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Economic Effects of Banking Crises: A Bit of Evidence from Iceland and Ireland

Notes from the Vault

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Iceland had a shorter, less severe recession after its banking crises than did Ireland. Iceland's flexible exchange rate and rapid resolution of its banking crisis without bailing out creditors are likely important explanations.

- Iceland and Ireland responded to the banking crises in their countries in quite different ways.
- While the countries are similar in many respects, they have some significant differences, the most prominent being their exchange-rate regimes.
- Iceland's combination of a flexible exchange rate and a policy of closing its failed banks appears to have served the country well in the aftermath of the financial crisis.

Banking crises in Iceland and Ireland came to a head at the height of the financial crisis in September and October 2008. These countries took quite different approaches in dealing with these difficulties. How differently have their economies responded?

Ireland and Iceland are small island countries with many similarities, including similar incomes for their residents. In 2010, Iceland's income per person was \$36,700 while Ireland's was \$37,600.¹ By international standards, these incomes are relatively high: Ireland ranks 27th and Iceland 29th of 229 countries. (By comparison, the U.S. income per person was \$47,400 in 2010, or 10th of 229.) Both countries have relatively small populations, although Ireland's population of 4.7 million is more than 15 times greater than Iceland's population of a little more than 311,000.²



Iceland and Ireland are similar in another respect. Banks in both economies lost funding in

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September and October 2008 as private lenders became concerned about the value of the banks' assets and the likelihood of loans being paid. The governments' responses to these losses of private lending support were quite different, though, and these responses had important effects on the countries' economies.

Iceland

For its size, Iceland had a large banking sector, dominated by three large banks. Total assets in these banks in 2008 were roughly 9.8 times Iceland's annual gross domestic product (GDP), a high ratio.³ By comparison, bank assets in the United States were 1.2 times GDP in 2008. Iceland's large banking sector was a recent development. In 2003, bank assets were only 1.7 times GDP. From 2003 to 2008, the assets of its banks grew by a factor of 10.

A substantial part of the expansion of the banks' loan portfolios were loans collateralized by Icelandic corporate stock (Flannery 2009, 96). As a result, the value of Icelandic stock was an important determinant of the value of the banks' loans and, therefore, assets. Chart 1 shows stock prices in Iceland from 2001 to 2011. The value of shares rose and then peaked in mid-July 2007. By July 2008, share prices had fallen to less than half their value at the peak. This loss in collateral value naturally called into question the probability of lenders being able to repay their loans.



The expansion of banking in Iceland reflected growth of both domestic and foreign deposits. Banks in Iceland opened branch offices in the United Kingdom and the Netherlands to gather deposits there. They also expanded by acquiring other institutions.

The banks increased their funding by obtaining short-term loans from other financial institutions—for example, money market funds in the United States. Such funding from other financial intermediaries is often called wholesale funding. A risk of wholesale funding is rollover risk—lenders may decide not to roll over these short-term loans when they mature, especially if they become concerned about the borrower's solvency.

At the time, Icelandic banks were acquiring funds in the United States, the United Kingdom, and the euro area—each with a different currency, and all with a different currency than the Icelandic króna. As a result of this borrowing in other currencies, Icelandic banks were subject to foreign-exchange risk on domestic lending in króna. If the Icelandic banks made loans denominated in foreign currency to people in Iceland, such loans pushed the foreign-exchange risk off banks' balance sheets but did not erase that risk. Such loans merely transferred the risk to borrowers.

Ireland

Ireland's problems were similar to Iceland's in some respects and different in others. One similarity is that Irish banks, like those in Iceland, expanded rapidly. In 2008, assets in Irish financial institutions with substantial domestic business were 4.4 times GDP, relatively high when compared to the United States, for example, but much less than in Iceland.⁴



The Irish banks used wholesale funding to expand, as did the Icelandic banks. Instead of a concentration in loans based on stock, though, Irish banks had a concentration in loans to property developers and in mortgage loans. The value of the real estate collateral rose substantially with the transformation of Ireland from Europe's "poor cousin" to the "Celtic tiger." Chart 2 shows the increase in housing prices up to the peak in 2006—which indicates trends in real estate prices more generally—and the subsequent decline. Since the 2006 peak, home sales volume has fallen substantially. This index almost surely underestimates the actual decrease in housing values.

Besides residential housing, banks in Ireland made substantial loans to developers for acquiring and improving land. The decrease in housing prices has been accompanied by a more substantial decrease in the value of land and, in particular, land for development. There is little new construction in Ireland, and it will be some time before construction rebounds. As a result, developers face serious financial difficulties. The collateral underlying these development loans is worth far less than the face value of the loans and widespread defaults have ensued.

Problems and responses

In 2007, banks in both Iceland and Ireland had problems. When the financial crisis in the United States began in September 2008, lenders in these other countries began considering the condition of banks more carefully than they had previously (Dwyer and Tkac 2009).

When wholesale funding started to evaporate at Icelandic banks in September 2008, the Icelandic government responded by taking over the banks. Given the size of the banking system and the likely losses at the banks, the decision was made to guarantee all deposits in domestic banks and their branches in Iceland. The Icelandic banks' facilities that gathered deposits in the United Kingdom and the Netherlands were not covered by those countries' deposit insurance schemes, which meant that this decision mattered more than it might have otherwise. The United Kingdom and Netherlands governments provided guarantees for deposits in Icelandic offices in those countries, and negotiations are ongoing about how much, if any, of the expense will be paid by Icelandic taxpayers.

On September 30, 2008, the Irish government guaranteed all deposits and all but the most junior of debt instruments in the banks. Government officials decided that "**no Irish bank should be allowed to fail**" (Honohan, 2010, 119; emphasis in original). The losses in Irish banks have increased since 2008. As of this writing (April 2011), some of the Irish banks have not been completely taken over by the government, but all the banks have received substantial capital funds from the Irish government. This extra governmental support has aggravated the government's funding difficulties that resulted from the serious recession. As a result, the Irish government has had to borrow from other euro-area countries and from the International Monetary Fund.

Effects

Two differences between the Irish and Icelandic economies' ability to recover from banking crises stand out. First, Iceland's government took over the banks quickly and guaranteed only some of the banks' liabilities, actions that resulted in less of a continuing drain on government finances than otherwise. Second, Iceland has a flexible exchange rate. Chart 3 shows the Icelandic exchange rate relative to the U.S. dollar. The number of krónur it takes to buy a dollar increased substantially in 2008, which meant that prices in Iceland fell substantially relative to the rest of the world. This made Icelandic labor and goods cheaper relative to those in the rest of the world, softening the effect of the crisis on the economy by increasing exports and reducing imports. While Iceland has had continuing inflation, inflation fell to about 2.5 percent per year in 2010.



The government of Ireland guaranteed substantially all of the country's banks' liabilities on September 30, 2008. This guarantee has been associated with continued increases in the government funding required, even as this article was written. Second, Ireland is part of the euro area. While no doubt beneficial in many respects, being on the euro is less helpful when Ireland is affected substantially more than other euro-area countries by an adverse shock such as this financial crisis. The prices of Irish goods and services would be expected to fall relative to prices in other euro-area countries and the rest of the world due to this crisis—and prices in Ireland have fallen, with Ireland experiencing deflation from 2008 until recent increases in gasoline prices. This process is not quick or even across the economy. If Ireland had its own currency and a flexible exchange rate, the exchange rate most likely would have depreciated as it did in Iceland, softening the effect of the crisis.

Chart 4 shows the unemployment rates in the two countries. Levels of unemployment rates generally are not comparable across countries, so it pays to be careful in making comparisons. For example, the unemployment rate in Iceland typically is lower than that in Ireland. Still, there are important differences in the timing of the increases. The highest unemployment rate in Iceland was 9.3 percent in February and March 2010, and the rate has fallen since. The highest unemployment rate in Ireland was 13.9 percent in the third quarter of 2010, with no sign of a decrease and maybe not even a sign of it leveling off. This increase in unemployment has occurred despite out-migration of foreign workers in Ireland and emigration of Irish citizens.



Chart 5 shows that real GDP declined substantially in both countries. Through the third quarter of 2010, real GDP in Ireland showed no sign of recovering from its decline since the end of 2007. On the other hand, real GDP in Iceland in that same quarter was 8 percent above its lowest level since the financial crisis. The declines in real GDP are similar from the peak to the lowest level, although larger in Iceland. Real GDP in Iceland fell over 16 percent from the third quarter of 2008 to the first quarter of 2010.⁵ Real GDP in Ireland was more than 14 percent lower in the third quarter of 2010 than it had been in the fourth quarter of 2007.



Real GDP understates the decline in Irish residents' incomes because Ireland's tax system

encourages offshore corporations to report profits in Ireland. Consequently, the change in Irish gross national income is a better measure of the effect of the recession on Irish residents. Gross national income declined by more than 26 percent by the third quarter of 2009, the most recent figure reported. Given the decline in GDP and the increase in unemployment from 2009 to 2010, it is likely that gross national income in Ireland declined even further during that time frame, making the contrast between Iceland and Ireland even starker.⁶ In terms of income and employment, Ireland's residents have suffered a noticeably more severe decline than have people in Iceland.

Conclusion

The Irish economy has been harder hit by the financial crisis and its aftereffects than was Iceland's. Two major differences between Iceland and Ireland are likely explanations for much of the differential effects of the crisis. Iceland did not bail out its banks, while Ireland guaranteed virtually all of its banks' liabilities. Iceland has a flexible exchange rate, while Ireland's is fixed relative to the euro area. The smaller but still very severe recession in Iceland is consistent with the beneficial aspects of a flexible exchange rate in the presence of a large shock to a country. Iceland's smaller and shorter-lived recession is also consistent with a supposition that rapid resolution of banks is beneficial. It is impossible to disentangle these two causes or assess their relative importance other than to state that the result is some combination of the effects. Evidence from other countries is likely to be helpful for determining whether one or both of these policies affect the size and duration of the subsequent recession.

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¹ The measure of income is aggregate income to factors in the economies, gross domestic product. Income is measured in purchasing power parity dollars to reduce the effects of transitory changes in exchange rates. The comparable figure for the United States is about \$47,000. These income numbers and the populations are from the CIA's *The World Factbook* (2011).

² These population figures are estimates for July 2011.

³ These numbers are based on bank assets from Flannery (2009, 93) and on GDP in local currency from the International Monetary Fund (2011).

⁴ The bank data are from the Central Bank of Ireland (2011) and the GDP data are from the International Monetary Fund (2011).

⁵ Real GDP in Iceland in the third quarter of 2008 was virtually the same as real GDP had been in the fourth quarter of 2007 and higher than it had been in the first and second quarters of 2008.

⁶ The 26.5 percent decrease in nominal income is mitigated by decreases in prices, but the decreases in prices are not large enough to overturn the greater decrease in Ireland than in Iceland. The GDP deflator in Ireland fell 5.4 percent from the fourth quarter of 2006 to the third quarter of 2009.

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