

Understanding Financial Crises

Franklin Allen
Wharton School
University of Pennsylvania

The Wharton Global Alumni Forum
Ho Chi Minh City, Vietnam
May 30-31, 2008

- The ongoing Subprime Crisis that started in August 2007 have reminded us how damaging financial crises can be
- For people in East Asia who lived through the Asian Crisis of 1997 this is not a surprise
- Crises are not a new phenomenon - they have been around for centuries
- How can crises be understood?

Conventional wisdom in the media and among many government officials was that the Asian Crisis was due to basic institutional inadequacies:

- Crony capitalism
- Inadequate corporate governance
- Lack of transparency due to inadequate disclosure and accounting systems
- Poor regulatory supervision
- Government guarantees

- BUT crises occurred in many countries where institutions are vastly different such as Norway, Finland, and Sweden in the early 1990's
- Also, most of these factors were not present in the US at the start of the recent crisis
- The institutions and other factors present in all of these crises differed significantly from those in Asia
- This underlines that it is important not to take too narrow a view and focus too much on fine details

Historical background

- Banks issue *liquid liabilities* in the form of deposit contracts but invest mainly in *illiquid assets* and historically, this mismatch resulted in frequent banking crises
- Kindleberger (1993, p. 264) in his book *A Financial History of Western Europe* points out that financial crises have occurred at roughly ten year intervals over the last 400 years
- Over time one of the main roles of central banks came to be to intervene in times of crisis

- The Bank of England was the first bank to perfect these techniques
- Before Northern Rock last fall, the last true crisis in England was the Overend and Gurney Crisis of 1866
- Many other countries such as Germany, France, Sweden and Canada followed the Bank of England's example and by the end of the nineteenth century crises became a historical curiosity in these countries

- In the US the history of central banks and crises was very different
- Alexander Hamilton, the first US Secretary of the Treasury, had been impressed by the example of the Bank of England and this led to the setting up of the First Bank of the United States [1791-1811] and the Second Bank of the United States [1816-1836]
- But in the US there has always been a strong distrust of centralized power. In a report on the Second Bank John Quincy Adams wrote:

“Power for good, is power for evil, even in the hands of omnipotence”

- Although the bill for rechartering the Second Bank of the United States was passed by Congress it was vetoed by President Andrew Jackson and the veto was not overturned
- Between 1836 and 1913 the US had no central bank
- In the late nineteenth century time it had major crises in 1873, 1884, 1890, 1893 and 1907

- The crisis of 1907 was particularly severe and a French banker in 1907 famously commented “The US is a *great financial nuisance*”
- The 1907 crisis led to the foundation of the Federal Reserve System in 1914 but banking crises continued to occur in the US until strong banking regulations and controls were put in place in 1933
- In many other countries the response was even stronger than in the US and involved government ownership of the banking sector

- Governments succeeded in banishing banking crises – between 1945 and 1971 there were essentially no banking crises in the world
- But the regulation and public ownership went too far and prevented the financial system from allocating resources so there was financial liberalization starting in the 1970's and this has led to the return of crises
- Crises have occurred in both developed countries such as Norway, Finland, Sweden and Japan and now the US as well as in developing countries

How do recent crises compare historically?

Bordo et al. (2001) distinguish four periods:

Gold Standard Era: 1880-1913

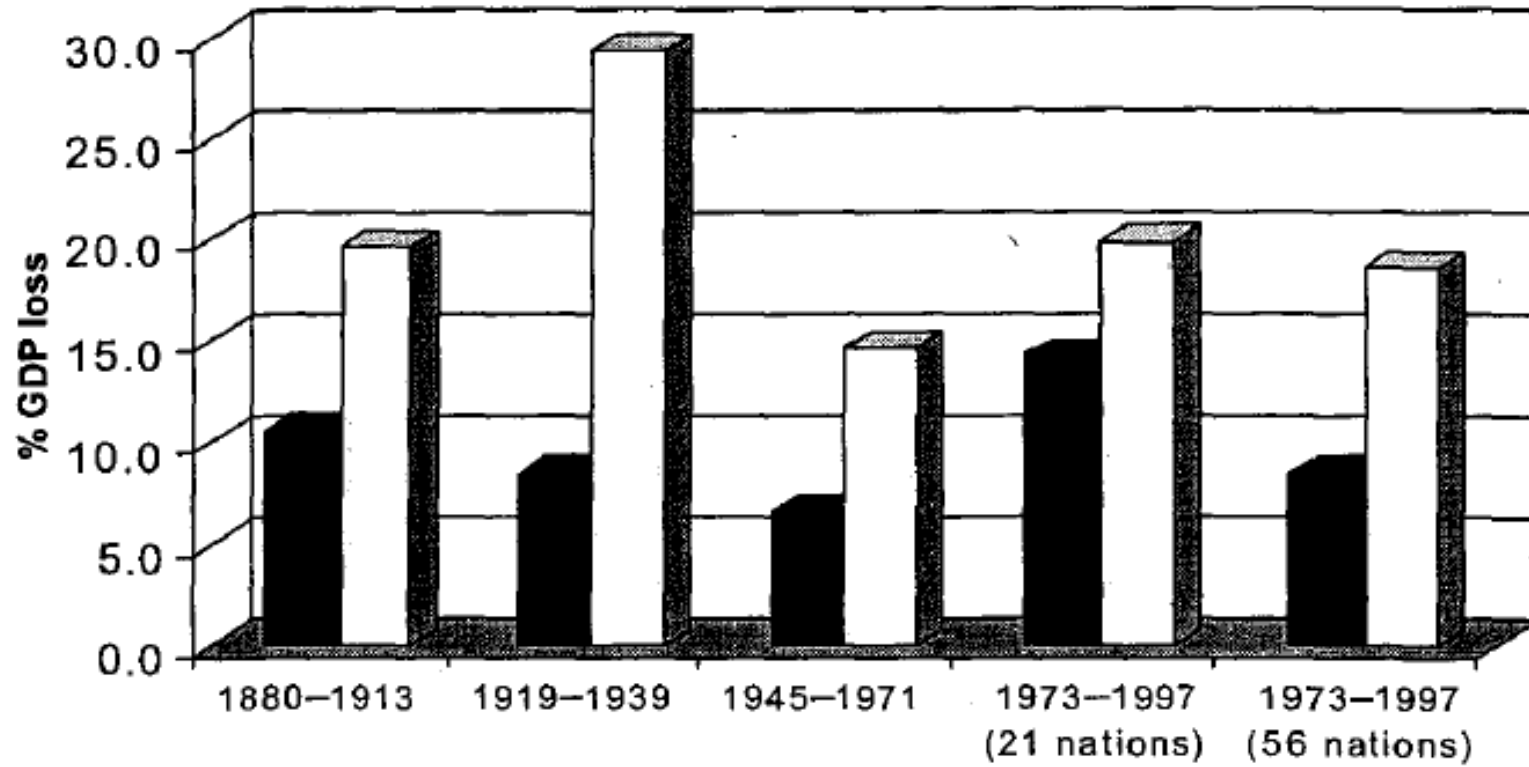
Interwar years: 1919-1939

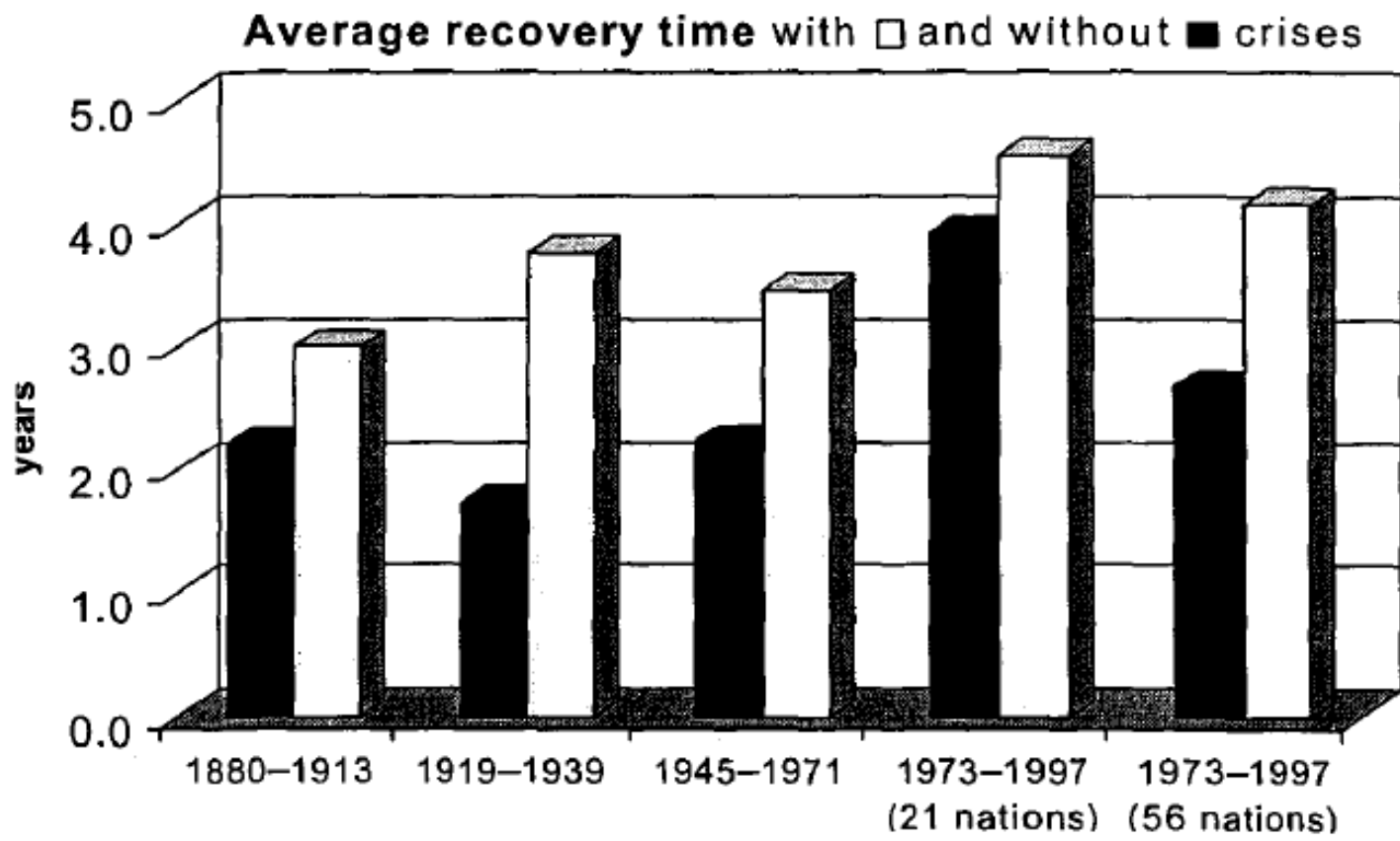
Bretton Woods period: 1945-1971

Recent period: 1973-1998

There are many similarities between the periods but also some important differences

GDP loss with □ and without ■ crises





Bordo et al. (2001)'s main conclusions:

- Banking crises, currency crises and twin crises have occurred under a variety of different monetary and regulatory regimes
- Over the last 120 years crises have been followed by economic downturns lasting on average from 2 to 3 years and costing 5 to 10 per cent of GDP
- Recessions with crises are more severe than recessions without them

- Period 1945-1971 was special because the regulation of bank balance sheets was pervasive and banking crises were virtually eliminated as a result
- Period 1919-1938 was special because banking crises and currency crises were widespread and the associated output losses were exceptionally large
- Period 1880-1913 was most like the recent period. Speed of recovery from currency crises is faster today but the speed of recovery from banking crises is slower

Theories of crises

- How can crises be understood?
- There are two longstanding explanations of financial crises
 1. Panics
 2. Fundamentals

Panics

Classical form: “Mob psychology”

Modern form: Multiple self-fulfilling equilibria

Good equilibrium – If everybody believes there will not be a panic they do not withdraw

Bad equilibrium – If everybody believes there will be a panic they withdraw their money

Key issue: Equilibrium selection – Good or Bad

Fundamentals

There is evidence in the US that in the 19th Century when leading economic indicators reached a level suggesting a future downturn a financial crisis occurred

People are looking ahead to see whether the bank will be able to repay them

- Expected high returns lead to no withdrawal
- Expected low returns cause a crisis

Panics vs. fundamentals: Empirical evidence

- Gorton (1988) and Calomiris and Gorton (1991) provide evidence that in late 19th Century crises in the US were caused by fundamental shocks
- Calomiris and Mason (2003) undertake a detailed econometric study of four crises in the 1930's and conclude that three were caused by fundamental shocks while one was panic-based
- Probably both are important but maybe fundamentals more so

The market failures

- Panics
 - The market failure is a coordination problem
 - Policies such as deposit insurance are designed to prevent them
- Fundamentals
 - The market failure is in liquidity provision
 - Equilibrium asset prices must be volatile to provide incentives for liquidity provision and this can lead to costly and inefficient crises

Models with inefficient liquidity provision are consistent with

1. Financial fragility
2. Contagion
3. Bubbles and crises

The policies central banks must pursue to overcome inefficient liquidity provision include open market operations and lender of last resort interventions

The Subprime Crisis

- How can we understand recent events?
- Some of the usual causes that are given in the press are:
 - Ratings agencies
 - Lack of transparency
 - Poor incentives
 - Inadequate risk management systems

The main cause...

- The Federal Reserve provided too much liquidity and held interest rates too low for too long
- This led to easy credit and caused a bubble in property prices
- Without the significant drop in property prices there would not have been a problem

Why was there a proliferation in subprime mortgages?

- What was the reason subprime mortgages became so important?
- Why were they introduced and why have they caused such a problem?
- If we regulate them out of existence will we prevent the problem going forward?

Tax arbitrage

- In the US interest is tax deductible but rent is not
- This creates a significant incentive to turn rent payments into tax deductible interest payments
- This is what 100% mortgages do

Tax arbitrage (cont.)

- The buyer doesn't own the house, the bank does
- The user of the house makes a fixed payment each month to cover the interest
- This is just like paying rent except it is tax deductible

As long as...

- Property prices keep rising
- If they fall then the arbitrage no longer works
- But property prices in the US had not fallen on average since the Great Depression
- In recent years property has outperformed other assets so it seemed like a good bet

Lesson 1

Central banks need to think carefully about the effects of monetary policy on asset prices, particularly property prices

In the past very few central banks have done this. For example, the Federal Reserve argued this was not possible and focused solely on consumer price indices of inflation.

What's going to happen next?

- What precedents provide the best guide?
- In the US we have not had situations like this on a nationwide basis since the Great Depression but in other parts of the world there have been many financial crises
- What is the most similar?

Japan in the 1990's

- In the 1980's the Japanese economy boomed
- There were huge increases in stock prices and particularly property prices
- Was it a bubble?

The Japanese Bubble

- The Nikkei index was around 10,000 in the mid-1980's and peaked at just under 40,000 at the end of 1989
- In recent weeks almost 20 years later it has been trading around 12,500-13,000
- What about property prices?

The Lost Decade in Japan

- Property prices peaked in 1991 and then fell continuously for about 15 years ending up around 70-75% **below** their peak value
- This caused huge problems in the banking system that spilled over into the real economy
- Growth fell from being among the highest in the world to the lowest

Why are property bubbles so damaging?

- Price discovery takes a long time in property markets
- Because property values form such a large part of people's portfolios both buyers and sellers are prepared to wait and market volume drops

Will it be as bad in the US?

- The housing price bubble was much smaller in the US
- The deviation from long term growth trend in property prices in the US was about 25%
- They have fallen about 16% so far suggesting about another 9% to go
- This would be painful but not catastrophic

Except...

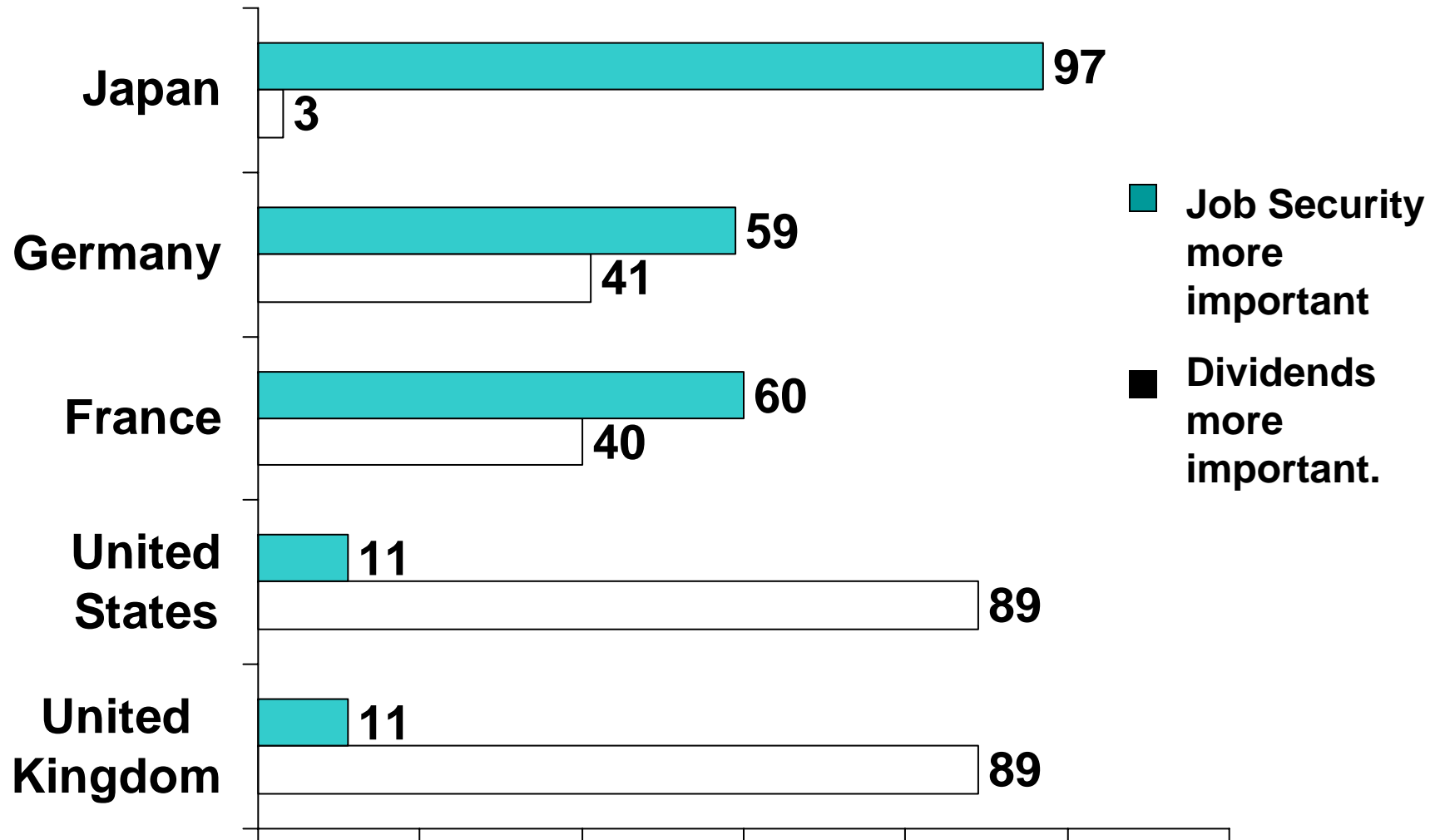
- Japan has a very different kind of economy in terms of the way that firms and banks reacted to the downturn
- In particular firms place great weight on the interests of employees and other stakeholders

Firm priorities

Survey of managers:

- Which of the following two would be the most prevalent view in your country?
 - (a) Executives should maintain dividend payments, even if they must lay off a number of employees
 - (b) Executives should maintain stable employment, even if they must reduce dividends

Job Security or Dividends?



How stable is the US economy relative to Japan?

- Japan stopped growing fast in the 1990's but the economy did not have a long lasting deep recession
- How much of this was due to firms' reluctance to lay off workers and of banks to call in loans?
- What happens if the US falls into recession how strong will the feedback effects be?

Why didn't regulation prevent the crisis?

- Banking regulation is different from other kinds of regulation in that there is no wide agreement on the market failures it is designed to correct
- It is *backward looking* in the sense that it was put in place to prevent the recurrence of past types of crises
- Much of it was initially put in place in the 1930's as a response to the Great Depression

- The US and many other countries have ended up with regulations that are not effective in preventing crises
- Many studies such as Boyd, Kwak, and Smith (2005) find that the costs of crises vary significantly from being almost costless to very substantial with the average being at least 63% of real per capita GDP
- Policymakers' view is typically that these large average costs justify extensive regulation to prevent crises

- But what are the costs of regulation?
- Are crises always bad?
- What exactly is the market failure?
- The Basel agreements illustrate the lack of a widely agreed theoretical framework

Lesson 2

Banking regulation needs to be designed to solve market failures rather than imposed piecemeal as a reaction to crises

Many banks focus on satisfying current regulations rather than thinking ahead

Incentives

Why was Goldman Sachs able to avoid the worst effects of the crisis while other financial institutions such as Merrill Lynch did not?

- Goldman has a long run incentive system while firms such as Merrill Lynch do not

Reforms of incentive systems

Financial institutions need to reform the way they reward executives and base compensation on long run performance not annual performance

They also need to be ready to fire executives that underperform and make sure they are not compensated in such situations

This needs to be the big change in the industry going forward

Lesson 3

Incentives of bankers need to be reformed but this should be a matter for the private sector and not regulated

However, the Fed must not undermine private sector moves in this regard

The Fed and Bear Sterns

It is very important the Fed does not bail out shareholders as they did with Bear Sterns

The Fed should have charged for the guarantee

They could have avoided systemic risk while taking out the shareholders and ensuring senior management was replaced

Cross-border cooperation

One of the most worrying aspects of the current crisis is the possibility for contagion across borders

UBS and the “too big to save” problem

The international community needs to do much more to coordinate crisis management

Société Générale problem provides an example of how not to do it

Lesson 4

Put in place a system of burden sharing so that crisis management can be effective in case a large multinational bank is faced with bankruptcy

Particularly important for the EU with its goal of a single market in financial services

A role for the IMF?

Importance of focus on financial stability

- After the crises in Norway and Sweden the Norges Bank and Riksbank started publishing Financial Stability Reviews
- Now many central banks publish Financial Stability Reviews and devote considerable resources to the issue of financial stability
- The Federal Reserve has lagged behind in this respect

Lesson 5

The Federal Reserve System needs to place more emphasis on financial stability

This may not have helped them to avoid the current crisis but on the other hand it may have led them to think through many of the issues that they are now faced with more carefully

Concluding remarks

Many remaining issues

- Provision of liquidity at quarter-end and year-end and window dressing
- Mark-to-market accounting in financial institutions has severe drawbacks in times of crisis
- Fed view versus the ECB view and problems caused by exchange rate movements

Further reading

If you wish to read more about crises:

F. Allen and D. Gale (2007). *Understanding Financial Crises*, Oxford and New York: Oxford University Press, Clarendon Lectures in Finance