).

This episode clearly fits our criteria for a moderate crisis. The OECD saw large, widespread financial problems that were having important effects throughout the economy and that were expected to continue doing so. It also devoted considerable attention to the health of the financial system and discussed measures to support it, and it saw large additional risks from the financial system. But it did not suggest that the financial system was close to being paralyzed or dysfunctional; rather, it conveyed a sense that it was functioning but that there had been a very large shift in credit supply. Thus, the episode does not qualify as a major crisis.

A comparison with Greece in 2009:2, which we code as a minor crisis–plus, also points to categorizing the current episode as a moderate crisis. The OECD’s 2009:2 entry on Greece contained similar language to that in 2010:1 concerning macroeconomic developments and prospects, but lacked the discussions of the health of the financial system and risks that were present in 2010:1. The 2010:1 episode thus appears notably worse. Another helpful comparison is with Portugal in 2010:2, which appears to be slightly more severe than the current episode and which we classify as a moderate crisis–plus. We therefore classify the current episode as a moderate crisis–regular.

Ireland, 2010:1. In the opening summary of its entry on Ireland, the OECD said, “The injection of public funds into the banking system is an important step in restoring the financial sector to health and getting credit flowing again” (p. 148). Later in the entry, there was a remark that was unclear about whether it was referring only to sovereign bonds or to yields more generally: “The serious escalation of the public finance crisis in Greece impacted on conditions in bond markets generally, with Irish spreads at the beginning of May 2010 picking up to their highest levels since March 2009” (p. 150). The concluding analysis of risks mentioned the health of the banking sector, saying, “Ireland’s tough approach to restoring the banking sector has the merit of being transparent and may finally restore financial health” (p. 150). The analysis of risks went on to make some comments that were mainly concerned with sovereign debt, but may have also been referring to possible repercussions on the financial system and credit availability (p.150):

> Finally, there is the risk that the euro area countries and institutions do not succeed in addressing the current sovereign debt and bond crisis. The materialisation of this downside risk would have dramatic consequences for Ireland in terms of debt sustainability but also in terms of the growth outlook over the forecast horizon.

Finally, as described in our entry for Greece for 2010:1, the OECD saw substantial distress in the euro area as a whole and only slight improvement from 2009:2, and it raised the possibility of spillovers from problems in sovereign bond markets to private credit availability.

This evidence suggests major problems in the financial sector. Most notably, the reference in the summary to restoring the financial sector to health and getting credit flowing again suggests severe distress. The similar comment about restoring financial health in the discussion of risks, and the reference to the injection of public funds as an important step, also support this view. At the same time, the OECD did not highlight the distress in its analysis of factors restraining the economy. A discussion of consumption cited “high unemployment and falling real disposable incomes” (p. 150); and the opening summary did no more than perhaps allude to financial distress when it said that "unwinding the imbalances created during the economic boom will continue to restrain consumption and investment for some time" (p. 148).

The strong language about financial problems, which in the opening summary verges on describing the financial system as nearly dysfunctional, argues for putting this episode at least solidly into the moderate crisis range. But the absence of strong statements attributing large effects to the distress, and of clear statements that the system was unsound, argue against going higher. We therefore classify this episode as a moderate crisis–regular. One helpful comparison is with Portugal in 2011:1, where there were also forceful statements of financial distress coupled with more muted remarks about macroeconomic impacts, and which we also code as a regular moderate crisis.

Ireland, 2011:1. The OECD's entry on the euro area gave a generally upbeat assessment of the health of the financial system, but suggested some lingering distress overall and serious problems in some countries. The opening summary said, "financial conditions have improved" (p. 90). The entry went on to say, "Improved overall financial conditions are contributing positively to growth, while non-standard policy measures and government support for the financial sector are being gradually wound down" (p. 92). It also cited "more favourable financial conditions" as one reason that "Private non-residential investment will bounce back" (p. 94). But it also saw residual problems, referring to "remaining weakness in the banking system" and the need "to ensure that credit availability does not constrain the recovery" (p. 92). In addition, the OECD indicated that the situation was considerably more serious in some euro countries: "For several countries, sovereign spreads remain at very high levels and the state of the banking system, as well as financial conditions, is still fragile" (p. 92). It made a similar remark in its concluding discussion of risks, but without being as clear about how broadly its concerns applied: "Weaknesses in government and bank solvency could lead to wider financial tensions and contagion, which would test the European Financial Stability Fund (EFSF) and the banking system" (p. 94).

The OECD discussed the health of the financial system repeatedly in its entry on Ireland. The opening summary began, "Ireland is continuing to undertake a comprehensive and vital adjustment programme to reduce its macroeconomic imbalances and restore its banking system to health" (p. 152). The summary also referred to "the large cost of bank recapitalisation" (p. 152), and said, "The government plans to cover the recapitalisation needs of the banking system revealed by the recent stress tests so as to restore normal bank credit flows and support the economic recovery. This should be done as planned without delay" (p.152). The entry elaborated on this last point, under the heading, "Banking recapitalisation should proceed quickly" (p. 154):

> The March 2011 bank stress tests were perceived as credible by financial markets as evidenced by a fall in the spread of Irish over German sovereign bond yields. It is important for the return to growth that the recapitalisation and associated restructuring of the banking system occurs without delay. In line with government and EU-IMF programme partner projections, it is assumed that the government will provide, EUR 19 billion (13% of GDP) of the EUR 24 billion in capital needs identified by the stress tests and that the government will receive equivalent assets in return (thus leaving the headline fiscal deficit unchanged).

The OECD also discussed financial distress in Ireland in the material preceding the country entries. It reported, "banks in Greece, Ireland and Portugal have been cut off from market finance and are dependent on liquidity provided by the ECB" (p. 36), and it referred to "the fragile financial systems" of those countries (p. 69).

Despite these relatively grim comments about the health of the financial system, the OECD said relatively little about macroeconomic effects of financial distress. Instead, it noted "The contractionary effects of fiscal consolidation" (p. 152), and listed four reasons other than credit supply that "private domestic demand is expected to continue contracting in 2011, albeit at a slower rate": "fiscal consolidation, high indebtedness, tax increases and falling real wages" (p. 152). The only time the OECD assigned a role to financial distress in harming macroeconomic performance is when it said, "although there have been important forward steps, the banking system has yet to be returned to health, constraining its capability to deliver credit for investment" (p. 154).

This episode is very similar to Ireland in 2010:1, which we classify as a regular moderate crisis. In both episodes, the evidence suggests major problems in the financial sector. One difference is that the current entry referred to restoring normal bank credit flows (implying that credit was not flowing normally) while the earlier entry referred to getting credit flowing again (perhaps implying that credit was not flowing at all); this weighs on the side of the earlier episode being slightly more severe. But going in the other direction, the statements of urgency and the discussions of the health of the financial sector in the material preceding the country entries were absent in the earlier episode. In other respects, the discussions were similar. Thus on net, it is hard to see a large difference between the two. And in both cases, there was only a single, and not particularly strong, statement about macroeconomic effects of the distress. The strong language about financial problems coupled with the absence of strong statements attributing large effects to the distress lead us to classify this episode as a moderate crisis–regular, as we do with the 2010:1 episode.

Portugal, 2011:1. The OECD did not mention financial issues in the opening summary of its entry on Portugal. But it discussed them at length in a paragraph headed, "Mounting market pressure culminated in request for external help" (p. 180):

> After two months of mounting pressure from financial markets, with yields and spreads soaring, the current caretaker government decided in April to request external financial assistance from the European Union and the IMF. ... a political crisis triggered a wave of credit rating downgrades for the state and enterprises. Banks continue to have virtually no access to wholesale debt markets and are therefore heavily dependent on ECB financing .... Credit growth has slowed, and consumer credit outstanding has even fallen slightly. This trend will likely be aggravated as banks shrink their balance sheets.

In addition, the concluding discussion of risks warned, "Private consumption and investment could be weaker than projected due to scarcer and more expensive credit, in the wake of faster deleveraging or further interest rate increases" (p. 181). Finally, the entry mentioned government "outlays due to banking losses" (p. 180).

The OECD also discussed financial distress in Portugal in the material preceding the country entries. It reported, "banks in Greece, Ireland and Portugal have been cut off from market finance and are dependent on liquidity provided by the ECB" (p. 36), and it referred to "the fragile financial systems" of those countries (p. 69). In addition, as described in our entry for Ireland in 2011:1, the OECD saw some lingering financial distress in much of the euro area.

This material is somewhat unusual for issues of the *OECD Economic Outlook* in this period: it describes major financial problems but does not identify major macroeconomic impacts. In discussing financial problems, the OECD mentioned distress in Portugal twice in the material before the country entries (which is rare for a small country), said that banks were unable to obtain private funds, and referred to government and ECB actions. In discussing the consequences, the OECD noted slowing credit and declining consumer credit (which, given the context, it was almost surely attributing to credit supply issues), projected further reductions in credit supply, and identified a downside risk.

An insightful comparison is with Portugal in 2010:2, which we code as a moderate crisis–plus. Here, the language about the health of the financial system was, if anything, slightly stronger, which argues against classifying this episode much below a moderate crisis–plus. But the discussion of macroeconomic effects and risks in the current episode was decidedly more muted than in 2010:2, which argues for moving at least somewhat down our scale. Balancing these two considerations, we lower our coding by one notch and classify this episode as a moderate crisis–regular. This episode is also similar to Ireland in 2010:1 and 2011:1, both of which we put in the moderate crisis–regular category.

Greece, 2012:1. The OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary began, "Activity has stagnated after contracting in end-2011 and unemployment is set to rise further, owing to weak confidence and difficult financial conditions related to the sovereign debt crisis" (p. 74). The summary also identified "how to simultaneously address needs of governments and banks" as an important challenge, and said that "bank balance sheets should be strengthened" to support growth (p. 74). Under the heading, "The economy has stagnated," the entry said: "in the latter half of 2011 ... tensions increased in the interbank market," and, "Risk spreads on government debt of some countries increased, ... putting further funding pressures on banks" (pp. 74–75). The entry also reported: "bank balance sheets remain weak, despite increased liquidity provision from the European Central Bank. ... The April 2012 ECB Bank Lending Survey points to a further tightening in bank lending standards to households and corporations, through at a slower rate than in late-2011" (pp. 75–76). Finally, the OECD warned, "The risks are large and mainly on the downside," and listed as one of two main downside risks, "the possible intensification of the sovereign debt crisis, which would further undermine confidence and the financial system" (p. 77). The entry concluded, "On the upside, more rapid repair of the financial system and ambitious structural reforms would improve the growth outlook" (p. 77)—implying that problems in the financial system were affecting growth.

The OECD discussed financial issues only twice in its entry on Greece. However, both instances suggest substantial problems. First, in discussing the reasons that real GDP had fallen "by around 6¼ per cent" over the previous year, it said, "Income losses, increasing unemployment, and credit constraints undermined consumption and investment" (p. 116). Second, under the heading, "Major downside risks prevail," it warned, "A further weakening in the banking sector's already limited capacity to support growth also poses a major risk to the outlook" (p. 118). In addition, in discussing fiscal policy in Italy, Portugal, Greece, and Spain in the material preceding the country entries, it said, "fiscal multipliers could be unusually large in some of these countries at present, due to fragile banking systems that limit the possibility of consumption smoothing, weak confidence and no scope for monetary policy reaction at the domestic level" (p. 58).

Although there is not a great deal of information here, it indicates substantial distress. Notably, citing credit constraints as one of three reasons for a collapse of consumption and investment suggests that the OECD viewed the constraints as quite consequential. In addition, the reference to the banking sector's limited capacity to support growth is consistent with serious problems, and the statement about risks is unusually strong.

This episode is similar to Greece in 2011:2, which we classify as a moderate crisis−minus. The most noteworthy difference is that the statement about risks in the current entry is markedly stronger. We therefore move one step up our scale and classify this episode as a moderate crisis−regular.

Portugal, 2012:1. As described in our entry for Greece for 2012:1, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. In its entry on Portugal, the OECD discussed financial problems extensively. The opening summary began, "Deep fiscal consolidation, bank deleveraging and weak external demand will leave the economy in recession until mid-2013" (p. 151), and also said: "Credit is contracting, and measures to strengthen the banking system, such as reductions in loan-to-deposit ratios, should not be rushed. However, problematic loans need to continue to be recognised and adequately provisioned" (p. 151). An accompanying chart was titled, "Credit is contracting fast" (p. 151). Later, the entry reported, "The combined effect of fiscal consolidation and bank deleveraging has weighed heavily on domestic demand" (p. 152). And the discussion of risks began, "A further deterioration in credit conditions or the euro area would take its toll on economic activity" (p. 153).

In addition, in discussing fiscal policy in Italy, Portugal, Greece, and Spain in the material preceding the country entries, it said, "fiscal multipliers could be unusually large in some of these countries at present, due to fragile banking systems that limit the possibility of consumption smoothing, weak confidence and no scope for monetary policy reaction at the domestic level" (p. 58).

This episode fits our criteria for a moderate crisis. Discussing financial problems extensively in the opening summary, listing banking sector problems as one of three factors driving a sharp downturn (and as one of two having a large impact on domestic demand), and addressing the health of the banking system in the material before the country entries (which his rare for a small country) and highlighting its fragility all indicate that the OECD viewed distress as large and as central to the performance of the economy. At the same time, the OECD did not come close to characterizing the financial system as deeply unsound or close to seizing up. We therefore classify this episode as a moderate crisis−regular. The episode is similar but slightly more severe than both Greece and Spain in 2011:2, both of which we place in the moderate crisis−minus category.

Greece, 2012:2. The OECD's entry for the euro area was similar to that for 2012:1: it made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary implied problems in the functioning of the financial system when it said, "private demand will pick up as confidence and the functioning of the financial sector improve" (p. 83). The summary also commented, "Stronger bank balance sheets and a full banking union would reduce the adverse feedback loop between sovereigns and the banking system" (p. 83). Under the heading, "Financial conditions are difficult," the entry reported, "The sovereign debt crisis in the euro area has led to an adverse feedback loop between sovereigns and banks. This has impaired credit in some euro area countries and reduced the effectiveness of monetary policy transmission" (p. 84). In addition, it warned that a range of factors "will continue to create difficulties for domestic banking systems so long as bank balance sheets have not been strengthened sufficiently" (pp. 84–85). And in discussing policy, it said, "The financial system needs to be repaired" (p. 86), and, "Further measures are required to clean up bank balance sheets and ensure that the banking system is well capitalised" (p. 86). Finally, the concluding discussion of risks referred to "the crisis" (although this appeared to be a reference to the overall health of the euro area rather than to the financial system specifically), and listed as one risk "a failure to restore the financial sector" on the part of policymakers (p. 87).

In the opening summary of its entry on Greece, the OECD said, "Recapitalisation of the banking system should be a priority to restore credit channels to support growth" (p. 130). The entry went on to describe financial distress as important to the performance of the economy, saying, "Output fell sharply in 2012 due to falling real incomes and confidence, rapidly rising unemployment, limited access to credit and weak tourism" (p. 130), and, "A healthier banking system, competitiveness-enhancing product and labour market reforms, greater use of EU structural funds, and strengthened external demand would all boost investment and exports" (p. 132). In addition, the discussion of risks commented, "Lack of bank liquidity poses additional risks to the outlook, although forthcoming bank recapitalisation and restructuring should help mitigate this risk" (p. 132). Finally, the material preceding the country entries included a chart that showed that interest rates on loans in Greece were far higher than in most euro area countries, and that they had changed little relative to policy rates over the past year (p. 27).

The OECD was clearly describing substantial distress. Most notably, the comments about the need to restore the credit channel, limited access to credit, and lack of bank liquidity all point to broad and serious problems, and thus as indicating that this episode falls at least noticeably into the moderate crisis range. At the same time, the OECD did not imply that intermediation was close to breaking down or seizing up; thus the episode does not appear to qualify as a major crisis. Similarly, the OECD's language about macroeconomic effects indicates significant but not overwhelming impacts of the distress. The OECD listed limited access to credit as a factor behind a sharp fall in output, but it listed four others as well, ranging from rapidly rising unemployment to weak tourism. And it said that that a healthier banking system would help investment and exports and that banking problems posed a risk to the outlook, but its tone was not extreme.

Comparisons also point to the moderate crisis range. We code Greece in 2012:1 as a regular moderate crisis, and the current entry does not discuss any change and its tone is broadly comparable to the earlier one. This episode also appears generally similar to Italy, Portugal, and Spain in 2012:2, all of which we put in the moderate crisis–regular group. We therefore classify this episode as a moderate crisis–regular.

Italy, 2012:2. As described in our entry for Greece for 2012:2, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The OECD discussed the health of the financial system and its impact on the economy in several places in its entry for Italy. In the opening summary, it said, "the economy is projected to continue contracting in the short term, reflecting budgetary tightening, weak confidence and tight credit supply" (p. 96). It also reported, "The economic slowdown has put pressure on the financial sector: non-performing loans are high and rising, liquidity conditions are tight and lending standards have become stricter" (p. 97). It forecast, "With confidence and financial conditions gradually improving, GDP is projected to begin to rise in the course of 2013" (p. 98). And the concluding discussion of risks warned, "an intensification of financial stress and unduly rapid bank deleveraging might accentuate the credit squeeze and further damp growth" (p. 99). Finally, the material preceding the country entries included a chart that showed that loan interest rates in Italy were moderately but not dramatically elevated relative to those in the healthiest euro area economies (p. 27).

This episode fits our criteria for a moderate crisis well. The OECD discussed problems in the financial sector repeatedly, and at one point it referred to a credit squeeze; but it did not use any stronger language. Thus, the OECD appeared to see a financial system that was still functioning but where there was substantial distress economy-wide. Similarly, it cited tight credit supply as one of three factors driving the short-run outlook; listed improving financial conditions as one of two factors likely to lead to improvement going forward (implying that it saw those conditions as currently holding the economy back); and it cited the possibility of worsening distress as an important risk.

Comparisons also support the view that this episode was a moderate crisis. We classify Italy in 2012:1 as a moderate crisis−minus. The current episode is broadly similar but appears slightly more severe: the OECD mentioned tight credit in the opening summary and said that nonperforming loans had risen and lending standards had tightened. The current episode also appears generally similar to Greece, Portugal, and Spain in 2012:2, all of which we put in the moderate crisis−regular category. We therefore classify this episode as a moderate crisis−regular.

Portugal, 2012:2. As described in our entry for Greece for 2012:2, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. The opening summary of the entry for Portugal began, "A large, but necessary, fiscal consolidation, continued bank deleveraging and weak external demand are projected to leave the economy in recession for some time" (p. 161). The summary also said, "While bank deleveraging is inevitable, an overly fast pace of credit contraction should be avoided and remaining barriers to credit reallocation removed" (p. 161). The OECD elaborated on the impact of financial distress in its discussion of recent macroeconomic developments: "The combination of fiscal consolidation and bank deleveraging has weighed heavily on domestic demand. The steepening decline in credit and a one-off personal income tax surcharge help to explain the accelerating contraction in 2012" (p. 161). It also devoted much of the discussion of risks to financial issues, under the heading, "Risks are skewed to the downside": "The economy will remain sensitive to a further deterioration in credit conditions and worsening conditions in other euro area economies. If the demand effects of the required fiscal retrenchment turn out higher than expected, this could lead the economy into a downward spiral of worsening economic, financial and fiscal conditions" (p. 163). Finally, the material preceding the country entries included a chart that showed that interest rates on loans in Portugal were far higher than in most euro area countries, and that they had changed little over the past year (p. 27).

This entry is very similar to that for Portugal in 2012:1. In fact, several of the statements about financial issues in the current entry are close paraphrases of statements in the earlier one. The small changes from the 2012:1 entry do not alter the basic picture of a financial system that, although not deeply unsound or close to seizing up, was suffering distress that was large and central to the performance of the economy. We therefore classify the current episode in the same way as the 2012:1 episode, which is as a moderate crisis−regular.

Spain, 2012:2. As described in our entry for Greece for 2012:2, the OECD's entry for the euro area made numerous references to significant ongoing financial distress and to potential links between difficulties in sovereign debt markets and banking sector problems. In its entry on Spain, the OECD discussed financial distress extensively. The opening summary said, "Significant fiscal consolidation, weaker demand from trading partners and difficult financial conditions will take their toll," and, "Bank restructuring should proceed briskly as planned, and subordinated owners of the debt of banks receiving government support should absorb losses" (p. 170). Under the heading, "The economy is in a deep recession," the entry said, "A large fiscal consolidation effort and tight financial conditions have cut deeply into economic growth" (p. 170). The entry also said, "Fiscal consolidation is expected to have stronger than usual effects on growth in this credit-constrained environment" (p. 172). In addition, the material preceding the country entries included a chart that showed that loan interest rates in Spain were moderately but not dramatically elevated relative to those in the healthiest euro area economies. (p. 27).

The entry on Spain also included two longer passages addressing financial issues. One was concerned with the health of the banking system and credit supply. Under the heading, "Restoring credit growth is a pre-requisite for sustained recovery," the OECD said (p. 171):

> Funding conditions for the government and for Spanish banks improved somewhat following the ECB's announcement of its sovereign bond buying programme in September. This projection assumes the government continues to rapidly recapitalise viable banks and close nonviable banks. This should lead to a gradual restoration of healthy credit supply. Recent independent "bottom-up stress testing" identified EUR 54 billion in capital needs in an adverse scenario, substantially less than the EUR 100 billion credit line from the euro area member states that the government can use for bank recapitalisation. Bank restructuring plans will aim to minimize the amount of public capital injections.

The other came in the concluding discussion of risks (p. 172):

> On the downside, further turbulence elsewhere in the euro zone may lead to higher sovereign and bank borrowing costs, and to weaker trading partner growth, aggravating the recession and the fiscal deficit in Spain. ... On the upside, the creation of the EU banking union and direct recapitalisation of banks with euro area funds could help break the negative feedback loop between banks and the fiscal position.

This episode matches up well with our definition of a moderate crisis. It is clear that the OECD saw substantial, broad financial distress—as shown by the numerous references to financial issues, the discussion of actions to support the financial sector, the description of the economy as a credit-constrained environment, and the discussion of restoring healthy credit supply (with the obvious implication that credit supply was not currently healthy). And it is equally clear that the OECD viewed financial distress as central to the performance of the overall economy—as shown by the exceptionally high proportion of the entry devoted to financial issues and the highlighting of distress in the discussions of recent performance, the outlook, and risks. Indeed, although the OECD did not characterize the financial system as on the verge of paralysis, in many ways this episode fits with the top of the moderate crisis range.

Amid the generally grim discussion, however, there were two positive notes: the OECD cited improvement in recent months, and loan interest rates, though high, were not exceptionally elevated. Taking these positive points into account, we put this episode in the middle of the moderate crisis range, and so classify it as a moderate crisis–regular. Two comparisons that may be useful are Italy and Portugal in 2012:2. Both are broadly similar to the current episode, and we put both in the moderate crisis–regular category as well.

Moderate crisis–plus:

Norway, 1991:2. In a brief (600-word) entry, the OECD singled out the importance of financial-market troubles. It reported, "Difficulties in the financial sector, where heavy loan losses have resulted in substantial problems for several financial institutions, constitute a downward risk to the projections. Financial fragility could lead to a 'credit crunch', thereby slowing the recovery" (p. 116). In addition, it referred to "the cost of bank rescue operations (estimated at about 2 per cent of Mainland GDP)" (p. 115).

The brevity of the entry makes it had to classify with great confidence. However, the entry points to severe problems. The OECD referred to a large bank rescue after the previous issue of the *OECD Economic Outlook* had contained no hint of any problems in the banking system; and it mentioned large loan losses, financial fragility, substantial problems at multiple institutions, and a possible credit crunch. We therefore code this episode as a moderate crisis−plus.

Japan, 1999:1. As we describe below, we classify Japan in 1998:2 as being in an extreme crisis−minus. Here, the OECD described the situation as considerably improved but still severely impaired. The one quite favorable development it cited concerned interest rate spreads. It described "the decline in the risk premia Japanese banks must pay in the domestic money markets and the virtual disappearance of the Japan premium—the premium Japanese banks have had to pay on loans raised in the international inter-bank market—for those banks that have continued to raise funds internationally" (p. 24; see also pp. ix and 46). However, the tenor of the remainder of the discussion was much more negative. Most notably, the OECD repeatedly characterized the financial system in terms of a credit crunch that was moderating but still very much present. In the very first paragraph of the *OECD Economic Outlook*, it said, "the credit crunch may have started to ease" (p. 1). In addition, it referred to "the progress that has been made in alleviating the credit crunch" (p. 2), and it said, "notwithstanding the recent recapitalisation of the banking sector and the resulting alleviation of the credit crunch, there remain medium-term concerns regarding the financial system" (p. 48). It also described widespread government intervention in the financial system, in the form of "massive provision of public funds and a significant increase in the public sector's assumption of credit risk" (p. 48).

In addition, the OECD explicitly linked the financial-sector problems to credit supply and real activity. For example, it stated that "credit supply remains restricted because of the continuing problems of the banking sector" (p. 2), and listed "impaired credit supply" as one factor that would "restrain capital spending" (p. 47). It also included the phrase, "if this allows normal lending operations to be resumed" in its discussion of the government's effort to recapitalize the banking system (p. 43), with the obvious implication that that had not yet occurred.

In light of the repeated descriptions of the severity of the financial-sector problems and their prominence, we code this episode as a moderate crisis−plus.

United States, 2008:1. The OECD's description of credit market conditions in the United States in 2008:1 was quite grim. The overview chapter said that "commercial banks in the United States and Europe have been tightening lending standards to both households and businesses" (p. 20), and discussed that the spread between risky corporate and government bonds had risen by 225 basis points in the United States (p. 42). It also raised the possibility of a negative feedback loop saying: "Until recently, the causality has been mainly from financial strains to activity; it has now started to operate in both directions, at least in the United States, creating negative feedback effects and possibly prolonging the headwinds from financial dislocation" (p. 21). In a similar vein, the OECD feared that falling real estate prices and rising defaults could imply "further bank losses and so risk exacerbating the credit crunch" (p. 30).

The entry for the United States was similar to the overview chapter. The opening summary said: "The financial crisis is resulting in a credit squeeze, declining house prices are putting pressure on household wealth and the sharp increase in commodity prices is eroding workers' disposable income" (p. 82). In discussing financial conditions, the OECD wrote: "The US economy is at the epicentre of a financial crisis, which is causing considerable disruption to real activity" (p. 82). It described a "tightening of lending conditions" and a "slowdown of commercial bank loans" (p. 83). The OECD also described the many measures that the Federal Reserve had taken (p. 85):

> to improve the functioning of the short-term funding market, to re-liquefy the market for mortgage-backed securities and to assist with the rescue of Bear Stearns. Since the onset of the financial crisis in August 2007, it committed more than half of its nearly $1 trillion balance sheet to lend Treasury securities in exchange for lesser grade securities, mostly backed by mortgages.

The closing risks paragraph said: "There is considerable uncertainty about the eventual scale of financial institutions' losses and the extent to which they restore their capital ratios by raising new capital as opposed to shrinking their balance sheets. These risks could go either way" (p. 87).

The OECD seemed to suggest that the financial disturbances were of a size and significance that they would affect demand and output. It said: "Tighter credit conditions, together with stagnating real disposable incomes and reduced confidence, will likely weigh considerably on household spending," and "The credit squeeze, together with weak sales prospects, will also likely lead to a sizeable contraction in non-residential investment, with capital spending plans already pointing to some reduction" (p. 86). At the same time, the opening summary said: "After stalling this year, real GDP growth should gradually return to potential next year" (p. 82)—perhaps suggesting that the overall effects would at least be short-lived.

This episode is on the border between a moderate crisis–plus and a major crisis–minus. It is clear that financial problems were widespread and severe, as evidenced by the frequent use of the word "crisis," reference to a "credit crunch" and a "credit squeeze," and the fact that the Federal Reserve had to take numerous actions to keep credit markets functioning. It is also clear that the credit disruptions were thought to be central to the outlook.

We ultimately scaled it as a moderate crisis–plus for a number of reasons. The closing risks paragraph said that credit conditions could go either way, perhaps suggesting that conditions were not that dire. There was also no discussion of credit markets being frozen or paralyzed—a hallmark of a major crisis. Finally, although financial disruptions were central to the outlook, the OECD did not seem to think the effects would be particularly bad or persistent. This also did not seem consistent with it being a major crisis.

Norway, 2009:1. The opening summary indicated significant financial distress, saying: "The authorities reacted promptly to problems in financial markets with a number of measures to restore the normal functioning of credit markets and stimulate output" (p. 152). In discussing current conditions, the OECD wrote: "Credit markets have tightened significantly. Both government and private sector financial assets have been strongly hit by the financial crisis" (p. 152). Echoing the opening summary, the OECD said: "The central bank has repeatedly cut policy rates to curb the soaring price of credit, and has provided many liquidity facilities to restore the normal functioning of credit markets" (pp. 152–153). The closing risks paragraph suggested financial problems could get worse, saying: "if falls in property markets are stronger than expected, households and banks will cut spending and lending more sharply".

Under the heading "The outlook is deteriorating," the OECD wrote (p. 153):

> Although the authorities' interventions have helped to cushion domestic financial conditions, credit standards continue to tighten for firms, severely hitting investment, and banks face difficulties in raising capital; lending margins have increased. Although Norwegian banks' financial losses have been limited so far, many banks lack sufficient equity capital. Credit conditions for households have relaxed somewhat, but confidence remains very low.

This description makes clear that financial problems were thought to be having a substantial impact on demand and the outlook for the economy.

Overall, the entry suggests that financial problems were widespread and severe. In addition to the more common references to tightened credit standards and rapidly rising interest rate spreads, there was discussion of measures to "restore the normal functioning of credit markets." Such statements raise the possibility that credit markets were seriously dysfunctional, and possibly frozen. It is also clear that the OECD believed financial conditions were central to the outlook. Investment in particular appeared to be suffering as a result of financial distress. Finally, Norwegian authorities were taking many measures to get credit flowing again. All of these facts suggest that financial conditions rose at least to the level of a moderate crisis–plus.

Two factors lead us to not classify this episode higher despite the reference to the lack of normal functioning in credit markets. One is that the OECD said that the numerous actions were helping. Indeed, credit conditions for households were relaxing. The second was that the risks did not sound particularly dire. The financial system was not in grave danger—as is typically the case in a major or extreme crisis.

Conditions in Norway in 2009:1 were noticeably worse than those in 2008:2 (which we classify as a moderate crisis–minus). Though the reference to the "soaring" price of credit was similar across the two episodes, the 2008:2 entry did not have the references to the need to restore normal functioning to credit markets, and the predicted effect on investment was noticeably weaker. However, the 2008:2 entry described much more severe risks to the financial system. On net, conditions in 2009:1 feel about two steps worse on our scale of financial distress than those in 2008:2. This confirms our view that scaling this episode as a moderate crisis–plus is appropriate.

United Kingdom, 2009:1. The opening summary said that "The financial crisis has severely impaired the supply of credit and house prices have fallen sharply, thus restraining business and household spending" (p. 98). It also said that "Measures to support the financial sector, dramatic monetary easing and fiscal stimulus, have cushioned the downturn" (p. 98). Thus, in the opening summary alone, the OECD mentioned the three characteristics common to some form of a moderate crisis: financial problems that were severe and widespread, large enough to be central to the outlook, and requiring extensive government intervention.

The entry went on to discuss financial conditions in detail. Under the heading "Financial conditions are improving but further measures are needed," the OECD wrote (pp. 98–99):

> Financial conditions, which worsened sharply at the onset of the crisis, are still unfavourable, although they have improved in 2009. Economic recovery will require restoration of the financial system and the supply of credit. Beyond measures to supply liquidity, the authorities have undertaken a wide range of system-wide policy measures to restore the banking system's ability to supply credit, including a guarantee of certain securities issued by banks and ring-fencing impaired assets. The

> measures taken by the government to support the financial sector have resulted in the full or partial public ownership of a number of banks and the assumption of potentially large risks on the public-sector balance sheet.

The overview chapter also detailed additional financial recovery measures taken by U.K. authorities. It mentioned: "The assets guaranteed at Lloyds TSB and Royal Bank of Scotland amount to 38% of UK GDP" (p. 46); that the Bank of England "has also in place a scheme to purchase commercial paper to support the function of this market" (p. 52); and that "estimated bank losses this year and next may imply further capital injections by governments of around ... 3 to 9% of GDP in ... the United Kingdom" (p. 56).

The OECD indicated that financial conditions were troubled enough to affect aggregate demand and output. It said: "Continued financial sector weakness, further declines in house prices, a weak global economy and sluggish income growth are projected to depress output through 2009 .... Improving exports combined with an easing in financial conditions should, with support from already implemented policy measures, underpin a recovery during 2010" (p. 101). The closing risk paragraph did not suggest additional negative risks from financial turbulence. Indeed, it gave as a positive risk that "conditions in the financial sector may normalise faster than assumed" (p. 102).

The United Kingdom had been a major crisis−minus in 2008:2. The fact that there were repeated references to improved or easing financial conditions argues strongly for scaling this episode as at least slightly less distressed. The description of distress in the U.K. in 2009:1 was similar to that for Japan in 1999:1 (which we scale as a moderate crisis−plus).

On an absolute scale, this episode corresponds to the definition of a high-end moderate crisis. The references to severely impaired credit supply, credit conditions remaining unfavorable, and that economic recovery will require the restoration of the supply of credit, all suggest that the problems in the financial sector were severe and widespread. Indeed, it is the fact that the descriptions are particularly grim that leads us to place this episode at the high end of the moderate crisis range (a moderate crisis−plus). There was also discussion that credit supply problems were large enough to have substantial effects on output. Finally, U.K. authorities were taking a very large number of extreme actions to stabilize the financial system. That these actions seem to be helping is the main reason the episode does not rise to the level of a major crisis−minus. The U.K. financial system, while still highly troubled in 2009:1, no longer seemed at grave risk, as evidenced by the fact that negative financial risks were not mentioned in the closing risks paragraph.

Iceland, 2009:2. The opening summary said (p. 184):

> The recession into which the Icelandic economy fell following the failure of the country's three main banks in October 2008 continues. Domestic demand has fallen sharply, and the economy is projected to continue shrinking until early 2010. Thereafter, growth is projected to return, boosted initially by the expected normalisation of financial conditions.

It also said that "capital controls should be progressively removed as soon as feasible to normalise relations with foreign markets and allow firms to access foreign credit markets" (p. 184).

In discussing the policy response to the banking crisis, the OECD wrote (pp. 185–186):

> Two of the three main banks that failed have been recapitalised, with one of them having been taken over by its creditors, and discussions are continuing with creditors of the other bank with a view to achieving a similar outcome. The Central Bank of Iceland ... took the first step in the sequenced removal of capital controls by permitting inflows of foreign currency for new investments.

The closing risks paragraph suggested that the success of these measures was not assured when it discussed "the risks associated with the uncertain global and financial economic recovery" (p. 186).

This was a quite brief and somewhat uninformative entry. Nevertheless, it is clear that conditions were substantially improved relative to 2009:1 (which we classify as an extreme crisis−regular). While credit markets were still troubled and not functioning normally in 2009:2, there was not the sense of paralysis and utter breakdown in intermediation that there was in 2009:1. Moreover, in 2009:1, there were many references to the severe effect of financial troubles on demand, while in 2009:2 such references were very limited.

In terms of the absolute level of distress, this episode lies on the border between a moderate crisis−plus and a major crisis−minus. Financial problems were clearly widespread and severe. Iceland's three main banks had failed in late 2008, but despite extreme measures their recapitalization status was still somewhat unclear in 2009:2. The OECD's statement that growth would not start until partway into 2010 "boosted initially by the expected normalisation of financial conditions," suggested that credit conditions were still far from normal. Similarly, the statement that removing capital controls would allow firms to "access foreign credit markets" is another indication that credit access remained highly restricted. Another factor suggesting that financial conditions were still highly distressed was the absence of discussions of radical improvement. Given that Iceland had been an extreme crisis−regular in the previous period, this fact limits just how low one could scale the distress in 2009:2.

Another striking feature of the entry was the relatively small role financial conditions seemed to play in the OECD's view of the outlook. There was one mention that growth would be aided by financial market normalization. But overall, exchange rate movements, fiscal consolidation, and energy investment plans were viewed as more central to the outlook. Given the other statements of obvious financial distress, this absence of much discussion of real linkages between financial conditions and domestic demand is not enough to lead us to score this episode below a moderate crisis of some sort. But it does tip the balance away from classifying it as a major crisis—minus. We therefore scale the episode as a moderate crisis−plus.

Portugal, 2010:2. The entry for the euro area overall suggests slightly less financial distress in 2010:2 than in 2010:1. The opening summary said: "financial conditions have improved" (p. 84). The OECD went on to explain (p. 85):

> Financial conditions have improved overall under extensive policy support and due to growing confidence, despite successive rounds of market volatility regarding sovereign debt risks. Credit to the nonfinancial sector, notably households, is increasing and equity prices have risen. Despite the publication of the second EU-wide stress tests, the strength of the banking system and its ability to provide credit as demand picks [up] remain concerns.

Adding to the sense that significant financial stress remained, the closing risks paragraph emphasized that sovereign debt problems could impact private credit supply. It said: "Markets remain sensitive to the weakness in the fiscal position in some countries and this may lead to wider financial tensions, although the creation of the European Financial Stability Facility (EFSF) provides an important near-term crisis management mechanism" (p. 88).

Financial distress featured prominently in the entry on Portugal. The opening summary began, "The economy is expected to be very weak in the rest of 2010 and into 2011, due to strong fiscal consolidation and tight credit conditions," and went on to say, "Strictly implementing consolidation measures ... and promptly correcting any slippages in order to meet those targets are essential to reduce the cost of external financing, and thus stave off the major downside risk of a credit contraction" (p. 171). An entire paragraph discussed financial stress under the heading, "Credit contraction risks are looming" (p. 172):

> Spreads on Portuguese public debt have been trending upwards since the end of May, reaching historic peaks. Persistent financial market stress has also severely restricted Portuguese banks' access to wholesale debt markets and made them more dependent on ECB liquidity provision, despite good results in the July EU-wide stress tests. Though credit growth for both companies and households has so far remained positive, it is widely expected to slow further, and could become negative.

In addition, the entry referred to "durables' consumption hampered by tighter credit conditions and the rise in the VAT by 1 percentage point in July 2010" (p. 171), and a chart was titled, "Credit conditions have deteriorated" (p. 171). And in discussing the outlook, the OECD said, "Activity should gradually become more robust as Portugal's interest-rate spreads fall in response to fiscal consolidation" (p. 173). Finally, the analysis of risks was headed "A credit contraction is the main downside risk," and began, "The possibility of abrupt deleveraging due to a strong credit contraction remains a major downside risk in the short and medium term" (p. 173).

The OECD also discussed financial distress in Portugal in the material preceding the country entries. It reported (p. 40):

> Specific risks continue to emanate from banks. A number of fiscally weak euro area countries have banking sectors that are still highly dependent on liquidity support from the ECB .... If these banks cannot regain market confidence in the coming quarters, they may experience funding difficulties when, as expected, the ECB stops its exceptional liquidity facilities.

An accompanying chart showed that the country whose banks were second most dependent on ECB liquidity support (after Greece) was Portugal (p. 43).

This evidence points clearly to the moderate crisis range: the OECD described widespread, severe problems in the financial sector and viewed them as central to the performance of the overall economy, but it did not and suggest that the financial system was on the verge of being dysfunctional or to seizing up entirely. Moreover, the extensive and strongly worded discussion suggests that the top of the moderate crisis range is appropriate. The evidence for choosing the top of the range includes the OECD citing tight credit as one of two factors behind a very weak outlook in the very first sentence of the entry; the two references to credit contraction as a major downside risk; the reference to banks' access to wholesale funding being severely restricted; and the highlighting of actions to help banks and risks to the banking sector in the material preceding the country entries, which is highly unusual for a small country. We therefore classify this episode as a moderate crisis–plus. One useful comparison is with Greece in 2010:1, which is similar to the current episode but where discussion of financial distress is slightly less prominent, and which we classify as a moderate crisis–regular.

Major and Extreme Crises

Major crisis–minus:

United Kingdom, 2008:2. Financial distress in the United Kingdom was mentioned frequently in the overview chapter. For example, the OECD said that "The housing market downturn in the United Kingdom has exacerbated pressures on the mortgage market, resulting in the nationalisation of two major lenders, the takeovers of a further two under duress and government capital injections into a number of other large institutions" (p. 21). The OECD also said that "exposure to severe banking problems" was a source of currency depreciation in the United Kingdom" (p. 42). The overview chapter predicted that "Ongoing financial stress and housing market adjustment will lead to falling consumption and investment throughout most of 2009" (p. 49), and urged further cuts in policy rates "because the economy appears particularly vulnerable to the combined effect of the financial turmoil and a severe housing downturn" (p. 58).

The entry for the United Kingdom reiterated and expanded on many of these descriptions. The opening summary said: "The adjustment in the construction sector is expected to continue, while house prices are likely to fall further. These factors, combined with turmoil in the banking and financial sectors, are already cutting domestic demand" (p. 113). The OECD mixed together its discussion of financial distress and the measures taken to deal with it. It wrote (pp. 115–116):

> Financial markets are particularly important to the UK economy and the recent severe instability in that sector will therefore have a large impact. The authorities have taken a number of steps to avert a loss of public confidence in the banking sector, including the nationalisation of two mortgage lenders and the coordinated rescue of a bank. The Bank of England has provided liquidity in interbank markets, extended the Special Liquidity Scheme (whereby illiquid mortgage-backed and other securities held by the banking sector can be swapped for UK Treasury Bills), and temporarily extended the types of collateral eligible for repo operations. The recently passed Banking (Special Provisions) Act provides a comprehensive package to address financial market turmoil, giving the government special powers to intervene in the banking sector by acquiring equity in troubled institutions. The government has also announced plans to provide up to £ 50 billion of direct recapitalisation assistance to banks, and to bolster the wholesale funds market by guaranteeing the borrowings of eligible institutions against a fee. While the efficacy of these remedies is difficult to judge at this early stage, the government should be commended for taking swift and decisive action.

The OECD clearly thought that financial distress was severe enough to affect domestic demand greatly. It said: "The contraction in GDP is expected to extend into mid-2009, as consumer spending slows sharply with lower house prices, lower net financial wealth, tighter credit conditions and a weakening labour market" (pp. 116–117). Also, a "long period of falling house prices and tight credit conditions will cut dwelling investment" (p. 117). The concluding risks paragraph said: "The risks around these projections are especially large given the turmoil in financial markets. ... The fiscal position is also at risk, particularly because of bank bailout costs" (p. 117).

This episode has all of the characteristics of a moderate crisis–plus and a bit more—which is why we classify it as a major crisis–minus. Financial problems were clearly severe and widespread. There were repeated references to a "crisis" and "financial turmoil," and the OECD reported "severe banking problems." U.K. authorities were taking many extraordinary measures to prevent financial markets from freezing entirely. The OECD was also clear that the financial distress was central to the outlook, saying that tight lending conditions would depress consumption and residential investment.

Two things about the description of financial conditions lead us to feel this episode crossed over the line into the major crisis−minus range. One was the very large number of extreme actions the United Kingdom was taking to restore financial stability. This suggests that the financial system was particularly distressed. The other was that the OECD expressed concern that the measures would not be effective, which could indicate that the problems were very severe or the financial system was particularly vulnerable.

United States, 2009:1. The overview chapter had many references to financial conditions in the United States. For example, it said: "The downturn in business investment has become less steep, reflecting somewhat easier credit conditions and less downbeat business confidence" (p. 19). The heading "Financial markets remain tight in spite of recent improvements" (p. 25) referred to conditions worldwide, but also summarized well the OECD's view of financial conditions in the United States. Charts showed that the three-month interest rate spread in the United States had fallen greatly and was nearing pre-crisis levels (p. 29), but that credit default swap rates remained significantly elevated (p. 30). The OECD also said (p. 30):

> Capital injections in banks have helped compensating for losses and write-downs that have been realised so far. But banks will still need to absorb accumulating credit losses, especially as a result of the economic downturn that is putting upward pressure on default rates across the various types of loans, in particular real estate. Indeed, commercial property loans might pose a clear risk of bank losses in the near term since bank charge-off rates on commercial mortgages in the United States have been strongly correlated with negative output gaps in the past.

It mentioned that "Bank lending has continued to lose steam up to the second quarter of this year. Indeed, credit to the private sector has weakened further across all segments of borrowers in the United States and the euro area, including consumer loans in the United States, a category that had been very resilient until very recently" (p. 31).

The overview chapter also discussed the wide range of actions taken by U.S. authorities to deal with financial problems. In a chart showing actions in a number of countries, the United States stood out as the only country taking every one of the possible measures. The list included guaranteeing or buying bank debt, injecting capital, nationalization, a plan to purchase toxic assets, and funding commercial paper and asset-backed securities (p. 44). It said of the Federal Reserve (p. 51):

> The Fed has taken a multifaceted approach in its implementation of unconventional measures, all with a view to restoring the flow of credit to ultimate borrowers. Reflecting the importance of direct financing from capital markets, the Fed has been intervening directly in dysfunctional key segments of the credit market, such as the ones for commercial paper and securitised products, where the Fed is now effectively lending to the ultimate borrowers.

It also said: "estimated bank losses this year and next may imply further capital injections by governments of around 1 to 3% ... of GDP in the United States" (p. 56).

The opening summary for the entry on the United States echoed the tone of the overview chapter when it referred to "still adverse, albeit improving, financial conditions" (p. 68). It also said that "The authorities should also go ahead with the planned measures to remove impaired securities from banks' balance sheets" (p. 68). Under the heading "Financial conditions remain fragile," the OECD wrote (p. 71):

> Conditions in a number of financial markets, including the interbank markets and the commercial paper market, have recently improved. Furthermore, mortgage rates have fallen since late last year as the Federal Reserve purchased agency debt and agency mortgage-backed securities. However, the supply of mortgage credit is still relatively tight and mortgage activity remains heavily dependent on government support. More generally, financial markets and financial institutions remain under considerable stress, and cumulative declines in asset prices, tight credit conditions and high levels of risk aversion continue to weigh on the economy. Restoration of trust in financial intermediaries and markets is vital for a sustained and strong economic recovery to occur.

The OECD said that "The April survey of bank loan officers ... indicated that the net fraction of banks that tightened their business lending policies remained high, although it has been declining" (p. 71). It also reiterated that the Federal Reserve had "implemented credit easing measures to support key credit markets, such as those for commercial paper and mortgages" (pp. 71–72).

In terms of the outlook, the OECD said that among the factors "likely to continue to weigh on consumer spending" was "continuing tight credit conditions" (pp. 69–70). It said that "Prospects for a recovery in the commercial real estate sector are worse, with rising vacancy rates, falling prices and very tight financial conditions" (p. 70). In the closing risks paragraph, the OECD wrote (p. 72):

> Recovery will depend on financial conditions remaining stable for the remainder of 2009 and gradually improving thereafter, underlining the importance of the authorities' efforts to restore confidence in the financial system. Recent stress tests indicate that some major banks will need more capital, and it is assumed that they will be recapitalised, including by an injection of public funds if needed. Nevertheless banks' balance sheets remain encumbered with impaired assets. Overall, the fragility of the financial system still represents a downside risk to the outlook.

We classify the United States in 2008:2 as an extreme crisis. The OECD's description of conditions indicates that financial problems were noticeably diminished in 2009:1. Most obviously, the OECD referred to "somewhat easier credit conditions," "still adverse, albeit improving, financial conditions," and the fact that "Conditions in a number of financial markets ... have recently improved." There were also decidedly fewer references to a "crisis" or to financial markets being paralyzed or frozen.

In an absolute sense, however, financial distress remained very high in 2009:1. The OECD was explicit that "Financial conditions remain fragile," and financial institutions were still "under considerable stress." The statement that "Restoration of trust in financial intermediaries and markets is vital for a sustained and strong economic recovery to occur" suggests that such trust was currently missing. Both the overview chapter and the closing risks paragraph suggested that there were still grave risks to the stability of the financial system. The problems in the financial system were also clearly central to the outlook.

What pushes this episode just over the line into the major crisis–minus territory was the large range of extreme actions being taken to restore credit flows. The Federal Reserve was intervening directly in dysfunctional segments of the credit market. Though these actions were seen as helping, it was clear that they had not yet restored credit markets to normal operation. Our classification of this episode as a major crisis–minus is consistent with the significant improvement over 2008:2. Furthermore, the description of this episode is very similar to that for the United Kingdom in 2008:2, which we also classify as a major crisis–minus. In both cases there were large problems in credit markets and substantial risks to the financial system, but financial markets were not described as frozen or paralyzed.

Major crisis–regular:

Japan, 1998:1. The OECD made several strong statements about the severity of the problems in the financial sector. For example, it referred to "a domestic financial crisis" in the second sentence of the opening summary of its entry (p. 44). It also said, "dealing promptly and comprehensively with the crisis in the banking sector, in order to put the financial system on a sound basis, has become an overriding priority" (p. 27)—a statement that, among other things, implied that the financial system was not on a sound basis. And it referred to "convincing signs of a credit crunch" (p. 45) and "crisis conditions" (p. 47). It also reported "the failure of several major financial institutions" (p. 44), and that "Japanese banks were forced to pay much higher rates in the world's interbank money markets" (p. 46).

The OECD had no doubt that the disruptions were having significant effects on the economy. For example, it said, "individual banks under pressure may be trying to improve balance sheets by cutting their lending even to the most creditworthy customers" (p. 23); "the balance sheet problem which has built up in the financial sector since the beginning of the decade ... has led to difficulties for small and medium-sized enterprises in obtaining the bank credit on which they are highly dependent" (p. 23); "Macroeconomic stimulus alone will not suffice to generate a sustained expansion since the access of small and medium-sized business to adequate financing sources must be restored if domestic demand is to recover" (p. 27); and that the banking failures, together with "spreading corruption scandals," were "a major shock to confidence and expectations, and the ensuing uncertainty has further damped private sector spending propensities" (p. 44). It also described major and widespread government interventions in the financial sector, such as "the strengthened deposit insurance system and the public provision of capital to major banks, together with the imminent intensification of bank supervision procedures" (p. 44).

All of this evidence points to a major crisis. A comparison with Japan in December 1997 points to the same conclusion. As described above, we code that episode as a moderate crisis–minus. Here, the OECD's language was considerably more dire. Moreover, it repeatedly stated that the situation had worsened. For example, it referred to "the existing weakness of the financial system, [which] has been aggravated by the Asia crisis" (p. ix); reported that "a market risk premium on Japanese bank borrowing emerged" after late 1997 (p. 22); and said that "credit supply conditions have worsened significantly since late last year, at least for smaller firms" (p. 44).

All of these considerations show a situation that was clearly worse than a moderate crisis. We therefore classify this episode as a major regular crisis–regular.

Iceland, 2008:2. The overview chapter made it clear that financial distress was very severe in 2008:2. It said (p. 42):

> Iceland suffered severe financial market dislocation beginning in early October as foreign investors withdrew funding from the country's three large banks. In the wake of this crisis, the Icelandic króna depreciated massively vis-à-vis the euro and the dollar in a matter of days, and short-term money market rates rose to dramatic heights. The negative fallout for the economy is expected to be large, worsening an already deteriorated economic situation. A large financing package, involving various international bodies, is in the process of being negotiated, with the aim of restoring investor confidence.

The opening summary of the entry for Iceland said that "the Icelandic economy has entered a deep recession following the failure of its major banks" (p. 147). The summary also had two references to the banking "crisis" (p. 147). Under the heading "The financial crisis has worsened," the OECD wrote (pp. 148–149):

> The accentuation of the global financial crisis since mid-September proved fatal for Iceland's three main banks, which have all been placed in receivership under direct government control. The government has guaranteed domestic deposits (which at the end of September were equivalent to around 100% of the GDP in the year to June 2008), and will guarantee foreign retail deposits in line with the requirements of the EU Deposit Insurance Directive; the government is not, however, guaranteeing other bank liabilities. This default on bank debts has curtailed banks' access to international credit markets and seriously disrupted the foreign exchange market, with very negative consequences for the economy. A loan plan from a group of countries led by the International Monetary Fund (IMF) has been agreed that would provide $10 billion ... over two years ... to support an economic recovery programme and to help Iceland restore confidence in its banking system and stabilise its currency.

The OECD drew a link from the severe financial distress to domestic demand. It said (p. 147):

> Consumer spending has dropped in response to the squeeze on real incomes resulting from the large depreciation of the exchange rate, tightening credit conditions and a deterioration in the economic outlook. Residential investment has fallen even more sharply, weighed down by a large stock of unsold new housing units, expectations that the large gains in real house prices in recent years will be reversed over the next few years and more limited access to housing finance on costlier terms. Tightening financial conditions and the deteriorating outlook have also weighed on business investment.

In discussing the outlook, the OECD said that "The economy is projected to contract very sharply in late 2008-early 2009 and not to begin growing again until mid-2010" in part because "Consumption expenditure is likely to shrink markedly as households respond to falling real incomes, rising debt-service costs, tight credit-market conditions, and declining wealth" (p. 149). The closing risks paragraph bore the tagline "Considerable uncertainties on the resolution of the banking crisis," but the main crisis-related risk identified was that "considerable uncertainty about the direct cost to government of guaranteeing domestic bank deposits and other liabilities poses a significant fiscal risk" (p. 149).

There is no doubt that this episode rises to the level of a major crisis. The OECD's description of conditions is substantially worse than that for Iceland in 2008:1 (which we identify as a moderate crisis–regular). It is similar to that for Japan in 1998:1 (which we identify as a major crisis). Among the signs of severe financial distress in this episode is the fact that the three main Icelandic banks failed and were nationalized; the OECD used the term "crisis" unreservedly; the IMF and several countries had to provide a rescue package for the country; and Iceland's banks had difficulty accessing international credit markets. The OECD also indicated that tightening credit conditions and limited access to housing finance were lowering demand significantly, and were likely to lead to a sharp and prolonged downturn.

We debated whether this episode might rise to the level of a major crisis–plus. Two considerations, however, argued against this classification. One was that the OECD tended to combine the adverse consequences of the financial crisis and the currency crisis. This could suggest that the financial crisis on its own was less severe than it might sound. The second is that there were few indications that the financial system was frozen and that credit was simply unavailable. This is something we would expect to see in a high-end major crisis or an extreme crisis. For these reasons, we classify this episode as a major crisis–regular.

<u>**Extreme crisis–minus**</u>:

<u>**Japan, 1998:2**</u>**.** We classify Japan in 1998:1 as a major crisis–regular. Here, the OECD described a situation that was notably worse. Among its stronger phrases were "financial paralysis" (p. 20); the "breakdown in the credit creation mechanism, and the resulting widening of creditor risk premia" (p. 44); "banks remain in dire straits as risk premia widen" (p. 45); "the increasingly serious situation in the banking sector" (p. 45); and "credit crunch" (which it used repeatedly). In addition, it discussed major government interventions in the financial system: "a broad agreement was achieved in the Diet to revitalise the financial system. The new legislation includes important measures to deal with financial sector problems. To support this, the Government has made an unprecedentedly large sum of public funds available to recapitalize the banking system, amounting overall to around ¥ 60 trillion, or about 12 per cent of GDP" (p. ix).

The OECD made it clear that those developments were having an important impact on the economy. For example, it said, "a profound lack of confidence, in large part due to the severe and prolonged crisis in the banking system, has depressed private spending" (p. 20); reported that "the balance sheet problems of the banking sector remain unresolved, and the resulting uncertainty has led to diminished confidence among consumers and investors, leading to sharp declines in private spending" (p. 42); and referred to "risks of a deflationary spiral arising in part from the unresolved problems in the banking sector" (p. 44).

However, although there had clearly been a nontrivial deterioration from 1998:1, the OECD did not describe the situation as qualitatively changed. For example, it said, "banking sector problems were not improving" (p. ix), and referred to "continued concerns about the health of the financial system" (p. 12). And in the summary of its entry, it stated, "The credit crunch is continuing" (p. 42). Also, as noted above, it commented that "banks remain in dire straits" (p. 45).

Thus, the financial-sector problems had become significantly but not dramatically worse. We therefore classify this episode as two steps more serious than in 1998:1, which corresponds to an extreme crisis–minus.

Extreme crisis–regular:

United States, 2008:2. The *OECD Economic Outlook* for 2008:2 described financial conditions in the United States as being in extreme crisis. The opening editorial said (p. 7):

> The financial turmoil that erupted in the United States around mid-2007 has broadened to include non-bank financial institutions and rapidly spread to the rest of the world. Following the collapse of Lehman Brothers in mid-September, a generalised loss of confidence between financial institutions triggered reactions akin to a "blackout" in global financial markets. Spreads in credit and bond markets surged to very high levels, paralysing credit and money markets. Prompt and massive policy action to restore confidence and provide liquidity appears to have successfully limited the period of panic, but the need for financial institutions to operate with less leverage and to repair their balance sheets remains.

The overview chapter focused almost entirely on the crisis and described financial conditions in similarly dire terms. The word "crisis" appeared over and over, and financial developments in the United States and their consequences were discussed on almost every page. For example, the OECD wrote (p. 20):

> Ongoing weakness in financial institution balance sheets and increasing uncertainty about whether many are solvent came to a head in mid-September, in the wake of the bankruptcy filing by Lehman Brothers. The result was a sharp increase in the rates of interest that banks charge for lending to one another and a drying up of lending. The premia paid to insure against debt default by financial institutions soared, although they have since fallen back to pre-September levels (Figure 1.4). Bank-runs at the wholesale level, both actual and threatened, have forced the bankruptcy, effective nationalisation or merger of many large financial institutions in the United States and Europe. In the United States, the investment banking sector came under enormous pressure. Two of the five largest investment banks were merged with other banks under duress, one went bankrupt and the remaining two were forced to become more highly regulated bank holding companies.

It also said that "US authorities launched massive interventions in financial markets to confront head-on the crisis of distrust, illiquidity and insolvency that threatened financial markets with outright collapse" (p. 18). A later discussion suggested that these actions were helpful, saying (p. 50):

> Guaranteeing deposits and bank lending and providing equity injections have contributed to directly tackling the crisis of confidence that reached panic proportions in early October 2008 when the complete breakdown of credit markets was threatened with potentially dire consequences for the real economy. Indicators of financial stress within the banking system suggest that policy announcements have recently led to some improvements.

The overview chapter also made clear that the extreme financial distress was affecting demand in the United States greatly. It wrote that "Personal consumption has been falling, with a particularly sharp fall in spending on durables such as cars which are most sensitive to the availability of credit and heightened uncertainty," and that "Business investment is also likely to continue to fall, amid low levels of confidence and sharply tightening financial conditions" (p. 14).

The entry for the United States amplified the general discussion. The opening summary began (p. 84):

> The US economy is facing extremely difficult conditions. The financial crisis has intensified at a time when growth had already been weakened by the prolonged housing downturn. A credit crunch is likely to result in a pronounced contraction in activity over the near term and a further deterioration of the labour market.

Under the heading "The financial system is under extraordinary stress," the OECD wrote (pp. 84–85):

> The financial crisis, not only in the United States but also in much of the rest of the world, has intensified. Falling home prices and the consequent deterioration of mortgages have led to substantial losses across the financial sector. Financial institutions' efforts to repair their balance sheets have constrained their lending. Furthermore, mounting uncertainty about the values of excessively complex and opaque mortgage-linked securities has progressively led investors to become more reluctant to bear credit risk. This has generated further declines in financial asset prices and a drying-up of liquidity. As a result, many securitisation markets, such as that for private-label mortgage-backed securities, have stopped working. In September, credit and money markets came to a near halt, with interest rates in these markets skyrocketing.

The OECD had no doubt that the financial crisis was of a magnitude likely to affect demand and economic activity. It wrote (p. 87):

> The aggravation of the financial crisis is likely to affect economic activity through several channels, most notably by restricting the availability of credit. Banks are reducing credit card limits, and denial rates on automobile loan applications are reportedly rising. Even households with good credit histories face difficulties obtaining mortgages or home equity lines of credit. Businesses, too, are impaired by diminished access to credit. For instance, tighter bank lending standards – as evidenced by October's Senior Loan Officer Opinion Survey—and disruptions in the commercial paper market have made it harder for firms to obtain the working capital they need to meet routine expenses such as payrolls and inventories.

In the closing risks paragraph, it said: "If financial conditions fail to move back to the pre-September level in the near term, the implications for the broader economy would be quite adverse. A protracted credit crunch would hold back spending, production and job creation even further" (p. 88).

The OECD also described the "series of aggressive steps to restore stability in financial markets and support real activity" that had been taken by U.S. authorities. It wrote (p. 88):

> They have intervened to support distressed financial institutions, most notably Fannie Mae, Freddie Mac and the American International Group (one of the world's largest insurance companies). Most importantly, the authorities have enacted a $700 billion rescue plan which has partly been used to recapitalize banks, and have also more than doubled deposit insurance to reduce the risk of bank runs. The success of these efforts in improving financial conditions will be the key determinant for the evolution of the US economy over the projection period.

This description of financial conditions and their likely impact is the worst we encountered in the *OECD Economic Outlook*. Financial distress in this episode was clearly higher than in Japan in 1998:1 (which we classify as a major crisis–plus), and a little higher than in Japan in 1998:2 (which we classify as an extreme crisis–minus).

Many elements of the description make it clear that financial distress was exceptionally high. There was repeated and unreserved use of the term "crisis." There was talk of credit markets coming "to a near halt," and of credit-worthy borrowers being unable to get credit even for routine uses. The OECD mentioned "panic" and "Bank-runs at the wholesale level." Spreads were described as "skyrocketing." There were widespread bank failures and forced mergers.

The OECD also indicated that the financial distress was absolutely central to its outlook for the United States—actually saying that "The success of these efforts in improving financial conditions will be the key determinant for the evolution of the US economy over the projection period." It described lack of credit availability as a major factor depressing consumption and investment, and said that if conditions did not improve the effects on the economy "would be quite adverse."

Finally, the list of government interventions into the financial system was massive and extraordinary. It included forced mergers, bailouts, capital injections, and nationalization of the Government Sponsored Enterprises. The only thing that suggested that this episode did not rise to the level of an extreme crisis–plus was the OECD's belief that the actions were working (at least somewhat) to stem the panic.

Iceland, 2009:1. The opening summary made clear that Iceland's financial system was deeply troubled. It said (p. 131):

> Domestic demand collapsed following the failure of Iceland's three main banks in October 2008, plunging the economy into a very deep recession. ... Restoring the smooth functioning of the banking system is the top priority. This entails completing the bank restructuring process quickly so that the new banks can resume lending, especially to firms. Progressively removing capital controls as soon as feasible would facilitate access to foreign credit markets.

The rest of the entry also interwove the descriptions of the banking crisis and its effects on intermediation and domestic demand. For example, in discussing current conditions, the OECD wrote (p. 131):

> The failure of Iceland's three main banks in early October 2008 deepened the contraction in all components of domestic demand which was already underway. Faced with falling real incomes, a large loss of wealth and an urgent need to deleverage, consumers have slashed spending. Residential and general business investments have also fallen precipitously in the face of a much bleaker economic outlook, a similar need to deleverage, and firms' extreme difficulties in obtaining credit.

To deal with the severe problems, "Iceland entered into a Stand-By Arrangement with the International Monetary Fund in November 2008. Its main objectives are to stabilise the exchange rate, restore normal activity in the financial sector, and return public finances to a sustainable path" (p. 132). The OECD also explained that "For the time being, official interest rates do not have much effect on access to credit because financial intermediation is dysfunctional. It has been extremely difficult for firms to obtain financing from the new banks, domestic wholesale markets or foreign credit markets (access to which is complicated by the exchange controls)" (pp. 132–133). There was reference to the fact that "the one-time cost of recapitalising the central bank" was a major source of the sharply increased government budget deficit (p. 133). The closing risks paragraph said (p. 133):

> The main risks surrounding these projections are that it may take longer than assumed for financial intermediation to normalise, which would delay the stabilisation and eventual recovery in domestic demand; and that the fiscal costs of resolving the banking crisis may differ materially from what has been assumed, which would alter the required amount of fiscal consolidation.

This description of financial conditions is clearly worse than that for Iceland in 2008:2 (which we classify as a major crisis–regular). In 2008:2, the negative effects on demand of declining access to credit were largely a risk; in 2009:1, they were a reality. The description suggests the episode is similar to that for the United States in 2008:2 (which we classify as an extreme crisis–regular). In both cases, intermediation had broken down almost entirely and credit markets were not functioning.

Several factors lead us to classify this episode as an extreme crisis–regular. First, there was repeated and unreserved use of the word "crisis." Financial intermediation is referred to as "dysfunctional," and the OECD says that it has been "extremely difficult for firms to obtain financing." The reference to the need to "restore normal activity in the financial sector" is strong evidence that Icelandic credit markets simply were not functioning. The financial problems are also described as being severe enough that they were leading to a precipitous fall in investment. Also relevant to our classification is the breadth and magnitude of the needed response to the crisis. The major banks were all nationalized, credit controls were instituted, and an IMF rescue package was necessary to deal with the fiscal consequences of the crisis. Taken together, these descriptions suggest that financial distress clearly rose to the level of an extreme crisis.