

**FISCAL SPACE AND THE AFTERMATH OF FINANCIAL CRISES:  
HOW IT MATTERS AND WHY**

Christina D. Romer  
David H. Romer

**ONLINE APPENDIX A**  
**Extension of the Measure of Financial Distress**

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The methods used to derive our measure of financial distress for 1967–2012 are described in Romer and Romer (2017) and the related [Online Appendix A](#). That online appendix also gives the detailed reasoning for our scaling of each half-yearly observation with a non-zero level of financial distress. This online appendix discusses the extension of our series to cover five additional years (2013–2017) and six additional countries. Because our methodology is fundamentally unchanged, we do not repeat all of the methodological detail from the previous online appendix. Rather, we mainly use this appendix to provide the detailed reasoning behind our scaling of the non-zero observations not covered in the previous appendix.

As discussed in the text (and the previous paper), our narrative source is the *OECD Economic Outlook*. The *Economic Outlook* is published semiannually. For 2013–2017, the first issue of the year is dated May or June, and the second is dated November. The country entries for this period are typically between 600 and 900 words.

For the original paper, we used a keyword search of each issue of the *Economic Outlook* to identify episodes where there might be financial distress. The keywords were bank, financial, crisis, rescue, bailout (and bail-out), crunch, and squeeze. We used these searches merely to identify which entries to read closely; we did not use the presence of the words in an entry in any other way. Starting with the December 2007 issue, the keyword search returned so many matches that we found it easier to read each volume in its entirety. We continue that approach for the extension of the series through 2017 and to six additional countries.

### **A. The Starting Dates for the Additional Countries**

Our previous work considers the 24 countries that were members of the OECD as of 1973. We define our measure of financial distress for each country starting whenever the country was first covered in the *OECD Economic Outlook*. This is 1967:1, which was the date of the first issue of the *Economic Outlook*, for most of the countries; 1969:1 for Finland; 1971:2 for Australia; and 1973:1 for New Zealand. Here we expand the sample to include the six countries that joined the OECD between 1994 and 2000—the Czech Republic, Hungary, Korea, Mexico, Poland, and the Slovak Republic.

In the cases of Korea and Mexico, we follow our earlier practice and define our measure starting with the first issue of the *Economic Outlook* with an entry for the country—1994:1 for Mexico and 1996:2 for Korea. However, for the four formerly Communist countries, the discussions in the *Economic Outlook* show that initially, credit allocation was not mainly determined by market forces. Since our framework is not well-suited to such settings, we do not define our series for these countries until the discussions in the *Economic Outlook* suggest that credit allocation was mainly market-determined.

In the case of the Czech Republic, the first entry in the *Economic Outlook*, in 1996:1, reported, “Controlling minority stakes in the major banks are still held by the National Property Fund” (p. 104). For an extended period thereafter, the *Economic Outlook* often referred to a gradual process of freeing the banking system from government control. For example, the 2000:1 issue mentioned “the privatisation of several state-controlled banks” (p. 93), and the 2002:1 issue described “further advance in the privatisation of the banking sector” (p. 70). It was not until 2003:2 that there was a fairly clear statement that credit allocation was market-determined: “With interest rates low and improved access to consumer credit in the wake of banking privatisation and restructuring, private consumption continued to expand vigorously into 2003” (p. 77). We therefore define our series for the Czech Republic starting in 2003:2.

Although the first entry in the *Economic Outlook* for the Slovak Republic was not until 2000:2, its trajectory was similar to that of the Czech Republic. The first entry reported that the government was “implement[ing] its programme to restructure and privatise the largest banks” (p. 114). The *Economic Outlook* continued to refer to “the privatisation of the banking sector” through the 2002:2 issue (p. 102), and the 2003:1 issue included a vague reference to “privatisation receipts” (p. 101). There was no further discussion of state control of the banking sector. We therefore also add the Slovak Republic to the sample starting in 2003:2.

The first entry in the *Economic Outlook* for Hungary, in 1996:1, reported: “The main commercial banks remain in state hands, although one was privatised in 1995 and another is currently in the course of being privatised” (p. 111). The 1997:2 entry stated, “The privatisation process is now almost complete,” although it did not discuss the banking system specifically (p. 110). There were no references to privatization or state control of banks after that. We therefore define our series for Hungary starting in 1998:1.

Poland’s situation was similar. The first entry in the *Economic Outlook* was in 1996:2. It described an ongoing transition to a market economy, although there was no discussion of the banking sector specifically (pp. 109–111). The 1997:2 issue reported: “Ownership transfer has made some headway in 1997 with the privatisation of some major firms, including one of Poland’s largest banks” (p. 126). There were no references to privatization or state control after that. We therefore also include Poland in the sample starting in 1998:1.

## **B. Criteria for Different Categories**

As discussed in Romer and Romer (2017) and in the text, we define financial distress as corresponding to what Bernanke (1983) refers to as a rise in the cost of credit intermediation. Our approach is to translate the descriptions of financial conditions in the *OECD Economic Outlook* into a scaled indicator of the rise in the cost of credit intermediation. To aid readers in understanding the episode-by-episode descriptions that follow, we repeat the discussion of the

criteria for different levels of financial distress from the previous appendix.

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 strains in financial markets, funding problems, or other indicators of an increase in the cost of credit intermediation that were important enough to be mentioned, but that it did not believe were having significant macroeconomic consequences. A common form for this to take was for the OECD to describe the problems not as directly affecting its outlook for the country, but as posing a risk to the outlook. Other possibilities are that the OECD viewed the problems as affecting only a narrow part of the economy; that it mentioned them in passing or explicitly identified them as minor; or that it described the financial system as

improved but not fully healed following a situation that we classify as a minor crisis.

Our subdivision of credit disruptions into minus, regular, and plus is based on the specifics of the discussions within this general rubric. For example, we tend to place disruptions that the OECD described as posing substantial risks to the outlook in higher categories than ones that it viewed as posing only mild risks. Similarly, if the OECD reported that a disruption was serious enough that it had caused authorities to make some type of intervention in credit markets to improve credit flows, we tend to classify the disruption as more serious. And, 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.

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

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

Of course, not all cases exactly match this pattern. Sometimes entries for small countries are quite short and so do not spell out consequences in detail. In such cases, if the OECD described important problems in the banking system, but did not explicitly link them to falls in credit supply or the macroeconomy, we nonetheless code the episode as a minor crisis. In other cases, the OECD did not explicitly draw a link to macroeconomic outcomes but described the

problems as posing an important risk to the outlook. In these cases, we consider the severity of both the financial-sector problems and the perceived risks to outcomes. A related complication is that in some cases, rather than saying that credit supply had been reduced, the OECD said that the usual monetary transmission mechanism was not working. We interpret such comments as an indirect way of describing shifts in credit supply.

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

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

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

As before, in some cases we rely heavily on comparisons. 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.

**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 frequent use the term “crisis” in referring to the financial system, and the unreserved use of such terms as “dire,” “grave,” “unsound,” and “paralysis.” We also look for clear-cut statements that the financial-sector disruptions were having an important effect on credit supply and macroeconomic outcomes. In addition, we view references to major government interventions as suggesting that the problems were severe. The comparative criteria involve stronger language than that used to describe episodes that we classify as moderate crises, or explicit statements that the situations were worse than in such episodes.

### **C. Episode-by-Episode Descriptions**

Table A2 presents a complete list by country of the level of distress in all half-years where we identify a positive level of financial distress. Panel (a) repeats the findings from Romer and Romer (2017) of financial distress in 24 OECD countries between 1967 and 2012. Panel (b) lists the non-zero observations for the six additional countries from when they enter our sample, and for the original 24 countries from 2013. In all cases, the data go through the second half of 2017.

The remainder of the appendix provides episode-by-episode explanations of the analysis and discussion in the *OECD Economic Outlook* that lead to our classification for all cases in the extension of our series through 2017 and to the six additional countries 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 A1**  
Scale Used to Rank Financial Distress

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

**TABLE A2**  
Financial Distress in OECD Countries, 1967:1–2017:2

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a. Original Series: 24 Early Members of the OECD, 1967–2012

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<p><b>Australia</b> 2008:1 Credit disrupt.–reg. 2008:2 Minor crisis–minus 2009:1 Credit disrupt.–minus</p> <p><b>Austria</b> 2008:2 Moderate crisis–minus 2009:1 Moderate crisis–minus 2009:2 Minor crisis–minus 2010:1 Minor crisis–minus 2010:2 Credit disrupt.–minus 2011:1 Credit disrupt.–minus 2011:2 Credit disrupt.–plus 2012:1 Minor crisis–reg. 2012:2 Credit disrupt.–plus</p> <p><b>Belgium</b> 2008:2 Minor crisis–minus 2009:1 Credit disrupt.–plus 2009:2 Credit disrupt.–reg. 2011:2 Credit disrupt.–reg.</p> <p><b>Canada</b> 2007:2 Credit disrupt.–plus 2008:1 Minor crisis–minus 2008:2 Minor crisis–reg. 2009:1 Minor crisis–reg. 2009:2 Credit disrupt.–plus</p> <p><b>Denmark</b> 2008:1 Credit disrupt.–minus 2008:2 Minor crisis–plus 2009:1 Moderate crisis–minus 2009:2 Minor crisis–plus 2010:1 Credit disrupt.–plus 2011:2 Credit disrupt.–plus 2012:1 Credit disrupt.–reg. 2012:2 Credit disrupt.–minus</p> <p><b>Finland</b> 1992:1 Credit disrupt.–reg. 1992:2 Minor crisis–plus 1993:1 Moderate crisis–reg. 1993:2 Minor crisis–reg. 1994:1 Credit disrupt.–plus 2008:2 Minor crisis–minus 2009:1 Minor crisis–minus 2009:2 Credit disrupt.–minus</p>	<p><b>France</b> 1991:2 Credit disrupt.–minus 1995:1 Credit disrupt.–reg. 1995:2 Minor crisis–minus 1996:1 Minor crisis–reg. 1996:2 Minor crisis–reg. 1997:1 Credit disrupt.–plus 2007:2 Credit disrupt.–plus 2008:1 Credit disrupt.–reg. 2008:2 Moderate crisis–minus 2009:1 Minor crisis–plus 2009:2 Minor crisis–minus 2010:1 Credit disrupt.–plus 2010:2 Credit disrupt.–minus 2011:1 Credit disrupt.–minus 2011:2 Minor crisis–reg. 2012:1 Minor crisis–minus 2012:2 Credit disrupt.–minus</p> <p><b>Germany</b> 1974:2 Credit disrupt.–reg. 2003:1 Credit disrupt.–minus 2007:2 Credit disrupt.–reg. 2008:1 Minor crisis–minus 2008:2 Minor crisis–plus 2009:1 Minor crisis–reg. 2009:2 Minor crisis–minus 2010:1 Minor crisis–minus 2010:2 Credit disrupt.–reg. 2011:1 Credit disrupt.–minus 2011:2 Credit disrupt.–plus 2012:1 Credit disrupt.–reg. 2012:2 Credit disrupt.–reg.</p> <p><b>Greece</b> 2008:2 Minor crisis–minus 2009:1 Moderate crisis–minus 2009:2 Minor crisis–plus 2010:1 Moderate crisis–reg. 2010:2 Moderate crisis–minus 2011:1 Moderate crisis–minus 2011:2 Moderate crisis–minus 2012:1 Moderate crisis–reg. 2012:2 Moderate crisis–reg.</p> <p><b>Iceland</b> 2006:2 Minor crisis–reg. 2007:1 Credit disrupt.–reg.</p>	<p><b>Iceland (continued)</b> 2007:2 Credit disrupt.–plus 2008:1 Moderate crisis–reg. 2008:2 Major crisis–reg. 2009:1 Extreme crisis–reg. 2009:2 Moderate crisis–plus 2010:1 Moderate crisis–minus 2010:2 Moderate crisis–minus 2011:1 Moderate crisis–minus 2011:2 Minor crisis–minus 2012:1 Credit disrupt.–reg.</p> <p><b>Ireland</b> 2007:2 Credit disrupt.–minus 2008:2 Minor crisis–plus 2009:1 Moderate crisis–minus 2009:2 Minor crisis–plus 2010:1 Moderate crisis–reg. 2010:2 Moderate crisis–minus 2011:1 Moderate crisis–reg. 2011:2 Minor crisis–plus 2012:1 Minor crisis–reg. 2012:2 Minor crisis–plus</p> <p><b>Italy</b> 1997:1 Credit disrupt.–minus 2007:2 Credit disrupt.–minus 2008:1 Minor crisis–minus 2008:2 Moderate crisis–minus 2009:1 Minor crisis–plus 2009:2 Minor crisis–reg. 2010:1 Minor crisis–plus 2010:2 Minor crisis–minus 2011:1 Credit disrupt.–reg. 2011:2 Minor crisis–reg. 2012:1 Moderate crisis–minus 2012:2 Moderate crisis–reg.</p> <p><b>Japan</b> 1990:2 Credit disrupt.–plus 1991:1 Credit disrupt.–minus 1991:2 Minor crisis–reg. 1992:1 Credit disrupt.–plus 1992:2 Minor crisis–minus 1993:1 Minor crisis–minus 1993:2 Minor crisis–reg. 1994:1 Credit disrupt.–plus 1994:2 Credit disrupt.–plus</p>
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TABLE A2 (continued)

a. Original Series: 24 Early Members of the OECD, 1967–2012 (continued)

<b>Japan</b> (continued)	<b>New Zealand</b> (continued)	<b>Switzerland</b>
1995:1 Minor crisis–minus	2010:2 Credit disrupt.–minus	2007:2 Credit disrupt.–reg.
1995:2 Minor crisis–reg.	2011:2 Credit disrupt.–plus	2008:1 Minor crisis–minus
1996:1 Minor crisis–plus	2012:1 Credit disrupt.–minus	2008:2 Credit disrupt.–plus
1996:2 Minor crisis–minus		2009:1 Credit disrupt.–minus
1997:1 Minor crisis–reg.	<b>Norway</b>	2012:1 Credit disrupt.–minus
1997:2 Moderate crisis–minus	1991:2 Moderate crisis–plus	
1998:1 Major crisis–reg.	1992:1 Minor crisis–reg.	<b>Turkey</b>
1998:2 Extreme crisis–minus	1992:2 Moderate crisis–reg.	2001:1 Moderate crisis–reg.
1999:1 Moderate crisis–plus	1993:1 Minor crisis–plus	2001:2 Moderate crisis–reg.
1999:2 Minor crisis–plus	1993:2 Credit disrupt.–plus	2002:1 Minor crisis–plus
2000:1 Minor crisis–minus	1994:1 Credit disrupt.–reg.	2002:2 Minor crisis–minus
2000:2 Credit disrupt.–plus	2007:2 Credit disrupt.–minus	2003:1 Minor crisis–minus
2001:1 Minor crisis–plus	2008:1 Minor crisis–minus	2003:2 Credit disrupt.–reg.
2001:2 Minor crisis–plus	2008:2 Moderate crisis–minus	2008:2 Minor crisis–reg.
2002:1 Moderate crisis–reg.	2009:1 Moderate crisis–plus	2009:1 Credit disrupt.–plus
2002:2 Moderate crisis–minus	2009:2 Minor crisis–reg.	2009:2 Credit disrupt.–minus
2003:1 Minor crisis–plus		
2003:2 Minor crisis–reg.	<b>Portugal</b>	<b>United Kingdom</b>
2004:1 Minor crisis–minus	2008:1 Minor crisis–plus	2007:2 Minor crisis–plus
2004:2 Credit disrupt.–plus	2008:2 Moderate crisis–minus	2008:1 Moderate crisis–minus
2005:1 Credit disrupt.–reg.	2009:1 Moderate crisis–reg.	2008:2 Major crisis–minus
2008:2 Credit disrupt.–plus	2009:2 Minor crisis–reg.	2009:1 Moderate crisis–plus
2009:1 Minor crisis–minus	2010:1 Minor crisis–plus	2009:2 Moderate crisis–minus
2009:2 Credit disrupt.–plus	2010:2 Moderate crisis–plus	2010:1 Minor crisis–reg.
2010:1 Credit disrupt.–minus	2011:1 Moderate crisis–reg.	2010:2 Minor crisis–reg.
	2011:2 Moderate crisis–minus	2011:1 Credit disrupt.–reg.
<b>Luxembourg</b>	2012:1 Moderate crisis–reg.	2011:2 Credit disrupt.–plus
2008:1 Credit disrupt.–reg.	2012:2 Moderate crisis–reg.	2012:1 Credit disrupt.–reg.
2008:2 Minor crisis–reg.		2012:2 Credit disrupt.–plus
2009:1 Credit disrupt.–plus	<b>Spain</b>	
2009:2 Credit disrupt.–reg.	2008:1 Minor crisis–plus	<b>United States</b>
2010:1 Credit disrupt.–minus	2008:2 Moderate crisis–minus	1986:1 Credit disrupt.–minus
2011:2 Credit disrupt.–reg.	2009:1 Minor crisis–plus	1990:1 Minor crisis–reg.
	2009:2 Credit disrupt.–plus	1990:2 Moderate crisis–minus
<b>Netherlands</b>	2010:1 Minor crisis–minus	1991:1 Minor crisis–minus
2008:1 Credit disrupt.–minus	2010:2 Minor crisis–reg.	1991:2 Credit disrupt.–plus
2008:2 Credit disrupt.–plus	2011:1 Minor crisis–minus	1992:1 Credit disrupt.–reg.
2009:1 Minor crisis–minus	2011:2 Moderate crisis–minus	1998:2 Credit disrupt.–plus
2009:2 Credit disrupt.–minus	2012:1 Moderate crisis–minus	2007:1 Credit disrupt.–minus
2011:2 Credit disrupt.–minus	2012:2 Moderate crisis–reg.	2007:2 Moderate crisis–minus
2012:1 Minor crisis–minus		2008:1 Moderate crisis–plus
2012:2 Credit disrupt.–reg.	<b>Sweden</b>	2008:2 Extreme crisis–reg.
	1992:2 Minor crisis–reg.	2009:1 Major crisis–minus
<b>New Zealand</b>	1993:1 Moderate crisis–reg.	2009:2 Moderate crisis–minus
2007:2 Credit disrupt.–reg.	2008:1 Minor crisis–minus	2010:1 Minor crisis–plus
2008:1 Credit disrupt.–plus	2008:2 Moderate crisis–minus	2010:2 Credit disrupt.–plus
2008:2 Minor crisis–plus	2009:1 Minor crisis–reg.	2011:2 Credit disrupt.–reg.
2009:1 Minor crisis–plus	2009:2 Minor crisis–minus	2012:1 Credit disrupt.–minus
2009:2 Minor crisis–minus	2010:1 Credit disrupt.–plus	2012:2 Credit disrupt.–minus
2010:1 Credit disrupt.–minus	2010:2 Credit disrupt.–reg.	

TABLE A2 (continued)

## b. Extension to Six Later Members of the OECD and All Countries, 2013–2017

<b>Austria</b>	<b>Hungary (continued)</b>	<b>Mexico</b>
2013:1 Credit disrupt.–reg.	2015:2 Credit disrupt.–plus	1995:2 Minor crisis–plus
2013:2 Credit disrupt.–reg.	2016:1 Credit disrupt.–minus	1996:1 Moderate crisis–minus
2014:1 Credit disrupt.–reg.		1996:2 Minor crisis–reg.
2014:2 Credit disrupt.–minus	<b>Iceland</b>	1997:1 Credit disrupt.–reg.
2015:1 Credit disrupt.–minus	2013:1 Credit disrupt.–minus	1997:2 Minor crisis–minus
2015:2 Credit disrupt.–minus		1998:1 Credit disrupt.–reg.
2016:1 Credit disrupt.–minus	<b>Ireland</b>	2008:2 Credit disrupt.–minus
<b>Czech Republic</b>	2013:1 Minor crisis–plus	
2008:1 Credit disrupt.–minus	2013:2 Minor crisis–plus	<b>Netherlands</b>
2010:1 Credit disrupt.–minus	2014:1 Minor crisis–minus	2013:1 Minor crisis–minus
<b>Denmark</b>	2014:2 Credit disrupt.–plus	2013:2 Minor crisis–reg.
2013:1 Credit disrupt.–minus	2015:1 Credit disrupt.–plus	2014:1 Credit disrupt.–minus
2013:2 Credit disrupt.–minus	2015:2 Credit disrupt.–minus	2014:2 Minor crisis–minus
<b>France</b>	2016:1 Credit disrupt.–plus	2015:1 Credit disrupt.–reg.
2013:2 Credit disrupt.–minus	2016:2 Credit disrupt.–reg.	2015:2 Credit disrupt.–minus
<b>Germany</b>	2017:1 Credit disrupt.–plus	
2013:1 Credit disrupt.–minus	2017:2 Credit disrupt.–plus	<b>Poland</b>
2014:1 Credit disrupt.–minus	<b>Italy</b>	2008:2 Credit disrupt.–reg.
<b>Greece</b>	2013:1 Moderate crisis–reg.	2009:1 Minor crisis–reg.
2013:1 Moderate crisis–minus	2013:2 Minor crisis–reg.	2009:2 Credit disrupt.–reg.
2013:2 Minor crisis–plus	2014:1 Minor crisis–minus	2011:2 Credit disrupt.–reg.
2014:1 Minor crisis–reg.	2014:2 Minor crisis–minus	2012:1 Credit disrupt.–minus
2014:2 Minor crisis–reg.	2015:1 Minor crisis–minus	2012:2 Credit disrupt.–minus
2015:1 Moderate crisis–reg.	2015:2 Minor crisis–minus	2013:2 Credit disrupt.–minus
2015:2 Moderate crisis–plus	2016:1 Minor crisis–minus	
2016:1 Minor crisis–plus	2016:2 Minor crisis–minus	<b>Portugal</b>
2016:2 Minor crisis–reg.	2017:1 Credit disrupt.–plus	2013:1 Minor crisis–plus
2017:1 Minor crisis–minus	2017:2 Credit disrupt.–reg.	2013:2 Minor crisis–reg.
2017:2 Minor crisis–minus	<b>Korea</b>	2014:1 Minor crisis–minus
<b>Hungary</b>	1997:1 Credit disrupt.–plus	2014:2 Minor crisis–minus
2008:2 Minor crisis–reg.	1997:2 Moderate crisis–reg.	2015:1 Credit disrupt.–plus
2009:1 Moderate crisis–reg.	1998:1 Major crisis–minus	2015:2 Credit disrupt.–plus
2009:2 Minor crisis–minus	1998:2 Moderate crisis–plus	2016:1 Minor crisis–minus
2010:1 Minor crisis–reg.	1999:1 Moderate crisis–reg.	2016:2 Minor crisis–minus
2010:2 Credit disrupt.–plus	1999:2 Moderate crisis–minus	2017:1 Minor crisis–minus
2011:1 Credit disrupt.–plus	2000:1 Credit disrupt.–plus	2017:2 Credit disrupt.–plus
2011:2 Minor crisis–plus	2000:2 Minor crisis–reg.	<b>Slovak Republic</b>
2012:1 Minor crisis–plus	2001:1 Minor crisis–plus	2008:2 Minor crisis–minus
2012:2 Minor crisis–reg.	2001:2 Minor crisis–minus	2009:1 Credit disrupt.–minus
2013:1 Minor crisis–plus	2002:1 Credit disrupt.–plus	2012:1 Minor crisis–minus
2013:2 Minor crisis–plus	2003:2 Minor crisis–minus	2012:2 Credit disrupt.–minus
2014:1 Minor crisis–plus	2004:1 Minor crisis–plus	2014:1 Credit disrupt.–minus
2014:2 Minor crisis–plus	2004:2 Credit disrupt.–plus	
2015:1 Minor crisis–reg.	2005:1 Credit disrupt.–minus	<b>Spain</b>
	2008:2 Minor crisis–plus	2013:1 Minor crisis–plus
	2009:1 Minor crisis–minus	2013:2 Moderate crisis–minus
	2009:2 Credit disrupt.–minus	2014:1 Minor crisis–reg.
	2012:2 Credit disrupt.–minus	2014:2 Credit disrupt.–plus
		2015:1 Credit disrupt.–minus

**TABLE A2** (continued)

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b. Extension to Six Later Members of the OECD and All Countries, 2013–2017 (continued)

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**United Kingdom**

2013:1 Credit disrupt.–minus

2013:2 Credit disrupt.–minus

2014:1 Credit disrupt.–minus

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**Notes:** Based on the *OECD Economic Outlook*. The table shows the non-zero values for our scaled measure of financial distress for 30 OECD countries. The end date is 2017:2 for all countries. The start date is 1967:1 for all countries other than Australia (1971:2), the Czech Republic (2003:2), Finland (1969:1), Hungary (1998:1), Korea (1996:2), Mexico (1994:1), New Zealand (1973:1), Poland (1998:1), and the Slovak Republic (2003:2).

## EPISODE-BY-EPISODE DESCRIPTIONS

### CREDIT DISRUPTIONS

#### Credit disruption–minus:

**Korea, 2005:1.** In 2004:2, the OECD had described noteworthy problems involving one particular type of intermediary—credit card companies—and we categorize that episode as a credit disruption–plus. In the current episode, the OECD never explicitly identified any problems in intermediation. But it referred repeatedly to high rates of household delinquency on credit card debt, which had been the driver of the companies’ difficulties. In the introductory summary of its entry, it referred to “the structural causes of weak domestic demand, notably debt delinquency and problems that discourage business investment” (p. 93). In the body of the entry, it said: “The turnaround in private consumption also reflects progress in overcoming the negative aftermath of the household credit bubble. ... Nevertheless, the impact of the credit bubble remains significant .... The government has launched a number of programmes, such as workouts and the creation of a bad bank, to deal with this problem” (p. 93). In addition, the concluding paragraph on risks to the outlook reported: “The main risk to domestic demand led growth appears to be debt delinquency problems that could prevent a pick-up in private consumption” (p. 94). The conjunction of these references and the absence of any discussion of actual difficulties in intermediation (together with the statement that there had been progress) suggests that the situation was considerably improved, but that some residual problems or risks to financial intermediation remained. We therefore classify this episode as a credit disruption–minus.

**Czech Republic, 2008:1.** The possibility of disruptions to financial intermediation was discussed in two places in the entry. The first was the statement: “The global financial turbulence has, so far, not had significant effects on the Czech financial sector and has therefore not prompted special measures by the Central Bank” (p. 133). The second was in the concluding sentence of the entry, which stated: “Although Czech financial markets do not appear to have strong direct linkages with the global financial turmoil, any further negative effects on the global economy could feed through to the domestic economy, principally through export demand” (p. 134). The fact that these statements came with the caveats that the effects were not significant, that little had occurred so far, and that the links were not strong suggests the possibility of some current financial disruption and the risk of some further disruption. On the other hand, the lack of any explicit statement of current effects or risks suggests that this episode belongs in the lower end of the credit disruption range. We therefore classify this episode as a credit disruption–minus. Two useful comparisons are with France in 2008:1 and with Luxembourg in 2008:1, both of which we classify as a credit disruption–regular. In those cases, the OECD included similar statements that the global financial turmoil was not having a major effect on domestic financial intermediation, but was more explicit in suggesting that it was having at least some effect.

**Mexico, 2008:2.** The OECD made numerous references to the adverse effects of the global financial crisis and weaker growth abroad on the economy; a typical statement was that the economy would be “[w]eighed down by adverse external market developments and global financial turmoil” (p. 160). But its 700-word entry made no references to the banking system or to any problems with financial intermediation. Earlier in the volume, however, the OECD reported that Mexico had instituted “[g]uarantees for bank loans or debt” (p. 76). The fact that Mexico had taken some actions to help its banks but that the OECD did not believe any explicit discussion of the financial system was warranted leads us to classify this episode at the lowest

positive level of financial distress. We therefore categorize this episode as a credit disruption–minus.

**Slovak Republic, 2009:1.** In its previous entry, the OECD had reported that reductions in credit supply were affecting the economy and that the government had taken measures to help the financial system. We therefore classify that episode as a minor crisis–minus. In this entry, the OECD makes no mention of any problems in the financial sector or any disruptions or intermediation. Equally, however, the entry includes no statements that the financial sector was healthier, much less any statements that it was fully healthy. The severity of the problems a half-year earlier and the absence of explicit statements of improvement suggest a non-trivial possibility of at least a risk of some continued financial distress. But the absence of any explicit statements of difficulties points to the very low end of our scale. These considerations lead us to place this episode in the credit disruption–minus category.

**Korea, 2009:2.** We classify Korea in 2008:2 as a minor crisis–plus. The 2009:1 entry described considerable improvement, and we categorize that episode as a minor crisis–minus (though one that is probably closer to a credit disruption–plus than to a minor crisis–regular). This entry described a financial system that had improved considerably more, but that had not quite fully healed. In discussing financial rescue measures that had been reported in previous issues of the *Economic Outlook*, the OECD said, “The strong economic recovery ... [has been] aided by measures to promote financial-market stability” (pp.190–191), and, “Recapitalisation using public funds has strengthened the banking system” (p. 191). In addition, in the material before the country entries, the OECD cited Korea as one of the countries “[w]here financial systems have been more resilient” (p. 47) and where “[p]rogress in dealing with problem assets has been ... faster” (p. 52).

The upbeat assessment of the health of the financial system and the overwhelming evidence of considerable improvement, together with the absence of any statement that the system was fully healed, lead us to categorize this episode as a credit disruption–minus. This episode is similar to the Slovak Republic in 2009:1, where we also identify a credit disruption–minus following a minor crisis–minus. The main difference is that there we infer both the improvement and the possibility that the system was not fully healed from the absence of any discussion of the financial sector, whereas here there is some direct evidence for both conclusions.

**Czech Republic, 2010:1.** In its 600-word entry, the OECD included one discussion of a potential issue with financial intermediation: “Even though the rate of non-performing loans is on the rise, the banking sector continues to display resilience. It is well capitalised, is financed by local deposits, is not affected by toxic assets or foreign currency loans and continues to be profitable” (p. 130). This episode clearly meets our criteria for a credit disruption–minus: a concern about the financial sector was mentioned, but only in passing; the OECD emphasized that it was minor and did not suggest that it was having any effects on the economy; and it reported that the banking system was generally healthy.

**Poland, 2012:1.** The OECD made two somewhat oblique references to potential financial disruptions. First, it reported, “Increased tensions in the euro area could affect Poland” through several channels, one of which was “the predominantly foreign-owned banking sector” (p. 149). Second, it said that “substantial weakening of the zloty could be destabilizing” (p. 150). The previous entry, which we classify as a regular credit disruption, had been explicit that there were risks to the banking system, and it said that one way that depreciation could affect the economy was through the impact of the large quantity of foreign-currency loans on the banks. Because the

statements in this issue are milder but suggest that the earlier problems had not entirely gone away, we classify this episode as a credit disruption–minus.

**Korea, 2012:2.** The only mention of possible financial distress came in the discussion of risks to the outlook in the concluding paragraph of the entry. That paragraph began: “A major risk is financial turbulence in the world economy, which in the past has negatively affected Korea both through trade and financial channels, although Korea is now better prepared for the latter” (p. 145). The fact that the issue was identified only as a risk implies that this episode does not meet our criteria for more than some type of credit disruption. Moreover, the facts that the entry was not completely explicit that the effects could operate through financial intermediation and that it said that Korea was better prepared to deal with effects working through financial channels suggest that the episode should not rank high even within credit disruptions. At the same time, the facts that the issue was discussed in the context of a major risk to the outlook and that the entry strongly implied that it could operate through financial intermediation suggests that it should not be discounted entirely. We therefore classify this episode as a credit disruption–minus.

**Poland, 2012:2.** As in 2012:1, the OECD reported, “A renewal of euro-area tensions would affect Poland via” “the predominantly foreign-owned banking sector” and other channels (p. 160). It also stated, “The Financial Supervision Authority’s plan to ease regulatory requirements for bank lending is also welcome as a countercyclical measure” (p. 160), which could be a hint that it saw some sign of problems in intermediation. The fact that we classify the previous episode as a credit disruption–minus and that this entry does not indicate any clear change points to classifying this episode in the same way. And the facts that the OECD alludes to possible risks and problems in intermediation but it is not explicit, and that it does not come close to describing them as significant, also points to putting this episode in the credit disruption–minus category.

**Slovak Republic, 2012:2.** Two considerations point to a very small positive level of financial distress. First, the entry includes one quite vague reference to potential distress: the opening sentence of the concluding paragraph on risks to the outlook is, “The euro crisis could lead to a deterioration of the financial conditions, depress investor sentiment and reduce FDI inflows and external demand” (p. 166). Second, and more importantly, we classify the Slovak Republic in 2012:1 as a minor crisis–minus, and the current entry does not include any statements that the financial sector was fully healed, or even that it had improved. The severity of the problems in 2012:1 and the absence of explicit statements of improvement suggest a non-trivial possibility of at least a risk of continued financial distress. The vague reference to potential difficulties, although by itself not enough to warrant identifying positive distress, points in the same direction. At the same time, there is nothing that indicates more than a very low level of distress. Except for the statement in the risks paragraph, this episode is almost identical to the Slovak Republic in 2009:1, where we identify a credit disruption–minus following a minor crisis–minor. We therefore also classify this episode as a credit disruption–minus.

**Denmark, 2013:1.** In its 600-word entry, the OECD made only one minor reference to credit availability and did not draw a link to the performance of the economy: “according to lending surveys, credit standards for firms and households remain tight. Bank lending continues to be muted, partly due to weak demand reflecting deleveraging” (p. 116). This suggests a positive but very low level of financial distress. Consistent with this, we code Denmark in 2012:2 as a credit disruption–minus, and the language in the current entry is quite similar to that in the previous one and implies that conditions have not changed (in the statement that credit

conditions “remain tight”). We therefore also place this episode in the credit disruption–minus category.

**Germany, 2013:1.** The OECD offered both positive and cautionary comments about the health of the financial system. On the positive side, it referred to “easy funding conditions” (p. 83) and “favourable funding conditions” (p. 85), and said, “As perceptions of tail risks surrounding the euro area crisis have diminished, German banks have lowered their reserve holdings at the European Central Bank, which may strengthen lending growth” (p. 83). In addition, a chart in the material preceding the country entries showed the Germany had a lower cost of credit to non-financial corporations and lower non-performing loans than other euro area countries (p. 16). On the cautionary side, the opening summary of the entry included a passing reference to “[h]igh leverage among systemically important banks” (p. 82), and the concluding paragraph on risks to the outlook began, “If stress in euro area sovereign debt markets remains high, exports may not recover as projected and funding conditions for banks could deteriorate, threatening the recovery” (p. 85).

These comments suggest a financial system that was largely healthy but that posed a residual, though diminished, risk to the economy. This points to a positive but very low level of financial distress. Consistent with this, we classify Germany in 2012:2 as a credit disruption–regular, and the current entry describes some improvement and uses slightly milder language. We therefore lower our assessment of financial distress by one step, and so put this episode in the credit disruption–minus group.

**Iceland, 2013:1.** The only reference to issues with credit supply came in the concluding paragraph of the entry, where one of the three possible reasons the OECD gave that “[i]nvestment would be weaker than projected” was, “if business access to credit does not improve” (p. 131). A long discussion earlier in the entry of reasons “[t]he domestic-demand led recovery has moderated” made no mention of any problems involving financial intermediation (p. 130). In addition, the previous entry had not described any financial distress, and the current entry does not say there had been any worsening. All of these factors point to a very low level of distress. We therefore categorize this episode as a credit disruption–minus.

**United Kingdom, 2013:1.** In a long (800-word) entry that discussed numerous factors affecting the economy, issues involving the health of the financial system received only two minor mentions. First, the second-to-last paragraph stated: “Real GDP growth is projected to rise gradually as non-residential investment, supported by credit easing, high retained earnings and external demand, is set to gather momentum” (p. 97). Second, the concluding paragraph on risks said: “The intensification of the euro area crisis might cause financial conditions to deteriorate again, reducing credit and wealth. ... On the upside, easing financial tensions in the euro area and stronger-than-expected world growth could raise confidence and boost aggregate demand” (p. 97). This language is considerably more upbeat than in 2012:2, where we identify a credit disruption–plus. But the reference to easing credit conditions going forward hints that they had not fully recovered, and the OECD identified a potential risk to credit availability. These considerations indicate that this episode belongs in the credit disruption–minus category.

**Denmark, 2013:2.** The OECD made only one passing reference to issues involving the cost of credit intermediation, saying, “lending surveys still point to tight lending standards” (p. 140). The presence of one small reference to this issue points to a positive but very low level of financial distress. Consistent with this, the 2012:2 and 2013:1 entries for Denmark contain quite similar language, and we put both of those episodes in the credit disruption–minus category. The implication in the current entry that lending standards had not changed also

points to placing this episode in the same category as the previous one. These considerations all cause us to classify this episode as a credit disruption–minus.

**France, 2013:2.** The OECD discussed issues involving financial intermediation in two places in its entry. First, in the body of the entry, it said: “Pressure on the financial system and the most severe risks to the euro area have diminished, ... even though there is still significant uncertainty regarding the solidity of banks” (p. 111). Second, the concluding paragraph on risks to the outlook included the passage: “Downside risks remain significant in the euro area, and French banks are heavily exposed to some vulnerable countries, mainly Italy. Their non-performing loans remain at surprising low levels, but the quality of mortgages could deteriorate if growth falters and unemployment rises further” (p. 113). Neither statement suggests important current problems, and the observation about the current level of non-performing loans also suggests that the system was currently relatively healthy. On the other hand, the language is less favorable than in 2013:1 (where we do not identify any positive level of financial distress), and the OECD was clear that it saw genuine risk. We therefore score this episode as a credit disruption–minus.

**Poland, 2013:2.** The OECD’s only reference to potential issues involving credit market conditions came in its concluding paragraph on risks to the outlook, where it said: “Polish banks are also vulnerable to a delayed resolution of European banking problems through their dependence on foreign funding” (p. 182). This one, somewhat vague reference to a potential risk involving the health of the banking sector leads us to classify this episode as a credit disruption–minus. The alternative would be to view this as such a minor reference that it did not correspond to any positive level of financial distress. However, the fact that the OECD changed its language from the previous issue (where we do not identify any financial distress in Poland) to spell out this risk in more detail, leads us to conclude that it saw a genuine risk, and thus that this episode should be categorized as a credit disruption–minus.

**United Kingdom, 2013:2.** Two considerations point to classifying this episode as a credit disruption–minus. First, we put the United Kingdom in 2013:1 in that category, and the current entry does not report any improvement or worsening of credit availability. Second, the entry was sprinkled with small indications that credit availability was not fully unimpeded. The opening summary said, “The welcome efforts to speed up the recapitalisation of the banking sector should underpin financial stability” (p. 118); the entry said, “Maintaining financial stability is essential” (p. 121), and, “Recent steps to identify banks’ capital shortfalls and to take remedial action should enhance financial sector resilience and support lending activity” (p. 121); and the concluding paragraph on risks to the outlook said that there were upside possibilities “if ... credit availability to small and medium-sized enterprises improves” (pp. 121–122). Based on these considerations, we conclude that this episode fits the criteria for a credit disruption–minus.

**Germany, 2014:1.** In its entry, the OECD hinted at small potential problems in financial intermediation in two places. First, in the opening summary, it made a somewhat vague reference to a possible risk involving the financial system: “Reducing high leverage among systemically important banks would make the economy more resilient to financial shocks” (p. 99). Second, in the body of the entry, it commented: “Growth of bank lending to the domestic non-financial sector has been weak, especially among large highly leveraged banks, in part because strong corporate profitability has damped loan demand” (p. 99). The statement that the weak loan growth was due partly to a factor operating via demand leaves open the possibility that the OECD thought loan supply was also partly responsible. The OECD did not provide a discussion of weak loan growth in 2013:2 (where we do not identify any financial distress in Germany), suggesting that it saw some change here. The two statements, both of which are quite

mild and neither of which is particularly clear, together with the comparison with 2013:2, lead us to classify this episode as a credit disruption–minus.

**Netherlands, 2014:1.** In 2013:2, the OECD repeatedly described significant problems with credit supply in the Netherlands, and we categorize that episode as a minor crisis–regular. The current entry, in contrast, simply did not discuss the financial system, describing neither any remaining problems nor any improvement. The only scraps of information about the system come from a chart in the material preceding the country entries that shows that interest rates on new loans to non-financial corporations in the Netherlands were low relative to other euro area countries, but had changed little over the previous half-year (p. 31); and from a few references in the entry to the housing market and homeowner equity (pp. 161 and 162), which do not shed light on the cost of credit intermediation.

In the absence of any indications of problems in financial intermediation, it does not make sense to identify a substantial level of financial distress. At the same time, the fact that the OECD did not say the situation had improved, much less that it was fully healed, suggests that the best point estimate is that there was still some residual distress. Based on these considerations, we classify this episode as a credit disruption–minus—a large improvement from the previous episode, but not quite a full healing.

**Slovak Republic, 2014:1.** In a 600-word entry, the OECD made one small reference to a risk to credit supply. The entry discussed the sustainability of fiscal consolidation and the possibility of government debt exceeding its constitutional limit (p. 176). Then, in the concluding paragraph on risks, the OECD said, “The particularly large share of domestic government bonds held by banking sector is a negative risk for credit growth” (p. 177). The fact that the OECD only identified a risk and did not emphasize it fits well with the lower end of the credit disruption range. We therefore place this episode in the credit-disruption–minus category.

**United Kingdom, 2014:1.** In its entry, the OECD did not identify any general problems with credit availability. Indeed, it reported, “Macro-prudential measures are rightly being taken to restrain housing demand financed by bank debt” (p. 114), suggesting ready availability of credit in that sector. However, in the concluding paragraph on risks, it said, “Small businesses still have difficulties accessing bank finance, which could hamper the investment recovery” (p. 114). The presence of a cautionary note about credit availability in one specific sector fits our criteria for the lower end of the credit disruption range. We therefore classify this episode as a credit disruption–minus.

**Austria, 2014:2.** After three consecutive issues of the *Economic Outlook* where the OECD described situations that we place in the credit disruption–regular category, here the OECD depicted a financial system that was improving but not fully healed. The opening summary of the previous entry referred to “generally favourable financing conditions” (2014:1, p. 123), while opening summary of the current one referred to “favourable financial conditions” (p. 83). Both the previous entry and the current one described how the government was still cleaning up distressed banks, although in both cases the OECD’s emphasis was on the budgetary consequences rather than on any macroeconomic effects. Here, the opening summary reported, “The restructuring of distressed financial institutions continues to add to public debt” (p. 83). And under the heading, “Completing the restructuring of the banking sector is necessary,” it said, “The restructuring of partly or fully nationalised banks continues to burden public finances. In particular, the resolution of Hypo Alpe Adria will widen the budget deficit again in 2014. ... [P]rogress has been made with respect to the capital position of other internationally

exposed banks” (p. 83). Finally, in contrast to the three previous entries on Austria, here the OECD did not mention the financial system in its concluding paragraph on risks to the outlook.

This evidence points to a very low but positive level of financial distress. The combination of the absence of any indication that the OECD saw an impact of financial problems on the performance of the economy and the comparison with the previous episodes leads us to classify this episode as a credit disruption–minus.

**Austria, 2015:1.** In its entry, the OECD hinted at small lingering problems in the banking sector that might be having a modest impact on the economy. The main relevant passage came in the concluding discussion of risks to the outlook: “Uncertainty about bank balance sheet impairments remains. If this channel explains more of the current sluggishness of investment and consumer confidence than assumed, growth may prove more subdued than projected” (p. 67). In addition, the opening summary said, “Close monitoring and supervision of banks is essential to revive confidence” (p. 65; a similar phrase was repeated in the body of the entry). However, the OECD did not tie this comment to any problems in financial intermediation.

The limited discussion of the financial sector as exerting a modest negative impact on the economy points to a credit disruption–minus. Consistent with this view, we code Austria in 2014:2 as a credit disruption–minus, and the present entry does not discuss either any deterioration or any improvement. We therefore classify this episode as a credit disruption–minus.

**Spain, 2015:1.** The OECD painted a picture of a financial system that was considerably improved, but not necessarily fully healed. In a setting where safe interest rates were little changed, the entry referred to “[f]alling mortgage interest rates” (p. 190). It went on to describe several favorable developments in the financial sector that were helping investment: “A healthier banking sector following restructuring and recapitalisation, falling interest rates on corporate borrowing, rising corporate profitability and increased capacity utilisation are all expected to contribute to renewed business investment growth” (p. 191). However, the entry never described the system as fully healed, and the concluding sentence sounded a note of caution potentially related to the health of the financial system: “renewed financial turmoil in the euro area ... would temper growth” (p. 191). These small suggestions of possible lingering difficulties and the fact that we place Spain in 2014:2 in the credit disruption–plus category (and in higher categories before that) suggest that the best point estimate is that there was still some residual distress, and thus that credit disruption–minus is the appropriate classification.

**Austria, 2015:2.** As in 2015:1, the OECD hinted at small lingering problems in the banking sector that might be having a modest impact on the economy. Indeed, the OECD’s language was little changed from that entry. In the concluding discussion of risks to the outlook, it said: “The restructuring of the banking sector is ongoing. If associated uncertainties explain more of the current sluggishness of investment and consumer confidence than assumed, growth may prove more subdued than projected” (p. 87). And again paralleling the previous entry, the opening summary said: “Close supervision of banks, in particular those active abroad, is essential to revive confidence” (p. 85). Again, the OECD did not tie this comment to any problems in financial intermediation, and the reference to banks’ foreign activities (which is new to this entry) moves the remark further from being directly about domestic credit supply. Finally, rather than repeating the comment about confidence in the body of the entry, here the OECD added, “It is assumed that no additional capital transfers or subsidies towards troubled banks will be necessary” (p. 86).

Both comparative and absolute criteria point to classifying this episode as a credit disruption–minus. In terms of comparisons, we place Austria in 2015:1 in this group, and the current entry is very similar to that one. In terms of absolutes, the entry contains a limited discussion of the financial system exerting a modest negative impact on the economy. We therefore categorize this episode as a credit disruption–minus.

**Ireland, 2015:2.** The OECD described a financial system that was considerably improved, but not quite fully healed. The introductory summary reported, “Business investment should remain robust thanks to rising profitability and favourable financing conditions” (p. 156). Similarly, the concluding discussion of risks to the outlook included the statement, “Investment will grow robustly, given improved profitability prospects and low financing costs” (p. 158). However, the body of the entry noted, “the banks still have to tackle non-performing loans, which account for a fifth of the value of outstanding loans” (p. 157). In addition, the concluding discussion flagged a risk involving debt, though it did not specify the mechanisms, or even whether it was referring to public or private debt: “Notwithstanding the institutional improvements in the euro area, Ireland’s still high debt leaves it particularly vulnerable to any re-emergence of the banking and sovereign debt crisis” (p. 158).

The OECD’s upbeat language points to clear improvement from 2015:1, where we place Ireland in the credit disruption–plus category. But its identification of an issue involving the financial sector, without tying it to the performance of the economy or its prospects, points to a small remaining positive level of distress. We therefore score this episode as a credit disruption–minus.

**Netherlands, 2015:2.** The 700-word entry included one reference to issues involving the financial system: in the concluding discussion of risks to the output, the OECD said, “If, by contrast, lending picks up sharply, the capital position of banks could become a bottleneck” (p. 188). This fits our criteria for a credit disruption–minus very well: the OECD referred once, in passing, to a potential risk to growth stemming from the health of financial institutions. Consistent with this view, we classify the Netherlands in 2015:1 as a credit disruption–regular, and the current entry uses milder language in discussing the financial system and does not say that the system is fully healed. We therefore classify this episode as a credit disruption–minus.

**Austria, 2016:1.** Paralleling the previous two entries on Austria, the OECD did not explicitly describe any problems in financial intermediation, but hinted at small lingering problems in the banking sector that might be having a modest impact on the economy. Moreover, the OECD’s language was again little changed from the previous entry. In the concluding discussion of risks to the outlook, it said, “The restructuring of the banking sector is ongoing which may continue to affect public finances. Associated uncertainties could weigh on confidence and hold back investment more than projected” (p. 87). And the opening summary said, “Completing orderly wind-downs of failed banks is important to revive confidence, reduce the financial links between banks and the public sector, and strengthen the banking sector” (p. 89). Finally, the body of the entry included, “The winding-down of failed banks is still not completed, but announced bail-in of senior creditors would be an important step towards containing expectations of implicit guarantees. The projection assumes that no additional capital transfers or subsidies to troubled banks will be necessary” (p. 90). Based on the limited discussion of the financial system exerting a modest negative impact on the economy, the fact that the stated transmission mechanisms were through uncertainty and confidence rather than restrictions on credit availability, and the close parallels to the previous two entries, we classify this episode as a credit disruption–minus.

**Hungary, 2016:1.** The OECD described a financial system that was considerably improved, but not necessarily fully healed. There was no mention of the financial system in either the opening summary or the concluding paragraph on risks to the outlook, and the body of the entry referred to “favourable credit conditions” (p. 145). However, the entry also reported that the government was reducing but not eliminating entirely its interventions to support credit availability to small and medium-sized enterprises: “The funding for growth schemes, which provide liquidity to banks for SME lending, are being phased out during 2016 and replaced by the Market-Based Lending Scheme where the central bank will assume some of the interest rate risks for loans to SMEs, reduce supervisory risk weights on loans to SMEs, and provide credit data for better risk assessments” (p. 146). Moreover, Hungary’s financial system had been substantially troubled for some time and we still classify it as a credit disruption–plus in 2015:2, and the current entry never described the system as fully healed. This facts tip us from not identifying any financial distress in this episode to classifying it as a credit disruption–minus.

### **Credit disruption–regular:**

**Mexico, 1997:1.** The only discussion of the financial intermediation sector came in the concluding paragraph on risks, where the OECD said, “although the situation in the banking sector has improved, its soundness has not been fully restored” (p. 99). The paragraph went on to discuss the possibilities of “financial turbulence” and of developments that “would damage borrowers’ capacity to repay loans” (p. 99), but it did not explicitly link those issues to the cost of credit intermediation.

The fact that the OECD saw only a risk to the outlook points strongly to the credit disruption range, and its use of relatively mild language points to a classification below the high end of that range. But the facts that there had been significant problems in 1996:2 (where we identify a minor crisis–minus) and that the OECD was explicit that the problems were not fully healed point to something above the very bottom of that range. We therefore classify this episode as a credit disruption–regular.

**Mexico, 1998:1.** The OECD’s only significant reference to problems in Mexico’s financial system came in the material preceding the country entries, where it said, “many banks in the Czech Republic and Mexico still suffer from serious asset quality problems” (p. 34). In the entry on Mexico, there were various references to such matters as “maintaining stable conditions on financial markets” (p. 110), “a further reduction of the risk premium” (p. 110), and “some turbulence in financial markets linked to the Asia crisis” (p. 110-111), but nothing specifically about the banking system or the cost of credit intermediation. The explicit statement that there were asset quality problems and the absence of any reference to improvement (beyond the vague statement about the risk premium) from 1997:2 (which we classify as a minor crisis–minus) point strongly to at least some financial distress. On the other hand, the absence of any mention of the issue in the entry itself strongly suggests that the distress was mild. We therefore categorize this episode as a credit disruption–regular.

**Poland, 2008:2.** In its 700-word entry, the OECD made only one reference to problems in financial intermediation, saying that “investment growth will remain subdued under the weight of tighter monetary conditions and credit standards” and four other factors (p. 172). In addition, in its cataloging before the country entries of responses to the global financial crisis, the OECD reported that Poland had increased deposit insurance limits and injected liquidity into its financial system (pp. 74 and 76). It also said, “In the context of the financial crisis spreading to emerging markets, it is fortunate that Poland has stronger fundamentals than other

such economies,” though it is not clear whether it was referring to the fundamentals of the financial system or of the economy more broadly.

The fact that the OECD saw an impact of credit supply issues on the economy but used very mild language, and described it as only one factor of many and as affecting only one sector, suggests either a credit disruption–minus or a credit disruption–regular. The fact that the government undertook some mild interventions to ensure financial stability tips the balance in favor of a credit disruption–regular.

**Poland, 2009:2.** In its 800-word entry, the OECD provided only two pieces of information about the health of the financial system. First, in the opening summary, it referred to “a sound banking sector” (p. 208). Second, near the end of the entry, after mentioning several factors that it expected to promote growth, the OECD added, “although these factors will be partly offset by tighter credit conditions” (p. 210). Since the central bank had recently cut its policy rate and was not expected to raise it, this appears to be a reference to the cost of credit intermediation rather than to safe interest rates.

It is difficult to know exactly what to make of this information. The OECD’s depiction is clearly far more upbeat than in 2009:1 (which we classify as a minor crisis–regular). But the absence of any explicit statement of improvement and, especially, the reference to tighter credit conditions suggest some remaining problems, though ones that are clearly far from large. We conclude that this episode is best described as a credit disruption–regular.

**Poland, 2011:2.** The OECD discussed potential problems in the financial sector in two places. First, under the heading, “The banking system is unshaken, despite foreign-currency loans,” it reported that even though there had been significant depreciation of the currency, “Polish banks are not suffering from their large stock of foreign-currency (mainly Swiss franc) loans because of sound prudential regulation and because the impact of the Swiss franc’s strength is largely offset by declines in interest rates on such loans” (p.167). Second, in the concluding paragraph on risks to the outlook, it said, “the risks of rising unemployment and a large currency depreciation triggered by capital outflows might have serious effects on the banking sector” (p. 168).

This episode fits our criteria for a credit disruption: there were clear and significant risks to the banking sector, but those risks were not necessarily likely, and so far financial intermediation had not been disrupted. We therefore classify the episode as a credit disruption–regular.

**Austria, 2013:1.** The opening summary of the entry referred to “generally favourable financing conditions,” but also reported, “The banking sector may require additional support” (p. 106). The remainder of the entry mentioned issues involving the health of the financial sector in two places. First, in the context of a discussion of the government budget deficit, the OECD mentioned “banking support measures worth about 0.8% of GDP” (p. 106); however, fiscal measures to help the banking sector were reported to be “in the pipeline” in the previous issue (2012:2, p. 113), so it is not clear that the OECD was describing any new measures. Second, in the concluding paragraph on risks to the outlook, the OECD listed “further tensions in the banking sector” as one of three risks to the outlook, and went on to say, “Materialisation of these risks would harm export growth and exacerbate financial sector and fiscal risks” (p. 107).

The conjunction of the upbeat assessment of current credit availability and risks involving the financial sector points clearly to the credit disruption range. This episode is quite similar to Austria in 2012:2, where we identify a credit disruption–plus. But here the OECD’s assessment

is slightly more positive, and the need for additional support for banks was a possibility rather than something that was in progress. We therefore lower our assessment of financial distress by one step, and so place this episode in the credit disruption–regular category.

**Austria, 2013:2.** This entry is very similar to that for Austria in 2013:1. The opening summary said that “financing conditions remain generally favourable,” but also said, “Restructuring of the banking sector has advanced but support to the sector may still require additional measures” (p. 130). The body of the entry referred to “financing conditions remaining supportive” (p. 130). And the discussion of downside risks to the outlook in the concluding paragraph was (pp. 131–132):

On the downside, renewed turbulence in the euro area or weaker growth in Central, Eastern and South-Eastern Europe would harm export growth and exacerbate financial sector tensions, with potential negative spillovers to growth and government finances. Despite significant improvements, systemically important Austrian banks still have below average capitalisation levels vis-à-vis their peers. If sufficient market funding to strengthen capital positions does not become available, this may lead to reductions in bank assets with negative repercussions on credit developments and growth in the region.

Two considerations point to categorizing this episode as a credit disruption–regular. The first is the strong similarity to the entry for 2013:1, which we code as a credit disruption–regular, and the absence of any indication of substantial change. Relative to that entry, the entry here included an additional statement that credit supply was currently healthy, but also a more extended discussion of risks involving the financial sector, suggesting on balance little change. Second, in absolute terms, the combination of no current difficulties but a noticeable risk also points to a credit disruption. We therefore classify this episode as a credit disruption–regular.

**Austria, 2014:1.** This entry is similar to the previous two entries for Austria, both of which we place in the credit disruption–regular category. The opening sentence of the summary cited “generally favourable financing conditions” as one of three factors driving the economy’s recovery (p. 123). However, the body of the entry described government interventions to help the financial system and identified a risk stemming from the financial system. In discussing fiscal policy, the OECD said: “the recent decision to establish an entity to wind down impaired bank assets will push up the headline budget deficit and public debt by 1% and 5% of GDP, respectively, in 2014. Additional public transfers may be needed for other (partly) nationalised banks” (p. 123). And the concluding paragraph on risks reported: “On the downside, events in Ukraine ... could harm export growth and the financial sector. Though recent measures to strengthen the capital position of banks were effective, the asset quality review and stress tests may reveal additional capital needs. This could lead to reductions in bank assets” (pp. 114–115).

The facts that the OECD viewed overall credit conditions as healthy but described some actions and risks points to a credit disruption. The comparison with Austria in 2013:1 and 2013:2 suggests the same conclusion. Thus, this episode belongs in the credit disruption–regular group.

**Netherlands, 2015:1.** In its 700-word entry, the OECD made one comment about problems with credit availability: in the opening summary, it said, “Access to finance for SMEs is improving, but related policy instruments, in particular public loan guarantees, could be further developed” (p. 161). This points clearly to the credit disruption range: the OECD saw a problem in the financial system that was important enough to mention, but that was confined to a specific part of the economy. The OECD put sufficiently little emphasis on the issue that it is

hard to see a case for the upper end of the credit disruption range. But the facts that it thought government intervention might be called for, and, especially, that we classify the Netherlands in 2014:2 as a minor crisis–minus and the current entry does not trumpet improvement argues against the lower end of the range. We therefore categorize this episode as a credit disruption–regular.

**Ireland, 2016:2.** In its entry, the OECD made one reference to problems involving the financial system. It said: “remaining high corporate indebtedness and non-performing loans will weigh on bank lending, squeezing Irish firms, especially SMEs, which face among the highest lending rates in the euro area” (p. 179). The fits our criteria for a credit disruption very well: the OECD saw funding problems that were important enough to be mentioned, but it did not emphasize them and saw them as mainly affecting only one sector, and thus as not having significant implications for the overall performance of the economy. Consistent with this, we code Ireland in 2016:1 as a credit disruption–plus, and issues involving credit supply received moderately less attention here. We therefore classify this episode as a credit disruption–regular.

**Italy, 2017:2.** In its 1000-word entry, the OECD described a financial system that was improving but that still had lingering problems. The opening summary reported: “The large stock of banks’ non-performing loans (NPLs) and the high public debt pose financial vulnerabilities. NPLs weigh on banks’ balance sheets .... The government’s strategy to deal with weak banks is bearing fruit and NPLs have started to decline” (p. 178). A figure caption stated, “Non-performing loans have started to fall” (p. 180). A longer discussion in the body of the entry said: “Italy’s main financial vulnerabilities are the high level of NPLs and public debt. NPLs sap confidence in the banking sector,” and went on to report that the government interventions described in the previous issue had “improved confidence and led to a large reduction in NPLs by mid-2017” (p. 180). Finally, the concluding discussion of risks to the outlook remarked: “A faster-than-expected, even if still gradual, decline in NPLs would foster confidence, further strengthening private investment” (p. 181).

On the one hand, the OECD never described the difficulties as affecting the economy, but only as creating risks, suggesting a low level of financial distress. On the other, the repeated references, including one in the opening summary, point to more than just a credit disruption–minus. One particularly useful comparison is with Italy in 2017:1, which we categorize as a credit disruption–plus. The language there is clearly stronger than in the present entry, and the present entry is explicit that there had been improvement. Another helpful comparison is with Ireland in 2017:2, which we also put in the credit disruption–plus group, and where the OECD is again more explicit about the impact of the difficulties in the financial system. Based on these considerations, we classify this episode as a credit disruption–regular.

### **Credit disruption–plus:**

**Korea, 1997:1.** The OECD reported that “interest rates on bank-guaranteed corporate three-year bonds” increased slightly “[i]n the wake of two major business failures, ... despite extra liquidity provided by the Bank of Korea,” and that, “To help avoid financing problems, the government will almost double its loans and credit guarantees to small- and medium-sized firms, to W 3.6 trillion (0.9 per cent of GDP) in 1997” (p. 96). In addition, the concluding sentences of the entry were: “The main risk to the economy is the possibility of further business failures of conglomerates burdened with excess production capacity and high levels of debt. Such a development would further weaken the banks by pushing up their non-performing loans and lead to difficulties in the financial sector that could result in a sharper downturn in activity” (p. 96).

On the one hand, there were problems in the financial sector and some government interventions. On the other, the OECD portrayed the problems largely as posing a risk to the outlook, and it did not link them to current developments. These features fit well with our criteria for the upper end of the credit disruption category. We therefore classify the episode as a credit disruption–plus.

**Korea, 2000:1.** The introductory summary of the entry referred to “significant progress achieved in rehabilitating the financial sector and improving the balance sheets of the corporate sector” (p.109). It also said: “The key to sustaining the expansion is the effective implementation of recent structural reforms in order to advance market-based restructuring of the financial and corporate sectors” (p.109). The only mention of financial problems in the remainder of the entry, however, was a discussion in the context of fiscal policy of a major government intervention that had been launched in 1998 (see 1998:2, p. 96): “64 trillion won (14 per cent of GDP) of government-guaranteed borrowing was used to restructure the financial sector” (p. 110).

We classify Korea in 1999:2 as a moderate crisis–minus on the basis of significant continuing problems in the financial sector and a recent development that the OECD saw as posing significant risks to the financial system. The present entry makes clear that there had been considerable improvement and that the risk had not materialized. In addition, an impact of problems in the financial system on the economy was never described explicitly, but only implied by the statement that improving the financial sector was important to helping the economy. At the same time, the introductory comments show that there were still lingering problems that were non-trivial. The absence of any explicit discussion of effects on the performance of the economy and the fact that financial problems received almost no attention in the body of the entry lead us to categorize this episode at the upper end of the credit disruption category—that is, as a credit disruption–plus.

**Korea, 2002:1.** The opening summary of the entry stated: “Further progress in the restructuring of the corporate and financial sectors—including the privatisation of government-owned banks—is important to sustain the expansion and maintain high potential growth” (p. 84). This statement makes clear that there had been improvement from 2001:2 (which we classify as a minor crisis–minus), but also implies that problems in the financial sector were affecting the economy. The OECD reiterated its view that there had been improvement in the body of the entry, saying: “The banking sector recorded profits in 2001, for the first time since 1997, while non-performing loans fell to a record low of 3.4 per cent of bank lending” (p. 85). Finally, the concluding sentence again referred to improvement but also implied continuing risks to banks: “On the domestic side, the main concern continues to be the large number of highly-indebted companies with weak balance sheets, although improvements in the banking sector may leave it less vulnerable to adverse developments in the corporate sector” (p. 85). Based on the improvement from the previous issue and the sense that the financial system was generally healthy but still posed a significant risk to the outlook, we classify this episode as a credit disruption–plus. This episode is in many ways similar to Korea in 2000:1, which we also categorize as a credit disruption–plus.

**Korea, 2004:2.** As in 2003:2, the OECD identified significant problems involving one particular set of financial intermediaries: credit card companies. The introductory summary of the entry said: “further progress in the reform agenda, notably by increasing flexibility in the labour market and addressing the problems of the credit card companies, should be the top priority” (p. 87). The entry went on to report, “nearly 4 million persons—almost a fifth of the labour force—are delinquent in their credit repayments” (p. 87), and, “Progress in reducing the

bad debt of the credit card companies is helping to stabilise credit conditions for households” (p. 88).

On the one hand, the facts that the OECD saw clear progress from 2004:1 (where we identify a minor crisis–plus), that it viewed that problems as at least partly structural rather than as disruptions to the financial sector, and that the problems were confined a specific type of intermediary all point to a level of distress well below a minor crisis–plus. On the other, the facts that the OECD described the problems as more than a risk and that it highlighted them in its opening summary point to more than a credit disruption–regular.

A useful comparison is with Korea a year earlier, where the OECD described “financial distress in the credit card sector” (2003:2, p. 91) and reported government interventions to help that sector, and where we identify a minor crisis–minus. The current episode is broadly similar, but the OECD’s language here is clearly milder. We therefore classify this episode as a credit disruption–plus.

**Hungary, 2010:2.** The OECD’s 800-word entry included two references to issues with financial intermediation. First, and most importantly, it said: “Private investment should eventually pick up on the back of the strength in external demand and the gradual improvement of credit conditions” (p. 140). Second, the concluding paragraph on risks warned: “A loss in foreign investor confidence could trigger a depreciation of the currency and a rise in borrowing costs” (p. 140). The reference to gradual improvement in credit conditions points to a noticeable but not dramatic reduction in financial distress from 2010:1. Since we identify a minor crisis–regular in that episode, that points to roughly a credit disruption–plus here. And the facts that the OECD mentioned but did not stress changes in credit conditions as a factor affecting investment, and that it identified a possible risk to financial intermediation, point to a similar conclusion. Thus, credit disruption–plus is the appropriate classification for this episode.

**Hungary, 2011:1.** The OECD’s discussion of credit supply issues was confined to a single sentence late in the entry: “Fiscal consolidation, tight credit conditions, an ongoing deleveraging of the private sector and increases in households’ precautionary savings will restrain the pace of expansion, though these effects should be offset to some extent by declining risk premiums” (p. 148; a discussion of risk premiums earlier in the entry suggests that the OECD was referring to premiums on sovereign debt, not issues involving private credit availability). Thus, the OECD perceived that financial distress was affecting the economy, but that the effect was not particularly large. Consistent with this, we categorize Hungary in 2010:2 as a credit disruption–plus, and the current entry gives no indication of either any improvement or any worsening in the health of the financial sector. We therefore also classify this episode as a credit disruption–plus.

**Ireland, 2014:2.** The OECD painted a picture of a financial system that was clearly well short of fully healed, but moderately healthier than in 2014:1. There was no mention of the financial system in the opening summary. The body of the entry reported: “Bank lending conditions, interest rates and new lending to small and large enterprises and households are broadly stable. With banks generally well on their way to healthier balance sheets, their access to funding is improving, although tackling the still high level of impaired loans continues to be an important challenge” (p. 141).

The conjunction of the limited attention in the entry to the financial system and the view that issues involving the health of the financial system posed an important challenge points to the upper end of the credit disruption range. The mixed references about improvement, with one comment about stability and another implying considerable healing, suggest definite but

not dramatic improvement from 2014:1 (which we classify as a minor crisis–minus), and thus point to the same conclusion. A third piece of evidence for this conclusion is a comparison with Italy and Portugal in 2014:2; we place those cases in the minor crisis–minus category, and the OECD’s language here is noticeably but not greatly milder. All of these considerations indicate that credit disruption–plus is the appropriate classification.

**Spain, 2014:2.** There was no mention of the financial system in the opening summary of the entry. However, the 600-word entry included two comments suggesting that an elevated cost of credit intermediation was a modest restraining influence on the economy. First, in the body of the entry, the OECD said, “needed budgetary consolidation and tight market lending conditions will continue to restrain growth” (p. 189). And in the concluding paragraph on risks to the outlook, it remarked, “Additional improvements in financing conditions ... could boost domestic demand further” (p. 190).

This episode fits well with the upper end of our criteria for a credit disruption: the OECD viewed issues involving intermediation as important enough to mention clearly, but it perceived them as falling somewhat short of being a significant force working on the economy. This episode is similar to Ireland in 2014:2 (which we classify as a credit disruption–plus), and slightly milder than Italy and Portugal in 2014:2 (both of which we place in the minor crisis–minus group). Another useful comparison is with Spain in 2014:1, which we classify as a minor crisis–regular. The language in that episode is considerably stronger, and the current entry makes clear that there had been improvement. We therefore categorize this episode as a credit disruption–plus.

**Ireland, 2015:1.** The OECD painted a somewhat mixed picture of Ireland’s financial system. On the one hand, it made very clear that it saw improvement. It reported: “The banking sector returned to profitability in 2014, improving its capacity to provide new lending” (p. 134). And in the opening summary, it said: “the problem of non-performing loans persists, impeding the full return to normal credit supply” (p. 133)—implying that the OECD saw a partial return to normal credit supply. On the other hand, the entry referred repeatedly to continued problems in the financial system. In addition to the comment in the summary about non-performing loans, the entry said: “Financing conditions for SMEs remain tight” (p. 133); “Non-performing loans are also still a problem, especially in the SME sector” (p. 134); and, in the concluding discussion of risks to the outlook, “Investment by SMEs may also be very sluggish due to tight financing conditions” (p. 135).

On the one hand, the facts that we classify Ireland in 2014:2 as a credit disruption–plus and that the OECD was clear that it saw improvement points to something below that level. On the other hand, the OECD’s descriptions of the current situation are very hard to square with such a classification: there were repeated references to problems in a particular sector, including a comment that there might be a large impact on investment by the affected firms. A useful comparison here is with the Netherlands in 2015:1, where the OECD also saw a problem with credit availability to SMEs but placed far less emphasis on it, and which we classify as a credit disruption–regular. In light of the strong evidence that the OECD viewed the situation as worse than our criteria for a credit disruption–regular, we place this episode in the credit disruption–plus category.

**Portugal, 2015:1.** The entry included two references to issues involving credit supply. First, it said, “Non-performing loans are high” (p. 173). Second, a slightly fuller discussion reported, “The credit channel remains impaired by high levels of corporate debt, in particular for small and medium enterprises, and high ratios of non-performing loans” (p. 175). These two comments do not paint an especially clear picture. But, on the one hand, the lack of emphasis on

credit supply and the absence of any explicit statement that it was affecting economic performance point fairly clearly to something less than a minor crisis–regular; on the other, the reference to an impaired credit channel points fairly clearly to more than a credit disruption–regular. In addition, the language is notably milder than in 2014:2, where we place Portugal in the minor crisis–minus category. We therefore classify this episode as a credit disruption–plus.

**Hungary, 2015:2.** The OECD’s main discussion of the financial system was (p. 145):

the [central] bank is continuing to expand its balance sheet through the Funding for Growth schemes, which inject liquidity to banks for SME lending .... Further measures to strengthen the quality of banks’ portfolios include the purchasing of bad commercial real estate loans and properties from banks and a gradual reduction of the levy on financial institutions’ balance sheets. ... These measures should spur lending and allow the central bank to wind up the Funding for Growth schemes by end-2016. Nonetheless, non-performing loans remain high.

On the one hand, the facts that the government was taking actions to help the financial system and that non-performing loans were high point to more than very minor financial distress. On the other, the OECD appeared to view the government’s measures as successful and the need for them as diminishing, suggesting that the situation was improving and that the problems were not severe. Moreover, the OECD did not draw a link between any problems in the financial system and the performance of the economy. The absence of such a link points to the credit disruption range, while the multiple government actions and the extended discussion point to the upper end of that range. Consistent with this view, we classify Hungary in 2015:1 as a minor crisis–regular, and the language here is decidedly milder. We therefore categorize this episode as a credit disruption–plus.

**Portugal, 2015:2.** The OECD commented repeatedly that low bank profitability was a factor restraining investment. In the body of the entry, it said, “Hampered by high corporate debt and low bank profitability, business investment will not be sufficiently vigorous to accelerate job creation” (p. 200), and, “the corporate sector remains highly indebted and non-performing loans continue to rise, weighing on banks’ profitability and impairing the credit channel” (p. 200). And in the concluding paragraph on risks to the outlook, it commented, “High leverage, private and public, and low bank profitability remain an important source of vulnerability” (p. 200).

The facts that the OECD focused on only one specific financial problem, that it appeared to place at least as much emphasis on high corporate debt as on low bank profitability, and that its language about the effects was mild (notably, “not be sufficiently vigorous”) suggests that this episode does not rise to the level of a minor crisis–regular. But the repeated references to issues with business investment and the comment about impairment of the credit channel point to more than a credit disruption–regular. The fact that we classify Portugal in 2015:1 as a credit disruption–plus and the current entry does not say either that there had been a worsening or that there had been an improvement, tips us to also classifying this episode as a credit disruption–plus.

**Ireland, 2016:1.** The OECD described ongoing problems in the financial system that were having a noteworthy but not large impact on the economy. It did not mention any problems with financial intermediation in either its opening summary or in its concluding paragraph on risks to the outlook, suggesting that it did not view any financial distress as a major force on the economy. However, the body of the entry cited issues with credit supply in two places. First, it reported: “The full return to normal credit supply is ... hindered by the

persistence of non-performing bank loans. The lending interest rates for SMEs remain among the highest in the euro area” (p. 159). Second, it projected: “Business investment should grow solidly given improved profitability prospects, although tight credit conditions will continue to exert a drag” (p. 160).

The fact that OECD saw credit availability as having a noticeable but modest negative effect on the economy is consistent with the upper end of the credit disruption range. Consistent with this, the OECD’s language is similar to its language for Ireland in 2015:1, where we identify a credit disruption–plus, and considerably stronger than in 2015:2, where we identify a credit disruption–minus. We therefore classify this episode as a credit disruption–plus.

**Ireland, 2017:1.** As in its previous several entries for Ireland, the OECD described lingering problems in the banking sector, with the problems particularly affecting credit availability to small and medium-sized businesses. In its opening summary, it stated: “The authorities should support a further resolution of non-performing loans by improving the process of repossession” (p. 184). A figure showing that interest rates on small loans to new businesses in Ireland were elevated relative to the euro area as a whole was captioned, “Borrowing conditions remain tight for Irish smaller firms” (p. 184). And the body of the entry reported: “Notwithstanding the strong economic recovery, the banking system is still impaired, a legacy of the past property boom. Borrowing conditions remain very tight for SMEs .... Despite a sizeable reduction over the past years, non-performing loans still account for around 17% of total outstanding loans” (pp. 185–186).

On the one hand, the OECD did not indicate that problems with credit supply were having notable consequences for the economy, or that the issues were widespread. On the other, it mentioned the issue repeatedly, and it devoted more attention to problems in the financial system than it did for Ireland in 2016:2 (which we classify as a credit disruption–regular). Relative to 2016:1 (which we code as a credit disruption–plus), here the OECD mentioned non-performing loans in its introductory summary, but in 2016:1 it suggested some impact of credit supply limitations on overall business investment. We therefore also place this episode in the credit disruption–plus category.

**Italy, 2017:1.** The OECD did not mention difficulties in the financial system in the opening summary of its entry. However, the body of the entry said: “Though the flow of new non-performing loans has slowed, the stock remains high and, along with the low profitability of the banking sector, limits credit, especially to SMEs and the construction sector” (pp. 190–191). It also reported: “The government has earmarked EUR 20 billion for bank recapitalisation, which, if it were all used, would increase public debt by 1.2% of GDP” (p. 193). And in the concluding paragraph on risks to the outlook, it stated: “The resolution of uncertainties relating to bank recapitalisation needs and faster progress on reducing bad loans would increase confidence and make room for more credit, strengthening private investment” (p. 193).

The references to continuing difficulties in the banking sector and to moderate government interventions, together with the absence of emphasis on this issue or statements of significant macroeconomic consequences, point to the upper end of the credit disruption range. Some useful comparisons are with Italy in 2016:2 and Greece in 2017:1, where the OECD was more explicit about problems with credit availability and which we place in the minor crisis–minus category; and Ireland in 2017:1, where the OECD’s tone is similar to the present case and which we categorize as a credit disruption–plus. We therefore score this episode as a credit disruption–plus.

**Ireland, 2017:2.** This entry is similar to the entry for Ireland in 2017:1. The opening summary reported: “the stock of non-performing loans (NPLs) remains stubbornly high, while banks often extend forbearance, which impairs the Irish banking system. The authorities should address high indebtedness by strengthening insolvency regimes and support a further resolution of NPLs by ensuring collateral enforcement and NPL write-offs” (p. 172). A passage in the body of the entry elaborated (pp. 173–174):

the banking system is still impaired due to a stubbornly high stock of NPLs. NPLs still account for around 13% of total outstanding loans, while banks have often extended forbearance and circumvented write-offs over the past years. Reflecting high default rates and difficulties in collateral enforcement, bank lending rates for SMEs remain very high, despite the accommodative euro area monetary policy. The authorities should address high indebtedness by strengthening insolvency regimes and support a further resolution of NPLs by ensuring collateral enforcement and NPL write-offs, which would enable the banking sector to regain its normal functioning, and strengthen credit supply.

Finally, the concluding paragraph on risks to the outlook sounded a mild note of caution related to the potential health of the financial system: “The high level of private indebtedness leaves Ireland sensitive to a rise in interest rates, which would weigh on private spending and further raise NPLs” (p. 174).

Two considerations point to classifying this episode as a credit disruption–plus. First, the OECD’s description is little changed from the previous issue, and we classify that episode as a credit disruption–plus. Second, the OECD repeatedly discussed non-trivial problems in the financial system, but never explicitly tied them to the performance of the economy.

**Portugal, 2017:2.** In the opening summary of its entry, the OECD reported: “The private sector, especially corporations, remains heavily indebted .... This adds to the vulnerability of the banking system which continues to suffer from weak profitability and non-performing loans” (p. 213). The body of the entry said: “Although the stability of the financial sector has improved over the past few years, low-quality assets and weak profitability reduce its capacity to withstand an adverse economic shock. ... [P]rivate investment funding has become cheaper with the continued reduction of interest rates on loans to non-financial corporations. Nevertheless, corporate spending is being held back by borrowing constraints” (p. 214). Finally, the concluding paragraph on risks to the outlook warned: “Given the elevated stock of non-performing loans in the banking system and high public debt, any new negative external shocks to the real economy may be particularly challenging” (p. 215).

With the exception of the one reference to borrowing constraints, all of this discussion was framed in terms of risks and vulnerabilities. The combination of important risks and a modest current impact points to the upper end of the credit disruption range. Consistent with this, we put Portugal in 2017:1 in the minor crisis–minus group, and the current entry states that there had been some improvement. Another useful comparison is in Ireland in 2017:2. We classify that episode as a credit disruption–plus. The language in that entry about current problems in the banking sector is slightly stronger than here, but the language about effects on the economy is even weaker than here. Thus on net the entries seem quite similar. We therefore place this episode in the credit disruption–plus category.

## MINOR CRISES

### Minor crisis–minus:

**Mexico, 1997:2.** Issues involving the cost of credit intermediation were not mentioned at all either in the opening summary or in the analysis of forces affecting the current economic situation. However, in discussing the government’s fiscal situation, the OECD described continued support to banks: “the government is assumed to make provisions for the payment of the fiscal cost of the support package to banks and debtors, as in 1995 and 1996” (p. 118). And in the concluding paragraph, it reported, “although the banking sector’s situation has improved, its soundness has not been fully restored” (p. 119). In the same paragraph, it also said that the projected “gradual decline in nominal and real interest rates ... should help debtors to continue servicing their debt and financial intermediaries to start lending again” (p. 119).

This entry is somewhat difficult to interpret. The facts that the health of the financial system was not prominent, that the OECD said the banking system had improved, and that we classify Mexico in 1997:1 as a credit disruption–regular all point to low distress. But the continued government support suggests somewhat higher distress; and, taken literally, the statement about helping intermediaries to start lending again indicates severe problems with credit supply. The first set of facts are compelling evidence against any type of moderate crisis, while the second set argue for more than a credit disruption. Because the suggestion that intermediaries were not currently lending is so at odds with the rest of the entry, it seems prudent not to place enormous weight on it, while not discounting it altogether. We therefore classify this episode as a minor crisis–minus. One useful comparison is with Mexico in 1996:2, which we put in the minor crisis–regular category. The OECD’s language there was quite similar to its language here, but the discussion of problems in the banking sector was slightly more prominent and slightly more explicit.

**Korea, 2001:2.** In 2001:1, Korea was suffering from a moderate crisis–minus. Here, the OECD described a financial system that was notably improved, but still sufficiently far from fully recovered that its health was significant to the state of the economy. The opening summary stated, “Achieving a sustained expansion requires effectively addressing the remaining problems in the corporate and financial sectors” (p. 98). The entry went on to report that the monetary transmission mechanism was somewhat impaired: “the central bank cut the overnight interest rate by 50 basis points to a record low 4 per cent, although the decline in bank lending rates has been smaller. Moreover, the on-going restructuring of the financial sector may tend to limit the impact of an easier monetary policy stance” (p. 98). It also said, “Financial-sector restructuring remains a priority” (p. 99), and, “there is a risk of major failures in the business sector, creating a further rise in joblessness and problems in the financial sector” (p. 99).

Both the sense of clear but not dramatic improvement from 2001:1 and the depiction of problems in the financial sector as being of nontrivial importance to the performance of the economy without being central point to some type of minor crisis. Both the improvement and the description of the current state of the financial system are difficult to square with a minor crisis–plus. The facts that the OECD did not emphasize an impact of problems in financial intermediation on the economy and that it used relatively mild language in discussing the risk of problems in the financial sector tip us to classifying the episode as a minor crisis–minus.

**Korea, 2003:2.** The OECD identified substantial problems involving one particular set of financial intermediaries: credit card companies. After a sentence devoted to “[a] series of negative shocks,” the OECD said, “This was compounded by financial distress in the credit card

sector” (p. 91). And under the heading, “Problems in the financial sector are being addressed,” the OECD discussed the issue at some length (p. 92):

The authorities have also taken steps to address financial-sector problems that have influenced private consumption. After a boom in 2002, lending by credit card companies has fallen nearly a third, reflecting liquidity problems in the wake of a rise in the delinquency ratio from 6½ per cent in 2002 to nearly 10½ per cent in August 2003. The government mapped out a package of measures in April to ease the credit card companies’ problems, through collective financial support from their creditor financial institutions.

These developments fit well with the lower end of the minor crisis range. There were significant problems in the financial sector that were affecting the overall performance of the economy and that prompted some government intervention, but the OECD viewed them as confined and as less important than a range of other factors. We therefore classify this episode as a minor crisis–minus.

**Slovak Republic, 2008:2.** The OECD viewed the international financial crisis as affecting the economy through several channels. The ones it put the most emphasis on were not directly related to the cost of credit intermediation: “government bond spreads *vis-à-vis* Germany have soared” (p. 176), “foreign car companies seem to have become more cautious with respect to their investment plans” (p. 176), and there was “weaker demand from main trading partners” (p. 177). But it also saw nontrivial effects involving credit supply: “Investment growth is also likely to slow sharply due to worsening earnings expectations and tighter lending standards of banks. Restricted credit is also likely to constrain the further growth of house prices, although the absence of an earlier country-wide construction boom may limit the downside risks in this sector” (pp. 177–178). In addition, the material preceding the country entries reported that the government had guaranteed all bank deposits, but had not taken any other measures to support the financial system (pp. 25–26 and 76).

As with Korea in 2003:2, these developments fit our criteria for the lower end of the minor crisis range. Difficulties in credit supply were significant enough to be having a nontrivial impact on the economy and to prompt government action, but they received less emphasis than other factors and were viewed as mainly affecting only one component of output. Consistent with this, the OECD’s language is notably stronger than that for Poland in 2008:2 (which we classify as a credit disruption – regular), but milder than that for Hungary in 2008:2 (which we classify as a minor crisis–regular). We therefore place this episode in the minor crisis–minus category.

**Korea, 2009:1.** The OECD described a financial system that was notably healthier than in 2009:1 (where we identify a minor crisis–plus), but still the source of considerable concern. The entry reported that “an easing in banks’ credit conditions [has] supported lending to small firms and households,” referred to “a narrowing of credit spreads,” and cited “[f]inancial stability” as one of the factors that “have helped strengthen the won” (p. 138). It also described substantial interventions to help stabilize the financial sector: “The government has injected 3.5 trillion won of capital (8% of banks’ Tier 1 capital) into seven banks and established a 40 trillion won (4% of GDP) fund for the purchase of non-performing loans” (p. 138). And it referred to risks to the outlook from the financial system, although not in particularly strong terms. It said, “the economic outlook remains highly uncertain given the possibility of second-round effects in the financial sector” (p. 139); and in the introductory summary, it cautioned, “The authorities should ensure that the negative impact of corporate restructuring on the financial sector remains limited” (p. 137).

On the one hand, the prominence of the financial system in the entry and the fact that the government felt impelled to take major actions to support the system point to more than a credit disruption. On the other hand, the discussion of impacts of financial distress on the economy focused on improvements and risks, not on current negative effects. We therefore classify this episode as a minor crisis–minus.

**Hungary, 2009:2.** The OECD did not provide a great deal of information about the health of Hungary’s financial system. The opening sentence of the entry cited “easing credit conditions” as one of two reasons that “GDP growth should progressively resume in 2010, and gather pace in 2011” (p. 181). The body of the entry discussed various aspects of the financial system but did not focus specifically on credit supply, saying that international assistance had “alleviated Hungary’s financing difficulties in international markets” and referring to “high perceived levels of credit risk” (p. 182). Finally, the concluding paragraph on risks to the outlook warned, “Downside risks to this projection include an increase in non-performing loans that would further damp business investment and renew loss of confidence in the currency” (p. 183).

We categorize Hungary in 2009:1 as a moderate crisis–regular. The current episode is clearly much less severe: the OECD highlighted improvement, and there was no discussion of problems with credit supply affecting the current performance of the economy. At the same time, the OECD stopped well short of saying that the financial system was fully healed, and it cited a potential rise in non-performing loans as a risk to the outlook. In the absence of stronger statements of improvement, we are reluctant to go from a moderate crisis–regular all the way down to the credit disruption range. But in the absence of stronger statements about current financial distress, we are reluctant to go far up into the minor crisis range. These considerations lead us to conclude that minor crisis–minus is the appropriate classification.

**Slovak Republic, 2012:1.** The OECD did not mention the financial sector in either its opening summary or its concluding discussion of risks. But issues involving the financial system arose repeatedly in the remainder of the entry. The OECD reported, “Depressed income prospects and increased borrowing costs are both cutting the demand for credit and subduing consumption growth,” and said, “Interest rate spreads have increased in the wake of the euro crisis” (p. 154). And in a paragraph headed, “The financial sector is under stress,” it stated, “The financial sector faces multiple objectives including absorbing non-performing loans, helping finance the cost of the crisis, adapting to stricter regulation, and financing the recovery” (p. 155). The paragraph went on to raise “the risk of a credit crunch”; however, it attributed the risk mainly to new government regulations (which we do not include in our definition of financial distress), rather than to disruptions of financial intermediation.

This episode fits well with the lower end of the minor crisis range. There were problems in the financial system that were quite relevant to the overall performance of the economy, but that were far from central to the outlook. We therefore categorize this episode as a minor crisis–minus.

**Netherlands, 2013:1.** In discussing why the economy was in a recession, the OECD wrote: “Deleveraging pressures for households are increasing due to tight lending conditions” (p. 144). It also said: “The share of mortgage holders with negative equity is growing, increasing risks for the financial sector. New legislation tightening the tax deductibility of mortgage interest payments should enhance financial stability, but further reductions in the maximum loan-to-value ratio should be implemented over the medium term. Credit institutions are reluctant to lend, further hampering the recovery, especially of small and medium-sized enterprises” (pp. 144–145). Finally, in discussing the risks to the outlook, it wrote: “The risks are

tilted to the downside. ... The banking system could be affected eventually through an increase in non-performing loans and defaults” (p. 146).

The OECD clearly described problems in the financial sector. Credit institutions were reluctant to lend and this was a factor holding back recovery. At the same time, some of the effects were discussed primarily as risks, not actual outcomes. The Netherlands had been a credit disruption—regular in the previous half-year. Because the entry did not explicitly describe a worsening of conditions, this was a factor leading us to only increase the severity by two steps (to a minor crisis—minus).

**Ireland, 2014:1.** The introduction to the entry said: “The process of restoring health in the banking sector should be reinforced by continuing to reduce the elevated level of non-performing loans and repairing the bank credit channel” (p. 147). It also said: “Growth potential should be boosted by complementing high attractiveness to foreign investment with further efforts to foster innovation across the whole economy and to ease firms’ access to capital” (p. 147).

The paragraph on the financial system was headed: “Domestic bank performance is improving” (p. 148). The OECD wrote: “Non-performing loans are high but have started to decline. The government should monitor the operation of the new institutional framework for resolving bad loans and quickly eliminate any bottlenecks. The operational performance and balance sheet of the two main domestic lenders is improving, putting them in a stronger position to meet the borrowing needs of the economy as it recovers” (p. 148).

Ireland was a minor crisis—plus in 2013:2. It is clear that the OECD saw significant improvement. There is not a lot of information about the absolute level of financial distress. The financial system was not healthy, but there was little indication of how much financial problems were holding back consumption or investment. For this reason, we put particular emphasis on the reported change and lower the classification to a minor crisis—minus. A useful comparison is Greece in 2014:1 (which was a minor crisis—plus). Conditions in Ireland were described in decidedly more positive terms.

**Italy, 2014:1.** There was nothing related to financial distress in the introduction to the entry. In discussing the state of credit markets, the OECD wrote (pp. 107–108):

Bank lending to companies showed the first signs of turning up in early 2014, after falling for two years. Interest rates charged to borrowers remain significantly higher than in some other euro area countries, although the supply of loans may become less of a constraint in the future, partly as reduced sovereign interest rates get reflected in lower bank lending rates. One consequence of the fall in credit has been weak fixed investment, now around one quarter lower than in 2008.

The OECD forecast that “[c]redit conditions should improve somewhat during 2014, depending on the results of the Asset Quality Review by the ECB, but are expected to support only a gradual recovery in investment” (p. 110). In evaluating the risks to the forecast, the OECD put financial constraints on the negative side. It wrote: “The projected recovery would be undermined if weaknesses in the banking system restricts credit and interrupts the normal investment cycle” (p. 110).

The discussion was noticeably more upbeat than in the previous half-year (Italy had been a minor crisis—regular in 2013:2). In absolute terms, it is clear that substantial financial distress remained. Loan interest rates were still relatively high and further credit restriction was seen as

a risk to recovery. However, credit problems did not seem central to the forecast. Both the descriptions of the change in financial conditions and its absolute level suggest this was a minor crisis–minus.

**Portugal, 2014:1.** Financial conditions were not mentioned in the introduction to the entry or in the discussion of the current conditions—suggesting that they were not seen as central to economic developments. In the paragraph explicitly on financial developments, the OECD wrote: “Bank balance sheets are also improving. However, firms face high borrowing costs and difficulties in accessing credit, partly because they are already highly indebted. Banks are providing easier credit access to the tradeable than to the non-tradeable sectors, which is helping the economy to rebalance away from domestic demand. Non-performing loan ratios remain high at 11.8% on average, and are significantly higher in the non-tradeable sectors” (p. 173). Though the OECD believed that the risks to the outlook were “skewed to the downside” (p. 174), financial developments were seen as a positive factor. It wrote: “On the upside, the banking system might provide more credit than assumed, which would promote investment and firms’ expansion” (p. 174).

Portugal was a minor crisis–regular in 2013:2. The entry explicitly stated that conditions had improved, which suggests a somewhat lower classification for this half-year. In absolute terms, financial conditions did not appear central to the outlook, which argues strongly for a classification no higher than some sort of minor crisis. At the same time, the discussion of high borrowing costs and difficulty obtaining credit, as well as the high level of NPLs, suggests a non-trivial level of financial distress. Taken together, these considerations suggest that minor crisis–minus is the appropriate classification.

**Italy, 2014:2.** The introduction to the entry stated: “ECB monetary policy support is expected to ease financial conditions and facilitate a resumption of bank lending, which should raise investment” (p. 146). That bank lending was in need of “resumption” is a sign that there were significant problems in the financial system. The OECD went on to say: “Bank lending to non-financial companies has continued to fall, though at a somewhat slower pace than in 2012–13. Credit standards were reported as having loosened a little and nominal lending rates have fallen, suggesting that part of the fall in lending may be due to reduced demand for loans from companies. But rates remain higher than in other euro area countries, probably reflecting higher perceived risks due to rising nonperforming loans in Italy” (pp. 146–147).

The OECD believed that problems in the financial sector were having real consequences. It wrote: “The fall in credit is part cause and part consequence of the fall in fixed investment” (p.147). In discussing risks to the outlook, it noted: “The projected recovery would be undermined if weaknesses in the banking system were to restrict the projected investment upturn” (p. 149).

Italy was a minor crisis–minus in 2014:1. Conditions may have been slightly better in 2014:2, but not enough so to warrant a lower classification. More fundamentally, there were clearly still significant problems in the financial sector. Borrowing costs were high, and tight credit was seen as one source of low investment. Overall, conditions match those for a minor crisis–minus. We felt the description of conditions in Italy in 2014:2 was similar to that for Portugal in 2014:2 (also a minor crisis–minus), and slightly more severe than those for Ireland and Spain in 2014:2 (both credit disruption–plus).

**Netherlands, 2014:2.** The introduction to the entry said: “Growth should pick up somewhat as domestic demand gradually improves, but poor access to credit for small and medium-sized enterprises and low liquidity of household balance sheets are important

headwinds” (p. 163). The OECD elaborated on financial problems in the paragraph on current conditions, saying: “Stronger consumer and business confidence indicators suggest that the economy should continue to recover, although small and medium-sized enterprises face significant constraints in accessing bank finance” (p. 163).

Low house prices were seen as a factor affecting the financial sector. The OECD wrote (p. 164):

prices remain nearly 20% lower compared to the pre-crisis peak and for a large number of young borrowers mortgages still exceed the value of their houses. This creates risks for the banking sector, but recent measures to reduce mortgage interest deductibility, increase amortisation and lower loan-to-value ratios should reduce financial vulnerabilities. These measures should be augmented by further efforts to recapitalise banks and to develop the private rental sector so as to create an alternative to homeownership and social housing.

Among the negative risks to the forecast, the OECD mentioned that “should a number of households default on their mortgages (an historically unlikely event), the financial turbulence would be damaging. Tight access to finance for businesses and weaker-than-expected growth in the euro area would restrain investment” (p. 165).

The Netherlands was a credit disruption–minus in 2014:1. The description in this entry is consistent with a substantially higher level of financial distress. The OECD specifically said that poor access to credit for SMEs was a headwind to recovery. It also described an unlikely risk to the forecast working through tighter credit conditions and investment. The conditions described correspond to a minor crisis–minus. Financial problems were significant, but not central to the forecast. The description of financial distress in this episode was clearly worse than those for Ireland and Spain in the same half-year (both of which we classify as a credit disruption–plus).

**Portugal, 2014:2.** Financial problems were not mentioned in the introduction. However, in discussing current conditions, the OECD wrote: “Stronger investment will be needed to maintain the current capital stock and allow the export sector to expand further, but subdued credit growth and a still fragile banking sector may limit domestic funding available for this” (p. 175). In a paragraph headed: “The banking sector remains fragile” (p. 176), the OECD wrote: “Although their position has improved, banks remain under pressure due to still high ratios of non-performing loans and very high levels of corporate debt. Credit by domestic banks continues to contract, and the cost of credit remains high, reflecting the financing constraints and high funding costs faced by Portuguese banks” (p. 176). Though risks to the forecast were “tilted to the downside”, the OECD suggested that “[r]ecent policy initiatives could improve access to finance for companies, including equity financing” (p. 177).

Portugal was a minor crisis–minus in 2014:1. The language in the 2014:2 volume is slightly more positive, but not enough to warrant a decrease in the classified level of financial distress. In absolute terms, there were clearly still significant problems in the financial sector, and the OECD thought they were having some impact on investment. However, the problems were not described as particularly dire, and the consequences for the economy were mentioned only obliquely. Thus, we felt comfortable classifying this as another minor crisis–minus. The descriptions of financial conditions in Portugal in this episode are very similar to those for Italy in 2014:2 (also a minor crisis–minus).

**Italy, 2015:1.** In the introduction to the entry, the OECD wrote: “To revive private investment, further action is needed to effectively deal with the still-mounting non-performing

loans, which are weakening the banking system's health and restricting the supply of credit" (p. 139). The discussion of current condition included a figure headed: "Banking lending rates and government bond yields have decreased" (p. 139). It also said: "Investment growth is finally showing some signs of recovery, which however remains uncertain due to still large spare industrial capacity, restricted credit supply, and past public-investment cuts to achieve budget targets. Bank lending to non-financial companies has continued to fall in the first months of 2015, although at a somewhat slower pace than in the past" (pp. 140–141).

The OECD included a full paragraph on problems in the banking sector. It wrote (p. 142):

However, the banking sector is still fragile and is not in a good position to fully support private investment. Surveys suggest that a large share of companies face unchanged conditions to access credit notwithstanding declining interest rates. Lending rates remain higher than in other euro area countries, probably owing to perceived risks relating to the rising amounts of non-performing loans on banks' balance sheet. Investment would therefore be strengthened by enhancing the insolvency regime, expanding the use of specialised courts and out-of-court debt workouts, and by establishing a specialised asset management company to acquire bad loans. The government is concretely considering some of these measures so as to create a secondary market for non-performing loans in compliance with EU regulations on state aid.

In summarizing the risks to outlook, the OECD said: "The rebound in investment could be stronger than predicted, especially if residential property prices reverse course and the banking system is strengthened. ... On the downside, Italy would be vulnerable to the effects of renewed financial turmoil in the euro area" (p. 143).

Italy was a minor crisis–minus in 2014:2. There was little sense of change in either direction. For example, lending rates were down, but a large share of companies faced unchanged conditions. There were also mentions of the banking system being fragile, problems with credit supply, and financial distress affecting investment. Since these characteristics suggest at least a minor crisis–minus, we leave the classification unchanged from the previous half-year.

**Italy, 2015:2.** The introduction to the entry said: "bank credit remains constrained due to the large and still rising amount of non-performing loans, hampering investment growth" (p. 162). It also included the statement: "Further measures to address banks' holdings of non-performing loans would strengthen the recovery" (p. 162). In discussing current conditions, the OECD elaborated that: "Investment has been tentative, owing to still large spare capacity, restricted credit supply, and weak public investment" (p. 163).

In a paragraph on the financial sector, the OECD said: "The fall in bank lending to the private sector is finally abating. ... Recent government initiatives, involving more efficient bankruptcy procedures and a shortened period to write off bad loans in banks' balance sheets, are positive steps to revive the credit market. Establishing a specialised asset management company to acquire impaired loans could significantly contribute to broaden the recovery to investment" (p. 165). However, the OECD's discussion of the outlook still included concerns about credit supply. It wrote: "Growth in gross fixed capital formation will turn positive in 2015 and will only modestly accelerate afterwards because of persistent credit supply constraints" (p. 165). But, it included as an upside risk to the forecast: "The rebound in investment could be stronger than predicted, especially if a specialised asset management company to acquire

impaired loans is established and the residential property market picks up more quickly than projected” (p. 165).

Italy had been a minor crisis–minus in the previous half-year. The description of financing conditions was quite similar in this entry, with at most suggestions of small improvement. In absolute terms, financial distress was above the credit disruption range. Credit supply problems were mentioned repeatedly, and they were seen as a factor holding back investment. There were also numerous actions being taken to try to improve credit supply. The descriptions of both the relative and absolute levels of distress suggest that leaving the classification as a minor crisis–minus is appropriate.

**Italy, 2016:1.** The introduction to the entry said: “Investment is turning around, providing some support to domestic demand, but constraints on the availability of bank credit still impede a faster investment recovery” (p. 164). It also said: “The collapse of investment in the wake of the crisis has exacerbated a long-standing labour productivity slowdown. Policy priorities to raise productivity involve speeding up the resolution of banks’ non-performing loans” (p. 164).

In discussing the incipient recovery, the OECD wrote: “bank credit supply constraints, along with uncertainty about future demand conditions, hinder a strong recovery of investment. The government is paving the way to create a secondary market for non-performing loans and improve banks’ balance sheets, an important precondition to raise credit supply and investment” (pp. 165–166). The concluding paragraph re-emphasized this point, saying: “The recovery of investment will depend on the effects of the government’s initiatives to remove bad loans from banks’ balance sheets and create a secondary market for them” (p. 167).

Italy had been a minor crisis–minus in 2015:2. This entry sounds almost identical to the one for the previous half-year, strongly suggesting no change. The absolute level also fits with a minor crisis–minus. There were clearly problems in the financial sector that were impacting investment. The OECD explicitly mentioned credit supply constraints and the need to deal with NPLs. At the same time, the outlook was relatively benign and credit problems did not get a lot of discussion.

**Portugal, 2016:1.** The introduction to the entry said: “High corporate leverage and weak bank conditions have been holding back investment” (p. 200). In discussing why growth in Portugal was slower than the euro area, the OECD wrote: “Investment, by contrast, has fallen sharply and continues to be a drag on growth, due to high corporate debt, weak bank balance sheets, policy uncertainty and falling momentum in the implementation of structural reforms” (p. 200). It also emphasized that “[n]on-performing loans are still high” (p. 200). In summing up the outlook, the OECD said: “The banking sector remains constrained by weak profitability and a high share of non-performing loans, both of which raise concerns about financial stability. On the other hand, the successful implementation of recent policy initiatives aiming at reducing corporate debt and repairing banks’ balance sheets could reduce the vulnerability of banks and allow more resources to flow into new productive investment” (p. 202).

Portugal had been a credit disruption–plus in the previous half-year. This entry sounds somewhat worse. Weak bank balance sheets were one of four factors holding back investment. High NPLs were seen as a risk to financial stability. These characteristics suggest that the appropriate classification is minor crisis–minus. A good comparison is Italy in 2016:1, which was also a minor crisis–minus.

**Italy, 2016:2.** The introduction to the entry said: “The large stock of non-performing loans and the uncertain recovery keep hampering banks’ loan disbursements, hindering the recovery of investment” (p. 184). Italy’s problem with NPLs was also flagged in the overview chapter of the *Economic Outlook*: “Some euro area countries, notably Italy, have still high non-performing loans” (p. 40). The OECD saw high NPLs as hampering investment. It wrote: “Investment growth remains lower than in previous recoveries. Credit to firms has been shrinking for some time as uncertain economic prospects and excess capacity have cut firms’ demand for credit. Also, the still high stock of bad loans (about 18% of all loans to non-financial corporations) restricts credit supply” (p. 185).

In summing up the outlook for Italy, the OECD wrote: “The moderate economic expansion and credit supply constraints linked to bad loans will curb private investment” (p. 187). It added: “Faster progress on reducing bad loans would mitigate credit supply constraints. ... On the other hand, renewed financial market turmoil in the euro area or an aggravation of banks’ balance sheet problems could drive risk spreads higher” (p. 187).

Italy had been a minor crisis–minus in the previous half-year. Financial conditions in this entry were perhaps slightly better, but less than a full step. The OECD continued to describe significant problems with NPLs leading to credit constraints and low investment. Conditions in Italy were similar to Greece in 2016:2 (a minor crisis–regular), but less bad. In Italy’s case, both credit demand and credit supply were mentioned as reasons for low investment, whereas for Greece credit supply dominated.

**Portugal, 2016:2.** The introduction to the entry said: “High corporate leverage and a fragile banking sector will hold back private investment” (p. 220). It also said: “Removing distressed legacy loans from bank balance sheets and opening up new sources of financing are needed to facilitate investment” (p. 220). The OECD elaborated on these points in a subsequent paragraph, writing: “Both private and public investment are historically weak. A highly leveraged corporate sector and high uncertainty are holding back business investment, which is crucial to sustain export growth. A large stock of non-performing legacy loans is crowding out investment funding from banks” (p. 221).

The OECD believed that risks to the forecast were on the downside. It wrote: “The banking sector remains highly leveraged, exposed to sovereign debt and to developments in the euro area, and could require more public support. This would further add to public debt, whose projected downward trajectory is already subject to significant risks, including potential increases in interest rate spreads” (p. 222). It did, however, also see a more positive scenario, writing: “Faster resolution of non-performing loans and a stronger recapitalisation of the banking system could restore confidence and boost investment financing” (p. 222).

Portugal had been a minor crisis–minus in the previous half-year. The description of financial conditions in this issue is very similar, suggesting no change in classification. As before, there were clear problems in the financial sector, which were holding back investment. But, conditions were not described as particularly significant and financial constraints did not appear central to the forecast. Overall, it fits the definition of a minor crisis–minus. Conditions in Portugal in this half-year were similar to those in Italy in 2016:2 (also a minor crisis–minus) and a little better than those in Greece in 2016:2 (a minor crisis–regular).

**Greece, 2017:1.** There was no discussion of credit conditions in the introduction to the entry. In the discussion of the state of the recovery, the OECD wrote: “Despite the gradual but steady easing of capital controls, financing conditions remain tight. Greek banks continue to rely, though to a lesser extent, on the Emergency Liquidity Assistance of the Bank of Greece. The

large stock of non-performing loans is weighing on banks' balance sheets, restricting credit supply, especially to SMEs and households, though a new resolution framework, including quantitative targets, is now in place for the orderly reduction of non-performing loans" (pp. 168–169). It gave as a positive risk to the outlook: "Further progress on structural reforms, especially in product markets, and a faster resolution of non-performing loans would lead to higher investment and exports than projected" (p. 170).

Greece had been a minor crisis—regular in the previous half-year. The fact that there was no discussion of the financial sector in the introduction is a change from previous entries and suggests a clear improvement. At the same time, the OECD was clear that financing conditions remained tight and credit was restricted to households and SMEs. Faster resolution of NPLs was seen as something that would aid the recovery of investment. Taken together, the relative and absolute descriptions of conditions are consistent with the criteria for a minor crisis—minus. This entry is similar to those for Italy and Portugal in 2016:2 (both a minor crisis—minus).

**Portugal, 2017:1.** The introduction to the entry stated: "Investment activity could be further spurred by measures to restore the health of the banking sector, notably regulatory incentives for banks to implement a credible plan for restructuring non-performing loans" (p. 226). In a later section entitled "Poor access to finance is holding back investment," the OECD wrote: "Despite the highly expansionary stance of euro area monetary policy, investment activity is being held back by weak profitability and the strong deleveraging needs of many corporations. In order to further reduce the uncertainty surrounding the banking sector and improve credit supply and pricing, policy measures that encourage a reduction in the stock of non-performing loans on bank balance sheets are necessary" (p. 227). The concluding paragraph mentioned the risk that: "The decline in public debt could be derailed by the need for greater public support for the banking sector or an increase in government bond yields" (p. 228).

Portugal had been a minor crisis—minus in 2016:2. The words in this entry are very similar, suggesting a similar classification. There were no indications of a change in financing conditions in either direction. In absolute terms, there were clearly still significant problems in the financial sector and they were seen as affecting investment. Based on these considerations, we classify it as a minor crisis—minus.

**Greece, 2017:2.** The introduction to the entry had two references to financing conditions. The first was: "Private consumption and investment will lead the recovery, responding to reduced policy uncertainty and gradually improving financial conditions" (p. 155). The second was: "Greece's high public debt and banks' large stock of non-performing loans (NPLs) are sources of financial vulnerabilities. ... Banks' large stock of NPLs adds to risks and limits banks' lending. Gradually curing and disposing of NPLs while ensuring banks retain sufficient capital buffers is a priority" (p. 155).

The discussion of current conditions included a graph entitled: "Banks' central bank funding is declining and NPLs have stabilised" (p. 155). The text elaborated: "Banks' access to funding is improving. While deposits lost during the crisis are yet to return, banks' access to interbank funding is rising, while their use of emergency financing from the central bank is decreasing. However, banks continue to reduce lending. Non-performing loans (NPLs) rates remain high, at 36% of total loans in early 2017" (p. 156). The OECD did, however, see hopeful signs. It wrote: "Reforms are improving banks' governance and reducing costs. A new NPL resolution framework is in place, and banks have met initial targets. Banks are well capitalised, but the quality of the capital is uncertain, as much is in the form of deferred tax assets. Capital controls remain in place, while a roadmap outlines their future relaxation" (pp. 156–157).

In summarizing the outlook the OECD wrote: “Business and housing investment are projected to rebound, after 10 years of contraction, as financing conditions and confidence improve” (p. 157). It also said: “High levels of public debt and NPLs make Greece’s economic outlook highly sensitive to any slippage in policy. Slower progress in addressing NPLs would lower confidence and investment and activity” (p. 157).

Greece had been a minor crisis–minus in the previous half-year. This is a somewhat difficult episode to classify. The descriptions of financial developments suggest some improvement. But, the absolute level of financial distress was clearly still significant. The OECD talked extensively about NPLs and viewed them as a risk to financial stability and investment. Our sense is that Greece had been in the upper range of a minor crisis–minus in 2017:1, and was in the lower range of a minor crisis–minus this time. Also, much of the improvement seemed to be prospective rather than actual.

### **Minor crisis–regular:**

**Mexico, 1996:2.** The introduction to the entry said: “Government support, together with better financial conditions, has served to alleviate difficulties of debtors and banks” (p. 101). This sense of improvement in financial conditions was also mentioned later when the OECD wrote: “Pressures on financial markets have calmed since April 1996” (p. 102).

The discussion of risks to the outlook included a long discussion of financial conditions. The OECD wrote (p. 103):

The main downside risk is related to the fragility of the banking system, which could be a drag on growth. Though their situation has improved thanks to various assistance measures and the economic recovery, banks have not emerged from their difficulties. The ratio of past-due loans to total assets has stopped deteriorating: on the basis of generally accepted accounting principles used in the United States, it would be approximately equal to 18 per cent (for Mexican banks that remain in the hands of the private sector). Still a number of firms and households are having repayment problems. Financial market stability and the level of interest rates are key factors in the unravelling of difficulties.

Mexico had been a moderate crisis–minus in 1996:1. The OECD stated quite clearly that there had been some improvement in financial conditions, in part because of extensive rescue measures. At the same time, financial conditions were not good in an absolute sense: NPLs were high, “banks have not emerged from their difficulties,” and financial problems could harm growth. Given that the drag on growth was described as a risk rather than an actuality, both the relative and absolute conditions fit the criteria for a minor crisis of some sort. Since the improvement was described as substantial, we scale financial distress as a minor crisis–regular (that is, two steps below the previous reading).

**Korea, 2000:2.** The introduction to the entry had two references to financial sector restructuring. It said: “The economic expansion continued through 2000, though at a more moderate pace, in the face of restructuring in the financial and corporate sectors” (p. 92). And, “Sustaining the recovery from the 1997 economic crisis requires effective implementation of reforms to advance market-based restructuring of the financial and corporate sectors. ... Containing the growth of public spending in line with the medium-term fiscal plan is necessary to meet the costs of financial-sector restructuring as well as future spending pressures” (p. 92).

The two headings of the sections on current developments said: “The pace of the recovery slowed in the first half of 2000...” “... owing, in part, to higher oil prices and uncertainty about the restructuring of the corporate and financial sectors” (p. 92). The OECD described another very large financial-sector rescue program, saying: “The government has launched a second financial-sector restructuring programme using 40 trillion won (7½ per cent of GDP) of public money” (p. 93).

Finally, the outlook was for growth to slow to a sustainable pace. But, “Such a favourable outcome does depend on effective actions to resolve outstanding problems in the financial and corporate sectors. Moreover, the possibility of additional failures among the large chaebols raises the risk of even more serious financial-sector problems that would impinge on the real economy” (p. 93).

Korea had been a credit disruption–plus in the previous half-year. This entry suggested that conditions had deteriorated. There was another very large action to help the financial system, and there were repeated references to the importance of financial-sector restructuring. The OECD also saw a substantial risk of more serious financial problems. At the same time, the problems were more in the corporate sector than in the financial sector, and there was little indication of links to spending. For all these reasons, we felt this episode fit the criteria for a minor crisis–regular. A useful comparison was Korea in 1999:2, which was a moderate crisis–minus. Conditions in 2000:2 were clearly more than a step less severe.

**Hungary, 2008:2.** The introduction to the entry said: “Against the background of global financial turbulence, economic activity is set to decline in 2009” (p. 144). It went on to say: “Controlling financial vulnerabilities is a key policy priority. The most urgent challenge is to move forward with announced measures to improve banks’ risk management (including strengthening stress testing), particularly regarding households’ large foreign currency exposure” (p. 144). A table in the opening chapter of the volume listed Hungary as aiding its financial system through guarantees for bank loans, capital injections for banks, and an increase in deposit guarantees (p. 76).

In the discussion of current conditions, the OECD wrote: “Activity was already weak when the world financial crisis began” (p. 144). There was discussion of financial tensions, but many of them involved the exchange rate and sentiment toward forint-denominated assets. The entry stated: “Despite a loan of € 5 billion granted by the European Central Bank in mid-October, the central bank of Hungary had to increase its base rate by 300 basis points (to 11.5%) to help attract foreign liquidity. Lending conditions have become increasingly tough” (p. 145). Hungary was given a Stand-By Arrangement by the IMF in November 2008. The OECD was predicting a recession in 2009, and said: “The slowdown is driven by weakening export demand, which, along with sharply higher interest rates and other financing difficulties, is slowing investment” (p. 146).

Hungary had no financial distress in 2008:1. Clearly, much of what was going on was a currency crisis, rather than conventional financial distress. But, there were references to “financial vulnerabilities” and “other financing difficulties,” that suggest the currency crisis had spilled over to financial institutions. Also, there were many actions to aid the financial system. At the same time, financial difficulties were not central to the outlook, and there little use of the term “crisis” to describe what was happening in the Hungarian financial system. We therefore felt that the appropriate classification was a minor crisis–regular. A useful comparison is Korea in 2008:2, which was a minor crisis–plus. Financial conditions in Hungary were slightly less bad.

**Poland, 2009:1.** Financial problems were not discussed in the introduction to the entry, or in the first two pages. Toward the end of the entry, the OECD wrote a long description of what was happening in the banking sector. It said: “The central bank reacted swiftly to the economic crisis and lowered its key policy rate by 225 basis points, to 3.75%. It has also lowered reserve requirements which, along with other supportive measures, should improve liquidity conditions in the banking sector. Banks have not been directly affected by the crisis, but tensions in the interbank market, a price war for retail deposits and a major tightening of lending conditions suggest deleveraging” (p. 157). A table in the opening chapter of the volume showed that Poland had increased deposit insurance and injected capital into the financial system to deal with the crisis (p. 44).

In discussing why “growth will be weak”, the OECD said: “The contraction in activity will be led mostly by falling investment due to tighter credit, much weaker confidence, deteriorating corporate financial positions, lower inflows of foreign direct investments and the downturn in construction” (p. 157).

Poland had been a credit disruption—regular in the previous half-year. The fact that supportive measures were being taken and that there was a major tightening of lending conditions suggests significant financial distress. Moreover, the OECD implied that tight credit was one of the factors reducing investment and growth. At the same time, financial conditions did not appear central to the OECD’s forecast and did not feature prominently in the entry. Also, the OECD said that banks had not been directly affected by the crisis. These considerations suggest that this episode fits the criteria of a minor crisis—regular.

**Hungary, 2010:1.** The introduction to the entry said: “The recovery should gather pace in 2011 as the headwinds from ongoing weakness in the labour market and tight credit conditions ease” (p. 142). The fact that tight credit conditions were expected to ease in the future suggests that they were problematic in the current period. This interpretation is consistent with the OECD’s statement that “[p]rivate consumption growth is likely to be held back in the near term by the high unemployment rate, the ongoing need for households to repair their balance sheets and still tight credit conditions” (p. 142). Likewise, it is consistent with the forecast for investment, which was: “From the second half of the year, private investment should begin to pick up on the back of the strength in external demand and the gradual improvement of credit conditions in the banking sector” (p. 143).

In discussing the risks to the forecast, the OECD wrote: “There are significant uncertainties for both trading partner growth and financial conditions, with risks for either a better or worse outlook for Hungary” (p. 144).

Hungary had been a minor crisis—minus in the previous half-year. Though the forecasts were for improvement in credit conditions, current conditions seemed somewhat worse in the current period. There were repeated references to “still tight credit conditions,” and the OECD suggested that these conditions were holding back both consumer spending and investment. For this reason, we felt that a slightly higher level of distress is appropriate. At the same time, current conditions did not appear severe, and the risks from the financial sector were seen as both positive and negative. Thus, we classify this episode as a minor crisis—regular.

**Hungary, 2012:2.** This entry does not paint a very clear picture of the health of Hungary’s financial system. The most direct comments were the citing of “large tax burdens on banks weighing on lending” as a factor “expected to restrain the recovery in domestic demand” (p. 135), and, relatedly, a reference to the extension of “a large and distortive bank crisis tax” (p. 134). Elsewhere, the OECD did not clearly distinguish between problems with sovereign

borrowing and in private credit availability. In the opening summary, it said, “The rapid conclusion of an agreement with multilateral organisations, which is assumed in the projections, is critical to growth, as it would lower the cost of funding, improve investor confidence and support domestic lending” (p. 133). And later, it referred to “still elevated risk premiums” (p. 133).

On the one hand, it is fairly clear that this episode does not reach the moderate crisis range: the OECD did not describe problems in credit supply as central to the performance of the economy, or use terms like “crisis” or “credit crunch.” On the other, it is also fairly clear that the financial distress was above the credit disruption range: the issues with the financial system were more than modest, narrow, or mentioned in passing, and the OECD was clear that they were affecting the overall performance of the economy. A comparison with Hungary in 2011:2 2012:1, both of which we place in the minor crisis–plus category, points to a similar conclusion. The language here is similar to that in those two episodes but not quite as explicit about problems in financial intermediation, and the current entry does not say that the situation had either improved or worsened. This points to little change or a small improvement. We therefore classify this episode as a minor crisis–regular.

**Italy, 2013:2.** The discussion of financial conditions was quite cryptic in the entry for this half-year, making classification difficult. Financial distress was not mentioned in the introduction to the entry. The discussion of lending conditions suggested continuing problems, however. The OECD wrote: “Bank lending has continued to shrink, partly due to reduced demand for credit. However, interest rates charged to borrowers are significantly higher than in some other euro area countries, suggesting that supply of loans is also a constraint, restricting investment and perhaps consumption” (p. 115). In discussing the risks to the outlook, the OECD said: “Finance constraints are a risk, but investment might be stronger” (p. 117). It also included as a downside risk the fact that “[t]he projected recovery could be undermined if the health of the banking system restricts credit and interrupts the normal investment cycle” (p. 117).

Overall, the OECD described obvious financial distress, but did not provide a lot of details. The OECD did say that restriction of loan supply was impacting investment and consumption, which is a hallmark of substantial distress. At the same time, the discussion of financial troubles was not included in the introduction or given a central role in the forecast. On an absolute scale this might be slightly lower than a minor crisis–regular (perhaps a minor crisis–minus). But, Italy was a moderate crisis in the previous half-year, and the descriptions of improvement were not large enough to warrant such a large reduction in level of distress. So, we settled on a minor crisis–regular.

**Netherlands, 2013:2.** Problems in the financial system figured prominently in the introductory paragraphs. The OECD wrote: “The Netherlands is in a protracted recession mainly owing to private and public sector deleveraging. Declining real house prices, falling real incomes and growing unemployment are holding back household consumption while overstretched balance sheets of banks and heightened risk have led to tight credit conditions” (p. 171). It also said: “Banking sector recapitalisation is needed to underpin financial stability and ease credit constraints” (p. 171).

In the discussion of current conditions, the OECD said: “Poor growth prospects and tight credit conditions have held back investment” (p. 171). The OECD was forecasting that “[t]he economy should edge out of recession” (p. 172). However, this was predicated on the expectation that “[b]usiness investment is expected to turn around assuming that credit constraints are relaxed following the continued and necessary efforts to strengthen banks’ capital buffers” (pp. 172–173). In assessing the risks to the forecast, the OECD wrote: “Risks are mainly skewed

to the downside. ... Negative results of the asset quality review by the European Central Bank could impinge on banks' access to funding in wholesale markets" (p. 173).

The Netherlands had been a minor crisis–minus in the previous half-year. The fact that credit problems were mentioned twice in the introduction, whereas they were not mentioned at all in the 2013:1 introduction, suggests that conditions had clearly worsened somewhat. In absolute terms, there were multiple references to tight credit conditions and credit constraints, tight credit was seen as holding back investment, and the government was taking actions to help the financial system. All of this points to significant financial distress. At the same time, much of the expected impact was described as a risk, rather than an actuality. For all these reasons, we scale the half-year as a minor crisis–regular. A useful comparison is Ireland (2013:2), which we scale as a minor crisis–plus and where the description of financial difficulties was slightly worse.

**Portugal, 2013:2.** There was no discussion of financial troubles in the introductory paragraphs. But, financial conditions did figure prominently in the discussion of current conditions and the outlook. The OECD wrote: "Non-performing loans are increasing and credit continues to contract" (p. 183). Under the heading, "Restoration of credit supply remains crucial" (p. 184), the OECD wrote: "Deleveraging is underway, while at the same time banks are reinforcing their capital buffers. However, credit continues to contract and non-performing loans, particularly in the corporate sector, keep increasing" (p. 184). Finally, in discussing the risks to the outlook, the entry said: "On the upside, a faster restoration of credit supply would allow a more rapid recovery" (p. 185).

Portugal had been a minor crisis–plus in the previous half-year. The entry suggests at least a slight improvement, which is consistent with scaling this as a minor crisis–regular. In absolute terms, there was clearly significant financial distress. We felt the figure heading "[r]estoration of credit supply remains crucial" was particularly telling. But, there was not much discussion of the consequences of financial problems for consumption and investment. This again is consistent with a minor crisis–regular.

**Greece, 2014:1.** The introduction to the entry included the very strong statement that "[t]he economic recovery also hinges on better access to credit, underscoring the importance of implementing plans to restructure bank balance sheets" (p. 138). A graph on p. 31 showed that bank lending rates were roughly 4 percentage points higher in Greece than in Germany. The discussion of the fiscal situation was interesting from the perspective of financial distress because it suggested that "the total impact of the support to financial institutions ... is worth around 10½ percent of GDP" (p. 138). This discussion also suggested, "Encouraging stronger growth also requires further structural reforms to boost competition, and better access to credit through restructuring bank balance sheets" (p. 139).

In discussing the forecast, the OECD wrote: "Credit conditions are also expected to improve through bank recapitalisation and balance-sheet strengthening. Liquidity would be supported further by the repayment of government arrears" (p. 139). The OECD saw both negative and positive risks to the forecast coming through financial conditions. It said: "The banking system still faces risks, including a high level of non-performing loans, and credit conditions may prove tighter than assumed. On the other hand, liquidity may increase more than expected following the recapitalisation of the main banks and Greece's confidence-boosting return to markets" (p. 140).

Overall, conditions were somewhat improved (Greece was a minor crisis–plus in 2013:2). At the same time, there was the one strong statement that better access to credit was essential for recovery. Actual lending rate spreads remained high. The government had clearly taken

extreme actions in the past, but the OECD seemed to feel they were paying dividends. Also it saw both positive and negative risks working through the financial system. Based on these considerations, a minor crisis–regular is the appropriate classification.

**Spain, 2014:1.** Financial conditions and developments were not discussed in the introduction or in the paragraphs on current conditions. However, a graph showing relatively high loan rates in Spain appeared under the heading: “Credit conditions remain tight” (p. 181). In discussing the outlook, the OECD wrote: “The recovery is expected to strengthen gradually in 2014-2015 with domestic demand making a rising contributing to growth. However, budgetary consolidation, tight lending conditions and private deleveraging will continue to restrain the recovery” (p. 182). It added that “[e]fforts to improve credit supply via banks and other financing sources should remain a priority” (p. 183). While the OECD viewed the risks to the forecast as balanced, it said: “Upside risks include a faster normalisation of financing conditions, which would boost investment further” (p. 183).

Spain had been a moderate crisis–minus in the previous half-year. The entry for 2014:1 did not highlight obvious improvement, which made us hesitant to reduce the classification dramatically. But, the discussion of financial conditions did not sound particularly dire either. Lending conditions were clearly not normal and quite tight, and they were identified as a factor restraining recovery. Overall, the descriptions of relative and absolute levels of financial distress fit our definition of a minor crisis–regular.

**Greece, 2014:2.** In the introduction to the entry, the OECD wrote: “Rapid restructuring of bank balance sheets and maintaining the momentum of structural reforms are key to sustained growth” (p. 124). In discussing current conditions, it indicated that “[m]aintaining the momentum of structural reforms, especially in the areas of public administration and product markets, and better access to credit are essential for economic growth” (p. 125).

The overall outlook was that “[g]rowth will gradually firm up” (p. 125). The OECD believed: “Improved credit conditions, supported by bank recapitalisation and balance-sheet restructuring, will boost domestic demand” (p. 125). In discussing the risks to this outlook, the OECD saw both negative and positive possibilities. It wrote: “Slow progress in bank balance-sheet restructuring could also hold back the recovery, given the high level of non-performing loans. ... On the other hand, the banking sector may provide more credit than expected following recapitalisation” (p. 126).

Greece was a minor crisis–regular in 2014:1. Though the overall forecast in 2014:2 was slightly more upbeat, the description of financial conditions was roughly similar to the previous half-year. Credit was still quite tight and very important to the outlook. For both these reasons, we scale this half-year as a minor crisis–regular as well. Regarding comparisons, conditions in Greece were described in noticeably worse terms than those in Portugal and Italy in 2014:2, both of which we scale as a minor crisis–minus.

**Hungary, 2015:1.** The introduction to the entry stated: “Planned measures to improve the business environment for banks and foster a clean-up of their portfolios should be fully implemented” (p. 120). It also included the statement: “The reforms outlined above in banking and product markets will be key to broad-based private investment growth” (p. 120).

In the heading of a figure showing lending growth, the OECD wrote: “Credit conditions for firms have improved modestly” (p. 120). It also said: “Compensation to households paid by banks (for past unilateral interest rate hikes and differences between buying and selling exchange rates), mandated by law, is spurring private consumption” (p. 121). Interestingly, the

OECD did not say that this program was harming bank profits (as it had in the previous half-year).

In discussing policy, the OECD wrote: “the authorities extended again the Funding for Growth Scheme, which provides banks with free central bank refinancing for lending to SMEs, by another 1.5% of GDP, and added a new feature of limited risk-sharing with the central bank for losses on loans” (p. 121). It added: “The authorities have committed to a gradual reduction of the levy on financial institutions’ balance sheets, starting in 2016, and more broadly to providing a better operating environment for the sector. A central bank-owned agency is also to start buying bad commercial real estate loans and properties from banks later this year (up to 1% of GDP), thus speeding up the process of strengthening banks’ portfolios. Implementation of these steps should help unclog lending” (p. 122). Indeed, in the outlook section, the OECD cited financial recovery as a positive risk to the forecast: “A better operating environment for banks could result in faster credit growth than assumed, increasing domestic demand growth” (p. 122).

Hungary was a minor crisis–plus in 2014:2. Financial conditions sound marginally better in 2015:1, but still tenuous. Many of the actions to strengthen bank balance sheets and increase the supply of credit were planned or in progress, rather than accomplished. The statement that the actions “should help unclog lending” certainly suggests continued financial market troubles. At the same time, there were relatively few mentions of adverse effects of financial distress for consumption or investment. Taken together, these considerations suggest that minor crisis–regular is the appropriate classification.

**Greece, 2016:2.** The introduction to the entry said: “The high level of non-performing loans undermines credit growth, holding back investment. To deal with this, the authorities should implement already legislated incentives and performance targets for banks to monitor their progress in reducing bad debt” (p. 162). In discussing that the economy was recovering slowly, the OECD wrote: “Financing conditions are still weak with the high level of non-performing loans limiting credit, despite the gradual but steady easing of the capital controls” (p. 163). It concluded that “[f]ull and swift implementation of structural reforms, faster improvement in the liquidity and financing conditions of the banking system, and some form of further debt relief would spur confidence and the recovery” (p. 164).

Greece was a minor crisis–plus in the previous half-year. The description of financing conditions in this half-year was noticeably less bad. We debated whether there had been one or two steps of improvement. We ultimately went with one step (and so classified this entry as a minor crisis–regular). There were still obvious problems in the financial system and they were seen as holding back investment. Conditions were slightly worse than those in Italy and Portugal in 2016:2 (both a minor crisis–minus).

### **Minor crisis–plus:**

**Mexico, 1995:2.** This issue of the *Economic Outlook* had several references to the Mexican “crisis,” but all of those focused on the exchange rate. The financial sector was not explicitly mentioned in the introductory paragraph. There was a later paragraph on the financial sector that read in its entirety (p. 91):

The banking sector has made substantial use of the assistance measures announced early in 1995. By September, the 17 banks that benefited from the dollar liquidity mechanism from the central bank were able to roll over most of their short-term foreign debt and could undertake new borrowing. Three of the five banks that

benefited from the temporary capitalisation programme (PROCAPTE) were still in the scheme in November while the others had repaid the amounts borrowed. To facilitate the injection of fresh capital the agency dealing with bank insolvencies (FOBAPROA) had taken over a portion of the loan portfolio of five banks. In parallel, efforts to attract foreign equity capital to the banking sector have met with some success.

In the discussion of risks to the forecast, the OECD wrote: “should financial and exchange markets remain volatile for a significant period, with persistent pressure against the peso and high interest rates, this would do some damage to prospects by weakening banks and businesses and fuelling inflationary expectations” (p. 93).

Mexico had been a zero (no financial distress) in the previous half-year. It is clear from the descriptions that the banking sector was in significant distress. There were multiple bank insolvencies, capital injections, and other rescue operations. Further market volatility was seen as potentially damaging to banks and the outlook. At the same time, the entry did not draw a clear link between financial developments and investment or consumption, and an impact on the overall outlook was viewed as just a risk, not a reality. We felt that the descriptions fit best with our criteria for a minor crisis–plus. An excellent comparison is Norway in 1993:1, which was also a minor crisis–plus.

**Korea, 2001:1.** In the introduction to the entry, the OECD wrote: “Achieving an early recovery requires effectively addressing the problems in the corporate and financial sectors, while limiting direct government intervention and avoiding ‘moral hazard’” (p. 103). It also said that “the effectiveness of monetary policy is limited by financial-sector problems” (p. 103). The Korean economy had experienced a sharp downturn at the end of 2000. The OECD said that “[i]n addition to falling overseas demand, the deterioration in the terms of trade and problems in restructuring the corporate and financial sectors were the key factors responsible for the downturn” (p. 103). It also expressly said that “[b]anks, burdened by non-performing loans, became more cautious in their lending behavior” (p. 103).

The government continued to take numerous actions to try to aid the financial system. The OECD said: “The government has responded to these challenges with a bond-recycling scheme run by Korea Development Bank .... In addition, the authorities are implementing the second-round financial-sector restructuring plan announced last fall. Forty trillion won of new public money is being used to re-capitalise weak banks and address problems in other areas, such as life insurance, bringing total net expenditures for financial restructuring since 1998 to 134 trillion won, more than a quarter of GDP” (pp. 103–104). It also suggested that the monetary transmission mechanism was perhaps weak, saying: “Monetary policy has also been aimed at supporting growth, with the central bank cutting the overnight call rate by 25 basis points to 5 per cent in February 2001, but the impact of lower rates is limited by current financial-market conditions” (p. 104). The OECD indicated that “[p]otential difficulties in the restructuring of the corporate sector, with negative repercussions on the financial sector, appear to be the major domestic risk to an early economic recovery” (p. 104).

Korea had been a minor crisis–regular in 2000:2. Conditions appeared to be slightly worse in 2001:1. In particular, banks had become more cautious in their lending. In absolute terms, it is clear that the financial system was still quite troubled. Korean authorities continued to take extreme actions to address problems in the financial system. There were also two references to monetary policy being less effective because of problems in the financial sector. Both the relative and absolute descriptions suggest that a minor crisis–plus is the appropriate classification.

**Korea, 2004:1.** The introduction to the entry suggested that a top policy priority was “addressing the problems in the non-bank financial sector” (p. 93). The entry went on to explain (p. 93):

Private consumption has also been negatively affected by the problems in the credit card sector. With delinquency rates rising from 5 to 14 per cent since 2000, the credit card companies face serious liquidity and solvency problems, resulting in a one-third decline in their lending to households since mid-2002. To ease their problems, the government organised collective financial support for the credit card companies from financial institutions. It has rescued the largest company, fearing that its collapse would lead to systemic risks. In addition, the investment trust companies have also faced liquidity problems, primarily due to adverse developments in the corporate sector. Despite the weaknesses in the non-bank financial sector, the banks remain relatively healthy.

Korea had been a minor crisis–minus in the previous half-year. The main problems were in the credit card sector. These were described as leading to a cutback in credit to households, and as having a negative impact on consumption. There was also a discussion of extensive government intervention because it feared systemic risks. It was clear that this was some sort of a minor crisis—credit problems were significant in a confined sector of the financial system, they were mattering for consumption, but they were not central to the outlook. Conditions were clearly worse than in the previous half-year, so this entry should be classified somewhat higher. We opted to increase the severity by two steps (to a minor crisis–plus) because the problems were highlighted in the introduction, there were also problems in the investment trust companies, and there was fear of systemic risk.

**Korea, 2008:2.** The introduction to the entry stated: “Korea has been hard-hit by the global financial crisis,” and “[m]onetary policy should focus on supporting activity and financial-market stability until conditions normalise” (p. 153). The entry went on to say (p. 154):

Since the last episode of sharp won depreciation during the 1997 crisis, the financial strength of the Korean banking and corporate sector has improved greatly. The current decline is largely explained by net capital outflows from the Korean stock market and the emergence of a current account deficit – of around 1% of GDP – for the first time in a decade. In addition, banks, which rely on overseas markets for about 10% of their funding, are having trouble borrowing in foreign currencies. Financial conditions in Korea have tightened considerably, with corporate bond rates rising by 80 basis points between mid-September and late October, while equity prices have fallen by 25%.

The OECD described several actions that the government was taking to aid the financial system. It said: “Korean authorities will make available an additional \$30 billion of dollar liquidity, using foreign exchange reserves, to domestic banks while guaranteeing their external debt up to \$100 billion” (pp. 154–155). Nevertheless, it saw as a risk the possibility that “continued world financial turmoil may further worsen the short-term outlook by undermining the health of Korean financial institutions, resulting in a credit crunch” (p. 155).

Korea had no financial distress in the previous half-year. We felt this entry fit the criteria for a minor crisis–plus. There were clearly significant problems in the financial system, but they were not yet central to the outlook. Indeed, the OECD emphasized the strength of the financial system. At the same time, they were taking aggressive action and the OECD felt there was a risk of a credit crunch.

**Hungary, 2011:2.** The first sentence of the OECD's opening summary was, "A mild recession is projected in 2012, driven by a fall in business and consumer sentiment, tight bank lending and financial conditions, ongoing deleveraging of the corporate and household sectors and major fiscal consolidation" (p. 136). However, a discussion under the heading, "Growth has been subdued," made no mention of problems in credit supply (p. 136), while a later discussion of the reasons "[t]he economy is facing a mild recession" listed "tight financial conditions," but did not explicitly cite disruptions of financial intermediation (p. 137). In addition, the OECD warned repeatedly that a recent government measure risked harming the financial sector to the point of causing significant problems in credit supply. It said, "A unilateral decision to allow borrowers to repay foreign currency loans at an off-market exchange rate ... may precipitate a credit crunch" (p. 136); "Facilitating the deleveraging of households is key to restore growth, but this should not be done by undermining the stability of the banking sector" (p. 138); and, in the discussion of risks to the outlook, "Recent steps to impose a new financial burden on banks could lead to a further tightening of credit conditions" (p. 138).

This description falls just short of our criteria for a moderate crisis. The prominence of restricted bank lending in the opening sentence certainly suggests that problems in the financial sector were central to the performance of the economy; the body of the entry, however, did not stress credit supply as currently having large effects or as being central to the near-term outlook. Similarly, the OECD did not ever use the word "crisis." But the opening sentence and the warnings about potentially more serious problems point to significant problems in the financial system that were having a substantial effect on the overall performance of the economy, and to a risk of the situation becoming worse. We therefore classify this episode at the upper end of the minor crisis range—that is, as a minor crisis–plus.

**Hungary, 2012:1.** The OECD did not mention problems in the financial system in its opening summary. However, the body of the entry cited "credit conditions have become tighter" as one of the reasons "[t]he economy is contracting" (p. 119). The OECD also reported: "To offset the withdrawal of foreign funding from the banking sector and support lending, the central bank has launched a two-year collateralised lending facility, but take-up has so far been low" (p. 120).

On the one hand, financial problems were not prominent in the entry. On the other, the few references to them point to significant problems. In 2011:2, we code Hungary as a minor crisis–plus based on the combination of significant current financial distress and a risk of substantial further deterioration. Here, the OECD said that credit availability had worsened but did not cite risks, suggesting on net little change. Similarly, the reference to a withdrawal of foreign funding from banks, and the fact that the government took action in response to this development, is suggestive of severe problems. But this is tempered by the lack of prominence of discussions of financial distress elsewhere in the entry and the fact that the government action appears relatively modest. On net, the best point estimate appears to be that there was neither any improvement nor any deterioration from the previous episode; equivalently, it is that the problems were significant but not quite into the moderate crisis range. We therefore categorize this episode as a minor crisis–plus.

**Hungary, 2013:1.** In its opening summary, the OECD said: "Restoring financial intermediation, which is essential for investment and growth, requires avoiding ever-greening of bad loans through adequate provisioning and better targeting of debt restructuring programmes" (p. 127); it also called for "phasing out distortive taxes on banks" (p. 127). The body of the entry reported: "the authorities have recently announced a Funding for Growth Scheme, whereby they will lend to commercial banks at 0%, first, to finance SME forint loans and, second, to convert outstanding SME foreign currency loans into forints (each part being worth up to 0.9% of GDP). ... [T]hese steps could help to revive bank lending" (p. 128). In

addition, in a comment that was not clearly about the health of financial intermediaries, the OECD warned in its concluding discussion of risks to the outlook: “A sharp depreciation of the forint could have destabilising effects given the still high foreign currency indebtedness of the private and public sectors” (p. 129).

The comments about the need to restore financial intermediation and revive bank lending point to major disruptions of financial intermediation—perhaps into the moderate crisis range. But the fact that the OECD did not cite problems in credit supply in discussing the recent performance of the economy and its projected path argues against that view. Nonetheless, the OECD’s language here is stronger and clearer than in 2012:2, which we code as a minor crisis–regular. Another useful comparison is with Hungary in 2011:2 and in 2012:1, both of which we place in the minor crisis–plus category. The OECD’s language here about problems with the health of the financial system is slightly stronger than in those episodes, but in those cases the OECD was more explicit that limited credit supply was affecting the overall performance of the economy. We conclude that this episode also belongs in the minor crisis–plus category.

**Ireland, 2013:1.** Financial market problems were mentioned in the introduction to the entry. The OECD wrote: “Financial market confidence has improved but the bank lending environment for firms and households remains adverse. It is essential to make faster progress in dealing with non-performing loans” (p. 132). In discussing the current state of the recovery, it said: “High debt burdens and financial distress continue to restrain the spending of households and firms” (p. 132). There was an extended discussion of financial market developments, but the OECD was particularly interested in what was happening in the sovereign debt market. It did, however, then bring the discussion back to private financing, saying: “Banks have made progress in regaining access to the wholesale funding market” (p.133).

In discussing the outlook for the economy, the section heading was: “The credit channel remains impaired” (p. 133). The OECD wrote: “The improvement in financial market conditions has not improved the bank lending environment for households and SMEs. Little progress has been made in dealing with non-performing loans and mortgage arrears continue to increase, although at a slower pace. Faster progress on both fronts is essential to strengthen credit growth, domestic demand and job creation” (p. 133). It also said: “Constrained by the weak global recovery, fiscal contraction and tight credit conditions, GDP growth is projected to be 1% in 2013 and close to 2% in 2014” (p. 133). A faster than expected improvement in financial conditions was seen as possible positive risk to the outlook. The OECD wrote: “a stronger translation of the improved financial market confidence into better lending conditions and consumer sentiment would contribute to a stronger recovery than projected” (p. 134).

Overall, the entry suggests that there was significant financial distress in Ireland in 2013:1. The OECD described minor improvement, so we could have scored this half-year slightly lower than the previous one (which was a minor crisis–plus). However, in absolute terms, it is clear that there was still substantial financial distress. Financial conditions were described as “adverse” and the credit channel as “impaired.” Moreover, credit conditions were seen as important (though perhaps not central) to the outlook. For all these reasons, the episode most closely fits our definition of a minor crisis–plus.

**Portugal, 2013:1.** Financial distress was not mentioned in the opening paragraphs. In describing the current situation, the OECD said: “A large fiscal consolidation effort and weak, but improving, financial conditions have cut deeply into economic growth” (p. 154), which suggests that financial problems were seen as significant and still affecting the economy. This and other statements, however, suggested an improvement in financial conditions. For example, the OECD wrote: “Funding conditions for the government and Portuguese banks have improved

following the ECB's announcement of its conditional sovereign bond buying programme. Recapitalisation should help smooth deleveraging, allowing for a gradual improvement of credit supply, provided that non-performing loans do not increase further" p. 155). In discussing the risks to the outlook, the OECD mentioned the possibility of worsening sovereign and private financing conditions: "On the downside, further turbulence elsewhere in the euro area may lead to higher sovereign and bank borrowing costs" (p. 156). On the positive side, "a faster recovery of the banking system" (p. 156) was given as a possible source of faster growth.

In absolute terms, the financial system was clearly still very troubled, and those problems were seen as affecting the economy. This suggests that financial distress was still substantial. At the same time, there were frequent mentions of improvement. Portugal had been a moderate crisis-regular in 2012:2. We felt the balancing of these two factors suggested a reduction in distress of two steps, from a moderate crisis-regular to a minor crisis-plus.

**Spain, 2013:1.** Spain had been a moderate crisis-regular in 2012:2. An improvement in financial conditions was mentioned in the introductory paragraph: "Trading partner growth and cost competitiveness gains, along with improved financial conditions as interest rate spreads gradually go down, will help to spur a slow recovery in 2014" (p. 162). At the same time, in the discussion the current outlook, tight credit conditions were given as one of several reasons for low demand and slow growth: "Significant fiscal consolidation, tight credit conditions, private sector debt reduction and a slowdown in Europe have taken a significant toll on demand" (p. 162).

The heading of the paragraph on the financial sector was: "Financial conditions have improved but remain tight" (p. 163). The OECD went on to say (p. 163):

The banking system has raised significant new capital, including approximately EUR 40 billion (3.8% of GDP) from public sources, and funding conditions for the banks have improved. Spanish banks recommenced wholesale debt issuance in January, non-resident funding withdrawals have ceased and reliance on Euro-system refinancing has dropped significantly since the August 2012 peak. Lending conditions have stabilised, but at a much more restrictive post-crisis level. Pressure to maintain banks' operational profits in a weak economy will likely limit the pass through of better bank financing conditions to borrowers. Nevertheless, there has been a small drop in interest rates on loans to SMEs from high levels.

Finally, in discussing risks, the OECD mentioned both positive and negative risks associated with the financial system: "On the upside, the improvement in financial conditions in Europe and Spain, as well as ongoing cost-competitiveness gains, may spur a stronger expansion than projected. On the downside, the risk of contagion to Spanish government borrowing costs and private sector credit conditions from adverse events in Europe remains high" (p. 164).

Overall, there is evidence of definite improvement, which argues for a reduction in the classification from the previous half-year. At the same time, it is clear that financial conditions were far from normal and were seen as one factor driving the restrained outlook. Both of these suggest a classification of minor crisis-plus is appropriate. In terms of comparison, it sounds a little worse than Portugal (2013:1), but the discussion of improvement is more concrete. Thus, we are comfortable scoring them similarly.

**Greece, 2013:2.** Financial distress was discussed in the introduction to the entry. The OECD wrote: "the required fiscal consolidation and weak bank balance sheets will restrain domestic demand," and, "Bank balance sheets need to be restructured to allow credit growth to

resume” (p. 147). In discussing current conditions, it also said: “On the other hand, substantial fiscal contraction, shrinking real incomes and limited access to credit held back domestic demand” (p. 147). The OECD forecasted: “Better access to credit as the banking system recovers and balance sheets are cleaned up should strengthen domestic demand” (p. 149). It saw both positive and negative risks to this forecast working through credit conditions: “Tight credit conditions may pose additional risks to the outlook. On the other hand, liquidity may increase more than assumed due to the recapitalisation of the main banks and repayment of government arrears” (p. 149).

Overall, the language was quite similar to that in the previous half-year (which we scaled as a moderate crisis–minus). But, there was some indication of improvement, and conditions were described in slightly less worrisome terms. This led us to scale this half-year one step lower (a minor crisis–plus). In absolute terms, it is clear that the OECD saw the financial system as quite troubled and felt that financial problems were having an impact on the economy. But, financial developments were just one of a number of things holding back recovery.

**Hungary, 2013:2.** In its opening summary, the OECD said, “Halting the persistent contraction in loans and fostering capital reallocation to more efficient uses requires tackling supply-side credit constraints by allowing better bank profitability and by cleaning up bank balance sheets” (p. 150). The body of the entry reported, “tight credit, significant uncertainty and some special taxes imposed in recent years continue to hamper private investment” (p. 150). It also said, “The authorities have also recently decided to substantially increase the Funding for Growth Scheme, which provides banks with central bank refinancing at zero interest rate for lending to SMEs” (pp. 150–151). Finally, the concluding paragraph on risks to the outlook commented, “On the upside, the Funding for Growth Scheme could induce a significant improvement in credit conditions” (p. 152).

As with Hungary in 2011:2, 2012:1, and 2013:1, this episode appears to fall just short of the moderate crisis range. The OECD flagged significant problems with credit supply in its opening summary; cited limited credit availability as an important factor slowing investment; and described a new government intervention. However, it never used extremely strong language, and the new program was not major. Relative to 2013:1, here the OECD’s language about problems with the health of the financial sector is not as strong, but it was explicit that the problems were affecting the overall performance of the economy. We therefore categorize this episode as a minor crisis–plus.

**Ireland, 2013:2.** The introduction to the entry said: “Further efforts are also needed to restore the banking system to health and repair the bank credit channel” (p. 156)—suggesting that credit supply problems continued. There was substantial discussion of nonperforming loans. For example, the OECD wrote: “Reducing non-performing loans is a priority” (p. 157). It also said: “Rising non-performing loans are weakening banks and SMEs continue to experience difficulties in accessing credit. Lending conditions remain among the tightest in Europe. The strategy set out by the Central Bank of Ireland, including quarterly quantitative targets for dealing with mortgage arrears, should be fully implemented to foster on-going balance sheet adjustments and improve credit supply” (pp. 157–158). In discussing the risks to the outlook, the OECD sounded a similar note, saying: “contagion from adverse financial events elsewhere and a slow resolution of non-performing loans all pose downside risks” (p. 158).

Ireland was a minor crisis–plus in the previous half-year. We saw very little discussion of improvement, and so felt comfortable giving this entry the same classification. On an absolute scale, the extended discussion of nonperforming loans and the difficulty of firms getting credit suggested substantial problems in the financial system. However, they were not described in

dire terms or as central to the outlook, which is consistent with scaling conditions as some form of a minor, rather than of a moderate, crisis.

**Hungary, 2014:1.** The introduction said: “The moderate recovery is projected to continue, based on robust export growth and a gradual acceleration of private investment. The latter will nonetheless continue to be hampered by an uncertain business environment related to controversial domestic policies and tight credit conditions, which have been alleviated only partly by the central bank’s Funding for Growth Scheme and by its low policy rate” (p. 141). It also said: “Restoring credit growth on a more permanent basis will require a better operating environment for banks and further cleaning up of their balance sheets” (p. 141).

The heading of the paragraph on financial conditions was: “Credit remains tight” (p. 142). The OECD wrote: “After strong take-up in the summer of 2013, lending under the Funding for Growth Scheme (which provides banks with free central bank refinancing for lending to SMEs at a maximum rate of 2.5%) has declined markedly” (p. 142).

Though the OECD forecast a continued modest recovery, it noted risks related to the financial sector. It said: “Hungary remains vulnerable to turbulence in global financial markets. Further forint depreciation would make servicing and rolling over public and private debts harder, as a significant share is denominated in foreign currency or foreign-held. ... On the upside, a better operating environment for private firms, notably banks, would spur investment and growth” (p. 143).

Hungary was a minor crisis–plus in 2013:2. Many of the descriptions were the same as in the previous issue and there were only a few slight indications of improvement. Also, there were repeated references to tight credit conditions despite both a lower central bank rate and a lending for growth scheme, and tight credit conditions were seen as impacting investment. Both the relative and absolute descriptions are consistent with a minor crisis–plus.

**Hungary, 2014:2.** The introduction to the entry said: “Growth is projected to slow down as tight credit conditions and an uncertain business environment limit investment” (p. 127). It also added: “A better operating environment for banks would also reinforce growth potential through greater credit availability” (p. 127).

There was a lengthy discussion of policy actions affecting credit availability. The OECD wrote (p. 128):

Lending under the Funding for Growth Scheme (which provides banks with free central bank refinancing for lending to SMEs), extended by the authorities until end-2015, has gradually gathered pace, but market-based corporate lending remains tight. Under legislation passed in the summer, banks must compensate household borrowers for past unilateral interest rate hikes and differences between buying and selling exchange rates. This will likely spur private consumption in 2015, but risks further credit contraction by reducing bank profits. Foreign-currency loans are to be converted into domestic currency, which should enhance financial stability, but will also likely impose further costs on banks.

In discussing the risks to the outlook, the OECD added: “The macroeconomic effects of the conversion of foreign-currency loans into domestic currency are hard to judge, especially as regards the response of credit supply, and hence pose a risk to the projections” (p. 129).

Hungary was a minor crisis–plus in 2014:1. We see little sign of improvement. There were multiple references to tight credit conditions and discussion that they were affecting investment. Some of the policy moves involved actions that reduced banks' profits and so raised the cost of credit intermediation. We believe the resulting impact on credit supply is appropriately considered a form of financial distress. Overall, we felt there was little change from the previous half-year and so score this as another minor crisis–plus.

**Greece, 2016:1.** The entry was striking in how little it said about financial conditions. The introduction to the entry included the one statement: “Dealing with the large stock of non-performing loans in banks is a priority to restore the availability of credit for investment” (p. 142). Then, in discussing current conditions, the OECD wrote: “The financing programme agreed with the European Stability Mechanism in August 2015 has reduced uncertainty and, together with the gradual softening of capital controls, boosted confidence and growth. Investment rebounded in the last quarter of 2015” (p. 142). It added: “Despite the recapitalisation of banks last December credit conditions are still sluggish due to large non-performing loans” (p. 143). There was nothing about credit in the outlook or risks paragraphs.

Greece had been a moderate crisis–regular in 2015:2. The language around credit supply this time was dramatically less severe. The statement that dealing with NPLs was needed to restore the availability of credit certainly suggests significant financial problems remained, and the OECD did draw a link to investment. There was also the description of a large bank recapitalization at the end of 2015. But, these descriptions do not rise to the level of a moderate crisis of any sort. There was no sense of “crisis,” and credit supply conditions were not obviously central to the outlook. We therefore classify this episode at the high end of the minor crisis range (a minor crisis–plus).

## **MODERATE CRISES**

### **Moderate crisis–minus:**

**Mexico, 1996:1.** Financial conditions were essentially not mentioned until the third page of the entry. However, they were then mentioned in detail. For example, the OECD wrote (p. 118):

The banking sector remains under strain and this may slow the recovery. Restructuring is under way: by the end of 1995, eleven banks, holding more than 70 per cent of the banking system's assets, had been recapitalised. With support from the various schemes put in place the system was able to overcome its immediate liquidity difficulties. The level of past-due loans increased quickly again in October and November with the hike in interest rates. This deterioration, however, seems to have stopped around year-end. Use of the various debt restructuring programmes also contributed to improving the quality of bank portfolios. The fiscal cost of the government support to banks has been officially estimated at around 5 per cent of 1995 GDP, to be spread over many years.

In addition to the actions to deal with the financial distress mentioned above, the OECD also said: “the ceiling on credit growth by development banks was announced – allowing for a significant expansion in favour of small- and medium-sized enterprises and for exporting firms” (p. 118).

In discussing the outlook, the OECD wrote: “Private agents’ uncertainties on future income and the high level of their indebtedness will restrain expenditure, while the fragility of the banking sector will limit lending” (p. 118). Financial market stability was also seen as an important risk to the outlook. The OECD said (p. 118):

Banks’ capacity to emerge from their current difficulties largely depends on financial market stability and the level of interest rates. The system’s fragility constitutes a major potential restraint on growth. However, should financial and exchange markets remain relatively stable over the projection period, a virtuous circle could start. More dynamic activity and lower interest rates would be rapidly reflected in an improved banking situation. This in turn could be translated into the higher lending necessary for stronger output and employment growth.

Mexico had been a minor crisis–plus in the previous half-year. Though financial conditions were not mentioned until partway through the entry, it is clear that conditions were quite severe: 70% of the financial system had to be recapitalized and fragility of the banking system was expected to limit lending. Financial fragility was also described as a “major potential restraint on growth.” We felt conditions were clearly worse than in 1995:2. At the same time, the term “crisis” was not used, and impacts of credit constraints on the economy were seen more as a risk than an actuality. For all these reasons, we classified this episode as a moderate crisis–minus.

**Korea, 1999:2.** The opening chapter of the volume suggested that the Korean financial sector was still fragile, saying: “In Korea, banks remain exposed to continuing losses on loans to large customers, and further capital injections may be required to strengthen banks’ balance sheets; government intervention may also be needed to deal with widespread insolvency in non-bank financial institutions” (p. 26). The introduction to the entry for Korea talked only relatively obliquely about financial problems. It said: “The expansion is likely to continue through 2000 and beyond, though probably at a more sustainable rate of around 6 per cent, while financial and corporate restructuring proceeds. The recent financial instability resulting from the collapse of a major conglomerate indicates the need for further restructuring efforts” (p. 95). There was also a reference to “the present financial fragility” (p. 95).

The OECD talked about government actions to help the financial sector, including “a credit guarantee programme to encourage lending to small enterprises” (p. 95). It also mentioned that “structural reforms, such as measures to rehabilitate the financial sector and to improve the corporate governance framework, have helped boost the confidence of both foreign and domestic investors” (p. 96). It then discussed recent troubles in financial markets, saying (p. 96):

the failure of one of the largest conglomerates in August has created instability in the financial market. Banks, with a total exposure estimated at W 23 trillion (5 per cent of their total credit), may face a significant rise in non-performing loans. Investment trust companies, with an even larger exposure of W 28 trillion, are a greater concern. These problems have contributed to a 20 per cent correction in the stock market between early July and the end of October and a 100 basis point rise in the yield on long-term corporate bonds. Government policies, including the launch of a fund to stabilise the bond market, eased concerns about the impact of the collapse of Daewoo on the real economy.

Finally, in terms of the outlook, the OECD wrote: “The main risk to a continued expansion is financial instability resulting from the on-going corporate restructuring process. A sharp

increase in non-performing loans could result in a credit crunch or capital outflows that would weaken the won and create inflationary pressures. Nevertheless, continued market-based restructuring of the corporate and financial sectors is the key to the long-term growth of the economy” (p. 97).

Korea had been a moderate crisis–regular in the previous half-year. There were indications of mild improvement (perhaps one or two steps). In absolute terms, the OECD seemed to describe quite severe problems in the financial system: large actions (with more likely needed), a possible credit crunch, and widespread insolvency in nonbank financial institutions. But, there was relatively little discussion of any direct linkage to lending, investment, or other real consequences. We debated both a moderate crisis–minus and a minor crisis–plus, but ultimately went with the more severe of the two. We felt a useful comparison was the Scandinavian crises of the early 1990s, where there were big financial problems and big actions, but somewhat less severe impact of the problems outside the financial sector.

**Greece, 2013:1.** Greece had been a moderate crisis–regular in both half-years of 2012. Conditions appear to have improved some, but not very much. The entry introduction stated that “[r]estoring credit growth is a pre-requisite for reviving economic activity” (p. 124), which suggests that credit problems had been and continued to be a factor hurting overall growth. The text elaborated that credit problems were one of three factors causing output to decline in 2012: “Output contracted further in 2012 due to shrinking real incomes, limited access to credit and fears at that time that Greece might leave the euro area” (p. 124). Later in the entry, the OECD wrote: “recovery of growth ... hinges upon restructuring in the banking sector, including through recapitalisation that is shortly to be completed” (p. 125). This suggests that banking problems were significant, but likely improving. In discussing the outlook and risks to the forecast, the entry said: “Positive growth is expected only in the course of 2014 as confidence strengthens, structural reforms boost competitiveness further and the banking system recovers” (p. 126), and “tight liquidity conditions pose a risk to business expansion” (p. 126).

Though not as clear as some other cases, conditions appear to fit our definition of a lower-level moderate crisis. Banking problems were clearly significant and central to the outlook. One argument for scaling this as a moderate crisis–minus is that financial distress was one of a few factors causing output to decline. The government was also taking significant actions (recapitalizing the financial system). A good comparison is Italy (2013:1), which is moderate crisis–regular. The description of conditions there was somewhat more severe.

**Spain, 2013:2.** Financial difficulties were mentioned in the introduction. The OECD wrote: “fiscal consolidation and tight credit conditions will remain a drag on growth” (p. 191). A paragraph under the heading, “The bank credit channel is impaired” (p. 191), discussed financial distress in some detail. It said: “Despite significant progress in restructuring and recapitalising the banking sector, credit is still falling. Credit demand is weak but interest rates for new loans to SMEs have risen substantially, suggesting that credit supply constraints are also at work. Banks faced with rising doubtful loans and further stress testing are maintaining tight credit standards. In addition, the gap between Spanish and euro area loan interest rates is continuing to widen” (pp. 191–192).

In discussing why the recovery would be weak, the OECD said: “Tight credit supply, falling house prices, household debt reduction and fiscal consolidation, will all restrain domestic demand” (p. 192). And, in discussing the risks to the outlook, possible financial developments were given as a negative risk. The OECD wrote: “Contagion from further financial turmoil in the euro area could push up Spain’s sovereign borrowing and bank funding costs, undermining growth” (p. 193).

Spain had been a minor crisis–plus in 2013:1. There is evidence that conditions had worsened some (interest rates had risen substantially, both in absolute terms and relative to others in the euro zone). In an absolute sense, financial distress was clearly significant. Problems were mentioned frequently and prominently in the entry, and the OECD specifically said that the “bank credit channel is impaired.” At the same time, there was little discussion of financial problems affecting consumption and investment. Thus, moderate crisis–minus appears to fit best both the relative and absolute conditions.

### **Moderate crisis–regular:**

**Korea, 1997:2.** The introduction to the volume singled out financial problems in Korea, stating: “Finally, in a number of other countries in East Asia, including in Korea, prospects will be negatively affected by the financial crisis, implying in some cases much lower growth rates in the short run than those experienced over the past decade” (p. xi). The introduction to the entry for Korea stated: “Financial instability in Korea since the summer of 1997 may delay the recovery of the economy from a period of sluggish growth of domestic demand. ... Firms are facing severe cash flow problems, which have resulted in a series of major bankruptcies and forced balance-sheet restructurings. These have had spillover effects on the financial system and have also had a negative impact on asset prices and sovereign risk” (p. 113). The discussion of current conditions said that “seven of the largest conglomerates have gone bankrupt thus far in 1997, resulting in large losses in the banking sector” (p. 114).

The entry included a long discussion of financial problems and the actions being taken to deal with them. The OECD wrote (pp. 114–115):

Weak corporate balance sheets and problems in the banking sector have depressed business confidence and delayed the economic recovery. Non-performing loans of commercial banks reached W 28.53 trillion at the end of September 1997 (slightly more than 8 per cent of total bank loans). Of this total W 18.91 trillion were substandard loans on which interest was in arrears for 6 months but are collateralised. Such problems have prompted a downgrading of the credit ratings of most Korean banks, including state-owned institutions, forcing them to pay a surprisingly large risk premium (given Korea’s economic fundamentals) on borrowings from overseas. In the event, the monetary authorities have focused on providing sufficient liquidity to prevent a secondary wave of bankruptcies. In August, the central bank provided W 2 trillion (\$2.1 billion) in special loans to a troubled commercial bank and several merchant banks facing similar problems. In addition, the government will establish an expanded W 10 trillion fund in late November to purchase non-performing debts. The government is planning to write off 50 per cent of all bad loans by the end of the year and hopes to resolve the bad loan problem fully within one to two years. Unsound financial institutions will also be identified and will be required to improve their situation via restructuring or face suspension and/or exit through voluntary or enforced mergers and acquisitions.

In discussing the risks to the projections, the OECD wrote: “There is a clear risk that financial problems, which have become more pronounced since the projections were finalized, will lead to weaker domestic demand, higher inflation and a stronger current external balance than projected” (p. 115).

Korea had been a credit disruption–plus in the previous half-year. The 1997:2 entry makes it clear that the Korean financial system was very troubled: high NPLs, elevated spreads, and

large losses. The government was taking a large number of aggressive actions. Interestingly, there were only vague mentions of the problems being large enough to impact the outlook. We felt the descriptions of problems were large enough that it met the criteria for a moderate crisis–regular. It was comparable (but slightly worse) than Japan in 1997:2, which we classify as a moderate crisis–minus.

**Korea, 1999:1.** The introduction to the entry described actions to help repair the financial system and the need to do more. It said: “A sustained expansion in 2000 and beyond will require a stronger recovery of private consumption and investment, which hinges on progress in restructuring the financial and corporate sectors. Large injections of public funds have strengthened the banking system and have helped to stabilise the decline in bank lending, although much remains to be done to rehabilitate the financial sector” (p. 96).

In describing the fallout from the crisis, the OECD wrote: “Output fell by almost 6 per cent in 1998 in the wake of the severe financial crisis as a credit crunch emerged and domestic demand contracted by 19 per cent” (p. 96). It also elaborated on the cost of the financial rescue, saying: “The cost of rehabilitating the banking sector has also boosted public outlays. In 1998, the government launched a W 64 trillion programme (14 per cent of GDP), financed by publicly guaranteed borrowing, to address the non-performing loan problem and to recapitalise viable banks, while closing weak banks and establishing a new independent regulatory authority” (p. 97). In discussing the risks to the outlook, the OECD wrote: “sustaining the recovery will depend largely on the growth of private consumption and investment. This requires successful restructuring of the financial sector, where there is a risk of a further rise in non-performing loans” (p. 98).

Korea had been a moderate crisis–plus in the previous half-year. In terms of changes, it is clear there was some improvement this half-year—the banking system had been strengthened. But, there was still much discussion of remaining problems (“much remains to be done to rehabilitate the financial sector”), and a further rise in NPLs was a risk. These problems were highlighted in both the introduction and the conclusion of the entry. The OECD made it clear that financial sector problems were holding back consumption and investment, and were central to the outlook. Because the financial system was not paralyzed, we were confident this was less than a major crisis of some sort. At the same time, it was clearly worse than episodes classified as a moderate crisis–minus. For these reasons, we scaled this episode as a moderate crisis–regular (one step down from the previous half-year).

**Hungary, 2009:1.** The introduction to the entry contained only one reference to financing conditions. It said: “Real GDP growth fell sharply in the fourth quarter of 2008 as the recession in the euro area curbed exports, adding to already weak domestic demand which reflected fiscal restraint and tight credit conditions” (p. 128). In the discussion of Hungary’s deep recession, the OECD wrote: “Domestic demand has been held back by tight fiscal policy and credit conditions since 2008” (p. 128). A table in the opening paragraph of the volume showed that Hungary had taken various measures to stabilize the domestic financial system, including a deposit insurance increase, bank debt guarantees, and capital injections (p. 44).

Under the heading, “Financial market tensions remain high” (p. 128), the OECD described the international rescue program. It said: “The joint financing package of \$25.5 billion provided by the International Monetary Fund, the European Union and the World Bank helps to mitigate Hungary’s reduced access to financing in international financial markets. Still, most banks have access to liquidity only at high cost and at short maturities” (pp. 128–129). It also raised the specter of further financial problems, saying: “To counter risks of further currency depreciation, which might endanger financial stability and increase inflation, the National Bank of Hungary

(NBH) has not lowered policy rates since January 2009, despite the deepening recession and contractionary fiscal policy. In the projections, the Bank is assumed to lower its policy rate only in 2010, when financial stability and inflation concerns subside” (p. 129).

In discussing future fiscal policy, the OECD said: “Looking beyond the crisis, sustainable fiscal consolidation should not exclusively rely on revenue increases as in 2008” (p. 129). This statement is interesting primarily for the matter-of-fact way that it describes the current situation as a “crisis.” Finally, in the concluding paragraph, the OECD wrote: “A continued, severely limited access to international financial markets, combined with significant fiscal consolidation and a collapse in exports markets, will lead to an output fall of more than 6% of GDP in 2009” (p. 130). This suggests that the combined currency and financial disturbances were thought to be central to the outlook.

Hungary had been a minor crisis—regular in 2008:2. It is clear that conditions were substantially worse in 2009:1. The situation was referred to as a “crisis,” credit conditions were described as tight, the government was taking many actions to restore credit flows, and banks were having severe difficulty getting access to liquidity. The entry also made it clear that problems in the financial sector were central to the outlook for demand and output. This episode fits the criteria for a moderate crisis—regular.

**Italy, 2013:1.** Italy had been a moderate crisis—regular in 2012:2. Though there appeared to have been a slight improvement, it was not sufficient to warrant a full step down in severity. Financial distress was mentioned repeatedly in the entry. The opening paragraph, said: “Italy’s recession will continue throughout 2013 as the effects of fiscal tightening and restrictive credit conditions bear down on economic activity,” and “Despite recapitalisation, continuing losses hinder the banking sector from supporting investment and consumption” (p. 90). The entry went on to say: “Despite the recovery of the market price of government debt in 2012, which strengthened banks’ balance sheets, banks are weakened by rising levels of non-performing loans and credit remains difficult and expensive to obtain for many companies. This has particularly affected investment and inventories” (p. 90). In discussing the outlook, the OECD again discussed that credit conditions were affecting consumption and investment. It said: “not much growth in consumer demand can be expected, especially as the credit situation is likely to improve only slowly. Tight credit affects investment too so domestic demand will remain very subdued and output pick up only slowly.” (p. 93). In the risks paragraph, the OECD said that “[r]isks relate particularly to the banking sector” (p. 93).

Overall, this episode fits our definition of a moderate crisis. Troubles in the financial system were described as substantial and central to the outlook. They were discussed prominently in the introductory paragraph, and were described as affecting consumer and investment spending. The entry specifically mentioned that credit was difficult to get and expensive for many firms. Perhaps somewhat surprisingly, the word crisis was not used, which is unusual for a moderate crisis. But the overall description was negative enough that we felt comfortable classifying it as such. At the same time, the lack of more severe language and any discussion of the financial system seizing up made us comfortable not scaling it higher.

**Greece, 2015:1.** The introduction to the entry included several statements about financial conditions. It said: “Economic growth in 2015 remains weak, as uncertainty related to the reform programme and deteriorating liquidity conditions have undermined business confidence and investment” (p. 117). It also included the strong statement: “The recovery of investment will depend critically on a return of business confidence and on stepping up the pace of structural reform implementation. Better access to credit is also essential. Stabilising the banking system by addressing the high level of nonperforming loans is therefore critical” (p. 117).

In discussing current conditions, the OECD wrote: “Non-performing loans in the banking system continue to restrain credit growth and uncertainty regarding the agreement with creditors has led to large deposit withdrawals in recent months” (p. 118). It also saw risks to the outlook working through the financial system. It said: “If Greece fails to address non-performing loans in the banking sector, credit conditions can deteriorate further, reducing investment and consumption growth” (p. 119). Finally, it summed up the outlook saying: “Assuming an agreement with creditors is found, growth in 2015 will nonetheless remain weak. Investment and consumption growth will be undermined by deteriorating credit conditions and low confidence” (p. 119).

Greece was a minor crisis—regular in 2014:2. The descriptions in this half-year were decidedly worse. Stabilizing the banking system was described as critical, and there were multiple references to banking problems affecting consumption and investment. There was also a reference to “large deposit withdrawals,” which is a hallmark of a more severe level of financial distress. At the same time, the word “crisis” was not used and there was no sense of the financial system seizing up entirely. Overall, this episode fits the criteria for a moderate crisis—regular.

### **Moderate crisis—plus:**

**Korea, 1998:2.** The overview chapter of the *Economic Outlook* said: “In Korea, which has experienced a severe crisis during 1998, the critical task is to resolve balance sheet problems which have led to a high rate of bankruptcy in the corporate sector and a major deterioration of asset quality and capital positions in the banking sector” (p. 26). The introduction to the entry for Korea also discussed the crisis extensively. It said: “In the wake of the financial crisis towards the end of 1997, the Korean economy moved into deep recession.... The timing and strength of the recovery, though, will depend to some extent on developments elsewhere in Asia, as well as on the banks’ capacity to lend, which has been reduced by the sharp rise in problem loans” (p. 94). It also sounded a note of optimism: “The Korean authorities have made progress in addressing the bad-loan problem and in rehabilitating the banking system to prevent a credit crunch from delaying the recovery” (p. 94).

In discussing current conditions, the OECD said: “The impact of the financial crisis on the real economy became apparent in the first half of 1998 as domestic demand declined by more than a quarter. Business investment was cut by 30 per cent as the highly-indebted corporate sector was forced to restructure to improve its balance sheets during a period of weak demand and exceptionally high interest rates, which boosted financial costs” (p. 94). It also wrote (p. 95):

Although interest rates have fallen to below pre-crisis levels, a credit crunch has emerged as banks’ capacity to lend has been reduced by the rise in their non-performing loans and the need to meet capital adequacy ratios. The growth of bank loans has declined from around 20 per cent (year-on-year) in early 1997 to under 2 per cent in August 1998, with small and medium-sized enterprises particularly hard-hit. Moreover, the lack of trade credit has hindered exports and imports, despite a significant increase in government guarantees.

The OECD described “an ambitious programme to rehabilitate the financial sector” (p. 95). It said (pp. 95–96):

The government has made significant progress in addressing the financial sector problems underlying the credit crunch. A single, independent supervisory authority was established in April with a mandate to progressively apply international

prudential standards. Since the beginning of 1998, the authorities have closed 16 merchant banks, four life insurance companies and two securities firms, while effectively closing five troubled banks by merging them with stronger banks. The government also announced a W 64 trillion (16 per cent of GDP) plan to address the non-performing loan problem and to re-capitalise viable financial institutions. By the end of September, the government had purchased W 23 trillion of bad loans, which are now officially estimated to total W 150 trillion.

It also discussed that “support has also been provided for small and medium-sized enterprises and exporters hurt by the credit crunch” (p. 96).

Finally, in considering the risks to the outlook, the OECD twice mentioned the credit crunch. It said: “The timing and strength of the recovery will depend on several key factors: first, how quickly the corporate sector restructures in the face of credit crunch conditions,” and “the credit crunch may result in further large-scale bankruptcies in Korea” (p. 96).

Korea had been a major crisis–minus in 1998:1. In the 1998:2 entry, financial conditions were again clearly described as quite bad. There were repeated mentions of “credit crunch,” and the government was taking very large actions to restructure and strengthen the financial system. The OECD also drew the link between credit market problems and real demand and the outlook. At the same time, there was no mention of a “run,” as there had been in the previous issue, and no sense of a total breakdown in financial intermediation. This entry fits the description of a moderate crisis–plus. (As a side note, we found this entry much easier to scale than the one for 1998:1. That conditions were slightly less bad than in 1998:1 and were clearly a moderate crisis–plus, made us feel more confident in our classification of the previous entry.)

**Greece, 2015:2.** The introduction to the entry mentioned financial troubles, but they did not seem dire. It said: “While growth is fundamental to reducing the huge public debt burden in the medium term, meeting the fiscal targets is critical to contain debt and to ensure smooth financing for bank recapitalisation and further debt relief. ... Recapitalising the banking system, reducing non-performing loans and lifting capital controls would ease financial constraints and so open a path for growth” (p. 140).

However, subsequent paragraphs painted a picture of more severe financial distress. The heading of the section on current conditions was: “Weak confidence and financial conditions pushed the economy back into recession” (p. 140). The accompanying graph was titled: “Weaknesses in the banking system and capital controls are holding back credit and investment” (p. 140). The OECD went on to say: “The political uncertainty since the end of 2014 and the prolonged negotiations with creditors have led to a sharp deterioration in confidence, and financial stress in the banking system pushed the economy back into recession after surprising resilience during the first half of 2015” (pp. 140–141). It also said: “Capital controls and financial fragilities in the banking system added to the already tight financial constraints caused by still weak bank balance sheets. Credit to finance investment and consumption is falling and exports are constrained” (p. 141). The statement that “public debt is set to rise to 200% of GDP, mainly due to the cost of bank recapitalisation” (p. 141), suggested quite extreme actions to deal with financial problems.

As to the outlook, the OECD summed up its view with the heading: “Bank recapitalisation and structural reforms are needed for a sustained and inclusive recovery” (p. 142). It explained: “Recapitalising the banking system and implementing an efficient framework to facilitate the resolution of non-performing loans would release financial resources for productive activities, increase confidence and reduce financing costs for firms and households. Rapid implementation

of the recently approved reforms to judiciary and bankruptcy procedures is crucial for this.” (p. 142). The OECD saw both positive and negative risks to this outlook working through the financial system: “Larger negative effects of the credit crunch on domestic demand, triggering a second round of fiscal consolidation measures and lower growth pose a downside risk. ... Faster resolution of financial fragilities could also lead to a stronger and faster recovery in investment” (p. 142).

Greece had been a moderate crisis—regular in the previous half-year. The entry for 2015:2 clearly implied that conditions had deteriorated at least somewhat. It used the term “credit crunch,” which is one of the hallmarks of a more severe level of financial distress. More generally, descriptions of financial distress ran throughout the entry. And, the OECD clearly believed that conditions in the financial system were having an impact on investment and were central to the outlook. At the same time, the more low-key introductory material suggested that financial problems had not risen to the level of a major crisis. Thus, we classify this episode as a moderate crisis—plus.

## **MAJOR AND EXTREME CRISES**

### **Major crisis—minus:**

**Korea, 1998:1.** The overview chapter of the *Economic Outlook* was filled with references to the East Asian “crisis.” For example, it said: “Outside the European Union unemployment may rise in a number of countries, most importantly in Korea, where the crisis may entail a steep increase, of 800 000 persons, to more than 6 per cent of the labour force” (p. 8). In discussing the role that short-term capital flows played in exacerbating the crisis in Korea, the OECD wrote: “once the run on banks began, liquidity in the foreign exchange market dried up and the exchange rate went into a free fall” (p. 12). It also said: “Despite its many strengths, the Korean economy in November 1997 experienced one of the worst financial market crises that has ever occurred in an OECD country” (p. 31), and “credit problems affecting foreign trade are aggravating balance sheet problems in the highly leveraged corporate sector” (p. 31). The OECD also described some of the actions being taken to deal with the crisis: “The government has taken steps to rehabilitate the financial system by closing weak institutions and using public money to resolve the bank’s balance sheet problems. Financing these operations, which the OECD Secretariat estimates may amount to 1 1/2 per cent of GDP in 1998 alone, will be facilitated by the government’s healthy overall fiscal position and the absence of net public debt” (p. 31).

Interestingly, the introduction to the entry on Korea did not mention problems with credit supply directly. It did, however, say: “Although financial markets have stabilized somewhat since the beginning of the year and some of the exchange-rate overshooting has been reversed, the impact of the crisis is now being felt in the real economy” (p. 104). And, it also said: “Despite the substantial costs to the budget of bank re-structuring, there also appears to be some scope for fiscal policy to play a role in counterbalancing the negative impact of the crisis” (p. 104).

In discussing the anatomy and consequences of the crisis, the OECD wrote: “The deterioration in corporate balance sheets and the mounting bad loan problem during 1997 led to the foreign exchange crisis, which erupted towards the end of the year when foreign banks shut off their credit lines to Korea” (p. 104). It then said: “The impact of the crisis is likely to be most severe in the first half of 1998. Tight credit conditions doubled the number of bankruptcies, while the dishonoured bill ratio rose to an all-time high in December. ... Imports were down 30

per cent year-on-year in dollar terms in February, reflecting falling demand and the reluctance of banks to accept letters of credit” (p. 105).

The discussion of developments in the banking sector seemed to describe a mixture of credit actions and credit disruptions. The OECD wrote: “The requirement that the commercial banks meet the Bank for International Settlements (BIS) capital-asset ratios by June 2000 is also likely to restrict credit growth. At the end of 1997, 14 of the 26 commercial banks did not meet the recommended ratio of 8 per cent. In addition, 12 of the 30 merchant banks have already been shut down, with more closures likely” (p. 106). The government was clearly taking actions to try to stem the problem. For example, in describing the fiscal assumptions underlying its forecast, the OECD said: “W 3.6 trillion is to be spent on the interest charges of the Korea Asset Management Corporation and the Korea Deposit Insurance Corporation, which is addressing the banks’ non-performing loan problem” (p. 107).

The OECD was forecasting a possible “sharp contraction in domestic demand in 1998” as a result of the crisis (p. 106). It wrote: “The business sector is likely to scale back its investment plans in reaction to extraordinarily high borrowing costs, excess capacity and balance-sheet problems” (p. 106). In assessing the risks to this forecast, the OECD said: “One key to restoring confidence is the rapid restructuring of the financial system that now appears to be in train. However, the potential for further large-scale bankruptcies that would exacerbate the problems of the financial system poses a major downside risk to the projection” (p. 107).

Korea had been a moderate crisis—regular in the previous half-year. The conditions described in this issue were clearly worse. There was repeated use of the word “crisis,” though it referred to problems with both the exchange rate and the financial sector. The introductory chapter explicitly discussed a “run” on Korean financial institutions. There were widespread bank failures, and the troubles in the financial system were seen as likely to have severe effects on investment. At the same time, we saw signs that the financial system was still functioning somewhat. The many government actions seemed to be holding the financial system together, and credit was still available, albeit at a very high rate. The descriptions fit our criteria for a major crisis—minus. A relevant comparison was Japan in 1998:1, which we classify as a major crisis—regular. Conditions in Korea were not quite as bad as those in Japan.