Financial Crises in Emerging Market Economies

PREVIEW

Before 2007 the most prominent examples of severe financial crises in recent times came from abroad. Particularly vulnerable were emerging market economies, which opened their markets to the outside world in the 1990s with high hopes of rapid economic growth and reduced poverty. Instead, however, many of these nations experienced financial crises as debilitating as the Great Depression was in the United States.

Most dramatic were the Mexican crisis that began in 1994, the East Asian crisis that began in July 1997, and the Argentine crisis, which started in 2001. These events present a puzzle for economists: how can a developing country shift so dramatically from a path of high growth—as did Mexico and particularly the East Asian countries of Thailand, Malaysia, Indonesia, the Philippines, and South Korea—to such a sharp decline in economic activity?

In this chapter we apply the asymmetric information theory of financial crises developed in Chapter 8 to investigate the cause of frequent and devastating financial crises in emerging market economies. First we explore the dynamics of financial crises in emerging market economies. Then we apply the analysis to the events surrounding financial crises in two of these economies in recent years and explore why these crises caused such devastating contractions of economic activity.
Dynamics of Financial Crises in Emerging Market Economies

The dynamics of financial crises in emerging market economies—economies in an early stage of market development that have recently opened up to the flow of goods, services, and capital from the rest of the world—resemble those found in advanced countries such as the United States but with some important differences. Figure 25.1 outlines the sequence and stages of events in financial crises in these emerging market economies that we will address in this section.

**Figure 25.1 Sequence of Events in Emerging Market Financial Crises**

The solid arrows trace the sequence of events during a financial crisis. The sections separated by the dashed horizontal lines show the different stages of a financial crisis.

**STAGE ONE**
Initiation of Financial Crisis

- Deterioration in Financial Institutions' Balance Sheets
- Increase in Interest Rates
- Asset Price Decline
- Increase in Uncertainty

Adverse Selection and Moral Hazard Problems Worsen

**STAGE TWO**
Currency Crisis

- Fiscal Imbalances
- Foreign Exchange Crisis

Adverse Selection and Moral Hazard Problems Worsen

**STAGE THREE**
Full-Fledged Financial Crisis

- Economic Activity Declines
- Banking Crisis

Adverse Selection and Moral Hazard Problems Worsen

- Economic Activity Declines

Factors Causing Financial Crises
Consequences of Changes in Factors

The solid arrows trace the sequence of events during a financial crisis. The sections separated by the dashed horizontal lines show the different stages of a financial crisis.
Stage One: Initiation of Financial Crisis

Crisis in advanced economies can be triggered by a number of factors. But in emerging market countries, financial crises develop along two basic paths—either the mismanagement of financial liberalization and globalization or severe fiscal imbalances. The first path of mismanagement of financial liberalization/globalization is the most common culprit, precipitating the crises in Mexico in 1994 and many East Asian countries in 1997.

Path A: Credit Boom and Bust  The seeds of a financial crisis in emerging market economies are often sown when countries liberalize their domestic financial systems by eliminating restrictions on financial institutions and markets, a process known as financial liberalization, and opening up their economies to flows of capital and financial firms from other nations, a process called financial globalization. Countries often begin the process with solid fiscal policy. In the run-up to crisis, Mexico ran a budget deficit of only 0.7% of GDP, a number to which most advanced countries would aspire. And the countries in East Asia even ran budget surpluses before their crisis struck. The story told so far suggests that a lending boom and crash are inevitable outcomes of financial liberalization and globalization in emerging market countries, but this is not the case. These events occur only when there is an institutional weakness that prevents the nation from successfully navigating the liberalization/globalization process. More specifically, if prudential regulation and supervision to limit excessive risk-taking were strong, the lending boom and bust would not happen. Why is regulation and supervision typically weak? The answer is the principal–agent problem, discussed in Chapter 7, which encourages powerful domestic business interests to pervert the financial liberalization process. Politicians and prudential supervisors are ultimately agents for voters-taxpayers (principals): that is, the goal of politicians and prudential supervisors is, or should be, to protect the taxpayers’ interest. Taxpayers almost always bear the cost of bailing out the banking sector if losses occur.
Once financial markets have been liberalized, however, powerful business interests that own banks will want to prevent the supervisors from doing their jobs properly, and so prudential supervisors may not act in the public interest. Powerful business interests that contribute heavily to politicians' campaigns are often able to persuade politicians to weaken regulations that restrict their banks from engaging in high-risk/high-payoff strategies. After all, if bank owners achieve growth and expand bank lending rapidly, they stand to make a fortune. But if the bank gets in trouble, the government is likely to bail it out and the taxpayer foots the bill. In addition, these business interests can make sure that the supervisory agencies, even in the presence of tough regulations, lack the resources to effectively monitor banking institutions or to close them down.

Powerful business interests also have acted to prevent supervisors from doing their job properly in advanced countries like the United States. The weak institutional environment in emerging market countries adds to the perversion of the financial liberalization process. In emerging market economies, business interests are far more powerful than they are in advanced economies, where a better-educated public and a free press monitor (and punish) politicians and bureaucrats who are not acting in the public interest. Not surprisingly, then, the cost to society of the principal–agent problem we have been describing here is particularly high in emerging market economies.

**Path B: Severe Fiscal Imbalances** The financing of government spending can also place emerging market economies on a path toward financial crisis. The financial crisis in Argentina in 2001–2002 is of this type; other crises, for example in Russia in 1998, Ecuador in 1999, and Turkey in 2001, also have some elements of this type of crisis.

When Willie Sutton, a famous bank robber, was asked why he robbed banks, he answered, “Because that’s where the money is.” Governments in emerging market countries sometimes have the same attitude. When they face large fiscal imbalances and cannot finance their debt, they often cajole or force domestic banks to purchase government debt. Investors who lose confidence in the ability of the government to repay this debt unload the bonds, which causes their prices to plummet. Banks that hold this debt then face a big hole on the asset side of their balance sheets, with a huge decline in their net worth. With less capital, these institutions must cut back on their lending and lending will decline. The situation can even be worse if the decline in bank capital leads to a bank panic in which many banks fail at the same time. The result of severe fiscal imbalances is therefore a weakening of the banking system, which leads to a worsening of adverse selection and moral hazard problems (as shown by the arrow from the first factor in the third row of Figure 25.1).

**Additional Factors** Other factors also often play a role in the first stage in crises. For example, another precipitating factor in some crises (such as the Mexican crisis) was a rise in interest rates from events abroad, such as a tightening of U.S. monetary policy. When interest rates rise, high-risk firms are most willing to pay the high interest rates, so the adverse selection problem is more severe. In addition, the high interest rates reduce firms' cash flows, forcing them to seek funds in external capital markets in which asymmetric problems are greater. Increases in interest rates abroad that raise domestic interest rates can then increase adverse selection and moral hazard problems (as shown by the arrow from the second factor in the top row of Figure 25.1).
Because asset markets are not as large in emerging market countries as they are in advanced countries, they play a less prominent role in financial crises. Asset price declines in the stock market do, nevertheless, decrease the net worth of firms and so increase adverse selection problems. There is less collateral for lenders to seize and increased moral hazard problems because, given their decreased net worth, the owners of the firm have less to lose if they engage in riskier activities than they did before the crisis. Asset price declines can therefore worsen adverse selection and moral hazard problems directly and also indirectly by causing a deterioration in banks’ balance sheets from asset write-downs (as shown by the arrow pointing from the third factor in the first row of Figure 25.1).

As in advanced countries, when an emerging market economy is in a recession or a prominent firm fails, people become more uncertain about the returns on investment projects. In emerging market countries, notoriously unstable political systems are another source of uncertainty. When uncertainty increases, it becomes hard for lenders to screen out good credit risks from bad and to monitor the activities of firms to whom they have loaned money, again worsening adverse selection and moral hazard problems (as shown by the arrow pointing from the last factor in the first row of Figure 25.1).

**Stage Two: Currency Crisis**

As the effects of any or all of the factors at the top of the diagram in Figure 25.1 build on each other, participants in the foreign exchange market sense an opportunity: they can make huge profits if they bet on a depreciation of the currency. As is discussed in Chapter 15, a currency that is fixed against the U.S. dollar now becomes subject to a *speculative attack*, in which speculators engage in massive sales of the currency. As the currency sales flood the market, supply far outstrips demand, the value of the currency collapses, and a currency crisis ensues (see the Stage Two section of Figure 25.1). High interest rates abroad, increases in uncertainty, and falling asset prices all play a role. The deterioration in bank balance sheets and severe fiscal imbalances, however, are the two key factors that trigger the speculative attacks and plunge the economies into a full-scale, vicious downward spiral of currency crisis, financial crisis, and meltdown.

**Deterioration of Bank Balance Sheets Triggers Currency Crises** When banks and other financial institutions are in trouble, governments have a limited number of options. Defending their currencies by raising interest rates should encourage capital inflows, but if the government raises interest rates, banks must pay more to obtain funds. This increase in costs decreases bank profitability, which may lead them to insolvency. Thus when the banking system is in trouble, the government and central bank are now between a rock and a hard place: If they raise interest rates too much, they will destroy their already weakened banks and further weaken their economy. If they don’t, they can’t maintain the value of their currency.

Speculators in the market for foreign currency recognize the troubles in a country’s financial sector and realize when the government’s ability to raise interest rates and defend the currency is so costly that the government is likely to give up and allow the currency to depreciate. They will seize an almost sure-thing bet because the currency can only go downward in value. Speculators engage in a feeding frenzy and sell the currency in anticipation of its decline, which will provide them with huge profits. These sales rapidly use up the country’s holdings of reserves of foreign
currency because the country has to sell its reserves to buy the domestic currency and keep it from falling in value. Once the country’s central bank has exhausted its holdings of foreign currency reserves, the cycle ends. It no longer has the resources to intervene in the foreign exchange market and must let the value of the domestic currency fall: that is, the government must allow a devaluation.

**Severe Fiscal Imbalances Trigger Currency Crises** We have seen that severe fiscal imbalances can lead to a deterioration of bank balance sheets and so can help produce a currency crisis along the lines described previously. Fiscal imbalances can also directly trigger a currency crisis. When government budget deficits spin out of control, foreign and domestic investors begin to suspect that the country may not be able to pay back its government debt and so will start pulling money out of the country and selling the domestic currency. Recognition that the fiscal situation is out of control thus results in a speculative attack against the currency, which eventually results in its collapse.

**Stage Three: Full-Fledged Financial Crisis**

In contrast to most advanced economies that typically denominate debt in domestic currency, emerging market economies denominate many debt contracts in foreign currency (usually U.S. dollars) leading to what is referred to as currency mismatch. An unanticipated depreciation or devaluation of the domestic currency (for example, pesos) in emerging market countries increases the debt burden of domestic firms in terms of domestic currency. That is, it takes more pesos to pay back the dollarized debt. Since most firms price the goods and services they produce in the domestic currency, the firms’ assets do not rise in value in terms of pesos, while their debt does. The depreciation of the domestic currency increases the value of debt relative to assets, and the firms’ net worth declines. The decline in net worth then increases adverse selection and moral hazard problems described earlier. A decline in investment and economic activity then follows (as shown by the Stage Three section of Figure 25.1).

We now see how the institutional structure of debt markets in emerging market countries interacts with the currency devaluations to propel the economies into full-fledged financial crises. A currency crisis, with its resulting depreciation of the currency, leads to a deterioration of firms’ balance sheets that sharply increases adverse selection and moral hazard problems. Economists often call a concurrent currency crisis and financial crisis the “twin crises.”

The collapse of a currency also can lead to higher inflation. The central banks in most emerging market countries, in contrast to those in advanced countries, have little credibility as inflation fighters. Thus, a sharp depreciation of the currency after a currency crisis leads to immediate upward pressure on import prices. A dramatic rise in both actual and expected inflation will likely follow, which will cause domestic interest rates to rise. The resulting increase in interest payments causes reductions in firms’ cash flow, which lead to increased asymmetric information problems since firms are now more dependent on external funds to finance their investment. This asymmetric information analysis suggests that the resulting increase in adverse selection and moral hazard problems leads to a reduction in investment and economic activity.

As shown in Figure 25.1, further deterioration in the economy occurs. The collapse in economic activity and the deterioration of cash flow and firm and household balance sheets means that many debtors are no longer able to pay off their debts,
resulting in substantial losses for banks. Sharp rises in interest rates also have a negative effect on banks’ profitability and balance sheets. Even more problematic for the banks is the sharp increase in the value of their foreign-currency-denominated liabilities after the devaluation. Thus, bank balance sheets are squeezed from both sides—the value of their assets falls as the value of their liabilities rises.

Under these circumstances, the banking system will often suffer a banking crisis in which many banks are likely to fail (as in the United States during the Great Depression). The banking crisis and the contributing factors in the credit markets explain a further worsening of adverse selection and moral hazard problems and a further collapse of lending and economic activity in the aftermath of the crisis.

We now apply the analysis here to study two of the many financial crises that have struck emerging market economies in recent years.1 First, we examine the crisis in South Korea in 1997–1998 because it illustrates the first path toward a financial crisis operating through mismanagement of the financial liberalization/globalization. Second, we look at the Argentine crisis of 2001–2002, which was triggered through the second path of severe fiscal imbalances.

CASE

Crisis in South Korea, 1997–1998

Before its crisis in 1997, South Korea was one of the great economic success stories in history. In 1960, seven years after the Korean War was over, the country was still extremely poor, with an annual income per person of less than $2,000 (in today’s dollars), putting it on par with Somalia. During the postwar period, South Korea pursued an export-oriented strategy that helped it become one of the world’s major economies. With an annual growth rate of nearly 8% from 1960 to 1997, it was one of the leaders in the “Asian miracle,” the term used to refer to formerly poor countries now experiencing rapid economic growth. By 1997 South Korea’s income per person had risen by more than a factor of ten.

South Korea’s macroeconomic fundamentals were strong before the crisis. Figure 25.2 shows that in 1996 inflation was below 5%, while Figure 25.3 shows that real output growth was close to 7%, and unemployment was low (Figure 25.4). The government budget was in slight surplus, something that most advanced countries have been unable to achieve.

Financial Liberalization/Globalization Mismanaged

Starting in the early 1990s, the South Korean government removed many restrictive regulations on financial institutions to liberalize the country’s financial markets and also embarked on the financial globalization process by opening up their capital markets to capital flows from abroad. This resulted in a lending boom in which bank credit

to the private nonfinancial business sector accelerated sharply, with lending fueled by massive foreign borrowing expanding at rates close to 20% per year. Because of weak bank regulator supervision and a lack of expertise in screening and monitoring borrowers at banking institutions, losses on loans began to mount, causing an erosion of banks’ net worth (capital).
Perversion of the Financial Liberalization/Globalization Process: Chaebols and the South Korean Crisis

Powerful business interests often play an active role in the mismanagement of financial liberalization. Nowhere was this clearer than in South Korea before the financial crisis of the late 1990s, when large family-owned conglomerates known as chaebols dominated the economy with sales of nearly 50% of the country’s GDP.

The chaebols were politically very powerful and deemed “too big to fail” by the government. With this implicit guarantee, the chaebols knew they would receive direct government assistance or directed credit if they got into trouble, but they could keep all of the profits if their bets paid off. Not surprisingly, chaebols borrowed like crazy and became highly leveraged.

In the 1990s, the chaebols weren’t making any money. From 1993 to 1996, the return on assets for the top 30 chaebols was never much more than 3% (a comparable figure for U.S. corporations is 15%–20%). In 1996, right before the crisis hit, the rate of return on assets had fallen to 0.2%. Furthermore, only the top five chaebols had any profits, while the sixth to 30th chaebols never had a rate of return on assets much above 1% and in many years had negative rates of returns. With this poor profitability and the already high leverage, any banker would pull back on lending to these conglomerates if there were no government safety net. Because the banks knew the government would make good on the chaebols’ loans if they were in default, banks continued to lend to the chaebols. This substantial financing from commercial banks, however, was not enough to feed the chaebols’ insatiable appetite for more credit. The chaebols decided that the way out of their troubles was to pursue growth, and they needed massive amounts of funds to do it. Even with the vaunted South Korean national savings rate of over 30%, there just were not enough loanable funds to finance the chaebols’ planned expansion. Where could they get it? The answer was in the international capital markets.

The chaebols encouraged the South Korean government to accelerate the process of opening up South Korean financial markets to foreign capital as part of the
liberalization process. In 1993 the government expanded the ability of domestic banks to make loans denominated in foreign currency. At the same time, the South Korean government effectively allowed unlimited short-term foreign borrowing by financial institutions but maintained quantity restrictions on long-term borrowing as a means of managing capital inflows into the country. Opening up short term but not long term to foreign capital inflows made no economic sense. Short-term capital flows make an emerging market economy financially fragile: short-term capital can fly out of the country extremely rapidly if there is any whiff of a crisis.

Opening up primarily to short-term capital, however, made complete political sense: the chaebols needed the money, and it is much easier to borrow short-term funds at low interest rates in the international market because long-term lending is much riskier for foreign creditors. In the aftermath of these changes, South Korean banks opened 28 branches in foreign countries that gave them access to foreign funds.

Although South Korean financial institutions now had access to foreign capital, the chaebols still had a problem. They were not allowed to own commercial banks, so the chaebols might not get all the bank loans they needed. However, there was an existing type of financial institution specific to South Korea that would enable them to get the loans they needed: the merchant bank. Merchant banking corporations were wholesale financial institutions that engaged in underwriting securities, leasing, and short-term lending to the corporate sector. They obtained funds for these loans by issuing bonds and commercial paper and by borrowing from interbank and foreign markets. At the time of the Korean crisis, merchant banks were allowed to borrow abroad and were almost virtually unregulated. The chaebols saw their opportunity and convinced government officials to convert many finance companies (some already owned by the chaebols) into merchant banks. The merchant banks channeled massive amounts of funds to their chaebol owners, where they flowed into unproductive investments in steel, automobile production, and chemicals. When the loans went sour, the stage was set for a disastrous financial crisis.

**Stock Market Decline and Failure of Firms Increase Uncertainty**

The South Korean economy then experienced a negative shock to export prices that hurt the chaebols’ already-thin profit margins and the small- and medium-sized firms that were tied to them. On January 23, 1997, a second major shock occurred, creating great uncertainty for the financial system: Hanbo, the 14th largest chaebol, declared bankruptcy. Indeed, the bankruptcy of Hanbo was just the beginning. Five more of the 30 largest chaebols declared bankruptcy before the year was over. As a result of the greater uncertainty created by these bankruptcies and the deteriorating condition of financial and nonfinancial balance sheets, the stock market declined sharply by more than 50% from its peak, as shown by Figure 25.5.

**Adverse Selection and Moral Hazard Problems Worsen and the Economy Contracts**

As we have seen, an increase in uncertainty and a decrease in net worth as a result of a stock market decline exacerbate asymmetric information problems. It becomes hard to screen out good from bad borrowers. The decline in net worth decreases the value of firms’ collateral and increases their incentives to make risky investments because there is less equity to lose if the investments are unsuccessful. The increase in uncertainty and stock market declines that occurred before the crisis, along with
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Figure 25.5  Stock Market Index, South Korea, 1995–1999

Stock prices fell by over 50% during the crisis.


the deterioration in banks’ balance sheets, worsened adverse selection and moral hazard problems. As a result, lending declined and the economy weakened. The weakening of the economy, along with the deterioration of bank balance sheets, ripened the South Korean economy for the next stage, a currency crisis that would send the economy into a full-fledged financial crisis and a depression.

Currency Crisis Ensues

Given the weakness of balance sheets in the financial sector and the increased exposure of the economy to a sudden stop in capital inflows because of the large amount of short-term, external borrowing, a speculative attack on South Korea’s currency was inevitable. With the collapse of the Thai baht in July 1997 and the announced closing of 42 finance companies in Thailand in early August 1997, contagion began to spread as participants in the market wondered whether similar problems existed in other East Asian countries. Soon speculators recognized that the banking sector in South Korea was in trouble. They knew the South Korean central bank could no longer defend the currency by raising interest rates because this would sink the already weakened banks. Speculators pulled out of the South Korean currency, the won, leading to a speculative attack.

Final Stage: Currency Crisis Triggers Full-Fledged Financial Crisis

The speculative attack then led to a sharp drop in the value of the won, by nearly 50%, as shown in Figure 25.6. Because both nonfinancial and financial firms had so much foreign-currency debt, the nearly 50% depreciation of the Korean won doubled the value of the foreign-denominated debt in terms of the domestic currency and therefore led to a severe erosion of net worth. This loss of net worth led to a severe increase in adverse selection and moral hazard problems in South Korean financial markets, for domestic and foreign lenders alike.

The deterioration in firms’ cash flow and balance sheets worsened the banking crisis. Bank balance sheets were devastated when the banks paid off their
foreign-currency borrowing with more Korean won and yet could not collect on the
dollar-denominated loans they had made to domestic firms. In addition, the fact that
financial institutions had been encouraged to make their foreign borrowing short
term increased their liquidity problems because banks had to pay these loans back
so quickly. The government stepped in to guarantee all bank deposits and prevent
a bank panic, but the loss of capital meant that banks had to curtail their lending.

Real GDP fell in 1998 at over a 6% rate, as shown in Figure 25.3, and unemploy-
ment rose sharply (refer to Figure 25.4). In this situation, we might expect the infla-
tion rate to fall as well. Inflation, however, did not fall; instead it rose, as we showed in
Figure 25.2. The currency crisis is behind this key difference. Specifically, the collapse
of the South Korean currency after the successful speculative attack on the currency
raised import prices, which directly fed into inflation, and weakened the credibility
of the Bank of Korea as an inflation fighter. The rise in import prices led to a price
shock, while the weakened credibility of the Bank of Korea led to a rise in expected
inflation, with inflation climbing sharply from around the 5% level to near 10%.

Market interest rates soared to over 20% by the end of 1997 (Figure 25.7) to com-
penstate for the high inflation. They also rose because the Bank of Korea pursued a tight
monetary policy in line with recommendations from the International Monetary Fund.
High interest rates led to a drop in cash flows, which forced firms to obtain external
funds and increased adverse selection and moral hazard problems in the credit markets.
The increase in asymmetric information problems in the credit markets, along with the
direct effect of higher interest rates on investment decisions, led to a further contrac-
tion in investment spending, providing another reason that economic activity fell.

**Recovery Commences**

In 1998 the South Korean government responded very aggressively to the crisis by
implementing a series of financial reforms that helped restore confidence in the
financial system. Financial markets began to recover, which helped stimulate lend-
ing, and the economy began to recover.
Severe Fiscal Imbalances

In contrast to Mexico and the East Asian countries, Argentina had a well-supervised banking system, and a lending boom did not occur before the crisis. The banks were in surprisingly good shape before the crisis, even though a severe recession had begun in 1998. Unfortunately, however, Argentina has always had difficulty controlling its budgets. In Argentina, the provinces (similar to states in the United States) control a large percentage of public spending, but the responsibility for raising the revenue is left primarily to the federal government. With this system, the provinces have incentives to spend beyond their means and then call on the federal government periodically to assume responsibility for their debt. As a result, Argentina is perennially in deficit.

The recession starting in 1998 made the situation even worse because it led to declining tax revenues and a widening gap between government expenditures and taxes. The subsequent severe fiscal imbalances were so large that the government had trouble getting both domestic residents and foreigners to buy enough of its bonds, so it coerced banks into absorbing large amounts of government debt. By 2001 investors were losing confidence in the ability of the Argentine government to
repay this debt. The price of the debt plummeted, leaving big holes in banks’ balance sheets. What had once been considered one of the best-supervised and strongest banking systems among emerging market countries was now losing deposits.

**Adverse Selection and Moral Hazard Problems Worsen**

The deterioration of bank balance sheets and the loss of deposits led the banks to cut back on their lending. As a result, adverse selection and moral hazard problems worsened and lending began to decline. The resulting weakening of the economy

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**FIGURE 25.8 Inflation, Argentina, 1998–2004**

Inflation surged to over 40% during the crisis.


**FIGURE 25.9 Real GDP Growth, Argentina, 1998–2004**

Real GDP growth collapsed during the crisis, declining at an annual rate of over 15%.

and deterioration of bank balance sheets set the stage for the next stage of the crisis, a bank panic.

**Bank Panic Begins**

In October 2001, negotiations between the central government and the provinces to improve the fiscal situation broke down, and tax revenues continued to fall as the economy declined. Default on government bonds was now inevitable. As a result, a full-fledged bank panic began in November, with deposit outflows running nearly $1 billion a day. At the beginning of December, the government was forced to close the banks temporarily and impose a restriction called the *corralito* (small fence), under which depositors could withdraw only $250 in cash per week. The corralito was particularly devastating for the poor, who were highly dependent on cash to conduct their daily transactions. The social fabric of Argentine society began to unravel. Nearly 30 people died in violent riots.

**Currency Crisis Ensues**

The bank panic signaled that the government could no longer allow interest rates to remain high in order to prop up the value of the peso and preserve the currency board, an arrangement in which it fixed the value of one Argentine peso to equal one U.S. dollar by agreeing to buy and sell pesos at that exchange rate (discussed in Chapter 16). Raising interest rates to preserve the currency board was no longer an option because it would have meant destroying the already weakened banks. The public now recognized that the peso would have to decline in value in the near future, so a speculative attack began in which people sold pesos for dollars. In addition, the government’s dire fiscal position made it unable to pay back its debt, providing another reason for the investors to pull money out of the country, leading to further peso sales.
On December 23, 2001, the government announced the inevitable: a suspension of external debt payments for at least 60 days. Then on January 2, 2002, the government abandoned the currency board.

Currency Crisis Triggers Full-Fledged Financial Crisis

The peso now went into free fall, dropping from a value of $1.00 to less than $0.30 by June 2002 and then stabilizing at around $0.33 thereafter, as shown by Figure 25.11. Because Argentina had a higher percentage of debt denominated in dollars than any of the other crisis countries, the effects of the peso collapse on balance sheets were particularly devastating. With the peso falling to one-third of its value before the crisis, all dollar-denominated debt tripled in peso terms. Since Argentina’s tradable sector was small, most businesses’ production was priced in pesos. If they had to pay back their dollar debt, almost all firms would become insolvent. In this environment, financial markets could not function because net worth would not be available to mitigate adverse selection and moral hazard problems.

Given the losses on the defaulted government debt and the rising loan losses, Argentine banks found their balance sheets in a precarious state. Further, the run on the banks had led to huge deposit outflows. Lacking resources to make new loans, the banks could no longer solve adverse selection and moral hazard problems. The government bond default and conditions in Argentine financial markets also meant that foreigners were unwilling to lend and were actually pulling their money out of the country. With the financial system in jeopardy, financial flows came to a grinding halt. The resulting curtailment of lending then led to a further contraction of economic activity. The corralito also played an important role in weakening the economy. By making it more difficult to get cash, it caused a sharp slowdown in the underground economy, which is large in Argentina and runs primarily on cash.

Just as in South Korea, the collapse of the Argentine currency after the successful speculative attack on the currency raised import prices, which directly fed into
inflation, and weakened the credibility of the Argentine central bank to keep inflation under control. Indeed, Argentina’s history of very high inflation meant that there was an even larger rise in expected inflation in Argentina than in South Korea. Inflation in Argentina rose as high as 40% at an annual rate, as shown in Figure 25.8. Because the rise in actual inflation was accompanied by a rise in expected inflation, interest rates went to even higher levels, as indicated in Figure 25.12. The higher interest payments led to a decline in the cash flow of both households and businesses, which now had to seek external funds to finance their investments. Given the uncertainty in financial markets, asymmetric information problems were particularly severe, and this meant investment could not be funded. Households and businesses cut back their spending further. As our aggregate demand and supply analysis predicts, the Argentine economy plummeted. In the first quarter of 2002, Figure 25.9 shows that output was falling at an annual rate of more than 15% and Figure 25.10 demonstrates that unemployment shot up to near 20%. The increase in poverty was dramatic: the percentage of the Argentine population in poverty rose to almost 50% in 2002. Argentina was experiencing the worst depression in its history—one every bit as bad as, and maybe even worse than, the U.S. Great Depression.

**Recovery Begins**

With the financial crisis receding and a boom in the demand for Argentina’s commodity exports, the economy recovered, and by the end of 2003 economic growth was running at an annual rate of around 10%, and Figure 25.10 demonstrates that unemployment had fallen below 15%. Inflation also fell to below 5%, as shown by Figure 25.8.

Although we have drawn a strong distinction between financial crises in emerging market economies and those in advanced economies, there have been financial crises in advanced economies that have more in common with financial crises in emerging market economies. This is illustrated by the Global box, “When an Advanced Economy Is Like an Emerging Market Economy: The Icelandic Financial Crisis of 2008.”
Preventing Emerging Market Financial Crises

The experience with financial crises in emerging market economies described in this chapter suggests a number of government policies that can help make financial crises in emerging market countries less likely.\(^2\)

**Beef Up Prudential Regulation and Supervision of Banks**

As we have seen, the banking sector sits at the root of financial crises in emerging market economies. To prevent crises, therefore, governments must improve prudential regulation and supervision of banks to limit their risk taking. First, regulators should ensure that banks hold ample capital to cushion the losses from economic

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shocks and to give bank owners, who have more to lose, an incentive to pursue safer investments.

Prudential supervision can also promote a safer and sounder banking system by ensuring that banks have proper risk management procedures in place, including (1) good risk measurement and monitoring systems, (2) policies to limit activities that present significant risks, and (3) internal controls to prevent fraud or unauthorized activities by employees. As the South Korea example indicates, regulation should also ban commercial businesses from owning banking institutions. When commercial businesses own banks, they are likely to use them to channel lending to themselves, as the chaebols in South Korea did, leading to risky lending that can provoke a banking crisis.

For prudential supervision to work, prudential supervisors must have adequate resources to do their jobs. This is a particularly serious problem in emerging market countries where prudential supervisors earn low salaries and lack basic tools such as computers. Because politicians often pressure prudential supervisors to discourage them from being “too tough” on banks that make political contributions (or outright bribes), a more independent regulatory and supervisory agency can better withstand political influence, increasing the likelihood that they will do their jobs and limit bank risk taking.

**Encourage Disclosure and Market-Based Discipline**

The public sector, acting through prudential regulators and supervisors, will always struggle to control risk taking by financial institutions. Financial institutions have incentives to hide information from bank supervisors in order to avoid restrictions on their activities, and they can become quite adept and crafty at masking risk. Also, supervisors may be corrupt or give in to political pressure and so may not do their jobs properly.

To eliminate these problems, financial markets need to discipline financial institutions from taking on too much risk. Government regulations to promote disclosure by banking and other financial institutions of their balance sheet positions, therefore, are needed to encourage these institutions to hold more capital because depositors and creditors will be unwilling to put their money into an institution that is thinly capitalized. Regulations to promote disclosure of banks’ activities will also limit risk taking because depositors and creditors will pull their money out of institutions that are engaging in these risky activities.

**Limit Currency Mismatch**

As we have seen, emerging market financial systems can become very vulnerable to a decline in the value of the nation’s currency. Often, firms in these countries borrow in foreign currency, even though their products and assets are priced in domestic currency. A collapse of the currency causes debt denominated in foreign currency to become particularly burdensome because it has to be paid back in more expensive foreign currency, thereby causing a deterioration in firms’ balance sheets that helps lead to a financial crisis. Governments can limit currency mismatch by implementing regulations or taxes that discourage the issuance of debt denominated in foreign currency by nonfinancial firms. Regulation of banks can also limit bank borrowing in foreign currencies.
Moving to a flexible exchange rate regime in which exchange rates fluctuate can also discourage borrowing in foreign currencies because there is now more risk in doing so. Monetary policy that promotes price stability also helps by making the domestic currency less subject to decreases in its value as a result of high inflation, thus making it more desirable for firms to borrow in domestic rather than foreign currency.

Sequence Financial Liberalization

Although financial liberalization can be highly beneficial in the long run, our analysis of financial crises in emerging market economies in this chapter shows that if this process is not managed properly, it can be disastrous. If the proper bank regulatory/supervisory structure and disclosure requirements are not in place when liberalization occurs, the constraints on risk-taking behavior will be far too weak.

To avoid financial crises, policymakers need to put in place the proper institutional infrastructure before liberalizing their financial systems. Crucial to avoiding financial crises is implementation of the policies described previously, which involve having strong prudential regulation and supervision and limiting currency mismatch. Because implementing these policies takes time, financial liberalization may have to be phased in gradually, with some restrictions on credit issuance imposed along the way.

### SUMMARY

1. Financial crises in emerging market countries develop along two basic paths: one involving the mismanagement of financial liberalization/globalization that weakens bank balance sheets and the other involving severe fiscal imbalances. Both lead to a speculative attack on the currency and eventually to a currency crisis in which there is a sharp decline in the value of the domestic currency. The decline in the value of the domestic currency causes a sharp rise in the debt burden of domestic firms, which leads to a decline in firms' net worth, as well as increases in inflation and interest rates. Adverse selection and moral hazard problems then worsen, leading to a collapse of lending and economic activity. The worsening economic conditions and increases in interest rates result in substantial losses for banks, leading to a banking crisis, which further depresses lending and aggregate economic activity.

2. The financial crisis in South Korea follows the pattern described previously. It started with a mismanagement of financial liberalization and globalization, followed by a stock market crash and a failure of firms that increased uncertainty, a worsening of adverse selection problems, a currency crisis, and then a full-fledged financial crisis. The financial crisis led to a sharp contraction in economic activity and a rise in inflation, as well as a weakening of the social fabric.

3. In contrast to the crisis in South Korea, the Argentine financial crisis started with severe fiscal imbalances. The recession, which had been going on since 1998, along with the deterioration of bank balance sheets when the fiscal imbalances led to losses from government bonds, which the banks had on their balance sheets, led to a worsening of adverse selection and moral hazard problems, a bank panic, a currency crisis, and then a full-fledged financial crisis. As in South Korea, the financial crisis led to a decline in economic activity and a rise in inflation in Argentina, but the economic contraction and rise in inflation was even worse because Argentina’s central bank lacked credibility as an inflation fighter.

4. Policies to prevent financial crises in emerging market economies include improving prudential regulation and supervision, limiting currency mismatch, and sequencing of financial liberalization.

### KEY TERMS

currency mismatch, p. W-6
financial globalization, p. W-3
speculative attack, p. W-5
emerging market economies, p. W-2
financial liberalization, p. W-3
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QUESTIONS

1. Why would emerging market economies survive the financial crisis (2007–08) better than developed economies?

2. Compare and contrast the global financial crisis that hit emerging economies and developed economies. Which economies were more affected and took longer to recover?

3. What is financial globalization? How would it fuel a financial crisis in an emerging market economy?

4. How would a rise in interest rates play a role in initiating a financial crisis in an emerging market economy?

5. The currency crisis in Southeast Asia in 1997–2000 did not spread to the developed economies. Discuss.


7. How had fiscal imbalances caused one of the emerging market economy’s best-supervised and strongest banking systems to lose its deposits?

8. How does currency pegging solve the currency crisis problem and to what extent should it be used?

9. How can emerging market economies avoid the problems of currency mismatch?

10. What should policy makers in emerging market economies keep in mind to avoid financial crises while liberalizing financial systems?