



CHAPTER 3

CRISIS AND RECOVERY IN THE WORLD ECONOMY

The financial crisis and recession have affected economies around the globe. The impact on the U.S. economy has been severe, but many areas of the world have fared even worse. The average growth rate of real gross domestic product (GDP) around the world was -6.2 percent at an annual rate in the fourth quarter of 2008 and -7.5 percent in the first quarter of 2009. All told, the world economy is expected to have contracted 1.1 percent in 2009 from the year before—the first annual decline in world output in more than half a century.¹ Although economic dislocations have been severe in one region or another at various times over the past 50 years, never in that time span has the annual output of the entire global economy contracted. But, as bad as the outcome has been, the decline would likely have been far larger if policymakers in the world's key economies had not acted forcefully to limit the impact of the crisis.

The global economic crisis started as a financial crisis, generally beginning in housing-related asset markets, and accelerated in the fall of 2008. After September 2008, interbank interest rates spiked, exchange rates shifted quickly, and the flows of capital across borders slowed dramatically. Trade flows also plummeted, falling even more dramatically than GDP. As a result, trade flows became a key transmission mechanism in the crisis, spreading macroeconomic distress to countries that were not primarily exposed to the financial shocks.

Policymakers around the world responded quickly, sometimes taking coordinated action, sometimes acting independently. Many central banks

¹ Quarterly figures are calculations of the Council of Economic Advisers based on a 64-country sample that represents 93 percent of world GDP. Annual average projections are from the International Monetary Fund (2009a). These projections indicate that from the fourth quarter of 2007 to the fourth quarter of 2008, world GDP contracted 0.1 percent, and from the fourth quarter of 2008 to the fourth quarter of 2009, world GDP expanded 0.8 percent. The contraction was strongest from the middle of 2008 to the middle of 2009; hence the annual average growth from 2008 to 2009 (-1.1 percent) is lower than the fourth-quarter-to-fourth-quarter numbers.

cut interest rates nearly to zero and expanded their balance sheets to try to stimulate lending and keep their economies going. They also lent large sums to one another to prevent dislocations caused by a lack of foreign currency in some markets. Beyond the central bank actions, governments intervened more broadly in banks and financial markets as well. Governments also spent large sums in fiscal stimulus to avoid massive drop-offs in aggregate demand. In a welcome development, they did not, however, restrict trade in an attempt to turn away imports.

The global economy is now seeing the beginnings of recovery. Financial markets have rebounded, trade is recovering, and GDP growth rates are again positive. Recovery is far from complete or certain, and some risks remain: lending is still constrained, and unemployment is painfully high. But, at the start of 2010, the world economy is no longer at the edge of collapse, and the elements of a sound recovery seem to be coming into place.

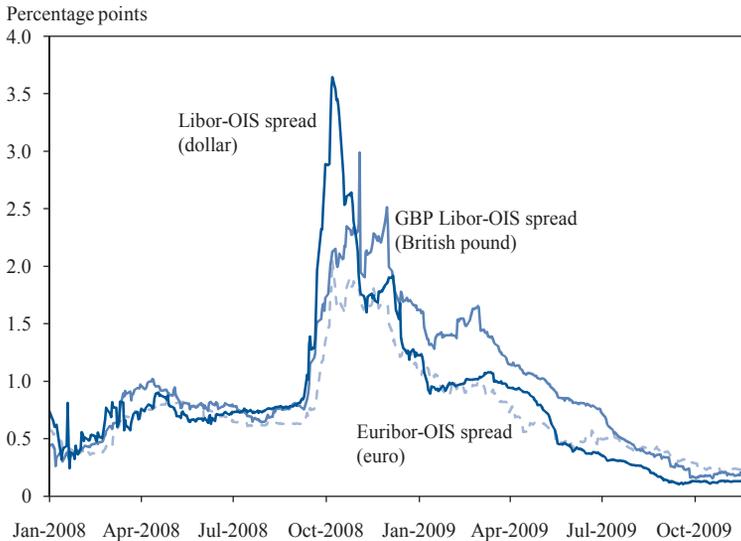
INTERNATIONAL DIMENSIONS OF THE CRISIS

The worldwide contraction had roots in many financial phenomena, and its rapid spread can be seen in a number of financial indicators. Borrowing costs increased, U.S. dollars were scarce in foreign markets, and exchange rates moved rapidly. Yet, despite problems in U.S. financial markets, there was no U.S. dollar crisis, and while currency markets moved rapidly, many of the emerging-market currency depreciations were temporary and not accompanied by cascading defaults. Thus, the world economy was better positioned for recovery than it might have been.

Spread of the Financial Shock

One of the early indicators of the crisis was the large spike in the interest rate banks charge one another that took place as the value of assets held on bank balance sheets came into question. After the investment bank Lehman Brothers declared bankruptcy in September 2008, banks grew even warier about lending to each other. This fear of lending to one another can be seen by comparing the interbank lending rate with the risk-free overnight interest rate. Similar to the TED spread, the Libor-OIS spread (the London interbank offered rate minus the overnight indexed swap) gives such a comparison for dollar loans, and comparable spreads are available for loans in other currencies. As Figure 3-1 shows, the spike in spreads for dollar loans was larger earlier, but the increase in interbank lending rates was sharp in dollars, pounds, and euros alike. Banks simply refused to lend to one another at low rates in these major financial systems. Furthermore, concerns about which firms might go bankrupt sent the cost of insuring

Figure 3-1
Interbank Market Rates



Source: Bloomberg.

against a default on a bond soaring. Thus, costs of borrowing increased for even creditworthy borrowers, putting a strain on the ability of firms to finance themselves.

The Dollar Shortage. Beyond the difficulties of evaluating counterparty risk were the acute shortages of dollar liquidity outside the United States, which were reflected in a steep rise in the cost of exchanging foreign currency for dollars for a fixed period of time (a foreign currency swap). The reasons for the dollar shortage are complex but can be understood by looking at foreign banks' behavior before the crisis. During the boom years, non-U.S. banks acquired large amounts of dollar-denominated assets, often paying for these acquisitions with borrowed dollars rather than with their own currency, thus avoiding the currency mismatch risk of borrowing in one currency and having assets in another. Much of the dollar borrowing was short term and came from U.S. money-market funds. After investors began to pull their money out of these funds in the fall of 2008, that source of lending dried up, and banks were left trying to obtain dollars in other ways. This put pressure on the currency swap market.

Before the crisis, moreover, some banks funded purchases of U.S. assets directly through swaps. In a simplified version of the transaction, foreign banks borrow in their own currency (euros, for example), exchange that currency for dollars through a swap, and then use the dollars to buy U.S. assets. By using a swap market rather than simply purchasing currency, they

even out the currency risk (McGuire and von Peter 2009),² but they are left with a funding risk. If no one will lend them dollars when their swap is due, they may have to sell their dollar assets (some of which may have fallen in value) to pay back the dollars they owe. When banks became very nervous about taking on risk, demand greatly increased the price of currency swaps.

Unwinding Carry Trades. As concerns about the stability of the financial markets heightened over the course of 2008, investors responded by trying to deleverage and reduce some of their exposed risky positions. The desire to undo risky positions coupled with the dollar shortage led to swift movements in currency markets, especially an unwinding of the “carry trade.” In the carry trade, an investor borrows money in a low-interest-rate currency (for example, the Japanese yen), sells that currency for a higher-interest-rate currency (for example, the Australian dollar), and invests the money in that currency. If interest rates are 1 percent in Japan and 6 percent in Australia, the investor stands to collect a 5 percent profit if exchange rates do not move. Although economic theory suggests that currency movements should offset this expected profit, over short horizons, if the exchange rate does not move, investors can make a profit. This happened in the mid-2000s, and the carry trade became a favorite strategy for hedge funds and other investors.

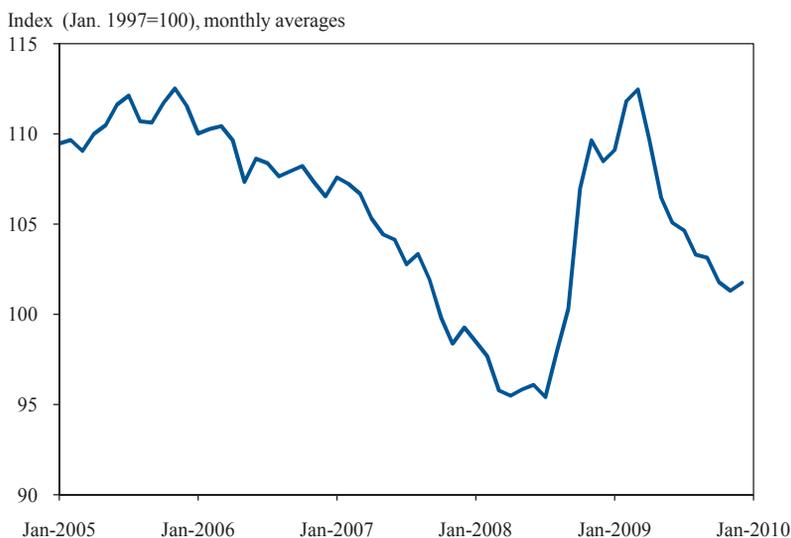
The popularity of the trade became self-fulfilling as the continued flows of money into higher-interest-rate currencies helped them appreciate and made the trade even more profitable. But, as the crisis hit, investors tried to reduce their risk and leverage. This unwinding process meant rapid sales of high-interest-rate currencies and rapid purchases of low-interest-rate currencies. Currencies that had low interest rates and had been known as funding currencies (such as the Japanese yen) rose rapidly in value, and the currencies of a number of popular carry-trade destinations (such as Australia, Brazil, and Iceland) depreciated swiftly. Thus, as the crisis hit, borrowing became more expensive and currency markets were increasingly volatile.

The Dollar During the Crisis. Although in many ways the crisis was triggered within U.S. asset markets, the response was not a run on the U.S. dollar; instead the dollar strengthened notably. Some observers had argued that the high U.S. current account deficit and problems in the U.S. housing and other asset markets might lead to an unwillingness to hold U.S. assets more broadly, which could have triggered a depreciation of the dollar. But both the need for foreign banks to cover their dollar borrowing and the need for other investors to repay loans borrowed in dollars (including for carry trades) generated strong demand for dollars. Further, the desire to

² The swap means they have borrowed dollars and lent euros. In this way, they borrowed euros at home and lent them in the swap, and they owe dollars in the swap but also own dollar assets. Thus, their foreign currency position is balanced.

avoid risky investments at the height of the crisis led to a “flight to safety,” with many investors buying dollars and U.S. Treasury bills. As seen in Figure 3-2, the trade-weighted value of the dollar increased 18 percent from July 2008 to its peak in March 2009. The movement of the dollar was broad-based, with sharp appreciations against most major trade partners; the main exceptions were Japan, where the yen appreciated even more against the world as the carry trade unwound, and China, which had reestablished its peg to the dollar in July of 2008 and therefore had a stable exchange rate against the dollar.

Figure 3-2
Nominal Trade-Weighted Dollar Index



Note: The index is constructed such that an upward movement represents an appreciation of the dollar.

Source: Federal Reserve Board, G.5.

Currency Volatility in Emerging Markets. The deleveraging and fall in risk appetite contributed to large and in some cases sharp swings in the currencies of many emerging economies, but the impact of these large depreciations varied. Some of the sharpest depreciations, such as those in Brazil, Korea, and Mexico, were largely temporary. The currencies of all three countries depreciated more than 50 percent against the dollar between the end of July 2008 and February 2009, but by the end of November 2009 Korea’s currency was down only 15 percent and Brazil’s only 12 percent. Mexico was still 29 percent below its summer 2008 value.³

³ The starting point for comparison is important. Korea had been depreciating in early 2008 as well, while Brazil and Mexico were appreciating. Thus, by the end of November 2009, Brazil had appreciated slightly from the start of 2008 while Korea had depreciated 24 percent and Mexico 18 percent.

Some countries with large current account deficits faced more pressure. The region with the sharpest declines in the value of its currencies against the dollar was Eastern Europe, where the currencies of Hungary, Poland, and Ukraine all depreciated more than 50 percent between July 2008 and February 2009, and others depreciated nearly as much. These large depreciations resulted in part from the strengthening of the dollar against the euro, as many of these countries are closely tied with Europe, but some of these currencies remained weak even when other countries started to strengthen against the dollar.

A large depreciation can especially lead to broad damage in an economy if there are negative balance-sheet effects. In this setting, a country may have few foreign assets but extensive liabilities denominated in foreign currency. As the exchange rate depreciates, the foreign currency loans become more expensive in local currency. This was particularly a concern in Eastern Europe, where many countries borrowed substantially in foreign currency leading up to the crisis. In Hungary, for example, many individuals took out mortgages in foreign currency. The depreciation of the Hungarian *forint* thus put pressure on both individuals and bank balance sheets. There was widespread concern that the Western European banks, such as those in Austria, that had made loans in Eastern Europe would face substantial losses. Both the Organisation for Economic Co-operation and Development (OECD) and the International Monetary Fund (IMF) warned of potentially serious bank problems in Austria because of these concerns. By the end of 2009, however, those concerns had not materialized. Austria has had to shore up its banks, but there has not been widespread contagion from Eastern Europe.

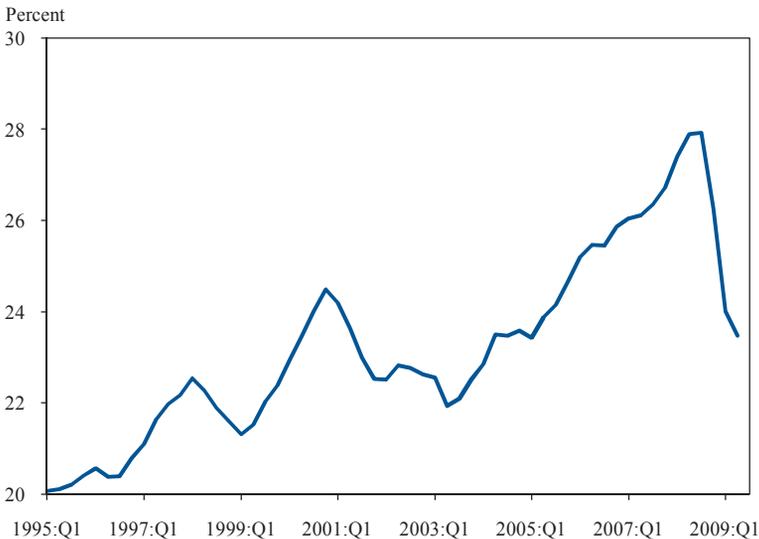
During the peak of the crisis, the spreads on emerging-market bonds spiked, but they returned toward more standard levels over time, and outright financial collapse was avoided. There are a number of reasons for the more contained impact of the exchange-rate movements during the crisis. In the past decade, many developing countries have reduced the currency mismatch on their balance sheets by borrowing less, increasing their stocks of foreign exchange reserves, and shifting away from debt finance (Lane and Shambaugh forthcoming). The improved fiscal positions of some countries likely also helped, as did the strong policy response and coordination described later. Some vulnerable countries also benefited from the strengthening of the IMF's lending capabilities (discussed later). The failure of this shock to turn into a series of deep sustained financial collapses across the emerging world was a welcome development that left the world economy better positioned for a quick turnaround.

The Collapse of World Trade

Despite this crisis's origins in the financial sector, trade rapidly became a crucial source of transmission of the crisis around the world. Exports collapsed in nearly every major trading country, and total world trade fell faster than it did during the Great Depression or any time since. From a peak in July 2008 to the low in February 2009, the nominal value of world goods exports fell 36 percent; the nominal value of U.S. goods exports fell 28 percent (imports fell 38 percent) over the same period. Even countries such as Germany, which did not experience their own housing bubble, experienced substantial trade contractions, which helped spread the crisis. The collapse in net exports in Germany and Japan contributed substantially to their declines in GDP, helping drive these countries into recession. In the fourth quarter of 2008, Germany's drop in net exports contributed 8.1 percentage points to a 9.4 percent decline in GDP (at an annual rate); Japan's net exports contributed 9.0 percentage points to a 10.2 percent GDP decline. Real exports fell even faster in the first quarter of 2009.

Figure 3-3 shows that the drop in the trade-to-GDP ratio during this crisis, from 28 percent to 23 percent in OECD countries, is unprecedented. Trade as a share of GDP had not dropped by more than 2 percentage points from the year before since at least 1970 (the earliest available data), suggesting trade's drop relative to GDP has been larger than in the past. Economists have noted that the responsiveness of trade to GDP has been

Figure 3-3
OECD Exports-to-GDP Ratio

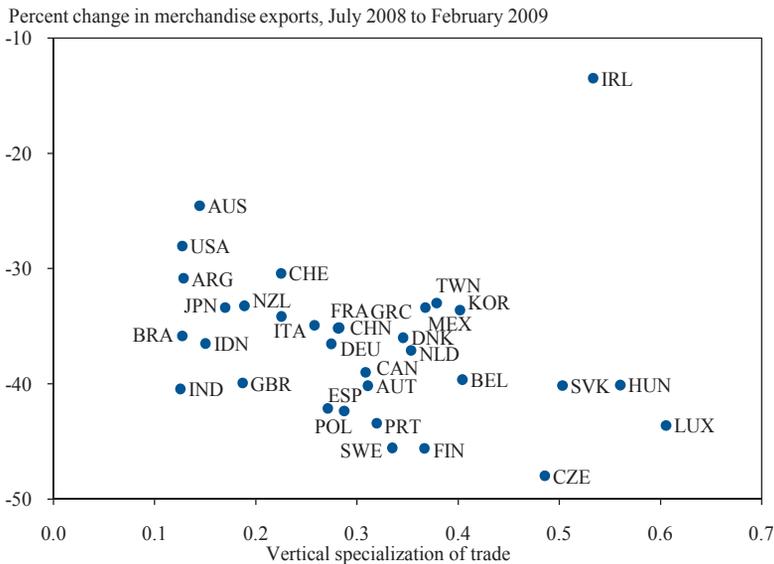


Source: Organisation for Economic Co-operation and Development, Quarterly National Accounts.

rising over time. Three main reasons for the exceptionally large fall in trade, even given the decline in GDP, have been suggested (Freund 2009; Levchenko, Lewis, and Tesar 2009; and Baldwin 2009).

The first reason is the use of global supply chains (or vertical specialization), where parts of production are manufactured or assembled in different countries and intermediate inputs are shipped from country to country, often from one branch of a firm to another, and then sent to a final destination for finishing. In this case, a reduction in output of one car may involve a decrease in shipments far larger than the final value of that single car. For example, a country that imports \$80 of inputs and adds \$20 of value added before exporting a \$100 good will see GDP fall by \$20 if demand for that good disappears, but trade (measured as the average of imports and exports) will fall \$90. If the decline in demand was concentrated in goods where global supply chains were particularly important, this could help account for the large fall in trade-to-GDP ratios. Estimates are that imported inputs account for, on average, 30 percent of the content of exports in OECD and major emerging market countries, although there is variation across countries within the OECD. Figure 3-4 shows that, with the exception of Ireland, the percentage by which trade declined for a country was

Figure 3-4
Vertical Specialization and the Collapse in Trade



Notes: See text for definition of the vertical specialization of trade. Merchandise exports measured in dollars. Alternate data from Johnson and Noguera (2009), which include the degree to which exports themselves are intermediate inputs, show a similar picture. Sources: Miroudot and Ragoussis (2009); country sources; CEA calculations.

strongly correlated with the extent of that country's vertical specialization (specifically defined as the degree of imported inputs used in exports).

Second, the disruption in global financial markets may have helped generate the trade collapse. Exporters typically require some form of financing to produce their export goods because importers will not pay for them before they arrive. Similarly, importers may need some sort of financing to bridge the gap between when they need to pay for goods and when they will be able to sell them on a domestic market. When liquidity tightened in world financial markets, the cost of trade finance increased. Little high-quality information is available for trade finance because it is typically arranged by banks or from one party to another, rather than through an organized exchange. The data that do exist show a drop in trade finance, but one that is not necessarily larger than the drop in overall trade. The drop in general financing available for producers and consumers, along with the impact of the recession on aggregate demand, may be factors as significant as the specifics of trade finance.⁴

Finally, the types of products that are traded may have been a critical factor in the trade collapse. Investment goods and consumer durables make up a substantial portion of merchandise trade, representing 57 percent of U.S. exports and 49 percent of U.S. imports in 2006. In a recession, investment spending by firms and purchases of durable goods by consumers often fall more sharply than other components of GDP. Because these investment and purchasing decisions are large and irreversible, they may be delayed until the economic situation is more clear. The drop in spending in these categories during this crisis has been far more severe than in previous recessions in the past 30 years in the United States. Paralleling the movements in overall demand, the collapse in the nominal value of trade was most severe in capital and durable goods and in chemicals and metals, and least severe in services and nondurable goods. The combination of the concentration of the spending reduction in these sectors and the sectors' importance in overall trade appears to be one source of the sharp fall in trade in the crisis.

The Collapse in Financial Flows

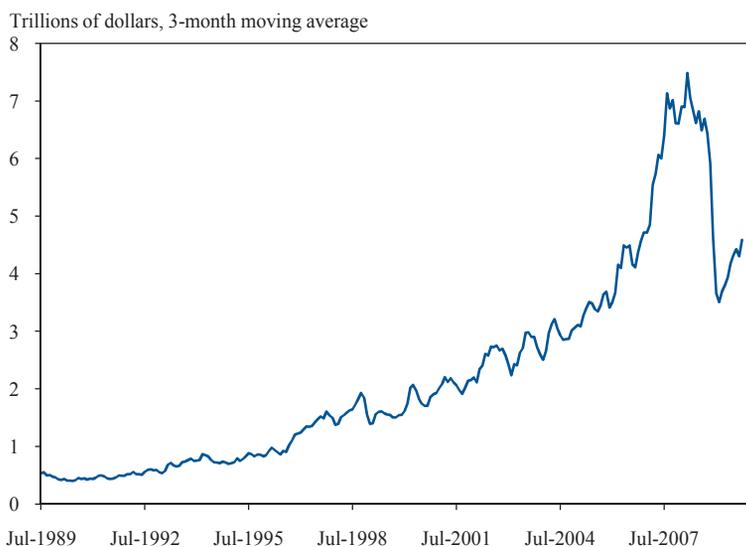
Trade in goods was not the only international flow to collapse. Financial trade evaporated in a way never before seen. U.S. outflows and inflows of finance rose steadily for decades as increasingly integrated capital markets grew in size and scope. By 2007, the average monthly gross purchases and sales of foreign long-term assets by American investors were

⁴ See Mora and Powers (2009) for a discussion of trade finance in the recent crisis. Levchenko, Lewis, and Tesar (2009) find no support for the notion that trade credit played a role in the reduced trade flows for the United States during the crisis.

\$1.4 trillion, and foreigners' purchases and sales of U.S. long-term assets were \$4.9 trillion. Each group both bought and sold a considerable amount of their holdings, so that net purchases by Americans were \$19 billion a month and net purchases by foreign investors were \$84 billion a month.

When the crisis hit, there was a massive deglobalization of finance that was unprecedented and in many ways more extreme than the collapse in goods and services trade. Figure 3-5 shows that the scale of cross-border flows was cut in half after years of fairly steady climbing. Net purchases by both home and foreign investors actually became negative in the fall of 2008 (that is, there were more sales than purchases). Americans pulled funds home at such a fast pace that from July to November of 2008, Americans on net sold foreign assets worth \$143 billion. Foreign investors also liquidated their positions, selling a net \$92 billion in U.S. holdings. Hence, outflows from foreign investors returning to their home markets were offset in part by inflows from Americans bringing money back to the United States, likely reducing the impact of the outflows.

Figure 3-5
Cross-Border Gross Purchases and Sales of Long-Term Assets



Source: Department of the Treasury (Treasury International Capital System).

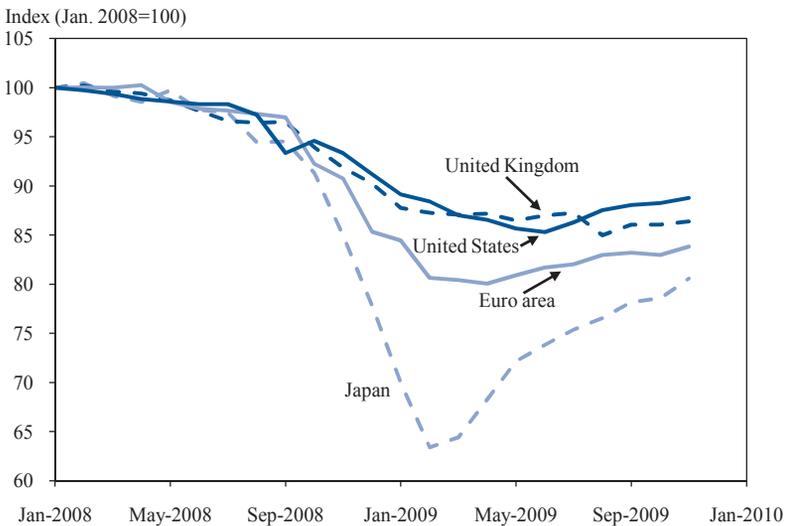
The Decline in Output Around the Globe

While the triggers of the crisis are generally considered financial in nature, these shocks were rapidly transmitted to the real economy. What had been a financial market shock or a trade collapse became a full-fledged recession in countries around the world. The financial disruption was so

strong and swift in most countries that confidence fell as well. Confidence levels are measured in different ways across countries, but they were generally falling throughout 2008 and reached recent lows in the fall of 2008 and winter of 2009. In many countries, confidence had not been so low in more than a decade.

As noted, world GDP is estimated to have fallen roughly 1.1 percent in 2009 from the year before. The number for the annual average masks the shocking depth of the crisis in the winter of 2008–09, when GDP was contracting at an annual rate over 6 percent. In advanced economies, the crisis was even deeper; the IMF expects GDP to have contracted 3.4 percent in advanced economies for all of 2009. For OECD member countries, GDP fell at an annual rate of 7.2 percent in the fourth quarter of 2008 and 8.4 percent in the first quarter of 2009. Despite the historic nature of its collapse, the U.S. economy actually fared better than about half of OECD economies during those quarters. Figure 3-6 shows the decline in industrial production across major economies, with each of these economies in January 2009 more than 10 percent below its January 2008 level, and Japan faring far worse relative to the other major economies.

Figure 3-6
Industrial Production in Advanced Economies

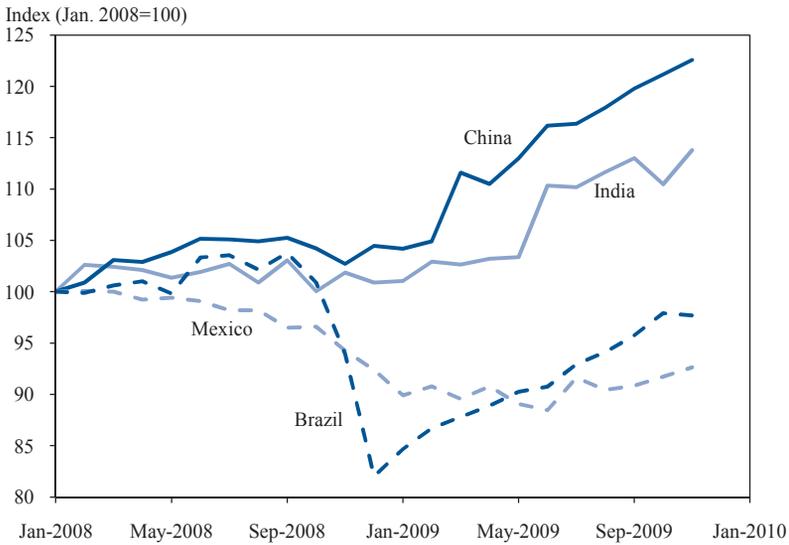


Sources: Country sources.

Some emerging market countries collapsed as well, with contractions at an annual rate of over 20 percent in Mexico, Russia, and Turkey, but the collapses were brief—lasting only a quarter or so. On average, the emerging and developing world was quite resilient to the crisis and is

projected to have continued to expand in 2009 at a rate of 1.7 percent for the year (these countries contracted in the first quarter, but they began growing quickly in the second quarter). Some regions, such as developing Asia, continued to grow at a robust pace for the year as a whole (over 6 percent), but even that rate is considerably slower than their growth in the mid-2000s. Figure 3-7 shows that industrial production fell in Brazil and Mexico in a manner similar to that in industrial economies, but in China and India it merely stalled for a brief period and then accelerated again. This overall performance in the emerging world is a turnaround from previous crises, where recessions in the advanced countries were followed by sustained collapses in some emerging countries.

Figure 3-7
Industrial Production in Emerging Economies

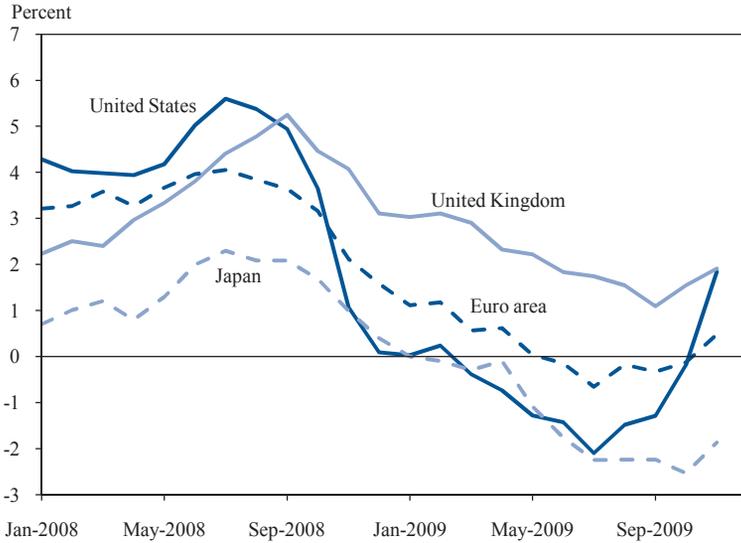


Sources: Country sources.

The combination of weak aggregate demand and falling energy prices has meant that price pressure has been starkly absent in this crisis. In fact, lower oil prices have meant that year-over-year inflation numbers were negative in most major countries until toward the end of 2009 (Figure 3-8). Core inflation rates—which exclude volatile energy and food prices—have also been quite low over the year and even negative in Japan. This lack of price pressure has left the world’s central banks with more flexibility than they had in the 1970s recessions because they do not have pressing inflation problems to consider. Inflation has also been muted in emerging and developing countries relative to their history; it is estimated

to be 5.5 percent over 2009 and is projected to fall slightly in 2010. As economies and commodity markets strengthened toward the end of 2009, inflation pressure grew in a limited number of countries but was not in any way widespread.

Figure 3-8
Headline Inflation, 12-Month Change



Sources: Country sources.

POLICY RESPONSES AROUND THE GLOBE

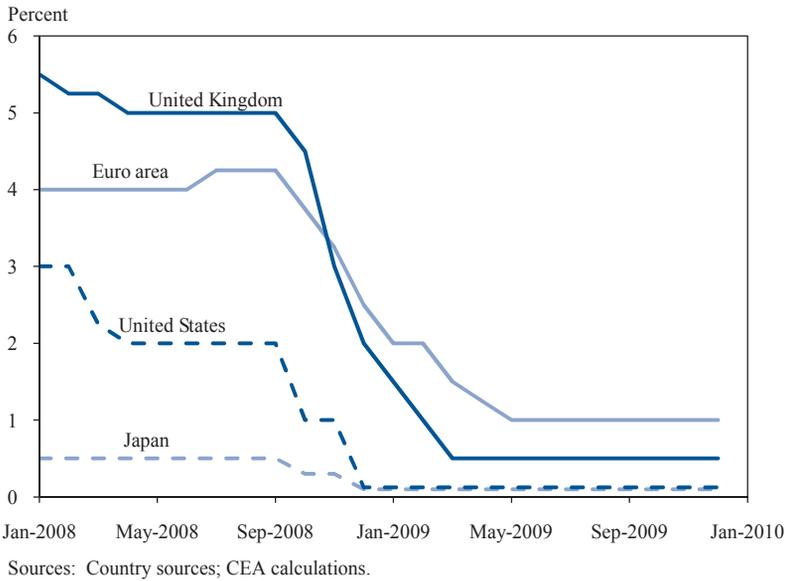
Given the severity of the downturn, it is not surprising that policymakers responded with dramatic action. Central banks cut interest rates, governments spent considerable sums in the form of fiscal stimulus, and governments and central banks supported financial sectors with funds and guarantees. Many of these actions were coordinated as policymakers tried to prevent the financial market upheaval and recession from becoming a full-fledged depression.

Monetary Policy in the Crisis

The response of monetary authorities was both strong and swift across the globe. The major central banks coordinated a significant rate cut of 50 basis points on October 8, 2008, in an attempt to increase liquidity and to boost confidence by demonstrating that they were prepared to act decisively. During the crisis, every member of the Group of Twenty (G-20)

major economies cut interest rates. By March 2009, the Federal Reserve, the Bank of Japan, and the Bank of England had all cut rates to 0.5 percent or less, with the Federal Reserve and the Bank of Japan approaching the zero nominal lower bound. The European Central Bank (ECB) responded slightly more slowly but still cut its policy rate more than 3 percentage points to 1 percent by May 2009 (Figure 3-9). Emerging market countries and major commodity exporters, whose economies were growing fast in the summer of 2008, moved as well, but not to the near-zero levels seen at the major central banks.

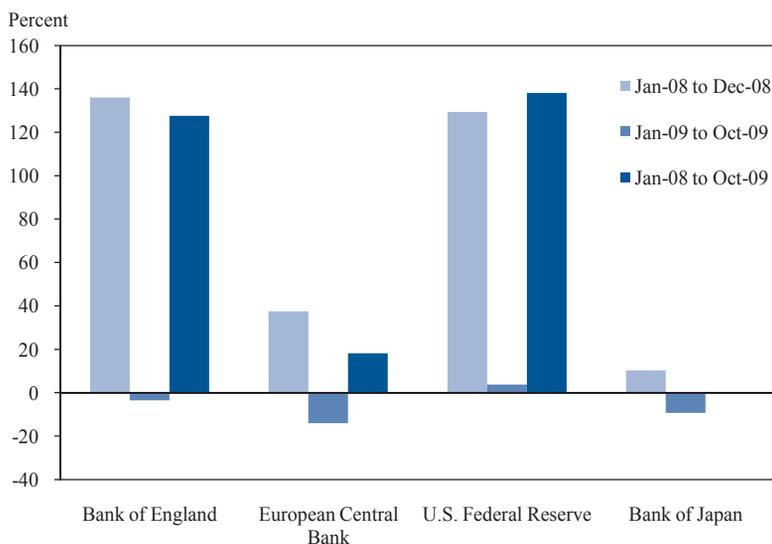
Figure 3-9
Policy Rates in Economies with Major Central Banks



Besides cutting interest rates, three of the largest central banks used nonstandard monetary policy as well. As Figure 3-10 shows, the Federal Reserve and the Bank of England more than doubled the size of their balance sheets in 2008 (see Chapter 2 for more details on the Federal Reserve’s actions). The two banks bought large quantities of assets, substantially increasing the supply of reserves, and made loans against a variety of asset classes. The goal of these programs was to free up credit in markets that were being underserved through purchases of, or loans against, asset-backed securities and commercial paper. The ECB also expanded its balance sheet substantially (37 percent) in 2008 and made loans against a variety of assets, but it did not undertake the same level of quantitative easing as either the U.S. or U.K. central banks. The Bank of Japan did not expand its balance

sheet on a similar scale.⁵ While it did expand some of its lending programs in corporate bond markets, its policies were more oriented to financial markets than to quantitative monetary policy. As noted earlier, Japan’s inflation rate has been negative.

Figure 3-10
Change in Central Bank Assets



Sources: Country sources; CEA calculations.

As Figure 3-10 shows, the rapid growth of central bank balance sheets halted during 2009, but the central banks have not withdrawn the liquidity they injected into the system. Similarly, policy interest rates have remained constant since December 2008 in the United States and Japan and since the spring of 2009 in the euro area and the United Kingdom. Some commodity producers and smaller advanced nations with strong growth have begun to withdraw some monetary accommodation. Australia, Israel, and Norway have all raised policy interest rates. Also, authorities in countries such as China and India had not raised main policy rates as of the end of 2009, but they have made administrative changes that tightened lending to slow the expansion of credit as their economies began to grow more quickly.

In addition to lending support, authorities directly intervened to support the banking sectors in a number of countries. Countries took many actions on their own, ranging from the policies pursued in the United States such as the Troubled Asset Relief Program (discussed in Chapter 2), to direct takeovers of some banks in the United Kingdom, to the creation of other

⁵ On December 1, 2009, the Bank of Japan announced a roughly \$115 billion increase in lending, equivalent to a nearly 10 percent increase in its balance sheet. This increase was significant but still far below the actions taken by other major central banks.

entities to centralize some bad assets and clean the balance sheets of other banks in Switzerland and Ireland, to general support and guarantees in a wide range of countries.

Central Bank Liquidity Swaps

In addition to the coordination of rate cuts, one other important form of international coordination took place across central banks. As noted, a dollar funding shortage materialized abroad, as the normal channels for the transmission of dollar liquidity from U.S. markets to the global financial system broke down. This shortage presented a unique set of challenges to central banks. They could have simply provided domestic currency and left banks to sell it for dollars, but the foreign exchange swaps market in which such transactions are usually conducted was severely impaired. Alternatively, central banks could have used dollar reserves to provide foreign currency funds, but few advanced countries (outside of Japan) had sufficient foreign currency holdings to fully address the foreign currency funding needs of their banking systems.

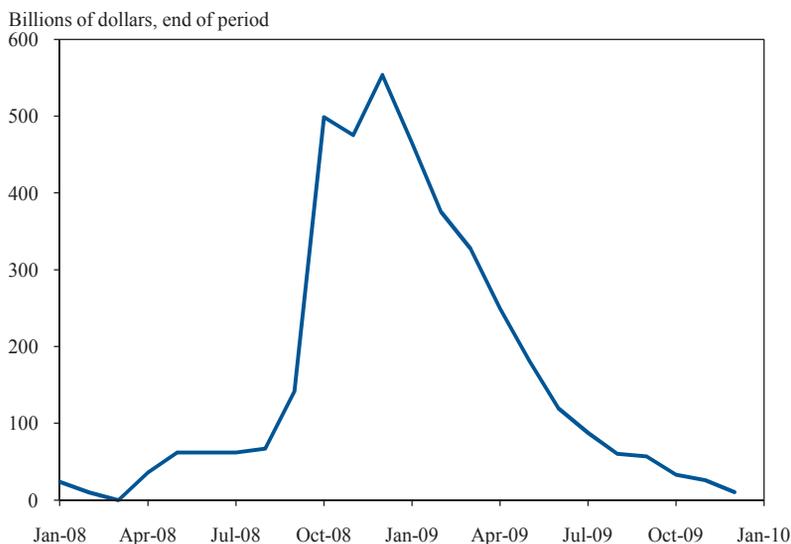
Central banks whose currencies were in demand responded to the shortage by providing large amounts of liquidity to partner central banks through central bank liquidity swaps.⁶ In many of these arrangements, the Federal Reserve purchased foreign currency in exchange for U.S. dollars and at the same time agreed to return the foreign currency for the same quantity of dollars at a specific date in the future. When foreign central banks drew dollars in this way to fund their auctions of dollar liquidity in local markets, the Federal Reserve received interest equal to what the foreign central banks were receiving on the lending operations. The Federal Reserve first used these swaps in late 2007 on a relatively small scale. But, as shown in Figure 3-11, from August 2008 through December 2008 these swaps increased from \$67 billion to \$553 billion. This massive supply of liquidity was larger than the available lending facilities of the IMF. The United States extended this program to major emerging market countries as well on October 29, 2008, providing lines of up to \$30 billion each to Brazil, Mexico, Singapore, and Korea.

As the acute funding needs have subsided, nearly all of the central bank swaps have been unwound, and the Federal Reserve has announced that it anticipates that these swap arrangements will be closed by February 1, 2010. There was no long-term funding cost to the Federal Reserve from these swap lines; moreover, the Federal Reserve's counterparties in these transactions were the central banks of other countries, and the loans

⁶ See Fender and Gyntelberg (2008) for a more comprehensive discussion.

were fully collateralized with foreign currency, so very little credit risk was involved in these transactions.

Figure 3-11
Central Bank Liquidity Swaps of the Federal Reserve



Source: Federal Reserve Board, Factors Affecting Reserve Balances of Depository Institutions and Condition Statements of Federal Reserve Banks, H.4.1 Table 1.

Although the dollar funding shortages were unique, the Federal Reserve was not the only central bank to provide swap lines. Some of the more notable examples include the European Central Bank, which made euros available to a number of central banks in Europe, among them the central banks of Denmark, Hungary, and Poland, that felt pressure for funding in euros; the Swedish central bank, which provided support to central banks in the Baltics; and the Swiss National Bank, which provided Swiss francs to the European Central Bank and Poland. Across Asia there was renewed interest in the Chiang Mai Initiative, under which various Asian central banks set up swap lines that could be used in an emergency. Despite the increases in these cross-Asian country swap lines, together they totaled \$90 billion, far less than the available Federal Reserve swap lines, and they were not drawn on during the crisis. In sum, while existing institutional structures (IMF lending or reserves) appear to have been insufficient to meet this aspect of the crisis, the world's central banks innovated to take temporary actions that quelled market disruptions and avoided even sharper financial dislocation.

Fiscal Policy in the Crisis

In part because major central banks had pushed interest rates as low as they could go and in part because of the magnitude of the crisis, by the beginning of 2009, many countries decided to institute substantial fiscal stimulus. The hope was that government spending could step into the breach left by the collapse of private demand and provide the necessary lift to prevent a slide into a deep recession or worse.

Nearly every major country instituted stimulus, with the exception of some countries hampered by substantial public finance concerns, such as Hungary and Ireland. Every G-20 nation implemented substantial stimulus, with an unweighted average of 2.0 percent of GDP in 2009 (Table 3-1), and many other OECD nations also adopted stimulus plans. Among G-20 countries, China, Korea, Russia, and Saudi Arabia enacted the most extensive stimulus programs in 2009, all equivalent to more than 3 percent of GDP. The U.S. stimulus in 2009 (estimated at 2 percent of GDP) was greater than the OECD's estimate of its member country average (1.6 percent of GDP), but the same as the G-20 average and not quite as extensive as the four high-stimulus nations.

Table 3-1
2009 Fiscal Stimulus as Share of GDP, G-20 Members

Argentina	1.5%	Japan	2.9%
Australia	2.9%	Mexico	1.6%
Brazil	0.6%	Russia	4.1%
Canada	1.8%	Saudi Arabia	3.3%
China	3.1%	South Africa	3.0%
France	0.6%	South Korea	3.7%
Germany	1.6%	Turkey	2.0%
India	0.6%	United Kingdom	1.6%
Indonesia	1.4%	United States	2.0%
Italy	0.1%	All G-20 Nations	2.0%

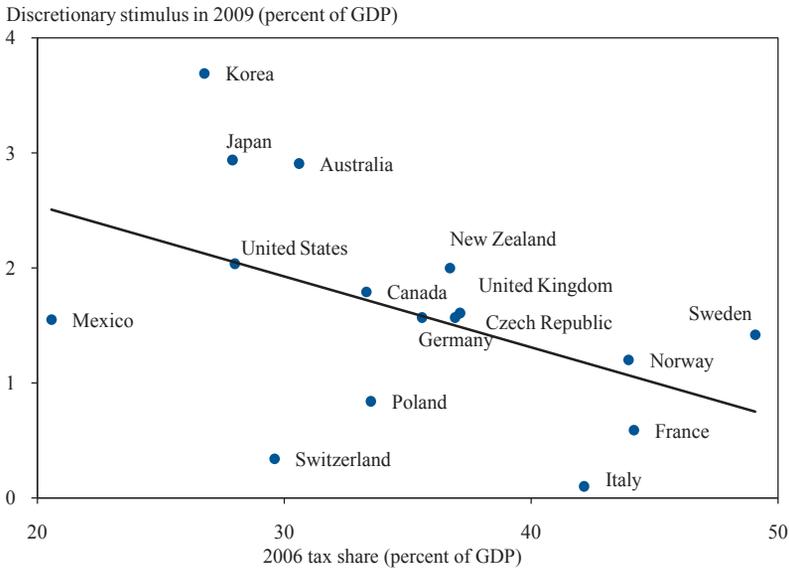
Note: Values are average of International Monetary Fund and Organisation for Economic Co-operation and Development estimates for nations with expansionary fiscal policies.

Sources: Horton, Kumar, and Mauro (2009); Organisation for Economic Co-operation and Development (2009a).

Discretionary fiscal action was not the only form of fiscal stimulus; automatic stabilizers (unemployment insurance, welfare, reduction in taxes collected due to lower payrolls) are triggered when an economy slows down. The size of automatic stabilizers present in an economy appears to be negatively correlated with the size of discretionary stimulus. As Figure 3-12 shows, those countries that already had large automatic stabilizers in place

appear to have adopted less discretionary fiscal stimulus, but they were obviously still providing substantial fiscal relief during the crisis.⁷

Figure 3-12
Tax Share and Discretionary Stimulus



Notes: The regression line is $\text{stimulus} = 3.8 - 0.06 * (\text{tax share})$. The coefficient on tax share is significant at the 90 percent confidence level. The R-squared is 0.23.

Sources: Organisation for Economic Co-operation and Development, Tax Database Table O.1; Organisation for Economic Co-operation and Development (2009a); Horton, Kumar, and Mauro (2009).

Stimulus is expected to fade slowly in 2010. Overall, the IMF estimates that advanced G-20 countries will spend 1.6 percent of GDP on discretionary stimulus in 2010, compared with 1.9 percent in 2009.⁸ Emerging and developing G-20 countries will also spend 1.6 percent of GDP in 2010, compared with 2.2 percent in 2009. The IMF projects that among the G-20 countries that adopted large stimulus programs, only Germany, Korea, and Saudi Arabia will increase those programs in 2010. In addition, substantial stimulus will continue into 2010 in Australia, Canada, China, and the United

⁷ The level of taxation in the economy is used as a proxy for automatic stabilizers. Countries with large levels of taxation see immediate automatic stabilizers because any lost income immediately reduces taxes. Those same countries often tend to have more generous social safety nets (funded by their higher taxes).

⁸ The averages are calculated by the IMF using PPP GDP weights. That is, the IMF uses the size of an economy—evaluated at purchasing power parity exchange rates, which take into account different prices for different types of goods and services—to weight the different countries in the averages.

States.⁹ Thus, substantial fiscal stimulus should continue to support the recovering world economy. The crucial question will be whether sufficient private demand has been rekindled by late 2010 to pick up the economic slack as stimulus unwinds.

Trade Policy in the Crisis

An extremely welcome development is the policy that was not called on during the crisis: trade protectionism. Frequently viewed as an accelerant of the Great Depression, protectionism has been largely absent during the current crisis. In the Great Depression, trade protectionism came into play after the crisis had started and was not a cause of the Depression itself (Eichengreen and Irwin 2009). But the extensive barriers that built up in the first few years of the Depression meant that as production rebounded, trade levels could not do so. In the current crisis, rather than respond to declining exports with increasing tariffs, countries left markets open, allowing for the possibility of a rebound in world trade. No major country has instituted dramatic trade restrictions. Furthermore, while antidumping and countervailing duty investigations have increased, the value of imports facing possible new import restrictions by G-20 countries stemming from new trade remedy investigations begun between 2008:Q1 and 2009:Q1 represents less than 0.5 percent of those countries' imports (Bown forthcoming).

THE ROLE OF INTERNATIONAL INSTITUTIONS

Rather than resort to beggar-thy-neighbor policies, this crisis has been characterized by international policy coordination. National policies did not take place in a vacuum; to the contrary, nations used a number of international institutions to coordinate and communicate their rescue efforts.

The G-20

The G-20, which includes 19 nations plus the European Union, was the locus of much of the coordination on trade policy, financial policy, and crisis response. Its membership is composed of most of the world's largest economies—both advanced and emerging—and makes up nearly 90 percent of world gross national product.

The first G-20 leaders' summit was held at the peak of the crisis in November 2008. At that point, G-20 countries committed to keep their markets open, adopt policies to support the global economy, and stabilize the financial sector. Leaders also began discussing financial reforms that would help prevent a repeat of the crisis.

⁹ Japan has announced additional stimulus since these estimates and will also be providing extensive stimulus in 2010.

The second G-20 leaders' summit took place in April 2009 at the height of concern about rapid falls in GDP and trade. Leaders of the world's largest economies pledged to "do everything necessary to ensure recovery, to repair our financial systems and to maintain the global flow of capital." Furthermore, they committed to work together on tax and financial policies. Perhaps the most notable act of world coordination was the decision to provide substantial new funding to the IMF. U.S. leadership helped secure a commitment by the G-20 leaders to provide over \$800 billion to fund multi-lateral banks broadly, with over \$500 billion of those funds allocated to the IMF in particular.

In September 2009, the G-20 leaders met in Pittsburgh. They noted that international cooperation and national action had been critical in arresting the crisis and putting the world's economies on the path toward recovery. They also recognized that continued action was necessary, pledged to "sustain our strong policy response until a durable recovery is secured," and committed to avoid premature withdrawal of stimulus. The leaders also focused on the policies, regulations, and reforms that would be needed to ensure a strong recovery while avoiding the practices and vulnerabilities that gave rise to boom-bust cycles and the current crisis. They launched a new Framework for Strong, Sustainable, and Balanced Growth that committed the G-20 countries to work together to assess how their policies fit together and evaluate whether they were "collectively consistent with more sustainable and balanced growth." Further, the leaders committed to act together to improve the global financial system through financial regulatory reforms and actions to increase capital in the system.

Given the central role the G-20 had played in the response to the crisis, it is not surprising that the leaders agreed in Pittsburgh to make the G-20 the premier forum for their economic coordination. This shift reflects the growing importance of key emerging economies such as India and China—a shift that was reinforced by the agreement in Pittsburgh to realign quota shares and voting weights in the IMF and World Bank to better reflect shifts in the global economy.

The International Monetary Fund

The IMF's role has changed considerably over time, from being the shepherd of the world's Bretton Woods fixed exchange rate system to becoming a crisis manager. In a systemic bank run, a central bank sometimes steps in as the lender of last resort. The IMF is not a central bank and can neither print money nor regulate countries' behavior in advance of a crisis, but it has played a coordinating and funding role in many crises. As the scale of the current crisis became apparent, it was clear that the IMF's

funds were insufficient to backstop a large systemic crisis, particularly in advanced nations. While it is still unlikely to be able to arrest a run on major advanced country financial systems, the increase in resources stemming from the G-20 summit has roughly tripled the resources available to the IMF and left it better suited to quell runs in individual countries.

As the IMF's resources were expanded, the institution took a number of concrete interventions. It set up emergency lines of credit (called Flexible Credit Lines) with Colombia, Mexico, and Poland, which in total are worth over \$80 billion. These lines were intended to provide immediate liquidity in the event of a run by investors, but also to signal to the markets that funds were available, making a run less likely. Now, rather than have to go to the IMF for funds during a crisis, these countries are "pre-approved" for loans. In each of these countries, markets responded positively to the announcement of the credit lines, with the cost of insuring the countries' bonds narrowing (International Monetary Fund 2009b). The IMF also negotiated a set of standby agreements with 15 countries, committing a total of \$75 billion to help them survive the economic crisis by smoothing current account adjustments and mitigating liquidity pressures. IMF analysis suggests that this program discouraged large exchange-rate swings in these countries (International Monetary Fund 2009b). These actions as well as the very existence of a better-funded global lender may have helped to keep the contraction short and to prevent sustained currency crises in many emerging nations.

THE BEGINNING OF RECOVERY AROUND THE GLOBE

In contrast to the Great Depression, where poor policy actions—monetary, fiscal, regulatory, and protectionist—helped turn a sharp global downturn into the worst worldwide collapse the modern economy has known, the recent massive policy response helped stop the spiraling of this Great Recession. Already financial markets have stabilized, GDP has begun to grow, and trade has begun to rebound. The crisis is far from over, however; most notably, employment in many countries is still distressingly weak. But the world economy appears to have avoided the outright collapse that was feared at one point and is now moving toward recovery.

The second quarter of 2009 saw the first hints of recovery in many countries. World average growth was 2.4 percent, and even OECD countries registered a positive 0.2 percent growth rate.¹⁰ The rebound caught many by surprise. The IMF and the OECD had revised projections steadily

¹⁰ World weighted average quarterly real GDP growth rates at a seasonally adjusted annual rate are from CEA calculations. The OECD growth rate is from the OECD quarterly national accounts database.

downward through the winter and spring, but by the middle of 2009 many economies had returned to growth. The one-quarter improvement in annualized growth of 5.7 percentage points (from -6.4 percent to -0.7 percent from the first to the second quarter of 2009) in the United States was one of the largest improvements in decades, but other countries that had deeper contractions rebounded even more. Annualized growth rates improved more than 14 percentage points in Germany and Japan, while growth rates rose more than 30 percentage points in Malaysia, Singapore, Taiwan, and Turkey. Other emerging markets, such as China, India, and Indonesia, which did not contract but faced lower growth during the crisis, rebounded to growth rates on par with their performance during the 2000s (if not the rapid booms of 2006–07).

Trade had collapsed quickly, and it has begun to rebound quickly as well. Beginning in March, when GDP was still falling rapidly, exports began to turn. From lows in February 2009, nominal world goods exports in dollar terms had grown 20 percent by October. U.S. nominal goods exports picked up later but had grown 17 percent from their April lows by October. As GDP began to rise, trade volume began to grow faster. Annualized growth for world real exports was 2.4 percent in the second quarter of 2009 and 16.8 percent in the third quarter. By comparison, world weighted average annualized real GDP growth in the second and third quarters of 2009 was 2.4 percent and 3.4 percent, respectively.

Financial markets are rebounding as well. Net cross-border financial flows are near their pre-crisis levels, and gross flows are increasing (although as of October 2009 they were still less than 80 percent of their average level in 2008). Libor-OIS spreads have fallen to more typical levels, and equivalent measures in other markets have subsided as well. Stock market indexes in the United States, Japan, the United Kingdom, and the European Union have all risen substantially. By October 2009, all were above their levels in October 2008, making up dramatic losses in early 2009. House prices have stabilized in most markets. Furthermore, the cost of insuring emerging-market bonds, which had spiked in the fall of 2008, is now back roughly to its pre-crisis level. The value of the dollar, which rose dramatically during the crisis, has retreated toward its value before the crisis (see Figure 3-2). From the end of March 2009 through December, the dollar depreciated 10 percent against a basket of currencies. The trade-weighted value is roughly at the same level as in the fall of 2007 and above its lows in 2008.

Potential financial problems still exist. Banks around the world may not have recognized all the losses on their balance sheets. The shock waves from the threatened default by Dubai World in November 2009 showed that there are still concerns in the market about potential bad debts on

various entities' balance sheets. There also are concerns in some countries that asset prices may be rising ahead of fundamentals. But the crush of near-bankruptcy across the system has clearly eased.

The Impact of Fiscal Policy

The broad financial rescues and the monetary policy responses played crucial roles in stabilizing financial markets. Fiscal policy also played an essential role in the macroeconomic turnaround. A simple examination of G-20 advanced economies shows that while they all had broadly similar GDP contractions during the crisis, the high-stimulus countries—despite having much smaller automatic stabilizers—grew faster after the crisis than countries that adopted smaller stimulus packages. Table 3-2 shows the 2009 discretionary fiscal stimulus as a share of GDP, the tax share of GDP (which is a rough estimate of automatic stabilizers), as well as the GDP growth during the two quarters of crisis (2008:Q4 and 2009:Q1) and the second quarter of 2009 when growth resumed in many countries. Growth reappeared first in the high-stimulus G-20 countries.

Table 3-2
Stimulus and Growth in Advanced G-20 Countries

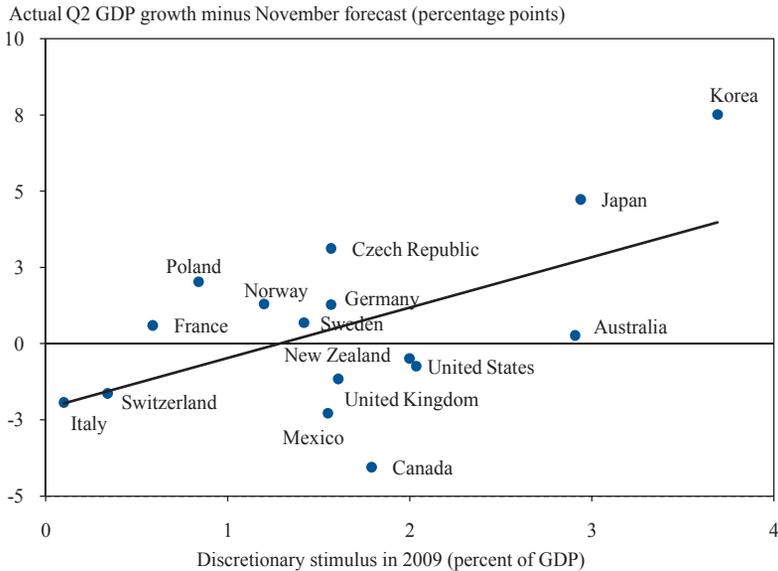
	Stimulus (% of GDP)	Stabilizers (% of GDP)	Growth during:	
			Crisis (%)	2009:Q2 (%)
High stimulus	3.2	28.4	-7.1	5.4
Mid stimulus	1.7	35.3	-8.3	-1.3
Low stimulus	0.3	43.2	-7.4	-0.3
United States	2.0	28.0	-5.9	-0.7

Notes: High countries are Australia, Japan, and Korea; middle countries are Canada, Germany, and the United Kingdom; low countries are France and Italy. Growth rates are annualized. Crisis refers to Q4:2008 and Q1:2009.

Sources: Organisation for Economic Co-operation and Development, Tax Database Table 0.1; Horton, Kumar, and Mauro (2009); Organisation for Economic Co-operation and Development (2009a); country sources.

Countries may have different typical growth patterns, however. Thus, to understand the impact of fiscal stimulus, one must estimate what would have happened had there been no stimulus—a counterfactual. Private sector expectations in November 2008—after the crisis had begun but before most stimulus packages were adopted—can serve as that counterfactual. Thus, one can compare actual growth minus predicted growth with the degree of stimulus to see whether those countries with large stimulus packages outperformed expectations once the stimulus policies were in place. The second quarter of 2009 is used as the test case. Figure 3-13 shows actual growth minus expected growth compared with 2009 discretionary fiscal

Figure 3-13
Outperforming Expectations and Stimulus



Notes: The regression line is $(\text{growth} - \text{forecast}) = -2.1 + 1.65 * \text{stimulus}$. The coefficient on stimulus is significant at the 95 percent confidence level. The R-squared is 0.31.
Sources: J.P. Morgan Global Data Watch, Global Economic Outlook Summary Table, November 7, 2008; Horton, Kumar, and Mauro (2009); Organisation for Economic Co-operation and Development (2009a); country sources; CEA calculations.

stimulus for the OECD countries for which private sector forecasts were available on a consistent date.¹¹ Countries with larger stimulus on average exceeded expectations to a greater degree than those with smaller stimulus packages. The two countries in this exercise with the largest stimulus packages, Korea and Japan, outperformed expectations by dramatic amounts. Countries such as Italy that had virtually no stimulus performed worse than most. Among non-OECD countries, China had one of the largest fiscal stimulus packages, and in the second quarter of 2009 its growth was both rapid and far in excess of what had been expected in November 2008. Fiscal

¹¹ Stimulus is measured as in Table 3-1, using IMF and OECD estimates of 2009 fiscal stimulus. Forecasts are from J.P.Morgan. See Council of Economic Advisers (2009) for more details. That report examines more countries and a set of time series forecasts in addition to the private sector (J.P.Morgan) forecasts. The results are quite similar with a simple time series forecast. Results are slightly weaker with a broader sample, but that is not surprising because the swings in the economies in emerging markets were quite severe and difficult to predict, and the stimulus policies may operate somewhat differently in those nations. Council of Economic Advisers (2009) used Brookings estimates as well as OECD and IMF, but those ceased being updated in March, and thus this analysis uses only IMF and OECD estimates. Using the June estimates alone slightly weakens the results because stimulus announced late in the second quarter likely had little impact on growth in that quarter.

stimulus seems to have been important in restarting world economic growth in the second quarter of 2009.

After the second quarter of 2009, the relationship between stimulus and growth weakens somewhat. High-stimulus countries still exceed expectations relative to low-stimulus countries, but the relationship is not statistically significant. It may be that quarterly growth projections made nearly a year in advance are not precise enough a measure of a third-quarter growth counterfactual.

The World Economy in the Near Term

While the return to GDP and export growth is encouraging, exports are still far below their level in the summer of 2008, and GDP is now far below its prior trend level. The IMF currently forecasts annual world growth of 3.1 percent in 2010; the OECD projects 3.4 percent.¹² For advanced countries, the forecasts are even more restrained: the IMF projects 1.3 percent, the OECD 1.9 percent for OECD countries. The IMF forecasts world trade to grow 2.5 percent in 2010; the OECD, 6.0 percent. These forecasts may be conservative. The IMF forecast would leave trade at a much lower share of GDP than before the crisis, and even if trade growth met the OECD's more aggressive forecast, trade would not reach its previous level as a share of GDP for some time. Given that trade declined faster than GDP in the crisis, it is possible it will continue to bounce back faster as well, surpassing these estimates.

How Fast Will Countries Grow? There is an open question about how fast countries will grow following the crisis. After typical recessions, the magnitude of a recovery often matches the depth of the drop. In this way, GDP returns not only to its previous growth rate, but to its previous trend path as well. If, however, the world's advanced economies emerge from the crisis only slowly and simply return to stable growth rates, output will be on a permanently lower path. A financial crisis could lower the future level of output by generating lower levels of labor, capital, or the productivity of those factors. If the economy returns to full employment, and productivity growth remains on trend, though, capital should eventually return to its pre-crisis path because the incentives to invest will be high. Thus, as long as the economy eventually returns to full employment, the long-run impact of the crisis chiefly rests on productivity growth in the years ahead. Chapter 10 discusses the prospects and importance of productivity in more detail.

Some research suggests financial crises may result in a slow growth pattern (International Monetary Fund 2009a), with substantial average

¹² IMF estimates are from International Monetary Fund (2009a). OECD estimates are from Organisation for Economic Co-operation and Development (2009b).

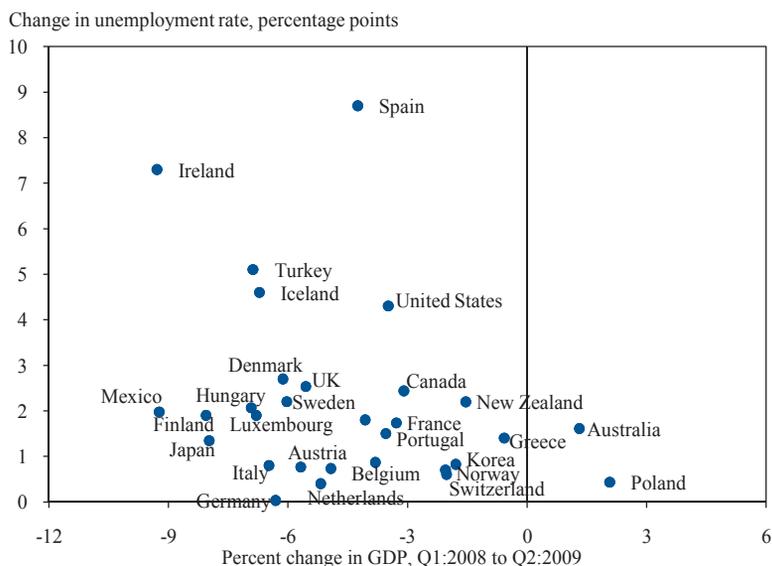
losses in the level of output in the years following a financial crisis. The same research, however, shows a wide variety of experiences following crises, with a substantial number of countries returning to or exceeding the pre-crisis trend level path of GDP. It is far too early to project the likely outcome of this recession and recovery, but there is hope that the aggressive policy responses and the potential for a sharp uptick in world trade—bouncing back with responsiveness similar in magnitude to its downturn—will return the path of GDP to previous trend levels in many economies.

Concerns about Unemployment. One reason for the great concern about the pace of growth after the recession is the current employment situation. What was a financial crisis and then a real economy and trade crisis has rapidly become a jobs crisis in many advanced economies. The OECD projects the average unemployment rate in OECD countries will have risen 2.3 percentage points from 2008 to 2009, with an average jobless rate of 8.2 percent in 2009. More worryingly, the OECD projects the group average will continue rising in 2010, and in some areas (such as the euro area) the jobless rate is expected to be even higher in 2011.

The United States has been an outlier in the extent to which the GDP contraction has turned into an employment contraction. Figure 3-14 shows the change in GDP and in the unemployment rate from the first quarter of 2008 to the second quarter of 2009. Typically, one would expect a line running from the upper left to the lower right because countries with small declines in GDP (or even increases) would have small increases in unemployment (lower right) and those with larger declines in GDP would have larger increases in unemployment (upper left). Countries broadly fit this pattern during the current crisis and recovery, but there are a number of aberrations. Germany saw a large contraction in GDP, and while growth has resumed, its one-year contraction was still sizable. Still, Germany's unemployment rate barely increased. In contrast, the United States suffered a relatively mild output contraction (for an OECD country), and yet it has had the largest jump in the unemployment rate outside of Iceland, Ireland, Spain, and Turkey, all of which had larger GDP declines.

There are several partial explanations for the large variation in the GDP-unemployment relationship across countries. The more flexible labor markets in the United States make the usual response of unemployment to output movements larger than in most other OECD countries; and, as discussed in Chapter 2, the rise in U.S. unemployment in the current episode has been unusually large given the output decline. Another factor is a policy response in some countries aimed at keeping current employees in current jobs. The extreme example of such a policy has been Germany's *Kurzarbeit* (short-time work) program, which subsidizes companies that put workers

Figure 3-14
 OECD Countries: GDP and Unemployment



Sources: Organisation for Economic Co-Operation and Development, Quarterly National Accounts and Key Short-Term Economic Indicators; country sources.

on shorter shifts rather than firing them. The OECD estimates the German unemployment rate would be roughly 1 percentage point higher without the program. Because such programs benefit only those who already have jobs, they could hold down unemployment at the cost of a more rigid labor market. Labor market flexibility is generally seen as allowing lower unemployment on average over the course of the business cycle and as permitting a more efficient distribution of labor resources, thus enhancing productivity.

Global Imbalances in the Crisis

In addition to the unambiguous signs of problems in the U.S. economy going into the crisis, there were clear signals that the global economy was not well balanced. Global growth was strong from 2002 to 2007, but the growth was not well distributed around the world economy, with fast growth in some emerging markets and sluggish growth in some advanced economies. Further, that growth came with mounting imbalances in saving and borrowing across the world. U.S. saving was very low, which led to substantial borrowing from the rest of the world. Home price bubbles and overborrowing were not exclusive to the United States; the United Kingdom, Spain, and many other economies also borrowed extensively, helping inflate

asset prices in those economies. This borrowing was paired with very high saving in some countries, particularly in emerging Asia.

The extent to which the global imbalances were a cause of the crisis or represented a symptom of poor policy choices in different countries is a question of active debate (see Obstfeld and Rogoff 2009 for discussion). The current account (net borrowing from or lending to the rest of the world) can be defined as a country's saving minus its investment. Thus, some argue that forces in the rest of the world cannot be deterministic of a country's current account balance. A country saves or borrows based on its own choices. In this formulation, the imbalances were merely a symptom. In fact, some argued the imbalances were beneficial because savings were channeled away from inefficient financial markets in poor countries toward what were thought to be more efficient markets in rich countries. Conversely, some argue that the influx of global savings into the United States distorted incentives by keeping interest rates too low and led to overborrowing and asset bubbles. In this view, the imbalances played a leading role in the crisis.

The truth almost certainly lies somewhere in between. The influx of global savings into the United States did lower borrowing rates and encouraged more spending and less saving within the U.S. economy. This may have allowed the credit expansion and related asset price bubbles to continue longer than they could have otherwise. At the same time, even if the global savings in some sense led to U.S. borrowing, the failure of the financial system to use that borrowing productively and the failure of regulation to make sure risk was being treated appropriately were surely partly to blame for the crisis.

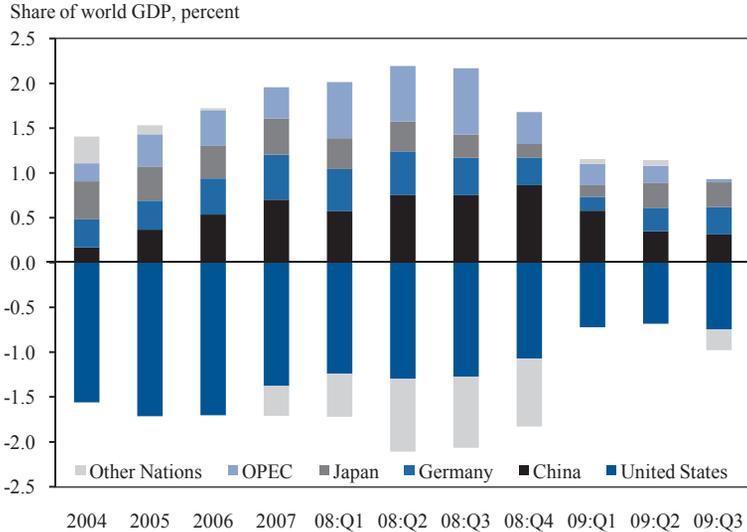
As the U.S. economy seeks to find a more sure footing and a growth path less dependent on borrowing and bubbles, world demand needs to be redistributed so that it is less dependent on the U.S. consumer and does not cause global imbalances to reappear and contribute to distortions in the economy. Fixing the imbalances can help provide more demand for the U.S. economy. But these imbalances also need to be treated as symptoms of deeper regulatory and policy failures. Fixing the imbalances alone will not prevent another crisis.

Since the onset of the crisis, the imbalances have partially unwound (the likely future path of the U.S. current account is discussed in more detail in Chapter 4). The U.S. current account deficit, which had built to over 6 percent of GDP in 2006, was on a downward path before the crisis struck in full force, falling to under 5 percent of GDP at the start of 2008. After the crisis hit, it fell below 3 percent of GDP in the first quarter of 2009. Major surplus countries—China, Germany, and Japan—have all seen a reduction in their current account surpluses from the highs of 2007. In all three

cases, the surpluses have stabilized at substantial levels (in the range of 3–5 percent of GDP), but they are notably down from their highs. One essential part of the response to the crisis has been the substantial fiscal stimulus implemented by these three countries, which has helped demand in these countries stay stronger than it otherwise would have been.

Figure 3-15, which shows current account imbalances scaled to world GDP, demonstrates how much of total world excess saving or borrowing is attributable to individual countries. As the figure makes clear, by 2005 and 2006, the United States was borrowing nearly 2 percent of world GDP, and by the end of 2008, China was lending nearly 1 percent of world GDP. During the crisis, the surpluses of OPEC (Organization of Petroleum Exporting Countries) countries, Japan, and Germany contracted, and the United States is now borrowing less than 1 percent of world GDP. China’s surplus is also smaller than before the crisis, but China is still lending nearly 0.5 percent of world GDP, and OPEC surpluses may rise as well. But by the third quarter of 2009, the degree of imbalance was substantially lower than just a year earlier. There is hope that the short-run moves in these current account balances are not simply cyclical factors that will return quickly to

Figure 3-15
Current Account Deficits or Surpluses



Notes: Sample limited by data availability. In the figure, OPEC includes Ecuador, Iran, Kuwait, Saudi Arabia, and Venezuela; and Other Nations includes all other countries with quarterly current account data. Third quarter 2009 data for both OPEC and Other Nations were incomplete at the time of writing.

Sources: Country sources; CEA estimates.

former levels but rather that they represent a more sustained rebalancing of world demand.

Net export growth is often a key source of growth propelling a country out of a financial crisis. But in a global crisis, not every country can increase exports and decrease imports simultaneously. Someone must buy the products that are being sold, and the world's current accounts must balance out. Thus far, the crisis has come with a reduction in imbalances, with strong growth and smaller surpluses in many surplus countries. Whether these shifts become a permanent part of the world economy or policies and growth models revert to the pattern of the 2000s will be an important area for policy coordination.

CONCLUSION

The period from September 2008 to the end of 2009 will be remembered as a historic period in the world economy. The drops in GDP and trade may stand for many decades as the largest worldwide economic crisis since the Great Depression. In contrast to the Depression, however, the history of the period may also show how aggressive policy action and international coordination can help turn the world economy from the edge of disaster. The recovery is unsteady and, especially with regard to unemployment, incomplete, but compared with a year ago, the positive shift in trends in the world economy has been dramatic.

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