This appendix describes how we derive our new semiannual measure of financial distress for a sample of advanced economies for the period 1967 to 2007. As discussed in the paper, our approach follows others in the literature in relying on qualitative evidence about financial conditions in each country. A key feature of our approach is the use of a consistent real-time source of this information. The use of contemporaneous accounts should help us avoid the possibility of bias from the retrospective identification of financial crises. 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.

A second 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 nonsystemic 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 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 *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 *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 *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 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, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. And because our goal is to assess the evidence from before the recent financial crisis, we end the sample prior to the widespread outbreak of the crisis. Concretely, the last issue of the *OECD Economic Outlook* we examine is that for the first half of 2007, at which point only a few countries were facing financial-market difficulties that the OECD considered noteworthy.

The two issues of the *Economic Outlook* are published at mid-year and at year-end. Specifically, the first issue is dated June or July (except in 1986, when it is dated May), and typically reflects developments through sometime in May. The second issue is always dated December, 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 *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 effects of disruptions to the
financial system, and we do not want to confound the two.¹

To derive our new scaled measure of financial distress, we read the *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.

In interpreting the material in the *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 prospective borrowers; and difficulties of creditworthy borrowers 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

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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 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.
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? In this ranking, 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. Likewise, the OECD’s description of the actual or anticipated impact of financial troubles on spending and the economy is often a useful summary statistic 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 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 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

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.
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 *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
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. **Criteria for Different Categories**

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.

**Credit Disruptions.** The hallmark of the episodes that we identify as credit disruptions is that the OECD perceived financial-market problems or increases 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 minor, 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 major risks to the outlook in higher categories than ones that it viewed as posing minor 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 *Economic Outlook* had described a country’s situation in a way that led us to code it as a minor crisis–minus, 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–plus.

**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 minus, regular, and plus 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, that are central to the performance of the economy as a whole, and that are not so serious that they could reasonably be described as taking the form of 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. Another is whether the OECD discussed impacts on credit supply or real activity repeatedly. We also take descriptions of sizeable government interventions in the financial system as an 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 *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 nonsystemic and systemic crises in Caprio et al. (2005). Likewise, it appears similar to the cutoff for being included in the IMF systemic banking crises database described by Laeven and Valencia (2014). For example, we identify seven periods when the countries in our sample were in moderate crises or worse; Caprio et al. also identify seven such
periods, and the IMF identifies eight. While the episodes we identify are often broadly similar to those in the other chronologies, the particulars of the timing are often quite different.

**Major and Extreme Crises.** 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 unreserved use the term “crisis” in referring to the financial system, and for 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. Episode-by-Episode Descriptions**

The remainder of the appendix provides episode-by-episode explanations of the analysis.

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5 However, our approach differs from those of Caprio et al. and the IMF 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, 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.
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 country. In panel (b), they are grouped first by severity, then chronologically within each category.
<table>
<thead>
<tr>
<th>Category</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No distress</td>
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<tr>
<td>Credit disruption–minus</td>
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</tr>
<tr>
<td>Credit disruption–regular</td>
<td>2</td>
</tr>
<tr>
<td>Credit disruption–plus</td>
<td>3</td>
</tr>
<tr>
<td>Minor crisis–minus</td>
<td>4</td>
</tr>
<tr>
<td>Minor crisis–regular</td>
<td>5</td>
</tr>
<tr>
<td>Minor crisis–plus</td>
<td>6</td>
</tr>
<tr>
<td>Moderate crisis–minus</td>
<td>7</td>
</tr>
<tr>
<td>Moderate crisis–regular</td>
<td>8</td>
</tr>
<tr>
<td>Moderate crisis–plus</td>
<td>9</td>
</tr>
<tr>
<td>Major crisis–minus</td>
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</tr>
<tr>
<td>Major crisis–regular</td>
<td>11</td>
</tr>
<tr>
<td>Major crisis–plus</td>
<td>12</td>
</tr>
<tr>
<td>Extreme crisis–minus</td>
<td>13</td>
</tr>
<tr>
<td>Extreme crisis–regular</td>
<td>14</td>
</tr>
<tr>
<td>Extreme crisis–plus</td>
<td>15</td>
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</tbody>
</table>

**Table A1**  
Scale Used to Rank Financial Distress
### TABLE A2

#### a. By Country

<table>
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</thead>
<tbody>
<tr>
<td>Turkey</td>
<td>Credit disruption–minus</td>
<td>Credit disruption–plus</td>
<td>Credit disruption–plus</td>
<td>Credit disruption–plus</td>
<td>Credit disruption–plus</td>
<td>Credit disruption–plus</td>
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<td>Credit disruption–plus</td>
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**TABLE A2** (continued)

<table>
<thead>
<tr>
<th>Credit disruption–minus</th>
<th>Minor crisis–regular (continued)</th>
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<tr>
<td>United States, 1986:1</td>
<td>Japan, 1991:2</td>
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<tr>
<td>Japan, 1991:1</td>
<td>Norway, 1992:1</td>
</tr>
<tr>
<td>Italy, 1997:1</td>
<td>Finland, 1993:2</td>
</tr>
<tr>
<td>Germany, 2003:1</td>
<td>Japan, 1993:2</td>
</tr>
<tr>
<td>United States, 2007:1</td>
<td>Japan, 1995:2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<th>Minor crisis–plus</th>
</tr>
</thead>
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<td>Germany, 1974:2</td>
<td>Finland, 1992:2</td>
</tr>
<tr>
<td>Finland, 1992:1</td>
<td>Norway, 1993:1</td>
</tr>
<tr>
<td>United States, 1992:1</td>
<td>Japan, 1996:1</td>
</tr>
<tr>
<td>Norway, 1994:1</td>
<td>Japan, 1999:2</td>
</tr>
<tr>
<td>France, 1995:1</td>
<td>Japan, 2000:1</td>
</tr>
<tr>
<td>Turkey, 2003:2</td>
<td>Turkey, 2002:1</td>
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<td>Japan, 2005:1</td>
<td>Japan, 2003:1</td>
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<tr>
<td>Iceland, 2007:1</td>
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<thead>
<tr>
<th>Credit disruption–plus</th>
<th>Moderate crisis–minus</th>
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<tbody>
<tr>
<td>Japan, 1990:2</td>
<td>Japan, 1997:2</td>
</tr>
<tr>
<td>Japan, 1992:1</td>
<td>Japan, 2002:2</td>
</tr>
<tr>
<td>Norway, 1993:2</td>
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<tr>
<td>Finland, 1994:1</td>
<td></td>
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<tr>
<td>Japan, 1994:1</td>
<td></td>
</tr>
<tr>
<td>Japan, 1994:2</td>
<td></td>
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<tr>
<td>France, 1997:1</td>
<td></td>
</tr>
<tr>
<td>United States, 1998:2</td>
<td></td>
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<tr>
<td>Japan, 2000:2</td>
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<tr>
<td>Japan, 2004:2</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Minor crisis–minus</th>
<th>Moderate crisis–plus</th>
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<tbody>
<tr>
<td>Japan, 1992:2</td>
<td>Japan, 1999:1</td>
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<tr>
<td>Japan, 1993:1</td>
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<tr>
<td>Japan, 1995:1</td>
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<tr>
<td>France, 1995:2</td>
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<td>Japan, 1996:2</td>
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<tr>
<td>Japan, 2000:1</td>
<td></td>
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<tr>
<td>Turkey, 2002:2</td>
<td></td>
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<tr>
<td>Turkey, 2003:1</td>
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<tr>
<td>Japan, 2004:1</td>
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<table>
<thead>
<tr>
<th>Minor crisis–regular</th>
<th>Extreme crisis–minus</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States, 1990:1</td>
<td>Japan, 1998:2</td>
</tr>
</tbody>
</table>

Notes: Based on the *OECD Economic Outlook*. The *Economic Outlook* does not describe any disruptions or crises in Australia, Austria, Belgium, Canada, Denmark, Greece, Ireland, Luxembourg, Netherlands, New Zealand, Portugal, Spain, Switzerland, and the United Kingdom. The sample period is 1967:1–2007:1 for all countries except Australia (1971:2–2007:1), Finland (1969:1–2007:1), and New Zealand (1973:1–2007:1). Countries that joined the OECD after 1993 are not considered.
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 “[t]he 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. ... [T]he 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 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.

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 “[s]pecial 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 *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.

**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.

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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.
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 “[t]he 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 *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.

**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.

Japan, 1994:1. The previous issue of the 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.

Japan, 1994:2. 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.

**France, 1997:1.** 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 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 that “[b]anks want to lend” (p. 43), and that “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 “[o]ther 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 that “[h]igh 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 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.

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–regular, 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 “[b]ank 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 “[s]ome 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 that “[i]ncreasing 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 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 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 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 that “[s]urveys 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 *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.

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. ... [B]ecause 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. ... [F]inancial 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.

Finland, 1993:2. As described below, the 1993:1 issue of the 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.

Japan, 1993:2. 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.
Japan, 1995:2. 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.

**Japan, 1997:1.** As described above, 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.

**Japan, 2003:2.** As discussed below, the previous several issues of the *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 “[g]rowth 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.

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.

Norway, 1993:1. 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.

Japan, 1996:1. 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.

**Japan, 1999:2.** 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 *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.

**Japan, 2001:1.** 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 cleanup 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 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 described 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 that “the monetary policy transmission mechanism is defective” (p. 21), that “[b]ank balance sheets are saddled with very large amounts of non-performing loans” (p. 21), and that “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.
**MODERATE CRISSES**

**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 “[v]arious measures [that] aim at repairing bank balance sheets” (p. 18), that “[i]mpediments 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.

**Moderate crisis–regular:**

**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 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. We therefore classify this episode as a 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 “[h]igh 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 *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 “[t]he 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 takeover, 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 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-

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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.
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.

Turkey, 2001:2. 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 “[m]ajor 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.

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 *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 *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.

**MAJOR AND EXTREME CRISSES**

**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 direr. 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.

**Extreme crisis–minus:**

**Japan, 1998:2.** As just discussed, 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”
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.