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Excerpt
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1 Globalization and the Multinational Corporation

1.1 Introduction

The world economy is becoming increasingly globalized. Campuses have students from many different countries. The chips in your laptop computer may have come from Korea, and its software could have been developed by Indian engineers. We hope that during your study break, you savor some Italian espresso, although the "Italian" coffee beans that were roasted in Italy were likely grown in Indonesia or Brazil. The concept of **globalization** refers to the increasing connectivity and integration of countries and corporations and the people within them in terms of their economic, political, and social activities.

Because of globalization, multinational corporations dominate the corporate landscape. A **multinational corporation (MNC)** produces and sells goods or services in more than one nation. A prototypical example is the Coca-Cola Company, which operates in more than 200 countries.

An MNC probably produces your favorite brew. For example, Anheuser-Busch InBev is a publicly traded company headquartered in Belgium with origins dating back to 1366. Over time, the local Belgian firm grew into an MNC called Interbrew, with famous brands such as Stella Artois and Leffe. In 2004, Interbrew and Companhia de Bebidas das Américas (AmBev), from Brazil, merged to create InBev; and in 2008 InBev acquired Anheuser-Busch, the brewer of Budweiser beer, to become Anheuser-Busch InBev. The company is now the largest brewer in the world by volume, producing 457 million hectoliters (hl) of beer. In November 2015, they revealed plans to acquire SABMiller, originally a South African but now a global brewer.

The link between a large European company and a large company from an emerging economy is no coincidence. In the first decade of the twenty-first century, the world witnessed strong growth in Brazil, Russia, India, and China (sometimes called the BRICs), although growth has substantially declined of late. Today, the BRICs account for more than 20% of the world's **gross domestic product (GDP)** and more than 50% of the GDP of all emerging countries. The integration of these emerging economies into the global economy was forcefully illustrated in 2006, with the creation of the world's largest steel company, ArcelorMittal. Mittal Steel, an Indian company, took over Arcelor, a European steel producer, which was created by an earlier merger of steel companies in France, Belgium, Luxembourg, and Spain. The fact that Arcelor's management at first opposed the takeover shows that globalization does not necessarily proceed smoothly.

The international scope of business creates new opportunities for firms, but it also poses many challenges as became abundantly clear in 2008 when a housing and mortgage crisis in the United States morphed into a global financial crisis. This book provides a guide to financial management in an increasingly globalized world, and in particular, to the financial management problems that multinational firms face. In this introductory chapter, we first reflect generally on the globalization phenomenon. We then discuss multinational firms in more detail, including their effects on the economy and society at large. We also survey the different important players in this globalizing world, ranging from international banks to international institutions and institutional investors. We end with a quick preview of the book.

1.2 Globalization and the Growth of International Trade and Capital Flows

Globalization affects all aspects of society, but economically, two main trends define it. First, countries continue to expand their trade in goods and services. Second, countries continue to reduce their barriers to capital flows. We discuss each in turn.

The Growth of International Trade

Trade Liberalization Beginning with the writings of David Ricardo in the nineteenth century, economists have known that countries gain from trade if each nation specializes in the production of those goods in which it has a comparative advantage. Even if one country is more productive at producing a given item than other countries, it should still focus its production on those goods in which it is relatively most efficient, and doing so will make all trading partners better off.[1] There also appears to be a link in the data between trade and growth: More open countries tend to grow faster.[2]

Unfortunately, protectionist tendencies have long kept the world relatively closed, with many countries restricting international trade through tariffs on imports, non-tariff barriers such as subsidies to local producers, quotas on imported products, onerous regulations applying to imported products, and so forth. Wacziarg and Welch (2008) pinpointed when various countries liberalized their trade regimes – in other words, when the countries became open to trade. They looked at a variety of criteria, including the extent of the countries' tariffs and non-tariff barriers, and state control on major export sectors. In 1960, only about 20% of countries were open to trade. These countries included the United Kingdom and the United States, who had a long tradition of openness to international trade, and many European countries that liberalized in 1959 or 1960, after the creation of the European Economic Community

[1] This law of comparative advantage will show up again when we discuss the foreign currency swap market in Chapter 21.

[2] Articles confirming such a link include Frankel and Romer (1999), Sachs and Warner (1995), Alcalá and Ciccone (2004), and Wacziarg and Welch (2008). Micro trade economists have shown trade liberalization also expands product scope (see e.g. Goldberg et al. 2010).

(EEC). The EEC set out to establish free trade among a number of European countries, later turning into the European Union, which we describe further in Section 1.4.

The idea that economies should be open to trade got a further boost in the early 1980s, when Western governments started to deregulate their economies and privatize government firms. The fall of the Iron Curtain in 1990 and subsequent trade liberalizations occurring in many developing countries increased trade openness dramatically, with more than 70% of countries open to trade by 2000.

International Efforts to Promote Free Trade The General Agreement on Tariffs and Trade (GATT), signed in 1947, was designed to encourage free trade between member states by regulating and reducing tariffs on traded goods and by providing a common mechanism for resolving trade disputes. GATT signatories occasionally negotiated new trade agreements to reduce tariffs, called "Rounds," to which countries would agree.

The Tokyo Round in 1979 also reduced non-tariff barriers to trade, and the Uruguay Round, begun in 1986, established the World Trade Organization (WTO) in 1995 to replace the GATT Treaty. GATT succeeded in lowering trade barriers in a multilateral, worldwide way, but a number of important regional trade agreements have slashed trade barriers even more in particular regions. The best known of these regional agreements are the European Union (EU), the North America Free Trade Agreement (NAFTA), Mercosur in South America, and the Association of Southeast Asian Nations (ASEAN).

In the meantime, advances in information technology (IT) increased the share of services and made the world seem smaller, allowing outsourcing to become an important phenomenon. Outsourcing is the shifting of non-strategic functions – such as payroll, IT, maintenance, facilities management, and logistics – to specialist firms to reduce costs. When the business function is relocated to a foreign country, outsourcing also becomes offshoring. Today, outsourcing IT work to low-cost countries, such as India, has become commonplace. These developments led to a new focus for trade policy: increasing the international tradability of services. During the Doha Round, which began in 2001, trade in services was put on the agenda. In addition, the Doha Round focused on agriculture, industrial goods, and updated custom codes. Unfortunately, the trade talks have been going far from smoothly, and, by the end of 2016, the global Doha negotiations essentially stalled.

The Growth in Trade The evolution of trade openness dramatically increased trade flows between countries. One measure of trade openness is the sum of exports and imports in a given year divided by a measure of output, such as GDP. Exhibit 1.1 presents some data on this relative size of the trade sector.

In Panel A, the data for large, developed countries reveal a significant increase in trade-to-GDP ratios between 1970 and 1985. Between 1985 and 2000, the trade sectors mostly grew as well, especially in France, Germany, and Australia. Growth over the previous decade stagnated somewhat but has increased again over the last five years. Germany witnessed the most substantial increase in its trade sector over the last 15 years. Of the countries shown, it is also the most open, with its trade sector comprising 85% of GDP in 2015, while the United States is the least open, with trade just 30% of its GDP.

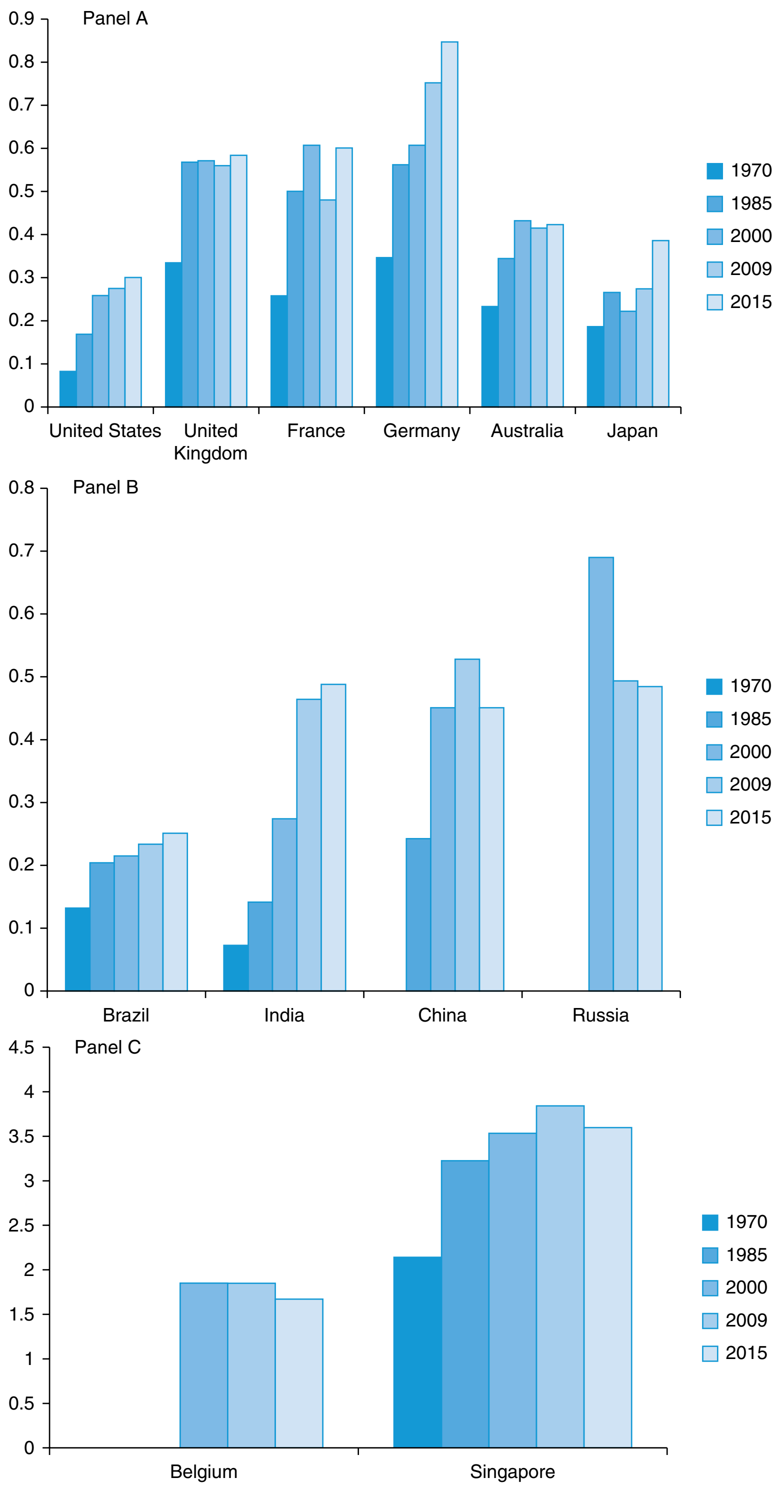

Exhibit 1.1 International trade as a percentage of GDP
Notes: The data are from UNCTAD and are the sum of exports and imports divided by GDP, a measure of total output.

In Panel B, large, developing countries such as Brazil, India, and China witnessed increases in the relative size of their trade sectors. India's trade sector evolved from less than 10% of GDP in 1970 to over 45% in 2014. China's trade sector nearly doubled between 1985 and 2000 and is around 45% of GDP in 2015. This increase reflects the major trade reforms China undertook during the 1980s and 1990s, including China's accession to the WTO in 2001. The accession, in turn, led to a steady decrease in tariffs on imports. Because of its large size and increased openness, China has become a major player in the world economy.

As Exhibit 1.1 demonstrates, although the global trend is toward freer trade, some countries are clearly more open than others. Many factors affect why, how much, and with whom countries trade. For example, countries that border oceans tend to trade more than inland countries. Large countries tend to trade relatively less than smaller countries as evidenced by the US numbers relative to most other countries; and, indeed, China is a relative outlier. Small open countries such as Belgium and Singapore (see Panel C of Exhibit 1.1) have trade-to-GDP ratios well over 150% and 350%, respectively.

How Multinational Corporations Are Affecting Trade The phenomenal growth of MNCs after World War II also boosted international trade. According to the United Nations Conference on Trade and Development (UNCTAD), the number of international companies has more than doubled over the last 20 years to over 80,000 companies. More than 50% of international trade actually occurs within MNCs (that is, firms trading with themselves). An ever increasing proportion of MNCs is now headquartered in emerging markets, with many buying up companies in developed markets.

In MNCs, capital, labor, management skills, and technology are all transferred to other countries to produce abroad rather than export from a domestic factory. Sometimes the components of different goods are produced in different countries, depending on their relative advantages in terms of costs and technological ability. A classic example is the Barbie doll. The raw materials for dolls come from Taiwan and Japan, their assembly takes place in the Philippines, Indonesia, and China (due to the low labor costs), and the design and the final coat of paint come from the United States, which still has an edge in design and marketing.

The Globalization of Financial Markets

The globalization of financial markets and the profound changes they have undergone since 1980 have also dramatically changed how MNCs manage their business risks, improve their access to foreign capital, and enhance their ability to reduce financing costs. We provide a short overview of the major developments.

Trends in Financial Openness A country is financially open if it allows foreigners to invest in its capital markets and allows its citizens to invest abroad. After World War II, most countries had controls or restrictions in place that prevented the free flow of capital across borders. However, in the 1980s, many developed countries began liberalizing their capital markets. For example, Japan started to liberalize in 1984; in Europe, the movement toward the Single Market forced many countries to abolish their capital controls, with France abolishing capital controls in 1986, Italy in 1988, and Belgium in 1990.

Prologis: Betting on Global Trade

Prologis, which owns and develops industrial real estate, is a real estate investment trust (REIT) that trades on the New York Stock Exchange (NYSE). You might think that real estate is not an easily exchangeable asset and consequently that Prologis has little to do with international business. But in fact, the fortunes of Prologis totally depend on globalization.

You see, Prologis develops, acquires, and operates distribution facilities in locations tied to global trade, such as international airports, seaports, and major highway systems. Prologis has investments in 20 countries, ranging from Spain to Brazil to China. With increased international trade and the need to minimize inventories, companies have realized that distribution efficiency is a key to their success. Prologis therefore targets properties that are built for the efficient movement of goods and are strategically located in the world's global distribution markets. Although the value of the property depends to a certain degree on local factors, as is the case for any piece of real estate, Prologis business is primarily a bet on globalization. Investors in Prologis are betting on continued growth of international trade and the increasing demand for such strategically located distribution facilities.

Prologis is the result of a merger in 2011 by AMB and ProLogis, two similar industrial property companies. The 2008–2009 global crisis was particularly dire for ProLogis and AMB. Not only did the crisis cause a worldwide recession which reduced trade flows, it also prompted protectionist pressures in many countries, undermining the core of the companies' growth strategy. AMB's stock price, for example, dropped from about $60 before the crisis to less than $10 in March 2009, a drop of more than 80%! The Prologis stock price has since recovered quite well.

In the late 1980s and during the 1990s, many developing countries began a financial liberalization process, relaxing restrictions on foreign ownership of their assets and taking other measures to develop their capital markets, often in tandem with macroeconomic and trade reforms. These developments created a new asset class in which to invest: emerging markets, which we discuss in more detail in Chapter 12.

Deregulation of foreign investment considerably increased the degree of financial openness in the world between 1980 and now. While measuring financial openness is difficult, most relevant studies agree that financial openness has not yet evolved as far as trade openness.[3]

One way to assess how open countries are to capital flows is to examine their foreign assets and liabilities.[4] The ratio of foreign assets plus foreign liabilities to GDP

[3] See Quinn and Toyoda (2008), Chinn and Ito (2008), and Fernandez et al. (2016) for indices of financial openness.

[4] See Chapter 4 for a discussion of the relationship between flows of capital that are recorded in a country's balance of payments and the balance sheet position of the country's foreign assets and liabilities.

has grown rapidly for industrial countries. In 1970, this financial ratio for industrial countries as a group was slightly less than 50%. By 1985, the ratio was close to 100%, whereas in 2008, the ratio was over 400%. Growth reversed at first, then slowed with the financial crisis and the ratio was around 420% in 2013. Financial openness in emerging markets progressed more rapidly from a lower base, with the ratio of foreign assets and liabilities over GDP increasing from less than 10% in 1970, to about 215% in 2008.[5] In 2013, the ratio stood at about 320%.

The New Financial Landscape The deregulatory zeal of governments worldwide happened against the background of and perhaps as a reaction to a vastly different financial landscape that emerged in the 1980s. Most importantly, the markets for financial derivatives exploded, backed by advances in financial economics and computer technology. A derivative security is an investment whose payoff over time is *derived* from the performance of underlying assets (such as commodities, equities, or bonds), interest rates, exchange rates, or indices (such as a stock market index, a consumer price index, or an index of weather conditions). The main types of derivatives are futures, forwards, options, and swaps. These derivatives are traded over the counter (that is, on a bilateral basis among financial institutions or between financial institutions and their clients) and on organized exchanges. We first encounter forward contracts, the simplest derivative, in Chapter 3, and Chapters 20 and 21 discuss other derivative contracts in more detail.

Another important financial development was the increased use of securitization: the repackaging of "pools" of loans or other receivables to create a new financial instrument that can be sold to investors. For example, financial institutions package mortgages or car loans into complex securities that are sold to investors, thereby spreading the risks involved. Moreover, banks earn fees on these securities and need not hold a capital buffer on their balance sheets to protect against possible losses as required for a regular loan. As Acharya et al. (2010) report, securitized assets worldwide increased from $767 billion at the end of 2001 to $2.7 trillion in December 2006.

The spectacular growth in derivatives and securitization considerably increased the complexity in the financial intermediation business. These developments dramatically improved the ability of banks and corporations to manage risk. For example, corporations with earnings denominated in foreign currencies could now easily hedge their risks using derivatives contracts. Similarly, companies could now easily tap foreign investors for capital with bond issues denominated in different currencies, while using the derivative markets to convert the loans back to their domestic currency if they desired to do so.

The new financial landscape also made it increasingly difficult for governments to regulate their domestic capital markets without smart financiers finding loopholes around the rules. For example, a major impetus to the growth of the swap market was regulatory arbitrage, where financial institutions exploited country-specific regulations or taxes to lower the cost of funding for multinational companies. In Chapter 11, we give some concrete examples of such regulatory arbitrage.

[5] These numbers are reported and discussed in Lane and Milesi-Ferretti (2007) and Milesi-Ferretti, Strobbe, and Tamirisa (2010). The most recent numbers are computed from data provided by Gian-Maria Milesi-Ferretti.

With derivative contracts and securitization techniques becoming ever more sophisticated, a degree of complexity and opaqueness crept into the financial system that put stress on the risk management systems of banks and companies. For instance, mortgage loans were carved up into different tranches depending on the perceived riskiness of the loans into so-called collateralized debt obligations (CDOs).

In the 1990s, a backlash against derivatives began as industrial and financial firms took large losses. Metallgesellschaft of Germany and Procter & Gamble in the United States sustained huge losses due to lax oversight of derivatives trading. Barings Bank, the oldest British bank and the personal bank for the queen, collapsed when one rogue trader, Nick Leeson, lost $1.4 billion on the derivatives exchanges of Singapore and Osaka in Japan in 1995. Leeson was outdone in January 2008 by Jérôme Kerviel, a trader at Société Générale, a French bank, who lost a staggering 4.9 billion euros ($6.7 billion) on derivative contracts. But by then, it had become apparent that more systemic problems were brewing in the financial sector.

A Global Financial Crisis From 2008 through 2010, the world witnessed a full-blown financial crisis, which started in the United States, and led to a global recession, the longest and deepest in the postwar era. We will discuss a number of important economic crises in this book, but the scale and the depth of this recent crisis raises deep issues about the functioning of the global financial system, making it deserve special attention.

Exhibit 1.2 depicts how a financial crisis typically unfolds, consisting of rapidly falling asset prices, and financial institutions that become insolvent or are hit by liquidity crises.

Suppose asset prices fall. Consumers are now less wealthy, and spend less. Firms may have a harder time financing themselves because the value of their collateral drops, causing them to invest less. As financial institutions take losses, aggregate

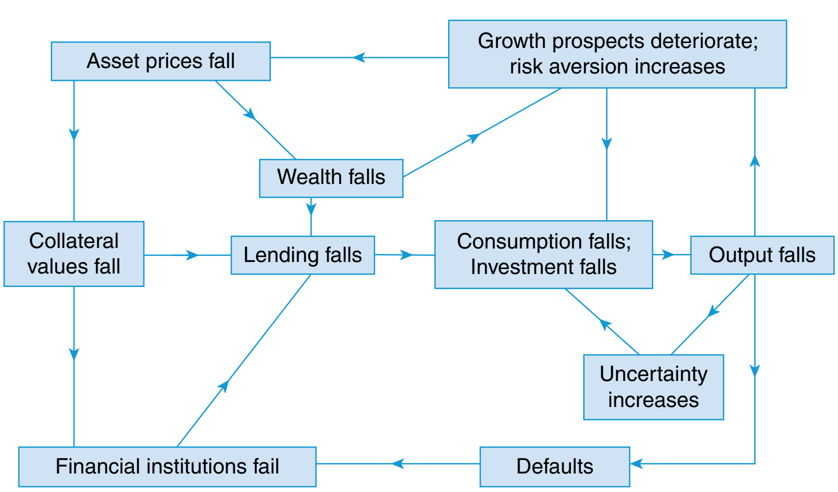

Exhibit 1.2 The workings of a financial crisis
Note: This Exhibit is inspired by Figure 19–1 in Mankiw and Ball (2011).

lending to both consumers and firms is reduced as well, causing them to spend less. Both chains of events reduce aggregate output and lead to layoffs. The bad economic conditions feed back into asset prices and the health of financial institutions through several channels. Unemployed workers and poorer consumers tend to be more cautious and may invest more in safe assets (such as Treasury bills and bonds), rather than risky securities. This increased risk aversion and the flight to safety it entails in turn reduce asset prices further. As Bloom (2009) shows, increased uncertainty about the economic and financial future may make companies delay investments and further reduce output. Facing defaults on their loans, caused by the bad economic conditions, and perhaps because of their direct exposure to asset prices, certain financial institutions may also curtail lending, and perhaps even go bankrupt. Once depositors and investors are sufficiently worried about the health of their financial institutions, a liquidity crisis may erupt. In a liquidity crisis, a financial or other institution does not have enough liquid assets to make payments it has promised. It may be solvent, that is, its assets may exceed its liabilities, but if counterparties who are worried about its solvency insist on immediate payment, the institution is forced to sell illiquid assets at fire sale prices. This may push the institution into insolvency and freeze up the markets in which the institution plays a big role.

The classic example of such a crisis is a bank run, where depositors who fear the bank's insolvency cause it to go bankrupt by withdrawing deposits en masse. Government-sponsored deposit insurance protects against this. In a more modern system, institutional investors and corporations fund banks and other financial institutions through secured short-term loans. When repayment is uncertain, large institutional investors require financial institutions to either provide the safest assets (like Treasuries) as collateral, or provide other securities, such as securitized loans, but then at a discount relative to current value, which is called the haircut. Steep haircuts amount to steep deductions in the value of the bank's assets.

We now provide a brief overview of actual events but note the references for further reading in the bibliography (Mankiw and Ball 2011 is a good start). In the United States, securitization and the government-condoned quest to allow every household to own a home fueled spectacular growth in subprime mortgages between 2000 and 2006. Subprime mortgages are made to borrowers with relatively low credit scores, and such mortgages may have special features to reduce loan payments in the early years of the loan. Because house prices kept increasing, many people bought houses they could not really afford, or speculated on rising house prices. Financial institutions securitized these mortgages and initially sold them to investors (pension funds, hedge funds, and banks) across the world, but as time went by, the institutions increasingly held the most risky parts of the tranches on their books. However, in 2006 and 2007, house prices started to fall and defaults on subprime mortgages started to rise. In 2007, two companies specializing in subprime mortgages declared bankruptcy, signaling to financial markets that major financial institutions holding assets backed by subprime mortgages might suffer losses, too. This raised the specter of a liquidity crisis in the US financial system. In the United States, haircuts on securitized loans began to creep up (see Gorton and Metrick 2012), but in the UK, Northern Rock Bank faced a classic bank run in September 2007, after it ran short of liquid assets and asked the Bank of England, the UK's central bank, for a loan. Northern Rock was the first of a series of venerable financial institutions to face serious trouble.

On March 16, 2008, JPMorgan Chase (helped by a loan from the Federal Reserve, the US central bank) bought Bear Stearns, a respected investment bank, which could no longer fund itself in the money markets. September 2008 proved much worse. First, Fannie Mae and Freddie Mac, the government-sponsored enterprises that securitize a large share of US mortgages, were taken over by the US government. Then, on September 15, Lehman Brothers, an investment bank founded in 1850, declared bankruptcy. Nobody fully understood how interconnected to other financial institutions around the world Lehman really was, and its default caused money markets to essentially freeze, while a flight to safety ensued. Treasury bond prices soared, the stock market tanked, and uncertainty was at an all-time high. The vicious circle shown in Exhibit 1.2 was now in full swing and the real economy took a nose dive, too.

Ramifications of the Crisis Academics, practitioners, and regulators are still busy debating the exact causes and consequences of the crisis. To some, the crisis was US grown, and a straight line could be drawn from greedy mortgage originators in California to excessive risk takers at the banks and in the derivative markets. To others, the US events were simply a trigger to shrink the bloated financial sector which had responded to low interest rates and international capital adequacy rules with a securitization business model using excessive leverage and incorrectly priced tail risks. To yet others, the root cause was global imbalances, the large US current account deficit and large surpluses in emerging countries, in particular China. While US monetary policy may have kept short-term interest rates too low,[6] adherents of this view place the responsibility for excessively low long-term interest rates on excessive capital flows into US Treasuries implied by the global imbalances.

The crisis also raises a host of regulatory issues. Central banks and governments across the world reacted vehemently to contain the crisis, pumping money into banks and companies, and running very expansionary monetary and fiscal policies. More important are the policy lessons to be drawn for the future. For example, *ex post*, it seems hard to understand why the Federal Reserve saved Bear Sterns, and later AIG, a large insurance company, but not Lehman, given the importance of Lehman for US money markets. Nevertheless, the Fed surely was correct in worrying about the moral hazard involved in saving big financial institutions. Using taxpayer money to bail out large financial institutions after they suffer large losses surely encourages such institutions to engage in risky behavior in which they keep the upside of trades, but are not being penalized for the downside. When large institutions feel they are "too big to fail," they may behave recklessly. Such issues will undoubtedly be debated and studied at length in years to come. We cannot fully join this debate, but we will come back to the far-reaching ramifications of this crisis throughout the book.

6 See Rajan (2006) and Bekaert, Hoerova, and Lo Duca (2013) for stories involving excessively lax monetary policy and its interaction with excessive risk taking in financial markets.