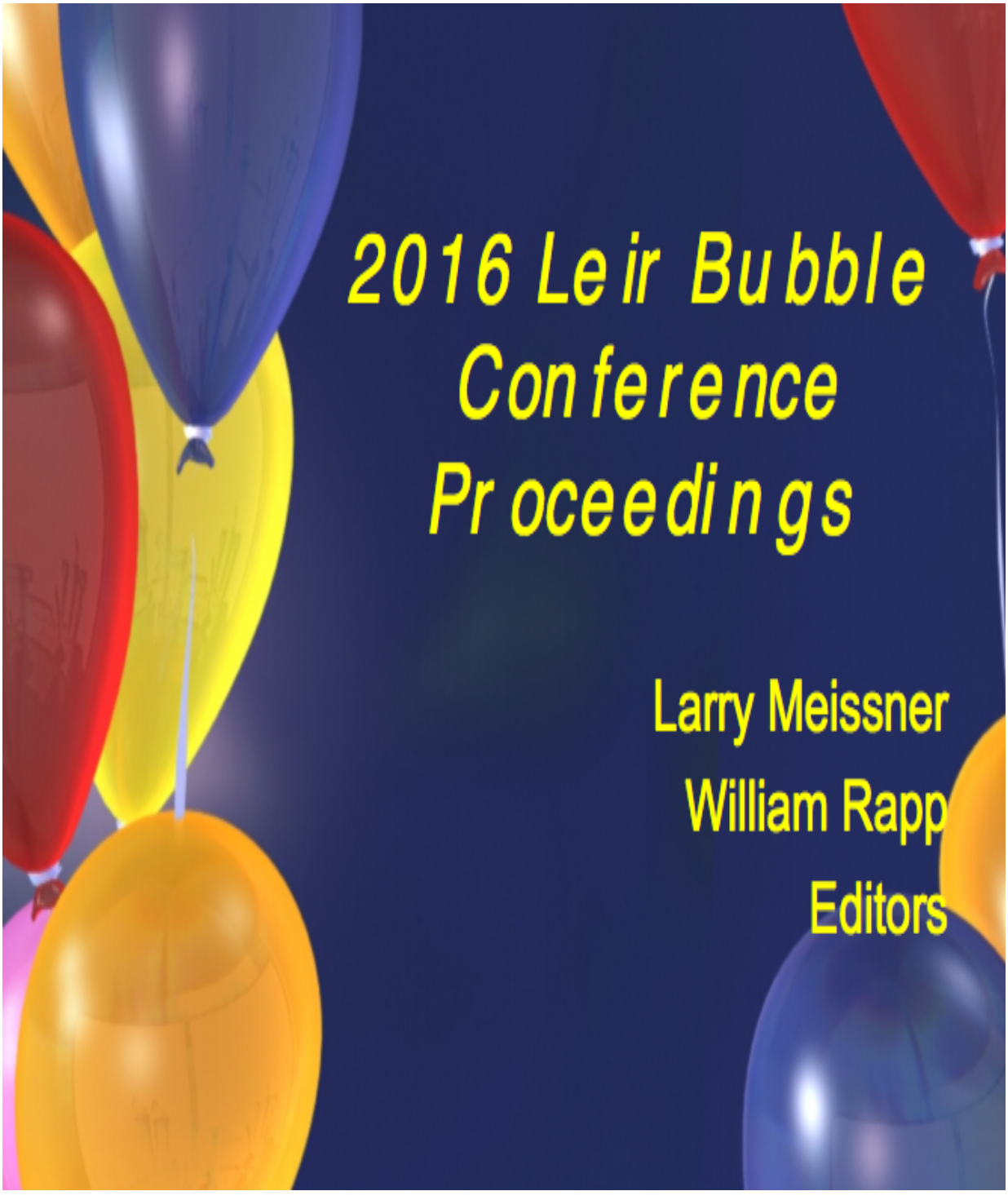
2016 Leir Bubble Conference Proceedings
Larry Meissner
William Rapp
Editors

2016 LEIR BUBBLE CONFERENCE PROCEEDINGS

"In Honor of our Great Supporters, Henry J. and Erna D. Leir."

Preface

The severity of the 2008 crisis suggests that either the scope or nature of the regulations, or their implementation, failed. The US economy incurred the costs of regulations year in and year out for more than 50 years, and then, when a crisis occurred, several ad hoc initiatives were needed to forestall the implosion of asset values. Perhaps regulation reduced the cost of the crisis. Or perhaps the costs were larger because the regulation had led to a sense of security that proved unwarranted.

Various regulatory initiatives have been adopted to forestall the next crisis or reduce its severity, even though there does not appear to have been a systematic review of why regulation did not allay the 2008 crisis.

This leads to the primary questions addressed at the 2016 Leir Conference. What are the key issues and major trade-offs associated with the financial regulation initiatives prompted by the 2008 global financial crisis? Have the myriad of new regulations reduced the likelihood or severity of future crises?

Introduction

Bubble, Bubble, Toil And Trouble[1]

William V Rapp
Larry Goodman

The objective of the conference is to identify the key issues and major trade-offs associated with the financial regulation initiatives prompted by the 2008 global financial crisis. As Yogi Berra said, "If you don't know where you're going, you'll end up someplace else."[2]

Some of the post-2008 regulatory initiatives have slowed recovery and expansion from the severe recession that followed the crisis. In this way, the Law of Unintended Consequences has been at work. The insight from previous regulatory innovations is that one should view skeptically claims that the current set of innovations will reduce the likelihood and severity of the next crisis.

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[1] With apologies to Macbeth's witches - the original is double double … but *Boil, Bubble, Toil And Trouble* is the title of the Leir Center book on recognizing and understanding Bubbles published by Kindle in 2013.

[2] Although attributed to Yogi, it is older - ultimately, a paraphrase from Alice in Wonderland.

The pattern is that every crisis leads to institutional adaptations intended to reduce the likelihood and severity of a financial meltdown. The Banking Crisis of 1907 led to establishment of the Federal Reserve as a domestic lender of last resort. Yet there was a 1920s boom and a Great Depression. The Great Depression of the 1930s led to creation of Federal Deposit Insurance and the Securities and Exchange Commission.

The Conference included presentations and a good deal of discussion among the participants. This introduction briefly summarizes the presentations and key points from the discussions. Each presentation appears as a chapter, as does the related discussion and comments that followed it.

Sources of Financial Instability

Banking crises result primarily from instabilities resulting from a sharp variability in the supply of credit which is a macro phenomenon. There have been four waves of crises since the early 1980s with bank failures in more than 40 countries.

The thrust of current policy is to deal with the results and consequences of instability rather than with the causes of instability. That is an interesting costs-benefit choice. So key conference questions are what are the costs of and the benefits of dealing with the causes of the crises, and the costs and benefits of dealing with the consequences of the instability? Further, what confidence can one have that Dodd-Frank type measures can cope with or reduce the likelihood of a crisis. Does the existing regulatory structure deal adequately with a single-firm or single-industry sources of instability such as Enron, WorldCom, Bear Stearns, Washington Mutual, Lehman Brothers, or Valeant Pharmaceuticals?

The list of "causes" of the 2008 US banking crisis is long: too much leverage, corruption of the credit rating agencies, securitization, too many subprime loans, Sandy Weil and the abolition of Glass-Steagall, Angelo Mozillo, Kerry Killinger, Dick Fuld, and the window dressing of Lehman's end-of-quarter balance sheets, Alan Greenspan's interest in Ayn Rand, the abolition of the separation of loan origination from ownership of the credit risk, compensation practices of lenders and loan originators, etc.

Regulation also played a role, as shown by the countries not impacted by crisis and the role played by securitization. In Japan (for example) the Financial Supervisory Authority (FSA) prohibited Japanese banks from investing in securities they could not explain. As they were unable to do this for CMOs (Collateralized Mortgage Obligations), they could not invest in them. In contrast, German regulators did not impose similar controls with respect to their banks, and some went bankrupt as a result.

In short, it remains an open question the extent to which the 2008-09 crash is a market failure or policy failure. It is a combination of both, especially given that it had global reach.

The thrust of US policy and the policies in other countries since the crisis has been to deal with the consequences of instability rather than its causes. The prevailing dogma is that if banks have higher capital requirements, the likelihood and severity of another crisis will be significantly reduced. This is an interesting cost-benefit choice.
These issues were addressed in short papers by Robert Aliber and Larry Goodman.

Prof Aliber posits that the banking crises in more than 40 countries since the early 1980s are all close cousins to each other. The common cause has been the sharp variability of cross-border investment inflows. Each crisis was preceded by a boom; most followed surges in real estate prices; and, each followed a sharp decline in cross-border investment inflows. Further, over-leveraging was involved, often with borrowing sourced from outside the country.

He demonstrates why this "generic" explanation is more consistent with the facts than the popular, US-centric, explanations for the US banking crisis of 2008, which centers on bad actors – the mischievous, malevolent, self-serving, and corrupt behavior of (depending on who is pointing fingers) politicians, regulators, bankers, and a motley group of greedy opportunists. This, he notes, confuses causes with symptoms and overlooks the fact that crises occurred in countries without the same factors in play.

He also analyzes the role of floating currency arrangements, finding them inherently unstable because the domestic adjustments to an increase in cross-border investment inflows induce additional inflows.

Larry Goodman's presentation addressed crisis detection and prevention. Like Prof Aliber, Prof Goodman is concerned with mis-identification of the causes and other "myths" that have been propagated.

Drawing on research and personal experience, he draws eight conclusions:
• First, develop a thoughtful crisis detection and prevention effort,
• Second, directly link crises (or recovery) scenarios with discreet action plans either for policy or asset allocation strategies,
• Third, watch central banks as major determinants of market drivers and liquidity in concert with fundamentals as well as timing and triggers,
• Fourth, deepen our understanding of the relationship between financial markets and the real economy,
• Fifth, prepare for debt workouts,
• Sixth, watch crowded trades and positioning data,
• Seventh, dispassionately assess the impact of post-2008 regulations on the economy,
• Eighth, preserve, promote, and propagate institutional knowledge.

His overall conclusion is that we can do a lot better detecting and preventing crises.

The Costs and Effectiveness of Financial Regulation

Even without regulatory capture and the revolving doors of personnel, successful regulation is problematic. Prey animals evolve to better-evade their predators, and the same can be said of regulated institutions – although few would compare regulators to predators (certainly not successful ones).

Robert Aliber's first direct experience with adaptive reaction to financial regulation was the offshore deposit market, more specifically, the Eurodollar market. That market came into being because several regulations that applied to domestic US deposits such as interest rate ceilings (Reg Q), deposit insurance premiums, and reserve requirements did not apply to the deposits in the offshore branches of banks. The 1963 interest equalization tax provided additional impetus.

Banking has been regulated for essentially its entire history. Initially, regulation was idiosyncratic and a form of consumer-protection. The externalities of the failure on the economy were believed to be relatively trivial. Regulation has also sought to protect against systemic failure, which always is associated with a dramatic change in the financial environment, and with failure because of systemic effects. The establishment of central banks (beginning in Sweden in 1668) was an institutional response to deal with a systemic financial issue, and the establishment of deposit insurance (during the early 1800s but widespread only from the 1930s) also was intended to deal with a systemic issue, bank runs.

Despite ever-expanding regulation, failures and crises have continued. This begs the question of what sort of regulation is effective, and at what cost.

Various comments on the issues raised by Professor Aliber reached two conclusions.

First, the principal reason regulators have had difficulty identifying systemic risks is that they were not anticipating them. Thus, Fed officials believed their responsibility was to provide ample liquidity once a bubble burst, not to identify bubbles. Only since Lehman Brothers has the concept of macro-prudential risks gained adherents, and it remains to be seen how effective policy makers will be in handling these types of risks.

Second, the case for regulation is strongest in instances of market failure. However, the 2008 financial crisis was the result of policy error, as well as instances of market failure. Despite this, the political pendulum has swung to increased regulation. A more-regulated financial system may lessen the risk of financial instability, but it may also lessen growth prospects due to diminished capital market efficiency.

Jack Malvey, a former Lehman Brothers strategist, wondered whether regulation is really complete. For example, do stress tests adequately capture the rapid evolution of the financial system and the diminished role of brokers and fiduciaries, as well as the reduction in liquidity due to fewer institutions in the market? Real-time operations would be helpful to liquidity, but they also require 24-hour real time credit information. There are higher costs to supplying more information, but the cost of information digitalization and storage is declining. At the same time, is the way information is presented current? Malvey noted that many financial ratios were set by Childs (1964)[3] using a credit manual from the 1930s.

Randy Guynn then talked about the new regulations and their cost. The current regulatory process as incorporated in Congressional legislation is not subject to a cost review, though the regulatory agency aspects are subject to such review. In turn, regulatory agencies that are subject to presidential executive control must justify the costs and benefits, but independent agencies such as the Fed or SEC have a more complex process.

In 2016 Congress took up a proposal to rely just on a 10% capital requirement, the composition of which is unclear, in lieu of many Dodd-Frank provisions. Still, Guynn is not aware of any actual data regarding the costs and benefits of the new regulations that would address the question of balancing financial stability versus possible lower economic growth and the necessary mismatch between short-term credit and long-term assets.

Next Dennis Logue looked at impact of regulations on community banks. Currently the country is losing about one a day. He believes this is an issue of oversight: keeping track of regulations is an excessive burden. This may have encouraged consolidation, as a larger bank can spread the regulatory costs over more assets. There are also limits on customers that may need a larger bank. The FDIC plays a leading role in this process since more barriers and more control lead to fewer institutions. Indeed, it was noted that interest income as a percentage of operating income was substantially lower for smaller banks than for larger banks, reflecting the two regulatory regimes. This may be why, as Robert Aliber noted, TARP was profitable for the government because it focused on large financial institutions.

Consolidation results in putting more eggs in fewer financial baskets. Stress tests are now seen as a way to measure the adequacy of more capital as a bulwark that will reduce the need for intervention if a financial shock threatens the stability of the financial system. Saving the system is now the policy goal.

Would Dodd-Frank Have Forestalled the 2008 Banking Crisis?

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[3] John F Childs “Profit Goals for Management”, Financial Executive 32:13-23, 1964 Feb in the Index of Economic Articles (on the first try in the 1967 vol).

In discussions, this topic was directly addressed. Professor Aliber is very skeptical that Dodd-Frank would have made a difference. A financial crisis results from a sharp contraction that follows a rapid expansion. Higher capital requirements may dampen the expansion for regulated firms, but the non-regulated firms will expand more rapidly. Indeed, the regulatory process has been taken over by lawyers who have little if any understanding of general equilibrium, and no concern with costs.

But perhaps the clearest indication Dodd-Frank would have made little difference is the observation made before the crisis by Charles O Prince, Citicorp CEO. "When the music stops, in terms of liquidity, things will be complicated. But as long as the music is playing, you've got to get up and dance. We're still dancing." (Financial Times 2007 Jul 09)[4]

Many conference participants felt we need to understand who is playing the music, rather than put shackles on the feet of blind dancers.

What Kind of Regulation is Best?

If more regulation is deemed to be needed, as the political situation has required, the question becomes whether it should be rules-based legislation (such as Dodd-Frank or Sarbanes-Oxley) or principles-based (such as BIS capital requirements).

Nick Sargen summarized the issues. Stress tests appear to have been effective in the case of US institutions, but less so in the case of European institutions. He also noted that one of the long-standing critiques of regulatory policy and other oversight is that it is pro-cyclical and reactive. An example is the way rating agencies lower credit ratings well after markets have downgraded the credits.

Bagehot Revisited

Walter Bagehot] was editor of the Economist, founded by his father-in-law, from 1860 to 1877 (the year he died). He advanced what is called the Bagehot doctrine: the central bank should lend freely at a penalty interest rate, but only to solvent institutions. That is, he saw a role for central banks to rescue solvent banks, as well as recognized that banking is too complex to just let markets work.

An interesting question is what would Bagehot do in a given crisis? Harvey Rosenblum addresses this in his presentation. To Prof Rosenblum, the *Bagehot Doctrine deems the central bank to be the First Responder of First Resort.* Bagehot recognized that because financial crises are not all the same, central bank responses had to adapt to evolving financial markets and institutions. This did not happen quickly enough in the 2007 crisis.

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[4] https://www.ft.com/content/80e2987a-2e50-11dc-821c-0000779fd2ac

Part of the reason is that the Fed's authority to act was not clear. In particular, the FDIC was playing a major role. In this respect, there is a need to amend Dodd-Frank to clarify who is the first responder. Banks and their clients need to know the rules in advance of the crisis. Also, the issue remains as to what happens if the first fix is not sufficient. While moral hazard is part of the real world, if the financial system freezes, the central bank must act.

Of course, the Fed has other obligations, such as employment and price stability (slight inflation). Further, the Fed is not able to break up the big systemically important banks, though it can act as the doctor in the emergency room. The Fed should do more "war games" to practice and prepare, while making the costs to a financial firm's stakeholders clear.

Professor Aliber provided a transcript of a hypothetical conversation between Congressman Barney Frank and Bagehot reflecting how Bagehot's views might have changed with circumstances.

A key question is whether solvency should be a requirement for receiving loans. Bagehot acknowledges that there are circumstances when even insolvent institutions should be provided liquidity to prevent a cascading of illiquidity – and hence insolvency – through the system. Further, such provision should extend to financial institutions other than banks when there is systemic risk.

But Bagehot remains skeptical of regulatory effectiveness, saying that Dodd-Frank and Basle III are a waste of time and money as "costs without benefits" because of the costs they impose on banks and hence on borrowers and depositors. They also encourage the expansion of shadow banks.

Bagehot further suggests that, the higher the capital ratios imposed on banks, the less attention monetary authorities will give to preventing systemic shocks like the ones in the early 1930s and in 2007-08.

International Capital Flows

Given that large and mostly unregulated capital flows have been responsible for global systemic instability, when and how should governments limit such inflows?

The International Monetary Fund, for example, is changing its position on the regulation of cross-border investment inflows. One issue is whether there is a preferred or standard approach to such regulation. Another issue is whether the US government should intervene to manage the increases in the foreign purchases of US dollar securities.

Mike Dooley looked at capital flows. He notes that the US is borrowing cheap and lending dear, and the growth in the scale of this intermediation has been increasing. All this has occurred while the dollar has appreciated to near the top of its historical values. If we actually have to pay for this net debt, the US might not look like a solvent intermediary.

The Crisis in Other Countries

Amar Bhide looks at the way the crisis was handled elsewhere, with particular attention to Sweden's central bank, Handelsbanken. Sweden was barely touched by the 2008 financial crisis, which Bhide attributes in large part of the fact Handelsbanken operates globally like a small community bank. Sweden is small relative to the world economy, nonetheless lessons can be learned from its experience.

Bhide contends that governments should remove the justifications and temptations for go-for-broke central banking by eliminating price stability and employment mandates. Both constructs are nebulous, and in a dynamic economy are constantly buffeted by myriad crosscurrents, impossible for central banks to secure.

What the Fed and other central bankers can and should be held responsible for is prudent lending by banks, as was envisioned by the US Congress when it passed legislation creating the Fed in 1913. More or less stable prices and low joblessness were regarded as desirable by-products. They were not, and should no longer be, the explicit goal.

Gyfli Zoega outlined how things have played out in Iceland since the crisis. Iceland is a very small country – if it were a city in the United States, it would not even be among the 50 largest by population. But its crisis was front page news globally. Although not part of the European Union, it is closely integrated with Europe. This gave it some flexibility (relative to Greece and Spain, for example) in adopting policies to deal with the capital flows that contributed to the collapse of the banking system.

Conclusion
At the final session, participants were asked to provide one-sentence key points.

Robert Aliber: What confidence can one have that Dodd-Frank type measures can significantly reduce the likelihood of a crisis?

Larry Goodman: The relationship between the financial system and the real economy is poorly understood yet it is more important than e
ver today.

Jack Malvey: Incent the adoption of longer-term horizons by all actors in the global financial system.

Randy Guynn: John Coates argued it is impossible to measure the benefits of financial regulations, and it also is very difficult to measure their costs.

Steven Lofchie: The principal reason regulators have had difficulty identifying systemic risks in the financial system is that they were not anticipating them.

Dennis Logue: Regulation is pro-cyclical.

Carl Walter: Given China's borrowing needs and poor investment returns, it is no surprise that the government's, that is the State's, balance sheet has become increasingly leveraged.

Harvey Rosenblum: To believe that better supervision and regulation would change this situation, would be the triumph of hope over experience.

Mike Dooley: The US is borrowing cheap and lending dear, and the growth in the scale of this intermediation has been increasing.

Amar Bhide: Central Banks should be held responsible for prudent lending, not stable prices.

Gylfi Zoege: By stopping hot capital flows, central banks may be able to conduct an independent monetary policy, and currency speculation does not endanger family ¿ stability.

Acknowledgments

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CONFERENCE ON FINANCIAL INNOVATION AND STABILITY

2016 Agenda

FRIDAY, SEPTEMBER 16, 2016

Session 1 - 02:00 PM to 03:15 PM

"THE SOURCE OF FINANCIAL INSTABILITY"

Welcome - Bill Rapp and Dean Reggie Caudill5

Chair—Randal Quarrels

Presenters--Bob Aliber & Larry Goodman

Banking crises result from the sharp variability in the supply of credit, which is a macro-phenomena. There have been four waves of banking crises since the early l980s; more than forty countries have experienced the failure of many banks. What is the source of the sharp variability? The list of the "causes" of the 2008 U.S. banking crisis is long--too much leverage, the corruption of the credit rating agencies, securitization, too many sub-prime loans, Sandy Weill and the abolition of Glass Steagall, Angelo Mozillo, Kerry Killinger, Dick Fuld and the window dressing of Lehman's end-of-quarter balance sheets, Alan Greenspan's love affair with Ayn Rand, the abolition of the separation of loan origination from ownership of the credit risk, the compensation practices of the lenders, etc. The thrust of U.S. policy and the policy in other countries since the crises is to deal with the consequences of instability rather than with its cause. The prevailing dogma is that if banks have higher capital requirements, the likelihood and severity of another crisis will be significantly reduced. That is an interesting cost-benefit choice-what are the costs of and the benefits of the dealing with the causes of the crises, and the costs and benefits of dealing with the consequences of the instability? What confidence can one have that the Dodd-Frank type measures can significantly reduce the likelihood of a crisis? Each of these banking crises has resulted from the adjustment of non-sustainable imbalances. Can the development of these imbalances be detected, and their prolongation forestalled?

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5 It was noted as the Conference began that a great supporter of the Leir Bubble Conferences, Arthur Hoffman, past President of the Leir Charitable Trusts, had passed away in August.

Session 2

"THE COSTS AND EFFECTIVENESS OF FINANCIAL REGULATION"

Chair--Michael Ehrlich

Presenters--Jack Malvey, Randy Guynn

Consider the innovations that led to the Eurodollar market or more broadly the offshore deposit market, which developed as an end-run around domestic financial regulation. Several regulations that applied to domestic deposits-interest rate ceilings or Reg Q, deposit insurance premium, and reserve requirements-did not apply to the deposits of offshore branches of the same banks. The rapid expansion of the offshore market in U.S. dollar deposits led to the development of money market funds, which offered higher interest rates than domestic deposits because they did not incur the costs of regulation. During the 2008 crisis, the money market funds were brought under the umbrella of deposit insurance on the rationale that otherwise they would have been subject to runs; they would have sold assets to obtain the funds to be paid to shareholders that wanted their money, the prices of these assets would decline, and the solvency of the regulated institutions would have been imperiled.

Banks have been regulated for three hundred years. Initially regulation was idiosyncratic and a form of consumer-protection; the externalities of the failure of a bank on the economy were believed to be trivial. More recently, regulation has been adopted to deal with systemic failure, which always is associated with a dramatic change in the financial environment and a dramatic change in the price relationship among various asset classes. Central banks were established to reduce the likelihood of bank failure because of a shortage of liquidity and deposit insurance was adopted to deal with systemic failure because of runs on banks.

More recently, the types of measures initially adopted to deal with failure because of idiosyncratic issues have been extended because of failure that can be attributed to systemic issues. Consider "living wills"- a living will might be useful to cope with failure because of an idiosyncratic factor but it is unlikely to be effective to cope with failure due to a systemic factor.

One of the major questions is whether the current approach to bank regulation is likely to be effective. Another is the "costs" of regulation.

Session 3

"THE COSTS AND BENEFITS OF FINANCIAL REGULATION"
(Continued from Session 2)

Chair--Nick Sargent

Presenters - Steven Lofchie, Dennis Logue

Dinner Session

Carl E. Walter, author, Red Capitalism on

"The Fragile Financial Foundation of China's Extraordinary Rise"

SATURDAY, SEPTEMBER 17, 2016

Session 4

"BAGEHOT RE VISITED"

Chair-Ron Sverdlove

Presenters--Harvey Rosenblum, Amar Bhide

The Bagehot doctrine is that the central bank should lend freely at a penalty interest rate to solvent institutions and that it would not lend to insolvent institutions. The rationale for central bank loans to an illiquid bank is to forestall asset sales can be readily extended to asset sales to an insolvent institution, since the negative externalities are more or less the same.

When should a government provide loans to an insolvent institution? The U.S. government provided capital—admittedly on a contingent basis to Bear Stearns and to Fannie Mae and Freddie Mac. But the U.S. government did not provide capital to save Lehman (which would have meant guaranteeing its liabilities and taking over management). The claim that it did not have legal authority seems bogus. The Fed provided capital to AIG the day after Lehman failed. The Bush administration obtained authority from Congress to provide capital to the banks through the Troubled Assets Relief Program (TARP).

What are terms for re-capitalization - how extensively should the existing shareholders be diluted? One important issue is timing, when should government intervene to re-capitalize the banks. Should it be known if bank capital declines below four percent - or three percent or x percent there will be an immediate infusion of government capital. (The most oversold argument of all time is the "moral hazard", the authorities should make it crystal clear that the institution will be saved even though it owners will lose most of their net worth.)

Session 5

"REGULATION OF INTERNATIONAL CAPTIAL FLOWS"

Chair--Hugh Patrick

Presenters- Mike Dooley, Gyfli Zoega

When and how should the governments limit cross border capital inflows? The International Monetary is changing its position on the regulation of cross border investment Inflows. One issue is whether there is a preferred or standard approach. Another issue is whether the U.S. government should intervene to manage the increases in foreign purchases of U.S. dollar securities, or whether instead the price of the U.S. dollar and the U.S. current account surplus should be determined by foreign investors and foreign central banks. The current account surpluses of some countries suggest that they are following “beggar thy-neighbor policies"; Singapore has a current account that is more than 15 percent of its GDP, Malaysia has a current account surplus of 10 percent of its GDP, and Germany and the Netherlands have surpluses of eight or nine percent. China's current account surplus is likely to surge as its growth rate slows.

Wrap Up -- Tom Synott, Bill Rapp

Financial Regulation: Challenges and Costs

Session 1

Robert Aliber posed two questions to the group:

(1) Why has financial regulation failed to prevent systemic crises?
(2) What are the costs of financial regulation?

Participants felt it would be useful to begin by looking at the historical record for the post-World War II era, which can be divided into before floating rates (1944-71, the Bretton Woods (BW) period) and after. The BW period was marked by extensive regulation of domestic financial systems and limited international capital mobility, whereas the post-BW period has been characterized by ongoing liberalization of financial systems and international capital flows.

During the BW era, there were no systemic financial crises, whereas the latter become more frequent beginning in the early 1980s with the Latin America debt crisis, followed by asset bubbles and banking problems in Japan and Scandinavia in the late 1980s, financial crises in parts of Latin America and Asia in the mid-1990s, the bursting of the tech bubble in 2000, the global financial crisis of 2007-09, and the euro-zone crisis in the 2010s.

Based on these experiences, one might be tempted to conclude that we should just role the clock back if greater financial stability is desired. However, this begs the question of why US officials abandoned Bretton Woods. US Treasury officials at the time were worried the US had a balance of payments problem, and they undertook a series of actions, including imposing an interest equalization tax in 1963 to discourage foreign borrowing from domestic US sources and eventually closed the gold window while devaluing the dollar.

In the end, these measures proved to be ineffective, because US monetary policy had become lax, and the US no longer was a stable reserve center. The inflationary environment, in turn, forced US policy makers to abandon Reg Q interest-rate ceilings during 1981-86. They had contributed to disintermediation and also gave rise to money market funds and high-yield securities (“junk bonds”).

The combination of rising inflation and interest rates and heightened exchange rate volatility also gave impetus for creation of financial derivatives that could be used to hedge currency and interest rate risk.

Low Inflation: A Necessary, but not Sufficient Condition for Financial Stability

Beginning with Paul Volcker's tenure as chair of the Federal Reserve in the 1980s, central banks in the major industrial countries became committed to bringing inflation down to acceptable levels, typically considered 2%. By and large they were successful, and inflation rates converged toward that level by the 1990s. Yet, the goal of financial stability proved to be illusive.

What accounts for this phenomenon? Researchers at the Bank for International Settlements (BIS), including White and Borio (2004), contend that the context for setting monetary policies changed radically beginning in the second half of the 1970s, as financial deregulation and liberalization coincided with increasing capital market integration around the world. The result was that domestic financial systems became highly leveraged and interconnected. Viewed from this perspective, monetary policies need to take greater account of the process of credit creation and, according to Aliber, the transmission of international capital flows via financial markets, in order to lessen the risk of bubbles.

According to economic historian Alan M Taylor, the explosion in credit since the mid-1980s ushered in *Age of Credit*. Although broad money relative to GDP remained almost flat at around 0.7 (rising a little only in the 2000s), the asset side of bank balance sheets exploded. Loans to GDP doubled from 0.5 to 1.0 and assets to GDP tripled from about 0.7 to roughly 2. The decoupling of loans from broad money reflected the rise of nonmonetary liabilities on bank balance sheets, such as wholesale funding. The even faster expansion of bank assets reflected this too, plus the rise in more interbank lending."

The end game was a major increase in the degree of leverage of the financial system: "In the end the banking system insured against one type of run, can be seen to have switched over time to alternative funding sources, which had no insurance, at least explicitly."

The 2008 Financial Crisis: What Did Policy Makers and Investors Miss?

Why did so few people foresee the 2008 financial crisis? To anticipate the crisis one had to make the following three assessments such as Michael Lewis identifies in the *Big Short*:

(1) there was a bubble in housing;
(2) credit was readily available and too cheap; and
(3) the financial system was vulnerable due to excess leverage and asset-liability mismatches of key financial institutions.

Some participants had felt they had made correct assessments about the first two items, but lacked insight into the balance sheets and true exposures of financial institutions, and trusted the assessment of regulatory institutions that the system was sound.

The philosophy of the Fed under Alan Greenspan and Ben Bernanke was that the role of the Fed was to provide massive liquidity to financial markets once a bubble burst.

Detecting bubbles, let alone popping them, was not part of their job description. This worked reasonably well in the aftermath of the tech bubble, as no major financial institutions became troubled, but it proved short-sighted as the financial system came under increasing strain from mid-2007 on. It was only after the fallout from the September 2008 collapse of Lehman Brothers became clear that the Fed and Treasury began to deal with systemic aspects of the crisis.

The answer to Professor Aliber's first question therefore is that, prior to the Lehman debacle, the Fed and other regulatory bodies did not deal proactively with systemic risk. It was only after the fallout that ensued that regulatory bodies began coming to grips with the need for macro-prudential regulation. And while institutions such as the BIS, IMF, US Treasury, the Fed, and other central banks have made it a priority today, it remains to be seen how effective their efforts will be, considering that the nature of financial crises changes over time, and new sets of issues always arise.

Then What Can Be Done to Prevent a Recurrence?

A key issue in determining the need for increased regulation is whether the 2008 financial crisis stemmed mainly from a market failure, a policy failure, or a combination of the two. To answer this, the Financial Crisis Inquiry Commission (FCIC) was formed in 2009 (section 5 of the Fraud Enforcement and Recovery Act of 2009) to investigate the causes of the crisis and to make recommendations to enhance the safety and soundness of the financial system.

In its February 2011 report the majority view was that the crisis was the culmination of a bubble in housing and a breakdown in the process of securitizing mortgages: "It was the collapse of the housing bubble – fueled by low interest rates, easy and available credit, scant regulation, and toxic mortgages that was the spark." Accordingly, the majority believed the crisis could have been averted if the United States had adopted more-restrictive regulations in conjunction with more aggressive regulation and supervision.

The dissenting view interpreted the crisis very differently. It observed that the US was not the only country to experience a credit bubble, and it criticized the majority opinion "focusing too narrowly on US regulatory policy and supervision, ignoring international parallels, emphasizing only arguments for greater regulation, failing to prioritize the causes, and failing to distinguish between causes and effects."

Well before the FCIC's report, Congress passed the Dodd-Frank Act in 2010 in response to political pressures. Its primary objective is to make another financial crisis less likely, but several participants questioned whether it will succeed. The banking industry, for example, has become even more concentrated, with the top five US banks accounting for half of all US deposits in 2015, as compared with 30% 10 years earlier. One of the main problems is the complexity of the act – 849 pages of legislation and several thousand pages in subsequent rule-

making. A common complaint is that the act not only will turn the banking industry into a regulated utility, but it also imposes significant new restrictions on activities of many financial institutions that had little to do with the crisis.

The alternative is a more targeted approach, such as the Basel III proposal to increase minimum requirements for bank capital and liquidity. This approach seeks to eliminate excess leverage in the financial system, which was a key factor contributing to the crisis and its severity. It has been noted that even if all of the $2 trillion in outstanding sub-prime debt had become worthless, the loss of wealth would have been equivalent to a stock market decline of less than 8%: "The reason the subprime debt mattered so greatly is that the losses sat on the balance sheets of leveraged intermediaries." Addressing this issue, therefore, is central to restoring the safety and soundness of the financial system.

Conclusions

The above assessments lead to the following conclusions to Prof Aliber's questions:

First, the principal reason regulators have had difficulty identifying systemic risks in the financial system is that they were not anticipating them. For their part, Fed officials believed their responsibility was to provide ample liquidity once a bubble burst, rather than to identify bubbles in advance. They viewed their responsibility on the regulatory side to be identifying specific institutions that were troubled. It was only after the fallout from Lehman Brothers that the concept of macro-prudential risks gained adherents, and it remains to be seen how effective policy makers will be in handling these types of risks.

Second, the case for regulation is strongest in instances of market failure. However, the 2008 financial crisis was the result of policy error, as well as instances of market failure. Nevertheless, the political pendulum has swung from deregulation of financial markets to re-regulation. The trade-off is that while a more-regulated financial system may lessen the risk of financial instability (such as during the Bretton Woods era), such a system may also lessen growth prospects due to diminished capital market efficiency.

It is good to have coordination among regulators, but what is the cost of regulation, including the increased costs and effectiveness if different regulators have to coordinate? This scenario also implies that we can learn from the past and can segregate the issue of rare events versus the cost of regulation compared to the possible damage of too little regulation that leads to such rare events. Further, while transparency has benefits, it also has costs.

The 2008 Financial Crisis:

Larry Goodman Asked What Did Policy Makers and Investors Miss?

Why did so few people foresee the 2008 financial crisis? Goodman contended that to anticipate the crisis one had to make the following three assessments:

(1) there was a bubble in housing;
(2) credit was readily available and too cheap; and
(3) the financial system was vulnerable due to excess leverage and asset-liability mismatches of key financial institutions.

In his own case, he like some others made the correct assessments about the first two, but lacked insight into the balance sheets and true exposures of financial institutions, and trusted the assessment of regulatory institutions that the system was sound.

However given what we have experienced can we educate ourselves, learn from history and keep institutional memory, as well as determine what is politically acceptable?

Session 2:

The Costs And Effectiveness Of Financial Regulation

Bob Aliber's Introduction

Robert Aliber's first direct experience with the costs of financial regulation was with the offshore deposit market, more specifically, the Eurodollar market. Several regulations that applied to domestic deposits such as interest rate ceilings (Reg Q), deposit insurance premiums, and reserve requirements did not apply to the deposits in the offshore branches of banks. This allowed banks to avoid regulation. The rapid expansion of the offshore market in US dollar deposits in the 1970s quickly led to the development of money market funds.

Banking has been regulated for essentially its entire history. Initially, regulation was idiosyncratic and a form of consumer-protection. The externalities of the failure on the economy were believed to be relatively trivial. Regulation has also sought to protect against systemic failure, which always is associated with a dramatic change in the financial environment, and with failure because of systemic effects. The establishment of central banks (beginning in Sweden in 1668) was an institutional response to deal with a systemic financial issue, and the establishment of deposit insurance (during the early 1800s but widespread only from the 1930s) also was intended to deal with a systemic issue, bank runs.

If one views the problem as excess international capital flows, then large bank failures such as Washington Mutual, Bear Stearns, and Lehman Brothers, were not because of any idiosyncratic issues. Further, the various resulting measures, such as "living wills" initially adopted to deal with idiosyncratic issues, are being adopted to deal with systemic issues. A living will might be

useful to cope with failure because of an idiosyncratic issue, but it is unlikely to be effective in coping with failure due to a systemic factor.

The last failure of a large US bank for idiosyncratic reasons is Franklin National in 1974, according to Professor Aliber. Failure resulted from large losses incurred in speculative currency trading. Globally, Baring Brothers failed in 1995 was due to an ill-fated gamble on Japanese stock prices and interest rates.

He then posed the two questions noted above.

Jack Malvey, a former Lehman Brothers strategist, wondered whether regulation is really complete. For example, do stress tests adequately capture the rapid evolution of the financial system and the diminished role of brokers and fiduciaries, as well as the reduction in liquidity due to fewer institutions in the market? Real-time operations would be helpful to liquidity, but they also require 24-hour real time credit information. There are higher costs to supplying more information, but the cost of information digitalization and storage is declining. At the same time, is the way information is presented current? Malvey noted that many financial ratios were set by Childs (1964) using a credit manual from the 1930s.

Randy Guynn then talked about the new regulations and their cost. The current regulatory process as incorporated in Congressional legislation is not subject to a cost review, though the regulatory agency aspects are subject to such review. In turn, regulatory agencies that are subject to presidential executive control must justify the costs and benefits, but independent agencies such as the Fed or SEC have a more complex process.

In 2016 Congress took up a proposal to rely just on a 10% capital requirement, the composition of which is unclear, in lieu of many Dodd-Franks provisions. Still, Guynn is not aware of any actual data regarding the costs and benefits of the new regulations that would address the question of balancing financial stability versus possible lower economic growth and the necessary mismatch between short-term credit and long-term assets.

Looking at the Volker Rule, where banks have almost no discretion, one sees implementation as especially costly. Also, one must go to five different regulators to get an explanation concerning the application of the proprietary trading rule for even treasury operations. The costs of showing a firm is not subject to the rule are very large, as proving a negative is always difficult. Capital liquidity is another cost in that an institution must invest in low-yielding assets such as government securities. Another set of issues revolves around living wills, which means a financial firm will go into bankruptcy earlier than it might otherwise.

Transparency relies on who is contributing what to a transaction. SEC rules were set aside by the DC Circuit Court of Appeals due to no cost-benefit analysis. Guynn questions if one could actually do such a cost-benefit analysis if you cannot regulate the risk that comes out of the

system itself. The political reaction is the result of a large economic crisis being politically unacceptable.

Thus, the government passes rules that are supposed to avoid future crises. Congress thought the Volker Rule reduced this risk. However, the liquidity cost was not part of the cost-benefit calculation, and thus no one looked at the related impact on economic activity. Volatility is part of the issue here, and it also is not addressed.

Thinking one can reduce risk simply by changing incentives to managers may be misplaced. In any case, regulators may need to vary the rules by the type of financial institution.

3d Session

Would Dodd-Frank Have Forestalled The 2008 Banking Crisis?

Aliber is very skeptical that Dodd-Frank would have made a difference. A financial crisis results from a sharp contraction that follows a rapid expansion. Higher capital requirements may dampen the expansion for regulated firms, but the non-regulated firms will expand more rapidly. Indeed, the regulatory process has been taken over by lawyers who have little if any understanding of general equilibrium, and no concern with costs.

Remember that great remark of Charles O Prince, a lawyer and Citicorp CEO. "You have to keep dancing as long as the music is playing." We need to understand who is playing the music, rather than put shackles on the feet of blind dancers.

Given financial regulations, how can one demonstrate the 2008-09 crash as a market failure, policy failure, or a combination, especially given it had global reach? One can look at countries not impacted by crisis and the role played by securitization. In Japan (for example) the Financial Supervisory Authority (FSA) prohibited Japanese banks from investing in securities they could not explain. As they were unable to do this for CMOs (Collateralized Mortgage Obligations), they could not invest in them. In contrast, German regulators did not impose similar controls with respect to their banks and some went bankrupt as a result.

One should also closely examine securities that did not recover such as auction-based assets based on fraudulent credits.

Given this assessment, who bears responsibility for the crisis and would rules such as margin requirements in the case of the dot.com bust have moderated it?

Nick Sargen introduced this segment and again raised the issue of Costs and Benefits of financial regulation in terms of the issues that should be considered**, especially whether there a need for increased regulation.**

The main arguments for increased regulations are that they are necessary to ensure financial stability and to protect consumers from predatory practices. Following the 2008 financial crisis, the majority view of the Financial Crisis Inquiry Commission (FCIC) was that the crisis had stemmed from "the collapse of the housing bubble – fueled by low interest rates, easy and available credit, scant regulation, and toxic mortgages that was the spark."

The dissenting view, however, observed the US was not the only country to experience a credit bubble, and criticized the majority opinion for focusing too narrowly on US regulatory policy and supervision. The key issue in this debate is whether the crisis was a manifestation of market failure, policy failure, or a combination.

Nature of Regulation

If regulation is deemed to be needed, a second issue is whether it should be rules-based legislation (such as Dodd-Frank or Sarbanes-Oxley) or principles-based (such as BIS capital requirements). Following the 2008 crisis, some observers have contended that financial institutions should be treated like public utilities. Is this a sound way to reduce the risk of future financial crises, or does it impose too great a regulatory burden and lessen prospects for economic growth?

One of the approaches following the crisis was to identify macro-prudential risks that are systemic in nature, in addition to the traditional emphasis on the safety and soundness of individual institutions. This approach now included the implementation of more-comprehensive stress tests, which appear to have been effective in the case of US institutions, but less so in the case of European institutions.

Financial Regulation and the Economic Cycle

One of the long-standing critiques of regulatory policy is that it is pro-cyclical. The reason: regulators typically do a poor job anticipating crises, not only because of the inherent difficulties in forecasting them, but also because regulators do not want to be blamed for harming businesses. Once a crisis unfolds, however, the tendency is to have increased regulation after the fact. An example of this process is the way rating agencies lower credit ratings well after markets have downgraded the credits.

One interesting approach in this regard is that some central banks are considering increasing reserve requirements when economies and markets are booming, and lowering them during the bust phase of the cycle.

Standard of Conduct for Financial Institutions

One of the main issues specifically related to consumer protection is what the standard of conduct should be for financial institutions. In the asset management world, investment professionals are considered to be fiduciaries that must always put the clients' interests first. The brokerage world, on the other hand, has long been guided by the principle of "caveat emptor". Since the 2008-09 financial crisis, however, there is a movement afoot to increase the standards for most institutions, despite the push back from many that this will hurt their business. The question remains, what is the proper standard of conduct for financial institutions?

Steven Lofchie commented on the nitty gritty of financial instruments, and running a financial firm.

From his perspective, fraud and bad actors play a role in justifying regulations. But politics also played a role in the commissions and their reports. That is, the expanded regulatory response was more about where to put blame than to actually improve understanding of the causes of the crisis. Lofchie thus sees the Fed's focus on repos and securitization as misplaced, while believing that the regulation of foreign private funds has not worked.

It is indeed important to identify issues that may have been separated from the truth. For example if one believes that having centralized derivative clearing houses will solve the problem of dealing with exotic or one-off derivatives, as in the case of AIG, this will not work because clearing houses depend on standardized products. Similarly, one cannot deal with a trading book by using a clearing house that runs based on standardized individual transactions. Anti-money laundering regulations are also up for grabs. In sum, centralized clearing houses may not be a solution in terms of liquidity or resources especially if there is a large failure in derivative positions such as AIG.

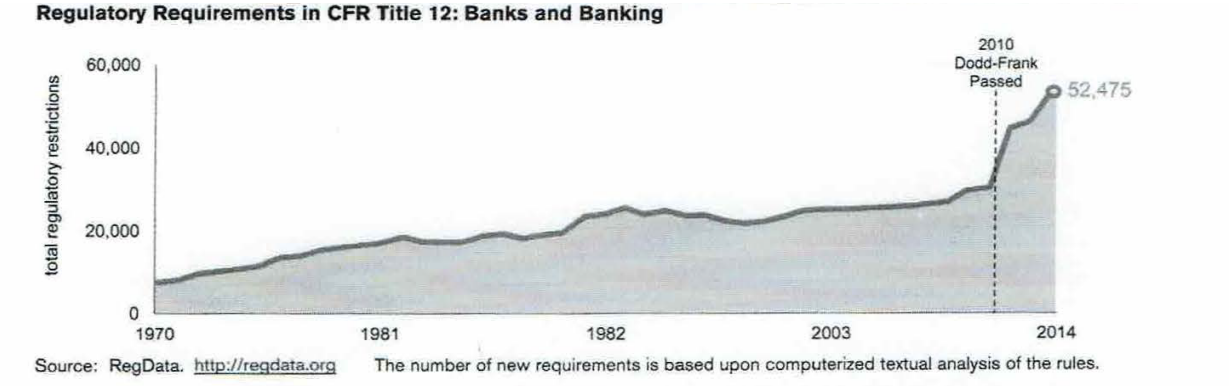
Given financial regulations, how does one demonstrate that 2008-09 was a market failure, a policy failure, or both, especially given that it had global reach. One way is to look at countries not impacted by securitization. One should also look also at securities that did not recover such as Auction-Based Assets based on fraudulent credits.

From this one can see if rule-based systems worked better and where the issue of responsibility for success or failure lies.

What Grows Faster Than The US Economy?

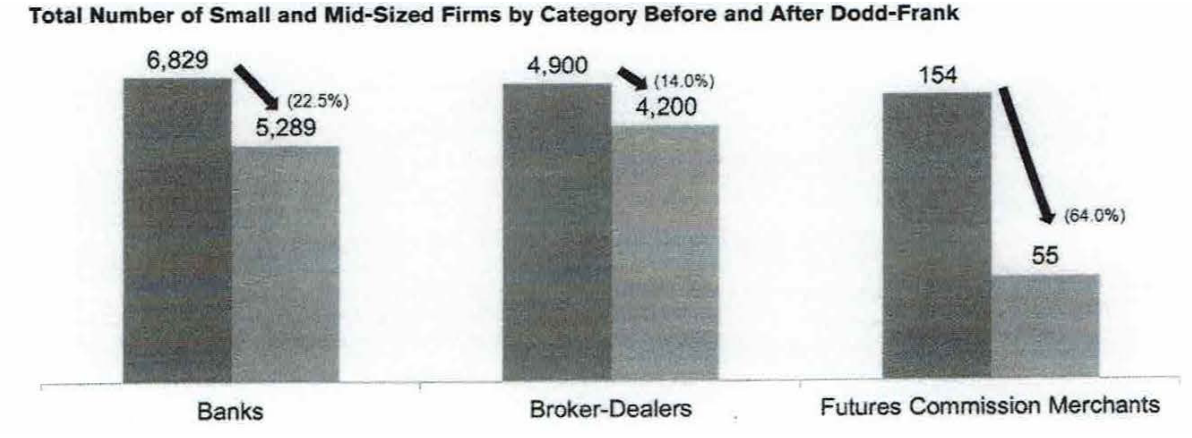
Steven Lofchie

Approximately 25,000 new regulatory requirements have been adopted under federal banking law alone since Dodd-Frank was adopted in 2010. To put this in perspective, more bank regulatory requirements have been adopted since the passage of Dodd-Frank than in the prior 200 years. This does not include the similar surge in the number of regulatory requirements added since Dodd-Frank under securities laws and the Commodity Exchange Act, nor does it include requirements imposed by the states and territories or by financial industry self-regulatory organizations (of which there are over 200).



What is the impact of this rule making on small and medium firms?

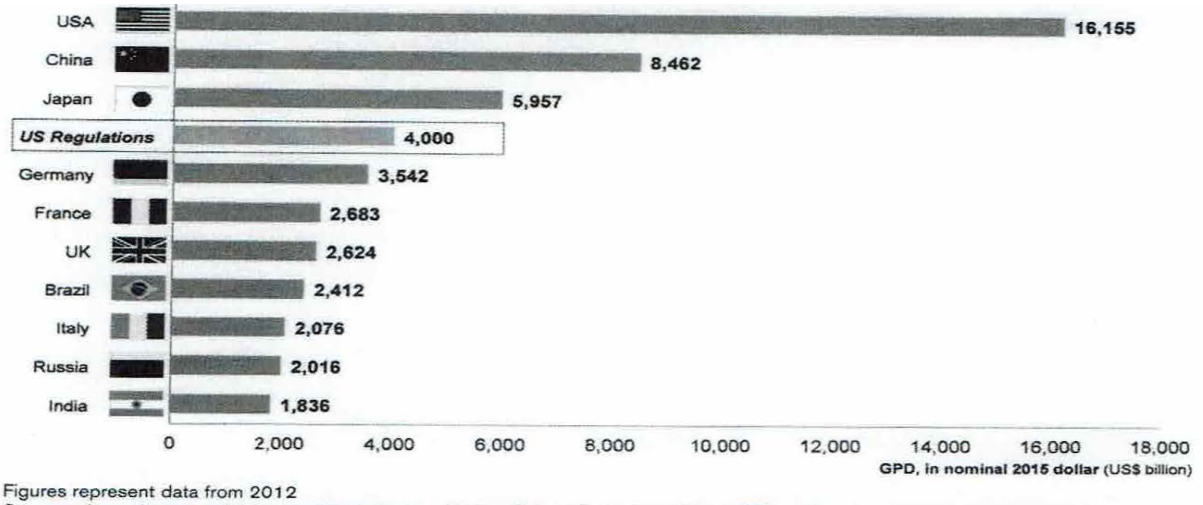
Some may believe that these costs fall only on large financial institutions, but that is not the case. Many regulatory costs are largely fixed costs that do not vary proportionately with the size of a firm. While rising regulatory costs hit all firms in the financial industry, small and medium firms may be the most impacted. Since adoption of Dodd-Frank, in every part of the financial services industry, the number of small and mid-sized firms has declined quite substantially.



Source: 0

What is the aggregate cost of all these regulations?

If the cost of regulatory accumulation ($4 trillion) in the United States were a country, US regulation would have the 4th largest GDP in the world.



Figures represent data from 2012
Source: As to the cost of U.S. regulation, Bentley Coffey, Patrick A. McLaughlin, and Pietro Peretto, "The Cumulative Cost of Regulations," April 2016.
As to the size of national economics, IMF World Economic Outlook (WEO), October 2015.

Dodd-Frank final rule total costs ($ billions)

The final aggregate costs for the rules adopted in each given "year" of Dodd-Frank's statutory existence can be calculated from the final rules that have been published in the Federal Register. The costs come directly from agency estimates of the rules' compliance and social costs during their lifetime with those having been adopted in Year 1 published in the Federal Register between July 21, 2010 and July 20, 2011 and so on. Calculations assumes that the government's estimates of rule costs are accurate, though most industry participants would argue that they are materially underestimated. Total cost over 5 years from 2010 to 2015 was around $30 billion.

Former SEC Commissioner Dan Gallaher created the diagrams to illustrate the number and the complexity of the regulations adopted under Dodd-Frank. The diagrams only cover the period from the adoption of Dodd-Frank until approximately March 2015. Further new federal regulations adopted other than under Dodd-Frank are not covered. Nor are state laws, or rules adopted by self-regulatory organizations. For simplicity, also excluded are, for example, the Federal Reserve Bank of New York, the Treasury Department (which sets rules through numerous separate departments), the Federal Trade Commission, or the Department of Labor, all of which make rules that apply directly or indirectly to financial firms. The diagrams look complicated, but the reality is even more complicated.

How did we get to the point where we have so many regulators so that regulations grow faster than the US Economy? Congress keeps adding new ones without any meaningful consolidation of existing ones.

Rules Applicable to US Financial Services Holding Companies Adopted Since July 2010 [6]

SEC AND CFTC

Self-Regulatory organizations (SROs)

Federal regulation of securities and derivatives is supplemented by what are referred to as self-regulatory organizations (SROs). Although these entities are described as self-regulatory, their rules are subject to the requirements of the SEC and CFTC. For example, SROs generally cannot adopt or amend their rules without the approval of the SEC or CFTC. Failure to comply with SRO rules subjects a firm and its employees to significant sanctions by the relevant SRO, as well as one or both of the SEC or CFTC.

Securities and derivatives SROs to which a single US financial institution may be subject can run as many 117 SROs that supplement federal regulation under the Commodity Exchange Act. National Futures Association brings the number of such organizations to 118.

Take the Federal Government and add 50 more

All 50 states have unique regulations governing banking, insurance, and securities. As a result, broker-dealers, investment advisers, and insurance companies are subject to numerous (and sometimes inconsistent) regulations under state law, as well as federal.

Overlap And Duplication

Not surprisingly, given the number of regulators, there is tremendous regulatory overlap and duplication.

According to the Volcker Alliance, the financial industry's multi-agency framework "continues to fuel interagency tension; cause communication and coordination problems at home and abroad; foster a lack of accountability (with everyone involved but sometimes no one in charge); impede timely response critical matters: and disperse the available talent, training, and resources of the regulatory system across a multitude of agencies."

Next Dennis Logue looked at impact of regulations on community banks. Currently the country is losing about one a day. He believes this is an issue of oversight: keeping track of regulations is an excessive burden. This may have encouraged consolidation, as a larger bank can spread the regulatory costs over more assets. There are also limits on customers that may need a larger

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[6] All of the information in this paper was derived from governmental or public third-party sources. For more information about this report you may contact Steven Lofchie. Anyone who would like to review the supporting information may do so by obtaining a free password for the Regulatory Policy Page of the Cadwalader Cabinet at www.findl<nowdo.com.

bank. The FDIC plays a leading role in this process since more barriers and more control lead to fewer institutions. Indeed, it was noted that interest income as a percentage of operating income was substantially lower for smaller banks than for larger banks, reflecting the two regulatory regimes. This may be why, as Robert Aliber noted, TARP was profitable for the government because it focused on large financial institutions.

Consolidation results in putting more eggs in fewer financial baskets. Stress tests are now seen as a way to measure the adequacy of more capital as a bulwark that will reduce the need for intervention if a financial shock threatens the stability of the financial system. Saving the system is now the policy goal.

Regulation and the Community Bank: Talking Points

Dennis E Logue, Board Chair, Ledyard Financial Group & Ledyard National Bank

Facts: Since 2006, there has been a net loss of one commercial bank per day (100 through 2Q 2016) and 389 New Banking Regulations from August 13 2010 through September 2 2016 (according to the St Louis Fed).

The Cost of Dodd-Frank is around $15 billion annually in administrative costs, but hundreds of billions in legal fees for the six largest banks. Only heaven knows about its impact on GDP growth since there has been virtually no meaningful economic cost benefit analysis.

Since banking is quite competitive, a large fraction of these costs are not costs that can be passed to depositors or borrowers. The lion's share of these costs is thus borne by banks' capital providers.

Prudential Regulation is provided by: the OCC and Fed through periodic exams. The FDIC piggybacks on OCC. Their approach is defined by CAMELS: capital adequacy, asset quality, management quality, earnings, liquidity, sensitivity to economic conditions. This seems to work satisfactorily, though regulators have lots of discretion.
Redistributive Regulations include:

Community Reinvestment Act - three tests

Consumer Financial Protection Bureau (CFPB) – Governance Issues

There is also over-reach since "Fair Lending" is based on statistical models with disparate impact on auto loans, payday lenders, student loans, debit card fees, and overdraft fees. Further, the CFPB should be telling low-income people not to buy leveraged, illiquid assets with much unsystematic risk such as houses. They should also tell the music industry not to borrow at all.

For the Big Banks, the regulation environment seems to be OK since there are regulatory economies of scale, and these banks can get rid of a lot of pesky smaller competitors who drop out. Further, they have plenty of money to spend on lobbyists, consultants, and political contributions to help shape the regulations to favor them. Really big banks may be designated as Systemically Important Financial Institutions (SIFIs) and face enhanced scrutiny. Nonetheless, if prospective profits exceed any likely fines, they may gamble since there is growing concentration in banking (see Table). Logue then described his own bank.

The Community Bank and Regulation

1. New Hampshire-based Ledyard National Bank (which trades as LFGP) opened its doors in 1991. It has roughly $450 million in bank assets and manages a bit more than $1 billion in trust assets. From the start, its founders and initial investors were intent on remaining independent.

2. It has been economically disadvantaged by many of the new regulations stemming from the Dodd-Frank Act, especially the Consumer Financial Protection Bureau (CFPB). In addition, many older regulations have been toughened. For some perspective, in 2005 it had a half time employee in compliance and one person in finance dealing with required reports. It now has three full time employees in compliance and four full time in financial reporting, not counting the CFO. The administrative costs are horrific, and it has not been possible to measure the cost of foregone opportunities. Further, as regulatory uncertainty has arisen in many sectors of the economy, business borrowing has not grown very rapidly. Thus economic growth has been stifled.

3. Many of the new regulations, as well as the strengthened historical ones, have substantial discretionary components. Sometimes rules are good and better than a regulator's best guess.

4. Our principal regulator is the Office of the Comptroller of the Currency (OCC). It examines us every 18 months or so. This agency assigns ratings based on six broad factors, each of which has sub-components. The acronym for their ratings is CAMELS.

C Capital Adequacy
A Asset Quality
M Management Quality
E Earnings
L Liquidity
S Sensitivity to Economic Conditions

5. Certain of these ratings are relatively unambiguous. For instance, Capital and earnings are easily discernible from our annual, audited financial reports. Of course, this is historical, but clear-cut. Liquidity is a less-specific amount. There are instruments in our portfolio that are

generally highly liquid, but sometimes become frozen. This means a bit of a judgment call for the OCC. Asset quality again requires a bit of discretion. We rate our loan portfolio and we have an independent consultant audit our risk assessments. But there may still be a loan or two where we disagree with the OCC regarding its risk.

Similarly, our investment portfolio consists of highly rated securities. But here there may still be some disagreement regarding risk, due to the duration, liquidity, or complexity of the instrument. Evaluations of management quality and sensitivity to economic conditions are wildly subjective. On a positive note, since 2008, the OCC has more pro-actively assisted the banks and has become more consultative. Rather than saying something is wrong, OCC tries to point out how improvement can be made.

6. One beneficiary of these periodic inspections are the bank's shareholders. They can take some comfort that an independent agency is looking over its shoulders. Another major beneficiary is the Federal Deposit Insurance Corporation (FDIC) because having sound banks means they do not have to pay deposit insurance claims.

7. While, small banks like Ledyard experience periodic examinations, large banks have continuous examination. They all have permanent cadres of regulators who work there daily. For instance, Morgan Stanley has 50 full time regulators who have offices within the firm. Very large banks may also be designated Systemically Important Financial Institutions (SIFIs). These receive an extra level of scrutiny from the Financial Stability Oversight Board. (As an aside, Dodd-Frank provides no definition of systemic.)

8. There are many other bank regulations that go well beyond safety and soundness. These are far more subjective and regulators have immense discretionary authority. These sorts of regulations have meaningful redistributive consequences.

9. One such regulation is the Community Reinvestment Act (CRA). The law was passed in 1977 in response to studies suggesting redlining or discriminating against minority borrowers.

10. The act has three tests. One is the Community Development Services test. This involves charitable giving and volunteer services. Strangely, a bank only gets credit when its employees help with bank-related issues. Ledyard would get zero credit if the CEO built an entire house for Habitat for Humanity. It would get credit if he balanced the checkbook. The second test deals with investment. Here a bank may invest in a pool that served underserved minorities even outside of its market. The third test is Community Development Lending, essentially loans to low-income borrowers in the bank's assessment area. However, the assessment area may include locales that are not in the bank's market area. That is, a bank may not have any physical presence in a low-income town or village.

11. Three factors deserve mention. First, there are no explicit guidelines. At Ledyard the management has to make intelligent guesses as to how much effort should go into each test. Second, excellence on one test does not compensate for failure on another. Third, failing the CRA can have dramatic effects on a bank. Failure means no mergers or acquisitions, and no new branches.

12. Another onerous regulation is the Home Mortgage Disclosure Act (1975). It requires extensive background work on the financial means of the borrower, as well as great attention to detail when presenting the borrower with an estimate of all the closing costs. Not only do all the costs have to be listed in alphabetical order, but if the actual exceeds the estimate, the bank pays the difference. Further, there may be occasions where the bank essentially has to forgive a mortgage, though I am not personally aware of exactly what triggers this apart from the bank misleading mortgage buyers about the borrowers' financial ability.

13. A final level of regulation that our bank has found onerous is the CFPB part of Dodd-Frank.

14. To begin, there are troubling governance issues. There is a single Director who has a term appointment and can be removed only for cause. Many other regulatory agencies have Commissions (for example, the SEC has five commissioners). Here there is only one key decision maker. There is no Board of Directors for governance oversight. There is no direct Congressional oversight.

15. There are many areas that the CFPB touches upon that affect all banks. One is the issue of "fair lending". Here the CFPB tries to identify discriminatory lending using statistical models that consider last names and zip codes. A lender can be cited for discrimination on the basis of "disparate impact" even when there was no intent to discriminate. For example, if two peer banks made between 12% and 15% of their auto loans to Hispanics and a third bank made only 5% of its auto loans to Hispanics it is disparate impact, even though no Hispanics may have been rejected. The CFPB only looked at last names, ignoring Hispanics who do not have Hispanic-sounding names. This is not very good science; it is "voodoo" regulation.

16. The CFPB is also increasingly looking at lending rates in the auto loan business, also using its disparate impact model. Roughly 2000 pages of rules have been issued regarding payday lenders. There are rules regarding debit card fees, and there will soon be rules regarding overdraft fees. Coming soon are rules regarding collection practices for student loans.

17. There is no evidence that any sort of cost-benefit analysis has been done for any of these regulations. Indeed, the benefits are redistributive since their focus is on some notion of "fairness". I am unsure how to measure "fairness". Regulations are supposed to cure market failures, not focus on imaginary ones. We can estimate the administrative costs, but these surely underestimate the overall economic cost. For example, making any sort of short-term loan

(banks often have clientele similar to payday lenders) will soon require an extensive check to see if the borrower can repay.

The cost is not insignificant, and the analysis may take a day or two or longer. Now suppose a worker with a landscape business comes to the bank needing, say, $600 immediately to repair his tractor. No money, no tractor, no income, no ability to work, and the landscaper may lose that customer forever. Costs such as these may never get measured. Surely it is possible for regulations to lead to lost GDP growth. Lost GDP may exceed the administrative cost by an order of magnitude.

Table: Consolidation In Banking

2006	2009	2015	2016 (YTD)	
7397	6829	5338	5238	Commercial Banks
178	25	1	0	New Report
305	132	264	98	Mergers
4476	6557	6385	6193	FDIC Employees
10.1	11.8	14.9	–	Bank Assets (in trillion dollars)
5.9	6.3	8.1t	–	Net loans & Leases (in trillion dollars)

Bad luck, Bad Decisions, Technology, Regulation?

Table: The Big Four: Total Assets
(in trillion dollars except as noted)

2006	2009	2015	2016 (2Q)	
1.4	1.6	2.1	2.2	Bank of America
1.9	1.9	1.7	1.8	Citigroup
1.3	2.0	2.3	2.6	JPMorgan Chase
0.5	1.2	1.8	1.9	Wells Fargo
51.3	57.3	53.5	–	% of total bank assets

Summary And Next Steps

Financial regulation is a necessity. Good regulation protects consumers and ensures well-functioning markets. However, “good" regulation is not the same as more regulation, nor the same as more regulators. Study after study has called for regulatory simplification, but the number of regulators keeps increasing. Since the adoption of Dodd-Frank, a remarkable number of new regulatory requirements have been imposed on market participants.

SIFMA[7] believes it is time to reassess the regulatory structure and to simplify it. It is time to take a look at what is working and what is not. Thoughtful regulation should drive the economy forward. It should not drive so many firms out of business.

This paper is intended to provide a very broad overview of the complexity of the US regulatory system, and of the costs of that complexity. Going forward, SIFMA intends to produce further white papers that focus on the complexities and costs of regulation with respect to various specific activities. The goal of each of these papers will be to initiate a discussion as to how the activity is regulated and whether the ends of the regulation could be achieved more efficiently and effectively.

Studies that resulted in overall regulatory simplification? According to a report from the Volcker Alliance, there have been 27 major studies arguing for simplification of the US regulatory financial system.[8]

"Toward Improving Financial Market Oversight
in the Early 21st Century"

Jack Malvey

The primary objectives of such Financial System oversight should be to:

-Enhance global coordination among multiple regulatory and legislative authorities, think tanks, financial institutions, and academia;

-Assure that proposed new global financial system rules explicitly include a detailed benefit-cost analysis, especially focusing on liquidity;

-Consider the vast differences in global economic and capital market contexts: high growth, high return, disinflationary, active portfolio management in the 1980s and 90s versus low growth, low return, passive portfolio management, deflationary, interventionist monetary policy in the 21st century;

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[7] The SIFMA Foundation is dedicated to fostering knowledge and understanding of the financial markets for individuals of all backgrounds. https://www.sifma.org/about/sifma-foundation/

[8] The Volcker Alliance is a nonpartisan 501(c)3 nonprofit organization established to address the challenge of effective execution of public policies and to help rebuild public trust in government. Its Chairman is Paul A Volcker, who worked in the United States federal government for almost 30 years, culminating in two terms as Chairman of the Board of Governors of the Federal Reserve System from 1979-1987. https://www.volckeralliance.org.

- Develop *Stress Tests* that include the possible implications of a potentially rapid financial system evolution inspired by FinTech, such as the further diminished role of broker-dealers, the broad adoption of virtual currencies, and the accelerated disintermediation of classic banks;

-Create and distribute real-time global capital market flows;

-Mandate the construction of real-time debt capital market indices;

-Insist on minimum credentials and mandatory training for new members of corporate, mutual fund, and foundation Boards of Directors;

-Re-evaluate the merits of varying classes of common stock with different voting rights;

-Derive more empirically justified recommendations on preferable capitalization ratios rather than relying on ad hoc heuristic prescriptions;

-Incentivize the adoption of longer-term horizons by all actors in the global financial system;

-Encourage corporate issuers to higher-frequency operating and financial data releases;

-Strive to liberate sell-side equity and credit research, as well as independent research providers, from fear of business and legal retribution for critical comments;

-Reduce financial system dependence on rating agencies;

-Incorporate new technologies to detect illicit activities and the emergence of potentially dangerous systemic anomalies;

-Phase out unrealistic assumptions, such as lofty long-term pension fund returns that suppress general awareness of future retirement scheme shortfalls;

-Plan for the expected diminution of real entitlement benefits and the extinction of defined retirement benefit plans where individuals will become more directly dependent on the financial system. Their educational needs will increase, as will their needs for investor protection;

-Better educate newcomers to the capital markets profession by requiring study of capital market history in academic, CFA, and CAIA programs.

Carl Walter on China and Red Capitalism [China's Financial System].

The Chinese banks are extensions of China's MOF and there is no transparency. The government owns the exchanges and sets the regulations so foreigners have only 2% of assets. Capital inflows were and are limited. Further, there are still de facto exchange controls. State-owned enterprises for many years paid no taxes, which has hobbled the central government budget.

In China there is no fiscal stimulus, only bank stimulus, with the banks owning over 60% of financial assets. Walter believes the Chinese government may be using its foreign exchange reserves to stimulate the Chinese economy through Hong Kong. This is not a sustainable system, especially as foreign exchange reserves are down from $4 trillion to $2.5 trillion.

In this regard, is China is like any other Emerging Market Country – or is it unique in using the banking system as a government policy instrument. One participant compared the situation to India.

The issue of apartment vacancies was then raised; this is something from which the banks will need to be rescued. There are also non-performing loans that will be a challenge.

The Chinese government is trying to disguise what is actually occurring, including a declining growth rate that may be closer to 3% than 6% (official Chinese economic statistics are of course suspect). But whatever the growth the current rate may not be sustainable if currency appreciation is a factor in loss of competitiveness. Further, wealth inequality can lead to sharp declines in asset wealth that leads to runs on the currency and goods as an adjustment to disparities in the economic wealth disequilibrium. This led to a discussion of possible depreciation and capital flight, and whether flight has stopped due to the Fed not raising rates or to Chinese regulatory pressures? In any case, for now the RMB has not depreciated further.

China's Financial System

1 It is obvious to say but China is different from the free-market economies that have provided much of the material for the study of banking and financial crises. China has

– A Non-convertible currency
- Closed capital accounts
- Managed interest rates

In addition, foreigners, over a long period, have held less than 2% of China's financial assets, and foreign direct involvement in China's domestic financial system is really immaterial.

China's stock, bond, and commodities markets are aspects of a comprehensive and failed effort by the Chinese government in the 1990s to fundamentally reform China's economy by

introducing market-based capital pricing. Now these markets serve to largely obscure the fact that capital remains as before, administratively distributed by the state.

- Stock markets are based on access and pricing set by regulators
- Interest yield curves are set by the central bank
- Currency exchange rates are set by the central bank

2 Because it is so eye-popping, analysts have come to focus on the scale of China's rapidly growing debt, which is held mostly by its huge state-controlled banks. Since 2008 its banks have ballooned, so that total assets are out of all proportion to China's economy: nearly 4 times GDP and over 2 times total US banking assets. However its banks are just a symptom of the real weakness of China's financial system: the absence of a strong basis of taxation. The 2008 stimulus and those that have followed would have been of a fiscal nature had the national budget and debt markets had the capacity.

3 A little history is needed to understand this situation. Before 1979 and the start of its economic and political recovery, China's national budget was a function of a Soviet-style state plan that allocated resources based on a strategic production plan. Planned surpluses from the state-owned industrial sector provided the bulk of the budget revenue. The reform era destroyed these arrangements, as well as the budget itself.

Economic reforms began with giving state-owned enterprises (SOE) greater independence to produce and also to retain profits. There were three consequences of this decision:

- National budgetary receipts went from 28% of GDP in 1978 to 9% in 1994
- Local governments ran large budgetary surpluses because they "owned" most of the SOEs
- The central government ran large deficits because all taxes were collected by local authorities and it "owned" so few SOEs

4 The 1994 budget reform was an attempt to reassert central government control. This reform was, however, undermined by deep compromises with provincial governments, and there have been no efforts to impose an improved regime since then. The results of the reform were:

- The central government established its own tax-collecting agencies
- The central government took over ownership of the most strategic SOEs
- National budgetary revenues began to increase, returning to 25% of GDP

But the compromise was that poorer provinces – by law forbidden to borrow directly - had to be made whole. This was done by central government revenue transfers.

- Few local governments create budgetary surpluses;

- Given their poverty, it is no surprise that local governments took advantage of the global financial crisis by over-borrowing;
- Central government SOE groups pay little tax to the national budget, given pension obligations

The consequence is that the central budget must finance 80% to 90% of its own expenditures by debt, with deficits officially held to around 3% of GDP. (Even as the target was officially retained at 3% for 2017, the headline amount for 2016, reported in January 2017, was 3.8%.) Research by the IMF and Goldman Sachs suggest the actual budget deficit is up to 10% of GDP. This is a major reason why China's primary fixed income markets have grown rapidly and therefore, China:

a. must finance the central government where expenditures are consumption based
b. must finance the central-government SOEs where investments don't yield a strong returns

5 What does all this mean? It means there is no real fiscal stimulus in China and real reform must be fiscal reform:

a. The Ministry of Finance can only increase deficit spending with National People's Congress approval, and here it is caught by the traditional 3% limit.
b. Hence the banks provide the fiscal stimulus, causing a balance sheet explosion – and a similar explosion in off-balance sheet products.
c. The central bank is compelled to keep interest rates low so that the state, its SOEs, and its banks can finance themselves cheaply.

6 Given its borrowing needs and poor investment returns, it is no surprise that the government or state balance sheet has become increasingly leveraged.

RMB Bns	**2012**			**2012**
Foreign exchange	25,853		Household Deposits	47,334
Net Current Assets	-10,135		Currency held by households	4,455
Gold	67		Debt Securities	4,079
Net loans to non-state borrowers	44,094		**Total claims on state**	65,231
State enterprise net fixed assets	29,722			
net claims, intl FIs	81		**Household & Foreign Minority Interest**	19,730
Total Assets	89,682		**State Net Worth**	4,721
Household & Foreign Claims/Total State Assets	**73%**			
Household & Foreign Claims/GDP	**125%**			
Household & Foreign Claims/State Net Fixed Assets	**220%**			

Session 4:

Bagehot Revisited

As noted above the Bagehot doctrine is that the central bank should lend freely at a penalty interest rate, but only to solvent institutions. The basic rationale for central bank loans to an illiquid firm is to forestall asset sales to raise cash as that just depresses asset pricend leads to more insolvencies. This rationale can also be applied to asset sales to an insolvent institution.

So when should a government provide loans to an insolvent institution? The US government provided capital, admittedly on a contingent basis, to Bear Stearns and to Fannie Mae and Freddie Mac. But the government did not provide capital to Lehman Brothers, supposedly because it did not have legal authority. Yet a day after Lehman failed, the Fed provided capital to AIG. Then the Bush administration obtained authority from Congress to provide capital to the banks, and then to near banks such as General Motors Acceptance Corp (GMAC).
If this is a government's responsibility, then what should be the terms for re-capitalization and how extensively should existing shareholders be diluted?

It is not clear, for example, why, in the case of Bear Stearns, shareholders received an above-market price from JP Morgan.

With respect to any such intervention, though, one important issue is timing. When should the government intervene to re-capitalize the banks? Should it be known that if a bank's capital declines below some level there will be an immediate infusion of capital by the government? The most oversold argument of all time is the concept of moral hazard, and so authorities should make it crystal clear that an institution is too big to fail and will be saved even though its owners will lose most of their net worth.

Walter Bagehot [WB] was editor of the Economist, founded by his father-in-law, from 1860 to 1877 (the year he died). He saw a role for central banks to rescue solvent banks, as well as recognized that the economy had become complex beyond a single individual such as Morgan or Vanderbilt being able to manage a crisis. That is, banking is too complex to just let market work. This pits the libertarian view versus the regulatory regime led by central banks.

An interesting question is what would Bagehot do in a given crisis. Harvey Rosenblum addresses this in his presentation, as well as drawing some parallels between 9/11 and financial crises.

"Just say no" might work most of the time. Looking at the Fed's prior decision tree, such as Long-Term Credit Management (LTCM) in 1998, and we see a private-sector solution to a private-sector problem. The 2008 AIG formula is to take over, stabilize, improvise, recapitalize, and re-privatize. Financial crises have become very expensive. The last one is estimated at $16 trillion.

Rosenblum posits that WB would have updated his Rule or Guiding Principle for the Central Bank. If too many will fail, it will force action by the CB, as no one else can act. However, in

the United States, the FDIC may have different interests than when the Fed is in charge. For example, 9/11 showed how communications were not robust at a time there was a need for a quick response.

In this respect, there is a need to amend Dodd-Frank to clarify who is the first responder. Banks and their clients need to know the rules in advance of the crisis. Also, the issue remains as to what happens if the first fix is not sufficient. While moral hazard is part of the real world, then if the financial system freezes, the CB must act.

Of course, the Fed has other obligations related to the financial system, such as employment and price stability (slight inflation). Further, the Fed is not able to break up the big systemically important banks, though it can act as the doctor in the emergency room. Yellen should argue to Congress what the Fed needs to do its job. Also, it should do more “war games” to practice and prepare, while making the costs to a financial firm’s stakeholders clear.

Robert Aliber’s View On Bagehot

Barney And Bagehot

Several days ago, while still in deep sleep I turned on C-Span V and came upon a hearing of the House Banking Committee. Congressman Barney Frank (CBF) was questioning Walter Bagehot (WB) (1826-1877), editor of *The Economist* from 1860 to 1877 and author of *Lombard Street* (1873).

ABSTRACT: CBF asks WB to review the key argument for central bank extension of access to its discount window. WB responds that the rationale is the "negative externalities" if a bank is forced to sell securities to obtain liquidity.

The ownership of liquidity changes, but the supply of liquidity is unchanged. CBF gets WB to acknowledge that the "negative externalities" rationale means that the central bank should provide liquidity to a bank that is insolvent or thought to be insolvent. WB reluctantly admits that this rationale also means the central bank should provide liquidity, which is now capital assistance, to non-banks such as the Lehmans and the AIGs. By extension, it should also do so to foreign banks and foreign non-banks that own significant amounts of securities denominated in US dollars.

CBF then asks WB about "Too Big to Fail" which WB characterizes as a "pernicious cliche”. WB says that Citibank, Bank of America, and Wachovia failed. WB brags that Gordon Brown was clever in providing capital assistance to the banks by providing equity and diluting existing shareholders.

CBF asks WB about regulatory reform since the 2008 crisis, and WB goes on the attack, saying that Dodd-Frank and Basle III are a waste of time and money as "costs without benefits" because they impose costs on the banks and hence on borrowers and depositors for the next 50 years. They also encourage the expansion of shadow banks to cope with a crisis that might occur in the fifty-first year. Then, when the crisis occurs, these measures will be ineffective, much like most of the regulatory initiatives adopted over the last 200 years.

Those who promote Dodd-Frank and Basle III fail to distinguish the causes of the idiosyncratic failure of one or two banks from the causes of the failures of large numbers of banks that previously were thought to be well-managed and well-capitalized. WB suggests that the higher the capital ratios imposed on banks, the less attention the monetary authorities will give to preventing systemic shocks like the ones in the early 1930s and in 2007-08.

CBF: Mr Bagehot, we have five groups of questions today. These are prompted by a review of the 2008 financial crisis, which was one of the most severe our country has experienced. The first group involves the Bagehot doctrine. The second involves lending to banks whose solvency is questionable. The third involves central bank financial assistance to non-banks. And the fourth involves The Too Big to Fail doctrine. The fifth, a rag-tag bundle, concerns regulatory reform.

WB: Perhaps I could remind you that no two financial crises are the same. And yet their general features are such that the differences among them should not obscure the strong similarities. Let me also remind you that since I wrote Lombard Street in the early 1870s, there have been several major global crises. There was the Panic of 1907. There was the Great Depression of the 1930s. And there have been four waves of banking crises since the early 1980s, each involving three, four, or more countries.

CBF: Could you provide an explanation of what you mean by a banking crisis or a financial crisis?

WB: A banking crisis means that the liquidity of a non-trivial number of banks is questioned, because an exceptionally large number of borrowers has defaulted on their loans. If only one bank among a large number of banks has a liquidity problem, the most plausible interpretation is that there is an idiosyncratic problem that centers on its solvency, perhaps because of a strategic mistake by the management.

If a large number of banks have liquidity problems at the same time, the likelihood is high is that there is a systemic cause that follows from a sudden sharp change in the financial environment that has involved a dramatic change in the relationship between the prices of several different asset classes, such as real estate and bonds. The banks that have a liquidity problem are those that are believed to have impaired solvency. Often these crises follow from a decline in real estate prices. Typically there is a boom in real estate, which always is financed

by an increase in the supply of credit. This boom is exemplified by a surge in prices and construction activity and property values that leads to economic euphoria and a sense of you never had it so good.

There is overbuilding in response to an anticipated growth in demand. Then real estate prices peak and begin to decline, because the price increases were driven by purchases by momentum traders. Many borrowers default once prices decline, and the banks and other lenders to the borrowers incur large loan losses. Some banks experience runs by depositors and shareholders.

Given this description, we should review whether there are more systemic crises today than when the British pound had a gold parity, and when America had a parity for the US dollar in terms of gold.

Let me recount the waves of crises in the three decades since the early 1980s. I use the term wave when three or four or more countries show the same general features and a large number of banks headquartered in a country fail. There was a major crisis in the early 1980s when the governments and government-owned firms in Mexico, Brazil, Argentina, and 10 or so other developing countries defaulted on their loans. Continental Illinois Bank in Chicago failed, in part because it had relied on Penn Square Bank in Tulsa, Oklahoma, as a feeder for loans to firms engaged in oil exploration.

All the banks, or virtually all the banks, in Texas failed. Several hundred banks in the midwest failed as well. And that was the beginning of your Saving & Loan Crisis. Then there was the major crisis in Japan in the early 1990s, which occurred at the same time as banking crises in Sweden and Finland. The Asian Financial Crisis began in mid-1997 and continued for nearly four years. Most of the banks in eight or nine countries including Thailand, Malaysia, Indonesia, South Korea, Russia, and Argentina failed. I include in this wave the banking crisis in Mexico during its presidential transition at the end of 1994 with the Asian crisis that occurred 30 months later because their antecedents were similar. Now we have the Anglo-Saxon real estate crisis, which has involved your country and my own as well as Iceland, Spain, and Ireland.

CBF: Please expand on your lugubrious comment that no two crises are identical and yet they are always the same?

WB: Each of these crises followed a credit bubble, which led to an increase in the prices of securities and other assets, usually the price of real estate. The bubble in the 1970s centered on the quick run-up in commodity prices and the belief that the prices of oil and wheat and other commodities would continue to increase. Therefore the loans to the governments in the countries that produce commodities were thought to be secure. The increase in commodity prices was capitalized in the prices of farmland and oil wells and oil reserves. Both borrowers and lenders became more optimistic, even enthusiastic, about the economic prospects. The

indebtedness of the borrowers increased. However their net worth increased more rapidly than their indebtedness, at least for 90 to 95 percent of the borrowers.

Each of these credit bubbles followed a period of accelerating cross border investment inflows to these countries. Every one of these countries had a primary deficit in its international payments. The increase in external indebtedness during each year was larger than the interest payments on this indebtedness during the same year.

Then some event led the lenders to become more cautious and to slow the growth of credit. Thus asset prices increased at a less rapid rate or even declined. And when the decline began, some of the firms that previously had been the most enthusiastic lenders experienced runs, because of the suspicion that their efforts to increase their share of the market meant that they had acquired riskier loans.

The perennial problem is that no one has seemed able to foresee the end game that real estate prices cannot increase more rapidly than household incomes until the end of time. If lenders and regulators and analysts recognize that debt cannot increase more rapidly than income for an indefinite future, then someone should foresee the inevitable adjustments when the increases in real estate prices slow. Or if a few individuals do, they are drowned by the masses who do not.

The Bagehot Doctrine

CBF: For the record, please repeat your guidance for the central bank?

WB: My key idea is that the central bank should lend freely at a penalty rate (which is the opposite of the current policy of the Fed, which is to lend freely at a rate of zero, so that the banks earn exorbitant profits because they can buy government securities that have higher returns).

CBF: What is the rationale for your recommendation?

WB: I want to reduce the likelihood that banks would be required to sell securities to get the cash to meet the demands of depositors that wanted their money, because they are concerned that the bank might be forced to close, either because it was illiquid or because it was insolvent. The supply of liquidity might seem to be fixed and if Alpha Bank is able to increase its liquidity, then Beta Bank may become less liquid. If a bank is required to sell securities in a troubled environment, the prices of those securities would decline, and other otherwise prosperous banks would tumble into insolvency.

CBF: Please describe the mechanism or process that would be involved in the extension of credit from the Bank of England to the joint stock banks.

WB: The process is not well understood. As an example, Alpha Bank would approach one or several discount houses with the request that it needed cash, that is, currency. It would offer good collateral. The discount house or houses would approach the Bank of England. The discount houses would enter the Bank, go to the banking office, knock, and someone would raise a frosted glass window about six inches. The runner from the discount house would present the collateral, almost always securities of the highest credit standing, you would say AAA, and the discount house would receive the cash. Anonymity of the bank that requested the discount would be preserved.

CBF: Will the extension of loans from the Bank of England to the commercial banks enhance their profits?

WB: My guidance is that the interest rate that the Bank of England should charge should be higher than the interest rate that banks can earn on their loans. The term that is now used to describe this relationship is negative carry.

CBF: Why would these banks borrow if they lose money on the transaction?

WB: Because the alternative would be for them to sell securities, which would depress the securities' price and lead to a decline in the net worth of the bank. Each of these banks would conclude that the loss from the negative carry would be smaller than the decline in its net worth that would occur if it had to sell securities.

CBF: Is there anything you would like to add?
WB: It is extremely important when there is a financial crisis to minimize the contagion effect. Another term that has become fashionable after my time is externality or that the sale of assets by Alpha Bank would have negative impacts on the liquidity and solvency of Beta Bank and of Omega bank because the value of their securities and their net worth would be depressed.

CBF: I am puzzled. You want to provide liquidity to the banks, and yet many of the banks that you described in the several waves of crises had incurred large loan losses.

WB: I want to reduce the likelihood that the banks would fail even though they have good securities and abundant capital. One more point. Because of the negative carry, the banks would have an incentive to repay the central bank at their earliest convenience.

CBF: How does this policy relate to the management of the central banks in the United States and elsewhere in the last several decades?

WB: This is, as the Japanese would say, a delicate issue. An asset price bubble develops because the supply of credit to certain borrowers or groups of borrowers has been increasing at too rapid a rate. The cousin of you can’t have an inflation without money is that You can’t have

a bubble in real estate without credit. Most of the credit for purchase of real estate flows though the banks. The central banks should monitor credit flows and the increases in prices of securities and real estate.

CBF: Have you reviewed what has happened in the United States in the last several years?

WB: Yes, because there was the classic surge in real estate prices to levels that were not sustainable. No, because the motives and anticipations of the lenders and of the Federal Reserve were unfathomable.

The cash flows from the lenders to the borrowers were too large to be sustained for an extended period, because the indebtedness of the borrowers was increasing more rapidly than their incomes. Moreover some of the borrowers obtained the money to pay the interest on their indebtedness from new loans. But this process could not be sustained for an indefinite period. At some date, the flow of new loans would decline, and some of the borrowers would no longer be able to rely on the money from new loans to pay the interest on their outstanding loans.

That is, the bean stalk cannot grow to the sky, and real estate prices cannot increase more rapidly than household incomes until the end of time. During these episodes, the increase in real estate prices in some segments of the market, geographic areas that are considered hot, are significantly higher than the interest rate on borrowed money. Some borrowers depend on the money from new loans to pay the interest on outstanding loans and when the music stops and far less money is available from new loans, some will sell real estate to get the money to pay the interest and prices will tumble.

CBF: Please expand on difference between the economic circumstances when you wrote Lombard Street in the 1870s and those in the United States and Britain in the mid-2010s.

WB: When I wrote, there was relatively little concern with asset price bubbles. Banks encountered liquidity problems because of a drain of reserves abroad or to the countryside. A few banks might be deemed to have too many risky loans, but the shortage of liquidity was a problem of the system rather than of particular borrowers. In the last few years, the banks that have had liquidity problems because other banks are skeptical of their solvency.

Central Bank Credit For Banks With Questionable Solvency

CBF: What is your view about extending credit to banks that may be 'underwater', that are insolvent?

WB: I am very much against extending credit to these banks. That would be a permanent transfer of wealth from the owners of the central bank to the owners of the defunct bank or to their creditors.

CBF: Assume Lehman Brothers had been a commercial bank. When Lehman is closed because of bankruptcy, what will happen to its securities?

WB: The answer is simple. The Lehman estate would be required by the bankruptcy court to sell the securities to get the cash to satisfy the demands of Lehman's creditors.

CBF: When the Lehman estate sells some of these securities, what will happen to their prices?

WB: The answer is straightforward: their prices would decline.

CBF: What would be the impact of the sales of the securities by the Lehman Estate on the market prices of the securities of the banks that hitherto had been solvent?

WB: The decline in the prices of these securities means that some of these banks that are solvent would become insolvent. [9]

CBF: Why do you favor providing credit to solvent institutions that are illiquid while you are against providing credit to institutions that are insolvent, if the sale of securities by both institutions would depress their prices?

WB: I do not want the central bank to become the owner of a defaulted bank.

CBF: So you think it more important that the central bank not provide credit to an institution that already is bankrupt, even if it means that the sale of securities by this institution might cause otherwise solvent institutions to tumble into bankruptcy because the value of their securities would decline.

WB: I take your point. If I want to be consistent, the central bank should be motivated to prevent distress sales of securities by insolvent banks.

CBF: Did you consider the likelihood that the central bank might provide a credit to an institution that was illiquid and solvent, and then whoops, this institution might become bankrupt?

WB: Yes, that is a clear possibility. I had not considered that possibility before. In this case the lender of last resort would provide credit only if there is collateral of the highest quality.

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[9] This assumes the securities must be marked-to-market on a transitory basis even if the ultimate value is not diminished. For equities this can be tricky, but for debt held to maturity the transitory values are less relevant, especially when the bond issuer is considered able to pay at maturity. Marking-to-market was not a 19th Century custom, so it is not clear why Bagehot would accept it as a good thing — especially given the consequences.

CBF: But what would happen if the bank does not have sufficient high-quality collateral that has not previously been committed?

WB: There are three possible answers. One is to make the loan, and acquire a contingent ownership interest, equity, in the lender if the lender is unable to repay. The second is to not to make the loan. In this case the lender might fail. The third is to find some other agent to make the equity investment in the lender.

CBF: Is there any difference between the sale of securities by an institution that is illiquid and solvent, and the sale of the same securities by an institution that is insolvent.

WB: None whatsoever.

CBF: If I may push the argument: Are you suggesting you would be willing to revamp one of the key ideas that generations of readers have taken from *Lombard Street* and agree that the central bank would make credits available to institutions that already are insolvent or are likely to become insolvent?

WB: Let me make my position clear. I stand by my key proposition. If a bank already is insolvent, then I favor that some other institution, the US Treasury, the FDIC, X, provide the money to recapitalize the institution so that it would not have the need to sell securities.

CBF: But what if these institutions are slow off the mark?

WB. Then the central bank must act. And then these other institutions would follow through, much as with the 1984 rescue operation of Continental Illinois. Obviously these are not clear-cut cases. While it would be nice to know whether a bank is solvent even if illiquid, there is no guarantee that an institution that is solvent today will be solvent tomorrow. The prices of securities decline in a systemic crisis, and the losses are widespread, even among the most conservative of lenders.

CBF: Would you like to add anything at this point?

WB: These are not first-best choices. The function of the central bank is to stabilize the financial system. The costs of not-saving a large financial institution could be very high relative to the capital of other banks.

Your Federal Reserve and my Bank of England sometimes appear to forget that they were established to provide financial stability. Instead, both became mesmerized by the desire to achieve a low inflation rate. They ignored or slighted why they were established. The costs of not-saving Lehman Brothers were tremendously high. The US unemployment rate surged by two to three percentage points, and the US fiscal deficit soared. The cost to the US Treasury of

not saving Lehman were 50 times higher than the cost that it would have incurred if it had saved Lehman.

CBF: Is your position about lending to solvent institutions that are illiquid consistent with your position about not lending to insolvent institutions?

WB: I concede. I have been inconsistent.

CBF: How do you propose to reconcile your inconsistency?

WB: There is only one way forward and that is to make funds available to the insolvent institutions. However, these funds would necessarily be a capital injection so that the central bank would become a shareholder of the bank and it might readily become the dominant shareholder.

CBF: Thank you. Is there anything else you would care to add?

WB: It should be noted that the initiatives your Treasury took to provide capital to the banks appear to have been profitable. Your Treasury was a 'vulture investor' in the best sense of the word. In moments of distress, private investors hunker down, and the prices of securities decline sharply relative to their earning power. In part, the investors are highly uncertain about the willingness of the central bank to commit to 'save the system'. The only institution that can provide the assurance to save the system is the central bank. And I must admit that the distinction between liquidity and solvency is much fuzzier than I thought 150 years ago. If there were 100 percent assurance about solvency, the problem of illiquidity would be far less severe.

We in Britain did a much better job of providing capital to the banks by providing capital for the purchase of shares rather than through loans. Our Treasury is responsible for the losses if the value of the assets proves smaller than the capital injection. The logic is that the authorities should capture most of the upside. And hence all the capital injection should be in the form of equity or debt convertible into equity.

Central Bank Credit For Non-Banks

CBF: Would you comment on extending access to the discount window to lenders that are not banks?

WB: My objective is to ensure the stability of the banking system.

CBF: It sounds as if you are making a distinction between the banking system and the financial system.

WB: My position is not too different from that which came to be known as the narrow banks. That was a position advanced in your country by Henry Simons, who taught at the University of Chicago. These narrow banks would own only US Treasury bonds, so they would not be done in by credit losses. But a second group of banks would take on the credit risks of lending to business.

Assume that the non-bank lenders hold many of the same securities that the bank lenders own. If, during periods of stress, they need liquidity, then the choice is between providing them with liquidity or having them sell their securities to raise the cash. The negative externalities then come into play. If non-bank lenders that hold significant amounts of securities also held by the banks, then I would be prepared to provide them with funds to cope. Your financial assistance to the insurance company AIG was appropriate, although I remain puzzled that you did not provide assistance to Lehman one day earlier.

One more observation. The scope of the US dollar area is much wider geographically than US legal jurisdiction. Foreign banks hold hundreds of billions of US dollar-denominated securities. These securities almost certainly are more liquid than those denominated in their own currencies. If they are subject to a run, they will sell these securities. And hence they also should be provided with access to the discount window at the Federal Reserve, although it might be that a swap should be arranged with that country's central bank.

Too Big To Fail

CBF: Would you like to comment on the 'Too Big to Fail" doctrine that has received so much attention in your country and especially in America?

WB: Consider the difference between the failure of a small bank and the failure of one of the four or five largest banks. When a small bank fails, the authorities arrange a marriage with a larger, well-capitalized firm. This may be blessed with the injection of government funds. But there is not likely to be a suitable partner when one of the largest banks fails.

Consider the menu of stakeholders in any large financial firm. There are shareholders, bond holders, depositors, others who own fixed-price claims on the firm, various counter-parties, directors, senior executives, other large financial firms, and the public.

Remember the demise of Continental Illinois National Bank in 1984, then the eighth largest US bank. The shareholders were wiped out, kaput, yet not one director was fired. The senior executives lost their positions and much of their financial wealth, which had been invested in the bank's stock. Many of the junior executives lost a great deal of reputational capital. They moved to other institutions, but most of them experienced truncated careers.

Who, then, was ‘bailed out’? The owners of small deposits benefited from deposit insurance. The owners of large deposits received a free lunch, although most had removed their money from Continental Illinois before the bank was closed. Whether the bank was kept open until they had removed their money was unclear.

CBF: Why wasn’t the insurance extended as well to the owners of large deposits?

WB: Large depositors were thought smart enough and knowledgeable enough to take care of themselves. And hence the banks would be more conservative in their lending policies because they knew that they would be subject to runs by the large depositors.

CBF: That logic seems twisted. The large depositors are likely to be more knowledgeable, and the first to start a run.

WB: I agree. Banks and investment banks are subject to runs if they experience large loan losses and the prospect that they might fail increases above a minimal threshold. At that stage, the financial manager faces the following choice. If the institution fails, the losses could be very large. If it avoids failure, the additional interest income is very small. Financial firms are subject to runs whenever the prices of securities decline significantly and there are rumors that they have had large loan losses. One way to reduce the likelihood of these losses is to ensure the financial environment is more stable.

The presumption is that if the banks are subject to runs, they will be more cautious in their lending policies. And if the large depositors were insured, they would be less concerned with the solvency of the banks, and hence the banks could adopt riskier lending policies.

If the large depositors are not insured, that is, if they might take haircuts, then they would be fair weather friends. The banks then might be too cautious about taking risks. This is a tough call.

CBF: But what is the relation to the measures that the US Government has taken to support Citibank, Bank of America, and other large banks?

WB: For all practical purposes Citibank failed. The shareholders lost most of their money, 90 to 95 percent. The top managers were replaced by the US Government. The directors were also replaced. But assume that the US Government had not been involved and that Citibank was treated like Lehman. What would have been different? The large uninsured depositors would have received a free lunch, much like the owners of money market funds were treated just like the insured depositors. They are the principal ‘inside group’ that benefited from the government financial support. The bondholders and those with counter-party exposure were also made whole. But other large banks and thousands of small banks benefited because the Citibank estate was not required to sell securities.

Congressman Frank, you and I share the view that the dominant objective is to prevent the implosion of the financial system when asset prices decline. These declines in the prices of securities are inevitable when a bubble bursts. Some financial institutions inevitably will incur losses. But we want to be sure that there is enough capital in the banking and financial system to prevent the cascading of losses and that the prices of securities are appropriate for the income on these securities.

Hence we want to reduce the likelihood that the system will encounter a debt deflation trap as the prices of securities decline. Too big to fail does not mean that the shareholders should be protected. Rather, they should be diluted and perhaps wiped out. Forgive me for waving the Union Jack in the Halls of Congress, but Prime Minister Gordon Brown did a brilliant job in defining the terms of financial assistance to Northern Rock and Lloyd's. The shareholders of these institutions were extensively diluted. The executives in Northern Rock and Halifax and Lloyd's lost their positions.

Did these institutions fail? If you asked the shareholders of Citicorp, which now is one third owned by the US Treasury, most would probably say that it has failed. They have lost 90 percent of their money. Similarly for Bank of America or Wachovia. And these banks' officers, they might say yes. Or take AIG, the shareholders were wiped out.

The major beneficiaries of government assistance were owners of large deposits, bondholders, and the firms that held various claims on Citibank. Depositors and bondholders were protected.

The problem is that your financial authorities have been inconsistent in the terms on which they provided assistance.

CBF: Then why the focus on too big to fail (TBTF)?

WB: I can offer three related observations. One is that several of your banks were forced to take government capital. The second is that other banks took advantage of cheap loans. And the third is that there is a search for villains during a banking crisis, but most of the supposed villains are victims and fail.

CBF: What about the employees with all those bonuses?

WB: That is a US side show largely due to Cassano's Casino in London. Joseph Cassano managed the structured products division of AIG. This is the principal case in which employees whose compensation packages were related to their income engaged in risky behavior and bet the firm and lost. The idea that the bubble resulted from the risky transactions of individual traders is silly, childish, an effort to personalize the problem.

CBF: Any concluding observations?

WB: The implication of TBTF is that small and perhaps intermediate institutions could be allowed to fail. And many of these small institutions do fail. But remember, the depositors in these institutions are protected by deposit insurance. The reason for adopting deposit insurance was to reduce the likelihood of runs.

When any of these institutions fail, their shareholders are wiped out. Their managers lose their jobs. The policies toward allowing the small banks to fail while their creditors are made whole could be applied to large institutions. The only significant difference is that there are a smaller number of potential buyers for a large institution that fails. But this is readily surmountable. The institution could be re-capitalized with government money and then there could be an IPO or a series or IPOs. Or the large institution could be carved up.

CBF: Why hasn't this happened?

WB: You're asking me to explain American politics.

CBF: Any other observations?

WB: The US Treasury and the Fed did not do their homework. If the US generals were as haphazard in contingency planning as the financial authorities have been in the last few years, they would have been court-martialed, lost rank, and had their pensions taken away.

Remember that the source of the instability was the run-up in housing prices. That run-up could not have occurred without a rapid growth in the credit supply. The management of the growth of the credit supply is the responsibility of the Fed.

We have backed into a situation where virtually all bank deposits are insured, some formally, others informally.

CBF: What is your opinion of the 'moral hazard' argument that providing credits to the banks today will encourage riskier behavior in the future?

WB: Let's ask a randomly selected number of the shareholders of Countrywide, Northern Rock, Bear Stearns, Wachovia, Lehman Brothers, et al what they think of the moral hazard argument. Implicitly the question suggests that these financial crises are caused by risk-taking behavior of the lenders rather than by the management of the supply of credit by the central bank. This crisis would not have occurred if credit had increased more slowly.

Regulatory Reform

WB: Two observations. One involves the regulatory limits on banking activities, and the second involves the size and number of institutions. First, on regulation and the scope or range of banking activities, traditional banks are involved in money payments and in providing deposits and making loans. These might be called spread businesses. In the last 30 years, banks have expanded into trading activities. They trade currencies and they trade securities and they are like hedge funds except they are regulated. Trading usually has been more profitable than banking.

Even though the banks that failed did not make losses on their trading activities, the Volcker rule is desirable and there should be a re-instatement of Glass-Steagall, largely because the cultures of the two activities are so different.

Banking crises always led to consolidation, a decline in the number of independent institutions as well-capitalized institutions acquire their brethren that have incurred large loan losses and find themselves incapable of attracting private capital because their embedded loan losses are so uncertain.

You used to have eight money-center banks in the United States. Now you have three or four. Four banks account for 60 percent of the mortgage originations. The bankers, at least those that survive, are happy with the smaller number. They will sing of the benefits of economies of scale. About the only real benefit is for the CEO's Gulfstream and the firms that dominate the large jet market as opposed to Cessna and the other makers of smaller jets. But both depositors and lenders are less-well served by smaller numbers.

Your government should adopt a policy of de-consolidation. The five or six largest banks need to spin off certain activities.

CBF: Could you comment on reform of regulations that apply to banks, and especially proposals to increase mandatory bank capital?

WB: I wish you hadn't asked that question, because it is so open-ended and since you won't like my answer. The legislative changes associated with Senator Dodd and you are orthogonal to the next financial crisis.

The history of the last 200 years is one of crises followed by regulatory reform. Consider some of the types of regulations, capital requirements, reserve requirements, interest rate ceilings, portfolio requirements, deposit insurance, limits on loans to individual borrowers, etc. Most of these regulations, with the principal exception of deposit insurance, are designed to forestall the failure of a bank because of idiosyncratic developments that impact individual banks. But my priority is to reduce the likelihood of failure because of systemic shocks.

Lehman Brothers, Countrywide Financial, Northern Rock failed because they had responded to conditions of monetary ease by seeking to increase their market share. Some firms will expand whenever the price at which they can sell their own IOUs is very high relative to the price they must pay when they buy the IOUs of subprime borrowers. If there is a lot of slack in the credit markets, it is inevitable that some firms will take advantage of the easy credit to increase market share.

Remember that you can't have a bubble in asset prices without an excessive rate of growth in the supply of credit available for real estate. This housing cycle was unique or at least different because much of the finance for housing came from outside the banks, in large part because of securitization. Together Fannie and Freddie accounted for 50 percent of housing credit. A lot of housing finance came from foreign investors, who were buying mortgage instruments. If credit for housing increases too rapidly, the regulations that are placed on the banks and other lenders will be irrelevant.

CBF: What guidance can you provide about limitations on the size and scope of institutions?

WB: There is very little evidence that there are economies of scale in banking, that a bank with $200 billion of assets is more efficient than a bank with $100 billion. One of the fascinating aspects of the banking industry is that small firms compete side by side with large institutions. If there were significant economies of scale, the smaller firms would vanish.

CBF: Assume your proposals were adopted. What changes would you advise on how individual banks are regulated? What is your advice on bank capital requirements?

WB: I want to minimize the regulatory costs that banks incur and the incentives for the growth of a vibrant shadow banking system. My theme is that the cause of the problem is that the credit supply has been allowed to increase at too rapid a rate. Bank capital is useful to cope with the idiosyncratic failure of individual banks because of strategic errors or self-dealing. Banks previously thought to be well-managed fail because of systemic shocks. Bank capital is largely irrelevant in dealing the with failure of banks because of systemic shocks that lead to large changes in relative prices of different asset classes.

High bank capital requirements are like an opiate, especially for central banks. The lower these requirements, the more attention that the monetary authorities will pay to minimizing systemic shocks.

CBF: Thank you, Mr Bagehot for your insights.

Session 5

Regulation Of International Capital Flows

Given that large and mostly unregulated capital flows have been responsible for global systemic instability, when and how should the governments limit such capital inflows?

The International Monetary Fund, for example, is changing its position on the regulation of cross-border investment inflows. One issue is whether there is a preferred or standard approach to such regulation. Another issue is whether US government should intervene to manage the increases in the foreign purchases of US dollar securities.

Singapore, for example, now has a current account surplus amounting to 20 percent of its GDP; Malaysia, 10 percent; Germany, 8 or 9 percent; and the Netherlands, 8 or 9 percent. What would be the US or world reaction if China had a current account surplus of 8 or 9 percent of its GDP?

Regulating International Capital Flows Due To Their Role in Creating Bubbles and Financial Crises as exemplified by the US and Iceland

The issue is how to regulate inflows so as not to create imbalances that force outflows and speculation. By examining the emergence of massive bubbles in these two situations, the role of capital flows can be observed and studied.

1) In both cases there was no attempt by the central bank (CB) to understand the situation. So there was no real prudential regulatory or monetary policy. The CBs actually raised interest rates and then gradually lowered them, but this led rising exchange rates. In Iceland they borrowed from foreign banks.

2) The Icelandic banks then lent to holding companies that invested in the stock market, similar to the US in 1929. Stocks responded and there was an economic boom. In Japan banks acted in the same way as stock holding companies with a similar leveraged pyramiding result.

3) There was no attention to currency risk. It was assumed rates could remain high to fight inflation, but this led to more stock speculation as one way to cover the costs of higher rates. Again, this excessive optimism was similar to the situation in 1929 in the US or the Japan 1980s bubble.

4) If the CB lowers rates, then money will flow out and the banks will collapse. Iceland's government had a roadshow to bring money back. But 2008 caught it up in the global financial crisis and the collapse of foreign real estate prices directly impacted the banks, so they could not rollover their debt and all defaulted.

5) This situation fell outside the mandate of the CB, which was to control inflation rather than to manage financial stability.

6) There was good economic recovery though from 2010 into 2015 in both Iceland and the US.

Iceland's government took the necessary action based on the need to survive after the system collapse in 2008. It erased debt from the balance sheets of banks, which were then recapitalized. Something similar happened in the US through TARP.

The issue for Iceland's monetary policy now is that, given recovery, how can the CB raise rates when there are negative rates in other countries without just repeating the prior scenario related to a strong currency? The solution has been to do it from a regulatory standpoint in terms of accepting deposits from foreigners by imposing a tax on the bond market plus having a requirement that the bonds must held for five years. Also, banks cannot borrow from abroad. These are capital controls, but they do not limit the taking of earnings out of the country. The idea that seems to work limits speculation while encouraging productive investment. But is economic and financial trauma required to develop such policies?

International Capital Flows

Mike Dooley

Is the current pattern of net or gross international borrowing a source of future financial instability in some countries or in the system as a whole?

Is there anything governments should or can do to reduce the risk?

Robert Aliber argues that net international capital inflows have preceded almost all of the post-war financial crises. Capital inflows inflate asset values and deflate asset values when the inflows are reversed.

It is important to distinguish between causes of changes in asset values and factors that amplify the impact of these changes. All financial crises are associated with a large reduction in the market value of an important class of financial assets. If the contractual value of financial intermediaries' liabilities are not contingent on the market value of their assets, this generates insolvencies and that amplifies the decline in asset valuations. This amplification is not clearly related to the cause of the initial decline in asset prices.

The conventional policy response and the actual response to the 2008 crisis has been to reduce the probability of insolvency for intermediaries by raising capital and reserve requirements above what the intermediaries would consider in their self-interest. The wedge between the private and public valuations of capital is usually related to market failures related to insurance and too big to fail distortions.

This policy response is costly because it is a tax on financial intermediation and discourages both saving and investment. During the current slow recovery, it is often claimed that the slow growth of credit has been caused by capital requirements, reserve ratios, and other prudential regulations. If so, this has been a very costly policy reaction.

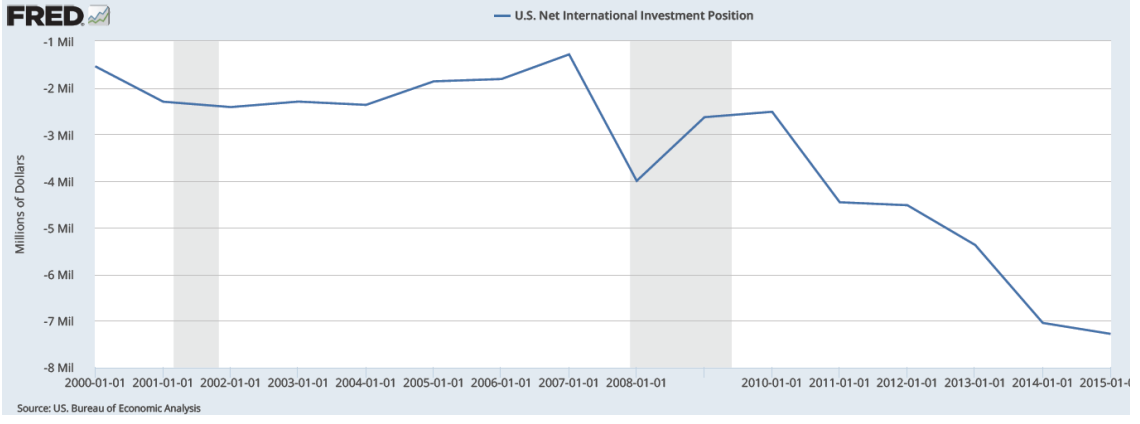
Professor Aliber's argument is that it may be less-costly and more-effective to attack the cause of the asset price instability rather than to insulate the financial system from its effects. He is certainly correct that capital requirements have not in the past been successful in insulating the system. It is easy to agree with this assessment, but it is not so easy to agree on how to reduce asset price instability.

It is clear that current account deficits and the associated increase in net foreign debt have preceded many financial crises. Moreover, I would agree to the proposition that a large net foreign debt makes a country vulnerable to shifts in expectations for sovereign default. For emerging markets this remains a serious problem, and it is behind the IMF's new, less-hostile attitude toward restrictions on capital inflows for some countries. In general, emerging market governments have reduced their own foreign debt and have closely monitored, and at times discouraged, private borrowing. In effect, the emerging markets have followed Professor Aliber's advice. I think this has worked: the 2008 crisis did not start in the emerging markets.

But I also think this argument does not travel well to developed countries. The United States had a very large current account deficit before 2008, but the decline in asset prices was not triggered by fears of sovereign default or a capital outflow. An emerging-market-style crisis for the US was widely predicted. We were warned that the US savings-investment imbalance would generate unsustainable net foreign debt and that the reversal when foreign investors came to their senses would generate a real devaluation for the dollar of 40% and a dandy of a financial crisis.

The crisis came, but the dollar actually appreciated as non-residents ran to US assets. I think a better explanation is that non-resident investors were subject to the same distortions as US residents. Both US residents and non-residents bid for US financial assets and inflated their values. European institutions in particular funded their positions in the US and in the case of some German banks with disastrous results.

An important ingredient was the relaxation of the legal requirements, and enforcement of requirements, that sellers of financial assets and rating agencies were not supposed to lie about the underlying assets. I understand that this begs the question of why dishonesty broke out and came to dominate US financial markets after 2000. Maybe the crooks are always there and attack when the regulatory system is weak or when they can hide in an optimistic market.



Let me throw out a puzzle about US net foreign debt. There has been a remarkable acceleration in the net foreign debt stock since the 2008 crisis [see FRED above]. If I was going to worry about capital inflows to the US, I think the $1 trillion a year increase in the stock of US net debt since 2010 is large enough to cause real concern.

However, as far as I know, no one is actually concerned, probably because the US current account deficit relative to GDP fell by half after the crisis and currently stands at about 2.7% of GDP. Why has the stock of debt, the net international investment position, increased much more rapidly since the recession while the flow of debt, the current account, has moderated? In part because the stock numbers, correctly, incorporate capital gains and losses in the values of gross assets and liabilities. In addition, the two data sets are drawn from very different sources and it is very difficult to determine which is more accurate.

Even more curious is the fact that the US trade deficit is currently about 4% of GDP, only slightly less than before the crisis. The difference between the trade and current account deficit reflects about equal surpluses on services and net investment income. In the first quarter of 2016, net investment income for the US was about 1% of GDP, a remarkable result for the world's largest debtor.

The US is borrowing cheap and lending dear, and the growth in the scale of this intermediation has been increasing. All this has occurred while the dollar has appreciated to near the top of its historical values. If we actually have to pay for this net debt, the US might not look like a solvent intermediary.

Regulation Of International Capital Flows: The Icelandic Case

Gyfli Zoega

Iceland is a country with 320,000 inhabitants and rich natural resources such as fishing stocks and hydro and geothermal energy plus landscape that attracts tourists. It was ranked 19th in the world in terms of GDP per capita in 2015 by the IMF and 17th by the World Bank. It is a part of the European Economic Area (EEA) and, as such, enjoys access to the EU single market in goods, services, labor, and capital. Its relationship with the EU is the same as that of Norway. These countries do not participate in decision-making, are not a part of the Common Agricultural Policy, and are not a part of the Euro zone. It is, however, part of the Schengen Agreement, so travelers from the EU apart from the UK do not need to show passports when arriving.[10]

[10] (Data cited are the most-recent available at the time of writing, which means 2015 or early 2016.) This puts the use of "currently" in context. The alternative would be to be very precise in every instance.

Boom follows a financial crisis

Icelandic banks, as well as a large part of the non-financial business sector, collapsed in October 2008. They were too big to save, insolvent because of unhedged lending in foreign currencies and lending to finance investments in a bubble stock market. Capital controls were imposed following the collapse to stem the depreciation of the currency. These involved restrictions on capital outflows, interest payments exempted, while the current account was left open. The capital controls are currently being relaxed. In anticipation of the lifting of capital flows, a set of rules and regulations have been passed to make the financial system more robust. In essence, these rules are meant to prevent the repeat of the 2003-08 episode.

Currently Iceland is experiencing an economic boom. Economic growth is expected to be 4.9% in 2016, with investment increasing by more than 20%, private consumption by 6%, and domestic expenditures by 7%. Unemployment is at 2.6% and inflation at 0.9%. The low inflation rate masks wage inflation, with nominal wages rising by more than 10% in both 2015 and 2016 due to the appreciation of the currency, which has reduced the price of imports. The rate of price increases for services is around 2%.

The economic expansion is caused by a very rapid increase in the number of tourists: their number almost quadrupled from 422,000 in 2006 to a projected 1.6 million in 2016. This was initially spurred by the depreciation that followed the collapse in 2008, but the real exchange rate has now reached its average level for the past 30 years and Iceland is no longer a cheap destination. Increased security concerns in the rest of Europe may have increased the number of tourists, especially from the US, and volcanic eruptions may also have attracted attention. In addition, there is increased tourism in many countries due to the lower price of oil.

The increased demand for the services of the tourist industry has caused the current account to be in surplus (5% of GDP), growth to be 4.9%, and has kept inflation down. Moreover, due to the foreign currency earnings of the tourism sector, household durable consumption expenditures have increased, with higher real wages and less household debt, without making the currency depreciate.

Policy

A fundamental issue is whether the expansion will cause sufficient immigration from the European Union to prevent wage inflation and an ensuing price inflation. Because Iceland is a

part of the European single labor market, immigrants from the EU do not need work permits. Both the tourism and construction sectors (hotel building, etc.) employ mostly European workers. The large wage increases in 2015 and 2016 resulted from centralized wage negotiations that brought the real exchange rates towards its new equilibrium.

Fiscal policy is mildly contractionary. A small government surplus masks an expansionary discretionary fiscal policy that neutralizes the automatic stabilizers of increased tax revenues and lower benefits. The central government debt to GDP ratio is approaching 30% of GDP from above. Economic growth has reduced this ratio since the crisis.

Central bank interest rates are 5.25%; borrowing rates in commercial banks are around 6.8%. Inflation is at 0.9%, -0.9% when housing is not included. (Most Icelanders own their homes; the rental market is small.)[11] The real rate is close to 7% with the exception that when borrowing to buy or build a house, it is significantly lower because house prices are rising at an annual rate of 12.4% in the capital region. The rise can to some extent be explained by the increase in the number of foreign tourists, a significant share of whom are staying in what previously were owner-occupied homes.

The central bank has also accumulated foreign exchange reserves, especially in the past two years. FX reserves are currently around 35% of GDP, 750 billion krona when GDP is around 2,100 billion krona. The buying of foreign currency is intended to prepare the ground for the relaxation of capital controls, as well as to provide adequate reserves of foreign exchange once controls have been lifted.

However, the accumulation has had the unintended consequence of keeping the exchange rate down and hence supporting export-led growth. The buying of foreign exchange is sterilized by offering the banks a 5.25% interest rate for keeping their reserves in the central bank. The combination of foreign exchange purchases and the sterilization amounts to an implicit subsidy of the export sector. Due to the abundance of liquidity in the banking system, the 5.25% deposit rate is the effective policy rate.

The high interest rates have had the effect of increasing savings. Household savings have increased during the expansion. The net effect is a large current account surplus that is added to

[11] Finding an actual percentage proved problematic — got numbers ranging from 70 to 78%. But all sources agreed the rate was declining and has become a political issue.

the reserves or is used to pay foreign debt. The net investment position is currently -14.4% of GDP and improving. The collapse of the over-sized banks in 2008 improved the net investment position of the country. One has to go back to 1965 for an investment position that resembles the current one.

The relatively high central bank interest rates have prevented any emergence of a stock market bubble. After a recovery from the crisis collapse, stock prices have traded in a fairly narrow range. House price inflation may be a sign of over-heating but could also be a sign of an increase in the relative price of houses due to increased demand by foreign tourists.

Back to capital mobility

Capital controls are being relaxed, legalizing foreign investments by domestic residents and the transfer of money from domestic banks to foreign banks. In the light of the spread between domestic and foreign interest rates, market participants do not expect capital outflows. Instead, there is the expectation that the carry trade might be restarted, and foreign banks offer lower interest rates on foreign-exchange-denominated loans.

Between June 2015 and June 2016, portfolio investments by foreign residents, carry trade, amounted to 100 billion krona. The government and the central bank introduced a new policy tool in June 2016 that amounts to an implicit tax on portfolio investments by foreign residents. Foreign investors who want to buy bonds denominated in krona will have to put 40% of the investment into a zero-interest deposit account at the central bank and keep it there for one year. This is called a "special reserve requirement for new currency inflows". This has had the effect of stopping the carry trade completely. (See Appendix.)

The parliament has not passed laws to limit unhedged individuals and firms from borrowing in foreign currencies. An alternative would be to raise the capital requirements on banks making such loans.

In addition, a limit has been set on the extent of maturity transformation in foreign currencies by domestic banks. Moreover, they are required to have a foreign exchange balance on their books and to be able to survive being completely shut out of foreign capital markets for at least a year. These measures are intended to ensure that the Icelandic Central Bank can act as a lender of last resort for the domestic banking system and to insulate their capital against currency fluctuations.

Reasons for unconventional instruments

The objective of both the special reserve requirement and the limitations on "dollarization" is to prevent both domestic residents and foreign investors from investing in the domestic currency to profit from the interest rate spread, as well as from an expected appreciation of the currency, thereby causing current account deficits and the central bank to lose control of monetary policy.

Without these measures, foreign currency borrowing may force the central bank to maintain high interest rates in order to prevent capital outflows when a weak economy calls for lower interest rates. By stopping the hot capital flows, the central bank may be able to conduct an independent monetary policy and currency speculation does not endanger family stability.

In essence, the new measures are intended to prevent current account surpluses elsewhere and low policy rates plus quantitative easing at foreign interest rates from creating a capital account surplus for Iceland, which would cause the current account to go into a deficit. A sudden stop of such capital inflows would then cause disruption. Moreover, by preventing unhedged borrowers from borrowing in foreign exchange, the authorities are making the economy more resilient in the face of a possible stop to capital inflows. In doing so the new measures:

- Prevent domestic banks from borrowing in foreign currencies in order to lend to domestic residents with a mark-up in foreign exchange, thus profiting from the interest rate differential.

- Prevent domestic households, unhedged firms, and local communities from borrowing in foreign currencies, hence taking a long position in the krona while taking on exchange rate risk.

- Prevent foreign investors from buying krona securities through foreign banks while taking on the exchange rate risk.

All three constitute a form of carry trade. All three reduce the effectiveness of the interest rate channel of monetary policy and create business cycles governed by the actions of foreign central banks and the current account surpluses of other countries and not Iceland. It remains to be seen whether foreign investors will be able to evade the special reserve requirement. They could do this by buying other assets than domestic bonds and bills. They could also lend

foreign currencies to domestic residents through the Iceland banking system to achieve a higher return.

Currently the government faces challenges in European courts related to the imposition of the special reserve requirement. The rules of the European single market prohibit capital controls since these would violate the principle of the four freedoms. European rules also restrict the ability of the government to ban or limit borrowing in foreign currencies. Yet we persist.

Appendix: Current Rules[12]

On Special Reserve Requirements For New Foreign Currency Inflows

Article 1

Definitions

For the purposes of these Rules, the following terms shall have the following meanings:

Special reserve account: An account with a deposit institution in Iceland that is identified with a ledger code 24 in the Icelandic Banks' Data Centre hf. system.

Special reserve requirement: The obligation of an entity subject to special reserve requirements to hold a special reserve amount in a special reserve account with a deposit institution in Iceland over the holding period.

Holding period: The term during which the special reserve amount shall be held in a special reserve account with a deposit institution.

Capital flow account: A restricted deposit account held by a deposit institution with the Central Bank of Iceland in which an amount is held in custody that corresponds to the total of the special reserve amounts held in custody by the deposit institution concerned.

New inflows of foreign currency: Foreign currency entering Iceland after 3 June 2016. Balances on deposit in foreign currency accounts with domestic financial undertakings dating from

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12 Assumed to be an official translation.

before 4 June 2016, export revenues, and other foreign currency subject to repatriation requirements, cf. Article 13(l) of the Foreign Exchange Act, are not considered new inflows of foreign currency.

Article 2

Special reserve base

New inflows of foreign currency in connection with the following capital create the special reserve base of an entity subject to special reserve requirements:

1. New investments and reinvestment of such new investments according to Article 13(m) of the Foreign Exchange Act, in bonds or bills issued in domestic currency that are electronically registered in accordance with the Act on Electronic Registration of Title to Securities, or in domestic currency deposits.

2. Domestic currency deposits with deposit institutions in Iceland, other than those deriving from capital that is eligible for reinvestment according to Article 13(e) or Article 13(f) of the Foreign Exchange Act, or that falls under Article 13(l) or Article 13(m) of the Foreign Exchange Act, but not those deriving from capital according to Item 5 of this Paragraph.

3. New investments and reinvestment of such new investments according to Article 13(m) of the Foreign Exchange Act, in unit share certificates of funds that invest in bonds or bills issued in domestic currency that are electronically registered in accordance with the Act on Electronic Registration of Title to Securities, or that own domestic currency deposits.

4. New investments and reinvestment of such new investments according to Article 13(m) of the Foreign Exchange Act, in the equity of a company that is established for the purpose of investing, directly or indirectly, in bonds or bills issued in domestic currency that are electronically registered in accordance with the Act on Electronic Registration of Title to Securities, or in domestic currency deposits.

5. Loans granted to resident entities that are used for investments in domestic currency, for the benefit of the lender, in bonds or bills issued in domestic currency that are electronically registered in accordance with the Act on Electronic Registration of Title to Securities or deposited to domestic currency deposit accounts. The same applies to such loans that are used

for investments in unit share certificates of funds or in the equity of a company that is invested or disposed of, directly or indirectly, in the manner described in the first sentence.

Article 3

Parties subject to special reserve requirements

The following entities are subject to special reserve requirements as set forth in these Rules:

1. Registered owners of bonds or bills according to Article 2, Items 1, 4, and 5.

2. Registered owners of deposits according to Article 2, Items 1, 2, 4, and 5.

3. Registered owners of unit share certificates according to Article 2, Items 3-5.

Article 4

Special reserve ratio
A special reserve ratio of 40% shall apply to the following types of capital in the special reserve base:

1. Bonds or bills according to Article 2, Items 1, 4, and 5.
2. Deposits according to Article 2, Items 1, 2, 4, and 5.
3. Unit share certificates according to Article 2, Items 3 and 5.

Article 5

Implementation of the special reserve requirement

The special reserve requirement shall be satisfied by deposit of the special reserve amount to a special reserve account within two weeks of the date the new inflows of foreign currency are converted to domestic currency or the reinvestment according to Article 13(m), Paragraph 6 of the Foreign Exchange Act has taken place.

The special reserve amount shall be the product of the special reserve base and the special reserve ratio according to Articles 2 and 4 of these Rules.

The settlement currency of the special reserve amount shall be the Icelandic króna.

It is prohibited to withdraw the special reserve amount during the holding period.

It is prohibited to hypothecate special reserve accounts or special reserve amounts.

Article 6

This is an English translation. The original Icelandic text is the authoritative text. Should there be discrepancy between this translation and the authoritative text, the latter prevails.

Holding Period

The holding period shall be 12 months and shall begin on the business day that the special reserve amount is deposited to a special reserve account.

If new investment according to Article 2, Items 1, 3, and 4 is reinvested in funds that are subject to special reserve requirements according to Article 2, Items 1, 3, and 4, the holding period of the reinvestment shall be considered to have begun on the business day that the holding period for the new investment began.

If new investment that does not fall under Article 2, Items 1, 3, and 4 is reinvested in funds subject to special reserve requirements according to Article 2, Items 1, 3, and 4, the holding period shall begin on the day that the special reserve amount for the reinvestment was deposited to the special reserve account.

Article 7

Capital flow accounts

Deposit institutions are required to deposit the special reserve amount that it holds in special reserve accounts to a capital flow account with the Central Bank of Iceland.

The amount according to Paragraph 1 shall equal 100% of the special reserve amount.

Deposit institutions shall satisfy the requirements according to Paragraph 1 on the same business day that the special reserve amount according to Article 5 is deposited to the special reserve account.

The balance on the capital flow account shall at all times correspond to the total of the special reserve amounts held in custody by the deposit institution concerned.

Capital flow accounts shall bear 0% interest.

The settlement currency for capital flow accounts shall be the Icelandic króna.

It is prohibited to hypothecate capital flow accounts, or the deposits held in them.

Article 8

Reporting requirements

With the assistance of a financial undertaking in Iceland, entities subject to special reserve requirements shall notify the Central Bank of Iceland of the disposal of new inflows of foreign currency falling under Article 2, Items 1-5 within two weeks of the date the new inflows of foreign currency are converted to domestic currency or the reinvestment according to Article 13(m), Paragraph 6 of the Foreign Exchange Act has taken place.

Notwithstanding this provision, in cases involving reinvestment, the Central Bank of Iceland shall be notified of the disposal according to the first sentence within one week.

Deposit institutions shall notify the Central Bank of Iceland within the same business day of deposits of special reserve amounts to special reserve accounts according to Article 5. This is an English translation. The original Icelandic text is the authoritative text. Should there be discrepancy between this translation and the authoritative text, the latter prevails.

Article 9

Sanctions

Violations of the provisions of these Rules are subject to administrative fines and penalties in accordance with Articles 15(a)-15(d), Article 15(h), and Articles 16, 16(a), and 16(b) of Act no. 87/1992, with subsequent amendments.

Article 10

Entry into force

These Rules, which are set based on the authorization contained in Temporary Provision III of the Foreign Exchange Act, no. 87/1992, have been approved by the Minister of Finance and Economic Affairs and shall take effect immediately. Without prejudice to the provisions of Article 8, Paragraph 2 of the Act on the *Law and Ministerial Gazette* and the *Official Gazette*, these Rules shall take effect upon publication.

Reykjavík, 4 June 2016
Central Bank of Iceland
Governor and Director, Capital Surveillance Unit Controls

Iceland Regulations raise issue of capital controls as an important part of controlling crises and preventing their development due to capital flows

Resident versus non-resident behavior may depend on the state of economic development and on the financial system, including issues of moral hazard and whether there is any obligation to bail out foreigners [Argentina?] or pay-back the IMF. Scale may be a factor.

Deposit insurance has led to regulation of bank lending such as interest rates and the amount that a bank can lend to any one borrower. It also should establish standards for prudential credit.

However, much of this becomes less robust if you include foreign capital flows. This is because if capital flows out it will squeeze the system, which does not happen if money leaves one domestic bank and goes to another. The Central Bank, though, must be able to respond to this situation. Interest rate policy may not be enough to deal with inflows, in that they are difficult to offset with regard to the increased liquidity that then creates inflationary pressures such as has occurred in China. This scenario may be compounded by a trade surplus if the country is successfully pursuing the Chenery evolutionary export-led growth model.

For example, the 1997 Asian Financial Crisis began with foreign investment that saw opportunities related to a low-cost export platform and that then evolved into a real estate and stock market boom. The Asian countries' currency stabilization policies used to support the evolutionary growth process attracted destabilizing financial capital flows. The connection between employment goals and a stable exchange rate introduces both the political dimension and the ingredients for a financial and foreign exchange crisis.

The bottom line for a small open economy is that capital controls should be part of its monetary policy, as has now occurred in Iceland. Applying this policy to the US may not be a direct line however.

The difficulty may be in differentiating between types of investors. The World Bank has tried to study portfolio investments by type but found them hard to identify. But one may be able to do it in terms of timing and the sectors that are impacted. In addition, it should be recognized that the foreigners responsible for the capital flows cannot vote against a tax or regulation. Iceland may have also benefitted in its recovery from having a floating exchange rate, again a policy variable over which foreigners have no control.

In this case, policy makers and regulators are trying through controlling micro-decisions to affect or protect the macro-economy. One can see the benefits of this in the housing bubble and subprime market in the US as compared to Canada, where subprime loans and political support were not present.

Does opportunity for foreign exchange speculation reduce productive FDI opportunities by increasing its risk? It should not if one can hedge the foreign exchange risk, although the rate of FDI increase is also a consideration.

In any case, a country needs to know its place in the world economic and financial system, while its regulators need to know whom they are affecting and the timing and size of this impact. This is the basis of the argument for more-targeted intervention that considers the benefits of capital flows in terms of productive investment versus those for mere financial gain.

Points would like to make

1) That Dodd-Frank confidence can reduce the likelihood of future crises is questionable because the connections between the real economy and the financial system are poorly understood. Further, there is a need for longer-term horizons among financial-sector actors, such as scaling capital gains over five years instead of one for tax purposes.

2) One cannot really measure the benefits and costs of financial regulation. While it is difficult balancing regulation and monetary policy, regulation is clearly needed in specific situations, such as emphasizing prudent lending over asset price stability.

Summary Session

Tom Synnott

One Sentence Summary Comments for Bubble Conference 2016

1. Robert Aliber: What confidence can one have that Dodd-Frank type measures can significantly reduce the likelihood of a crisis?

2. Larry Goodman: The relationship between the financial system and the real economy is poorly understood yet it is more important than ever today.

3. Jack Malvey: Incent the adoption of longer-term horizons by all actors in the global financial system.
4. Randy Guynn: John Coates argued it is impossible to measure the benefits of financial regulations, and it also is very difficult to measure their costs.

5. Steven Lofchie: The principal reason regulators have had difficulty identifying systemic risks in the financial system is that they were not anticipating them.

6. Dennis Logue: Regulation is pro-cyclical.

7. Carl Walter: Given China's borrowing needs and poor investment returns, it is no surprise that the government, that is the State, balance sheet has become increasingly leveraged.

8. Harvey Rosenblum: To believe that better supervision and regulation would change this situation, would be the triumph of hope over experience.

9. Amar Bhide: Central Banks should be held responsible for prudent lending, not stable prices.

10. Gylfi Zoega: By stopping hot capital flows, central banks may be able to conduct an independent monetary policy, and currency speculation does not endanger household stability.

11. Mike Dooley: The US is borrowing cheap and lending dear, and the growth in the scale of this intermediation has been increasing.

William V Rapp

Rapp focused on a theme that was not often directly addressed: *financial innovation*. To illustrate how such new products can arise and present issues, he distributed some recent materials on risks related to ETFs. He also noted there was now another important regulator, the Department Of Labor (DOL), because of the size of pension and retirement assets under management. This illustrates an important issue emerging from the conference: the financial landscape is constantly changing and so regulating or avoiding the next crisis will continue to be a challenge.

Material on ETFs drawn from John Authers (2015)

ETFS To Play Main Role In The Next Crisis

Liquidity fears in indexed products have caused jitters [in 2015] as the next financial crisis will be played out in indexes and exchange traded funds. That is inevitable given the huge share that ETFs now take of investor fund flows, and their popularity as hedge fund trading vehicles. What is less clear, and deeply controversial, is whether the structure of ETFs will itself contribute to the next crisis, or even cause it. Regulators, worried by past incidents when untested financial innovations helped exacerbate financial crises, are worried that it could.

ETF providers indignantly counter that they make the market more liquid, and less prone to sudden stops. Indeed, they complain that well-intentioned regulations exacerbate a problem they were meant to cure. Scale of the ETF industry is not in question. They now hold more than

$3tn in assets. But this raises the question of whether they have come to lead the market rather than follow it. This operates at two levels. First, there is a concern the power of the indexes distorts markets over time, and second, there is the possibility that the structure of ETFs and index funds worsens market shocks when they happen.

Indexes' influence spreads to virtually all institutionally managed funds. Benchmarking by the consultants on whom institutions rely when choosing fund managers is so widespread, that active managers have no choice but to watch the index they are compared to very closely and are obliged to follow any major changes in its composition.

Examples are easy to come by. When the Russell indices that are highly popular among US fund managers are updated each year, they often drive the heaviest trading of the year.

In June [2015], Chinese A-shares peaked and began to fall shortly after MSCI, the most important index provider for emerging markets, decided to delay including them in its flagship index. This came as a surprise. Showing the importance of indexers, Chinese authorities had lobbied hard for inclusion, as this would have driven capital into the A-shares market. Many investors at the time said that the subsequent sell-off could in part be attributed to the knock to confidence that came with MSCI's decision

Indexers do their best to limit their impact on the market. Russell makes its methodology very public, so investors can see weeks in advance what changes are likely to its indices. MSCI conducts public consultations. But as long as indexing and benchmarking remain so prevalent, the problem of over-powerful indexes seems impossible to avoid. It can merely be mitigated. For passive investors, rules for indexes must remain as clear as possible.

For active managers, the solution may be to change benchmarking. Rather than looking at past performance, which does not predict the future, consultants could look at investors' past behavior, or rate them on their degree of style discipline. If clients show that they are more interested in highly concentrated funds taking contrarian positions, and not in funds that merely shadow an index, then the industry would adjust to meet the demand, and the systemic problems caused by indexes should reduce.

Then there is the issue of market structure. Two incidents in 2015 raised concern. First, there was August 24, when US share prices gapped downwards at the opening in New York, and ETF prices were not available for a while. Second, in December, a gradual sell-off in high-yield

bonds turned into a rout for ETFs holding high-yield bonds.

Was this due to liquidity mismatches? It is a fair question. ETFs only offer prices throughout the trading day because market makers trade to ensure that there is no gap between the market price and the underlying price of the securities in the index they track, so this has to be a risk — especially when, as in the case of high-yield bonds, the underlying security is fundamentally less liquid.

There are two theories. One, held by the industry, is that the problems were driven if anything by regulations. Mandatory trading pauses following the 2010 "flash crash" made it harder for ETF managers to get a handle on the underlying price of their securities and created problems. The other theory: there is indeed a mismatch. Debate is healthy. The echoes of credit derivatives that in 2008 helped to turn a serious housing downturn into a near-collapse of the world financial system, are clear enough. But without a major market disruption — and 2015's turbulence barely ranks compared with the events of 2008 — it is hard to test whether new financial instruments will work as intended when under stress.

Better for everyone, including ETF providers, to err on the side of caution.

Boom and Bust in the 2000s The Influence Of International Capital Flows with a Focus on the US Case and the Dodd-Frank Response

Marty Lowy

The real estate boom that ended with the bust of 2007-09 began as a fairly normal increase in house prices in California in 1997. People noticed that prices were rising, and would-be real estate investors added to the price increases by bidding up properties that they hoped to re-sell quickly. Most of the early California flippers paid cash, thus making quick purchases easy.

After the California boom was underway, investors from California came to Nevada and Arizona with cash, ready to buy and to flip. Locals saw the Californians making money, so they began to borrow to get their own houses to flip.

So far, until about 2001, this phenomenon was almost wholly domestic and probably not based on monetary policy phenomena.

Then, to combat the dotcom bust and ensuing recession, the Fed lowered the Fed Funds rate from 6.5% at July 2000 to 2% at November 2001, and ultimately to 1% in 2004 before beginning to move it up again — very gradually. With money this cheap, every player in the game of buying and selling houses saw a lifetime opportunity to profit.

2001 was when real estate prices began to take off, since naturally, when interest rates decline, real estate prices rise because the cost of carry declines. And that was when the fraud and duplicity, mostly local, mostly among brokers and mortgage bankers, began to pump up the markets further.

What would have happened if the Fed had begun to raise rates significantly in early 2003, I do not know. It might have made a difference, perhaps even a critical one, since the low-teaser-rate loans made in 2004-06 would not have been possible. But that is not the subject of this paper.

Private Label Securitizations Take Charge of the Market

The structure of the US mortgage market changed dramatically between 2002 and 2004. In 2002, 50% of US mortgages was sold to Fannie and Freddie and another 35% or so was held in bank portfolios. In 2004 something unusual happened. Although the percentage of total loans that was securitized remained about flat, private-label securitizations (PLS) as a percentage of total originations doubled. In 2004 only 35% was going into F&F (Fannie Mae and Freddie Mac) securitizations and about the same amount was staying in portfolio. PLS, which enabled the securitizers to tap global markets, were accounting for 30% of all originations by 2004, and for 38% in each of 2005 and 2006, as opposed to 15% or less in earlier years. Further, the PLS in earlier years mostly consisted of traditionally underwritten jumbo loans (that is, over F&F thresholds).

F&F did purchase about 20% of the PLS issued in the crucial years. My informants about that market have said that F&F only bought the best of the PLS and, therefore, they did not play a major role in funding the riskiest loans. I have yet to confirm that, but I hope to test the proposition when the data become available after the Nomura–RBS case is over. (The case involves allegations the banks made false statements while selling mortgage-backed securities to F&F.)

Securitization's Share of the U.S. Mortgage Market in the 2000s[104]

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Originations	1,048	2,215	2,885	3,945	2,920	3,120	2,980	2,430	1,485
Total Securitized	615	1,355	1,857	2,716	1,882	2,156	2,045	1,864	1,264
% of Originations Securitized	59%	61%	64%	69%	64%	69%	69%	77%	85%
Private Label Securities	136	267	413	586	864	1,191	1,145	707	58
Pvt Label as % of Total Orig	13%	12%	14%	15%	30%	38%	38%	29%	4%
F&F securities as % of Total Orig	46%	49%	50%	54%	35%	31%	30%	48%	81%

The nearby table, from my 2009 book, *Debt Spiral*, summarizes the trends. I believe the numbers remain accurate. You can see two key trends.

PLS Funding Propelled the Last Leg Up in House Prices

This enlargement of the PLS sector provided a new source of funds for the mortgage market — and a source that would purchase product that had been underwritten using more relaxed standards than traditionally had been applied.

The low interest rates engineered by the Fed had brought out domestic sources of funds, but it turned out that there was even more money to be made by tapping less-knowledgeable foreign sources. And it was tapping those foreign sources, by enabling previously ineligible borrowers to purchase homes that drove the prices in the housing market to their ultimate unsustainable highs.

The crucial years in this regard were 2004 and 2005. In the four primarily affected boom-states, real estate prices increased approximately as follows in 2004-05:

53% Arizona
35% California (it had increased the most earlier)
46% Florida
43% Nevada

Had these increases not taken place — that is, had price escalation ended in 2003, damage might have been done. However: (1) price declines would have been far less, and therefore

losses would have been less and foreclosures fewer; (2) fewer loans would have been securitized, and therefore fewer loans would have been in the hands of the broader market; (3) fewer marginal borrowers would have been affected. If prices had stabilized in 2003 or so, probably Washington Mutual would not have failed, probably Fannie and Freddie would not have been taken over, and it seems likely, as well, that Bear Stearns and Lehman Brothers would not have failed. The addition of the foreign money therefore appears to have been the critical point in turning the boom from dangerous to fatal.

Could prices have continued to increase without the influx of "dumb", a term discussed below, foreign money? That is not knowable. But it appears to me that the relaxed underwriting standards that the foreign money facilitated probably were *necessary* to sustain the continued price increases of 2004-05. Without those underwriting changes, the price increases of 2004-005 probably would not have occurred.

Peter Wallison (2015 among others) would ascribe F&F's lending, spurred by Congress, as the cause of the last leg up in market prices in 2004-05. I doubt that that is the case, but there still are data that are caught in litigation that I hope to get access to in order to see whether I am correct.

How International Funding Came into the US Housing Market

If I am correct about what facilitated the 2004-05 price increases, it is critical to know what happened at the end of 2003 that made the private securitization market take off.

The international flow of funds often, perhaps usually, is critical to the boom and bust syndrome. But my understanding of a number of the boom and bust events of the last 40 years is that the flow of funds from abroad only rarely comes at the beginning of the boom. The beginning usually is domestically born, cheered on by governments and central banks seeking to overcome a period of sub-par growth, which may be happening again contemporaneously.

In accordance with that pattern, in 2001 the Fed lowered rates and kept them low as it cheered the real estate boom in the early 2000s. And the Administration and the Congress added to the fire by doing things like enacting 3% down and encouraging lenders of all kinds to make loans to low-and-moderate-income borrowers, many of whom, in my opinion, would have been better off not reaching for home ownership at that time. Everyone loves a boom, and members of

Congress try to use a boom to seek to allocate resources to their supporters, and they did so in the mid-2000s.

What sparked the international pipeline?

The international money typically comes in late in the boom and typically is "dumb money" that invests just as it is becoming apparent to the domestic market that the price of real estate, the usual collateral, is too high. The foreign money, however, knows that it is dumb in the sense of not being able to evaluate credit risks in foreign nations. Therefore, the foreign money almost always looks for a guarantor that it thinks it can trust.

In Ireland and Spain in the 2000s, it was the local banks. The local banks in Ireland and Spain carried their deposits and loans in euros. German, French, Swiss, and English banks *knew* that the Eurozone would not permit a large Irish or Spanish bank to fail. Therefore, the loans to the banks, they believed, were money-good, and that they did not have to worry about what the local banks did with the money. And the German, French, Swiss, and English banks were proved right. Pushed by the leaders of the Eurozone and the ECB, the governments stood behind the Irish and Spanish banks. Thus, the foreign banks lost nothing on loans to banks in Ireland and Spain, despite those banks having made bad loans with the money they borrowed.

Foreign banks had done the same thing in Thailand in the mid-1990s. The Thai banks would have failed, except for the government backstop, and the foreign banks lost nothing. I have not studied every case, so there may be exceptions. But that is the typical pattern. It is interesting that governments seem seldom to think their economies or real estate markets are overheated. They continue to cheer price increases until months or years after they have become unsustainable.

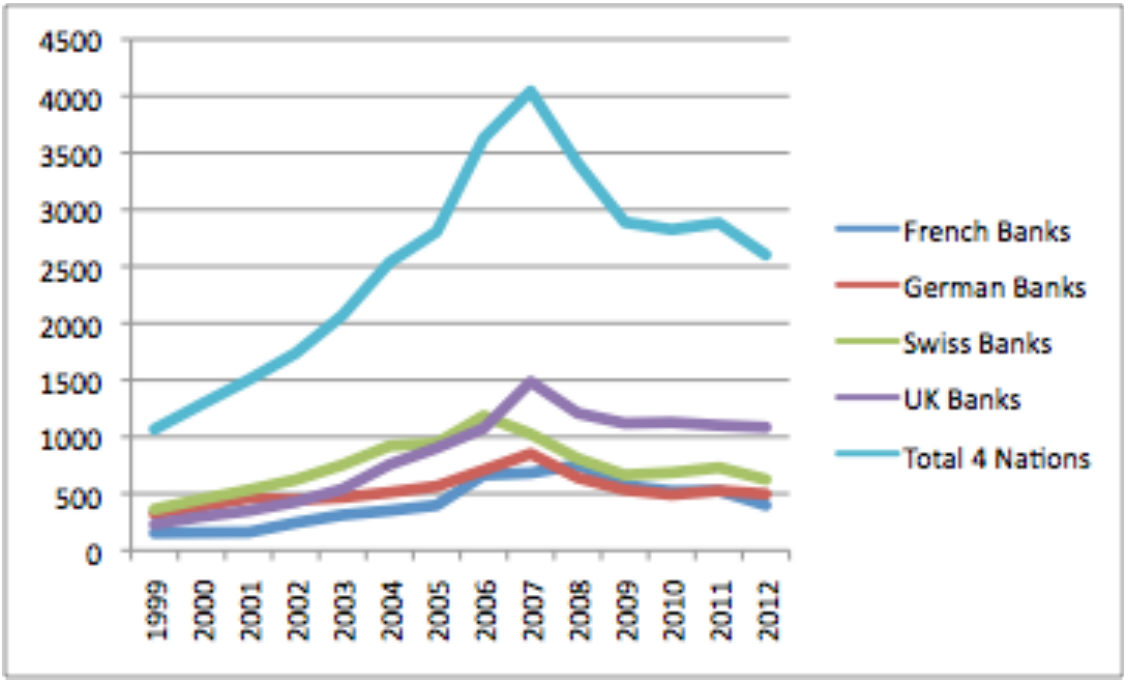
The US case in 2003-07 was a bit different from the Irish, Spanish, and Thai cases. The European banks did not lend to the US banks directly, nor did they rely on the US government directly. And the European purchases of US mortgage-backed private-label securities, however repackaged, should never have happened because there were so many ways that they could have been prevented by better policies or more responsible so-called gate keepers. But they were not prevented.

The dollars for the US PLS market came from the growth of dollar assets of French, German, Swiss, and UK Banks. The dollars got outside the US because the US had a major negative

current account for a long time. That does not tell us why the money was in European banks rather than somewhere else, which we could investigate, but for purposes of this paper, it is more important to learn how they got from the European banks into the US mortgage market and why.

We do know that the European banks were bloated with liabilities for the usual reason that banks become bloated with liabilities: because their sovereigns had made it known that the banks were safe. But where to put the money to earn a profit? That was the hard part, as it so often is in banking.

The US real estate market was hot, and it was a large market where one could invest lots of money. If only someone could turn the real estate loans into double-A or triple-A securities, which had very low capital charges under Basel II, which many of the European banks had just adopted, then even a very small spread could be very worthwhile, and a great volume of securities could be purchased. It would be the answer to the prayers of European banks with paltry earnings.



(Growth $ assets from BIS Table 9D, graph by the author)

The American investment banks were on that opportunity like a flash, of course. That is their job. And they did at least three things to create the products.

1. They created mortgages using relaxed underwriting standards that would provide fees for all the participants in the origination and securitization process. This aspect of creating the pipeline was critical. Underwriting standards had deteriorated somewhat in the early part of the boom, but the new volume level and the new fee levels could not have been achieved with anything resembling traditional underwriting standards. The basic differences were in four categories:

(a) Traditional standards had looked to the borrower's ability to repay the loan at the interest rate expected to prevail throughout the life of the loan. That was stood on its head when loans were underwritten to a teaser rate, even though the interest rate would reset many percentage points higher after just two years.

(b) Traditional underwriting standards verified the key data stated on the loan application. The new standards did none of that. Brokers and borrowers could lie with impunity.

(c) Loans at over 80% LTV (loan-to-value) traditionally required credit insurance. The new standards combined the other two lax or non-existent requirements with loans at close to 100% LTV.

(d) Traditionally, if a borrower had a credit score lower than a certain benchmark, additional fact checking was required and the permitted LTV was reduced. All that went out the window. As a result of these changes, people who could not qualify for a loan using normal underwriting principles were able to get loans and to buy properties they could not afford. And all the brokers and agents got paid for this laxity by largely hidden fees.

2. The banks convinced the Fed that although bank guarantees of structured investment vehicle (SIV) liquidity were guarantees of the liabilities for purposes of accounting principles, they need not be called guarantees for purposes of bank capital requirements.

The Fed adopted a temporary rule in 2003, made it permanent in 2004, and the Bundesbank followed suit in 2004. Thus, one avenue was born, the SIV conduit whose liquidity was guaranteed by the sponsoring American or German bank. That was good enough for many European banks to participate, as well as for many US institutions to buy the asset-backed commercial paper (ABCP) that funded part of the structure. My former-regulator informants say they thought the additional credit availability would be good for the economy, which is consistent with the typical boom syndrome.

3. The investment banks convinced the rating agencies that some date in the 1990s was the beginning of time for purposes of evaluating the risks of default on mortgages. That enabled the agencies to give high ratings to poorly underwritten mortgages. That mistake was compounded by many others, including the incredible assumption that mortgage defaults were not highly correlated. It is hard not to conclude that the rating agencies were worse than sloppy.

4. The investment banks compounded matters by committing what amounts to securities fraud in the process of securitizing the loans and selling the securities. This may not have been necessary to create the crisis, but that is a question that bears examination someday.

I am convinced by Judge Denise Cote's opinion (May 11 2015) in Federal Housing Finance Agency (FHFA) v Nomura Holdings Inc and RBS Securities Inc that at least some investment banks did commit securities fraud. Whether the major banks that settled with the FHFA by paying large sums also did so, I do not know, but the sequence of events looks suspicious. And if securities fraud was committed in connection with a large part of the sales, it will be a matter of conjecture as to whether the securities could or would have been sold without that fraud. I fear the records may be fast disappearing, and that therefore such research may not be possible. I hope to get access to some records when the Nomura–RBS case is over.

The Role of China

Some implicate Chinese purchases of F&F securities as providing the impetus for the housing market's surge. Because F&F never had funding difficulties for mortgages that met their standards, however, I am not persuaded that was material. Chinese purchases of long-term Treasuries and F&F bonds may well have been important in keeping long-term interest rates low, and that may have played a role in prolonging the boom in real estate. A contrary view, however, would point out that a large proportion of the late-boom loans were sold with short-term teaser rates that did not require low long-term rates.

How Could the Influx of Funds from Europe Have Been Prevented?

International capital flows have been crucial to many great booms and busts. And the governments and institutions of recipient nations play major roles in facilitating the foreign capital infusions. The capital does not flow into a particular economy, however, unless there is

a mechanism that the owners of the capital believe to include a guarantee of repayment. That is why the mechanisms and the methods of their creation are important.

In the case of the US in 2004-05, the foreign money *convinced itself* that it had found safe mechanisms through which to invest. In fact, it had done so only in part. The SIV structure worked, in that guaranteeing banks actually did perform on their guarantees. But some of the guaranteeing banks were German Landesbanks, so it was the German states that bailed out those banks in order to make good on their guarantee obligations. Maybe a little irony there.

The apparent safe haven of the triple-A rating proved not to be so safe. The German and Swiss banks, and others to a lesser extent, that relied on the ratings suffered significant losses on their securities portfolios and even worse losses temporarily through mark-to-market. In addition, because the securities portfolios were backed by liabilities also denominated in dollars that ran when the portfolios declined in value, the European banks holding the securities would have failed if the Fed had not bailed them out with swap lines and other significant accommodations.

What will foreign lenders learn?

What affect will these miscalculations by the European banks have on future international capital flows to boom-prone nations? Will banks in the position of Deutsche, UBS, and Credit Suisse, among others, look for more-certain government backing before they venture? Or will they try to evaluate local collateral? Or will they tend to stay home? My guess is that, in most cases, they will seek the sovereign guarantees that have been typical in such cases. Maybe they will have the discipline to stay home if such guarantees are unavailable. And maybe even the sovereign guarantees will not be sufficient since many sovereigns have defaulted. Indeed, by some definitions, every sovereign has defaulted at least once, and some have defaulted a dozen times or more, even though bankers sometimes forget that.

What will be the impact of the failure of the triple-A ratings on portfolio investments? It almost looks like the world has forgotten about that already, as money in bond mutual funds, seeking yield, flows all over. Almost certainly, most of those mutual funds will suffer losses.

Such thoughts will bring us around to asking whether the boom is worth the bust. And to asking whether a nation experiencing good times should seek to prevent foreign capital from participating or should restrict the means by which it should be allowed to participate such as in the form of equity? Those ideas are worth discussing.

That money tends to flow toward apparent returns does not mean that such flows are inevitable, or that they are good or bad, or that regulatory systems should turn a blind eye to whether or how they happen.

We need more discussion of those questions. The prevailing economic doctrine that capital should flow from a place that has extra to a place that needs it may not be as self-evident as it has seemed.

In fact, perhaps major distinctions need to be made between the flow of equity capital and the flow of debt capital.

Is Dodd-Frank a useful or appropriate response to this situation?

Whether Dodd-Frank is an appropriate response to the events of 2003-09 does not seem to me to be an important question, even though I think that many parts of Dodd-Frank have addressed the events of the boom and bust quite well. The important question regarding Dodd-Frank is whether the key parts of the law are an advance over the prior law in terms of financial system stability and the American banking system's contribution to the American economy. Dodd-Frank is chock full of silly things, but most of them probably are not of great consequence in the long run.

I come down on the side that the key parts of Dodd-Frank are a significant benefit to American financial stability and to the American economy. The reasons are:

1. Stress Tests

Stress tests are the key regulatory tool in Dodd-Frank. They have strengthened the stability of the system by strengthening all large banks and should continue to do so. The stress tests also will tend to prevent debt-fueled asset bubbles from growing by demonstrating in advance the consequences of bubble lending in the severe scenario. More universal stress testing, which I believe is coming, will tend to reinforce that bubble prevention.

Complaints that the Fed conducts stress tests too secretively may have substance. But I would urge that the benefit of stress testing over long periods of time depends on continuous change

and, sometimes, surprises. The macro world is in constant motion, which requires bank managements to respond flexibly. It is not wrong for the Fed to test that flexibility.

Stress tests are a tool that does both a micro and, through relative universality that gradually is being enhanced, a macro job as well by influencing the overall conduct of lending institutions. Sometimes that means there will be a tension between the Fed's stress test role and its monetary policy role. Thus far, the stress test officials seem to have had independence from the monetary policy people, as I believe they should, but that may not always be the case.

Even if foreign banks and other foreign types of lenders are not subject to stress testing, foreign lenders rarely are responsible for the origin of a debt-fueled boom. The boom begins with domestic institutions. And if they are restrained, the likelihood of foreign lenders beginning a conflagration appears to be small. Even though global imbalances may result in money seeking yield in foreign nations, the money in general does not usually seek a home that is not already a hot market.

Some respected commentators say that macro forces control and that, therefore, micro forces are not crucial to regulate. As one friend has put it: "It is my belief that ill-advised macroeconomic policy will always trump even the best micro-based regulatory system." That could be true. Macro forces are constantly changing and constantly posing new challenges for bank managements. However, government policies are not good at controlling macro forces, and often government policies are the cause of the most pernicious macro forces. Therefore, regulation at the micro level that makes individual financial institutions and categories of institutions stronger and more resilient is the only way to promote financial stability through the variety of macro shocks that one should anticipate may occur. And I think the stress testing regime is capable not only of overcoming most adverse macro forces, but also of making banks sufficiently resilient to ride out most bad macro scenarios.

If I am wrong about the efficacy of stress testing to make financial institutions resilient, then the only way to prevent fairly frequent financial crisis would be some fairly extreme form of narrow banking. If I were convinced that stress testing will not over a fairly long period of time prevent frequent financial crises, then I would have to favor some form of narrow banking as the only remaining solution.

We should not be misled by the apparent lack of financial crises in the US during the 70 years between the Great Depression and the Great Recession. The early part of the period featured

interest rate regulation and other forms of protecting banks from competition. Those forms of protection all were overwhelmed by the imagination of the markets and the political energy of businesspeople. The consequent increase in the price of liabilities led banks to have to take more risk on the asset side in order to earn a spread.

They did so, and legislatures, implicitly understanding that imperative, with a push from economists who ballyhooed the benefits of unfettered markets, cooperated by removing asset restrictions. That process has engendered the major bank failures of the late 1980s and early 1990s, the near collapse of major banks due to LDC loans in the mid-1980s, and the near collapse of the system in 2007-09. Neither the restrictive protection from competition nor the unfettered competition has succeeded. The stress test era is a new theoretical approach. If it does not succeed, we should expect renewed turmoil. I am, however, optimistic that it will succeed.

2. Capital

All the lenders were under-capitalized in the boom period. F&F may have been the worst, and the investment banks the second-worst capitalized. Higher capital standards will strengthen the financial system and will provide greater financial stability. Institutions still may fail, but they will be able to withstand larger shocks.

3. The Consumer Financial Protection Bureau (CFPB)

The CFPB is a long-overdue addition to the regulatory arsenal. Putting the bank regulatory agencies in charge of consumer protection was always a conflicted idea. One can say that putting the CFPB under the Fed umbrella retains the conflict, but so far, the CFPB appears to have independence in practice. In my opinion, a separate agency with a more-typical agency structure would be better. Had the CFPB been in place from say 1997, it might well have prevented many of the abuses in mortgage lending that occurred in the 2000s, and that might have significantly ameliorated the boom.

In addition, in general, there is an information asymmetry between the lender and the borrower, and that asymmetry leads to suboptimal asset allocations, especially in consumer products that are financially leveraged. The CFPB can ameliorate the asymmetries and therefore help to produce better asset allocations. Unfortunately, in its early years, the CFPB has operated too

much in an enforcement mode rather than in a more-constructive mode of rule-making and the creation of safe harbors that could be useful to a large segment of institutions and consumers.

4 Living Wills

The living wills are forcing large banks and their holding companies to simplify their structures. That is a positive because it will make them more possible to manage and more possible for stockholders to understand. The simplified structures also would make a failure easier to deal with, most likely with fewer systemic implications as well.

5. Volcker Rule

The Volcker rule is removing the wild-west practitioners from the top of the banks. That will restore a balance that will be good for the economy. Trading is a zero-sum game. Lending, though harder to make money at, adds to the sum of economic activity. Unfortunately, the Volcker Rule is more complex than it should be. I understand from experts that there is room for simplification without gutting its beneficial aspects.

Impact on the liquidity of markets

There has been a great deal of study as to the impact of higher capital requirements and the Volcker Rule on the liquidity of capital markets. I have read some of the papers, though not all. My conclusion is that liquidity always is there when you don't need it and is never there when you do, and that that has always been true. Market glitches seem important to traders and market makers, but to the overall health of a market economy and the finance that supports it, they seem like mere blips.

Lending Risks

There is no need for America's banks to take large lending risks relative to their capital. Bank lending in general has been growing, and the capital markets provide strong support to lower-rated credits.

Coming out of the 2008-09 crisis, the major US banks are knocking the socks off the European banks in most competitive areas. Their better capital and more transparent structures are

helping them to do that. Credit the American regulatory system, as well as the bank managements, for having stepped up to the plate.

Some respected commentators blame Dodd-Frank as one of the causes of slow growth following the Great Recession. I deny that it has been a material cause of slow growth. (1) Reinhart & Rogoff show that growth after deep recessions usually is slow. (2) The slow growth actually began around 2000. Here is my graph from *Debt Spiral* (published 2009) that shows what the economy really was doing in the supposed boom years of 2002 through 2006.

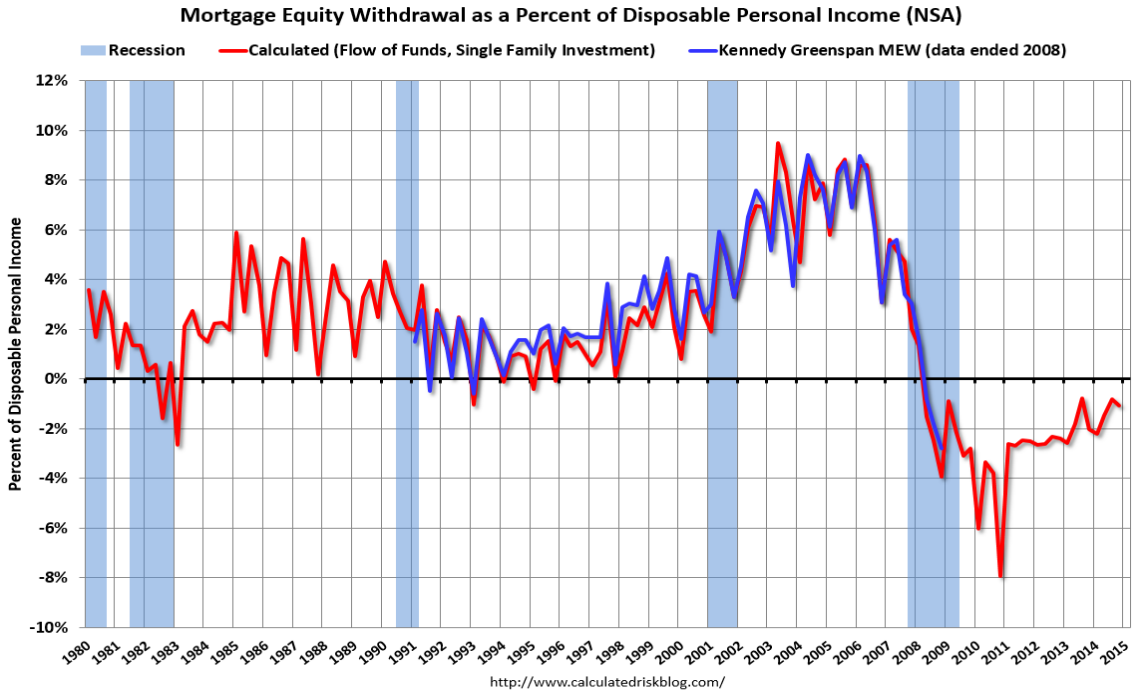
The table shows that if we take out the economic activity caused by the equity extraction from houses, the ups and downs of which are shown by the following graph from the Calculated Risk blog, the economy in 2002-2006 not only would have been slow growth, it would have been no growth. Recall also that those were years when large sums were being expended on wars in Iraq and Afghanistan, which tended to make economic growth look more robust. The extreme negative equity extraction in 2008-2011 also helps to explain the slowdown of consumer spending in that period.

Whatever malady held the economy back in the 2000s may well be the same one that is holding the economy back in the teens.

A Goldman Sachs paper concludes that, "Having achieved a relatively healthy post-crisis labor market recovery while largely escaping the enduring problems that have dogged some post-crisis economies, the US economy now looks more normal than widely perceived, in our view." I would associate myself with that view as well.

Impact of Equity Extraction on U.S. GDP 2002-2006 ($$ billions)

GDP Measures	2002	2003	2004	2005	2006
Real GDP	10049	10301	10676	10990	11295
Real GDP Growth	158	252	375	314	305
Real GDP Growth (%)	1.6%	2.5%	3.6%	2.9%	2.8%
Deflated net extra EE*	127	180	239	257	219
1.5X net extra EE**	190	271	359	385	328
Real GDP Growth net of EE	(32)	(19)	16	(71)	(23)
Real GDP Growth (%) without EE	-0.3%	-0.2%	0.2%	-0.7%	-0.2%



Larry Goodman's Post Conference Contribution

Richard N Cooper, advisor to many US Presidents on international monetary affairs, was interviewed by the Center for Financial Stability on his decades of experience at the center of international monetary policy (see Yee 2015). Highlights include:

- Evolution of the international monetary system,
- Insights into Nixon Shock due to cessation of the gold standard,
- System of floating exchange rates,
- Recent revelations regarding the 1944 Bretton Woods Conference,
- China and measures to move forward,
- Proposals for the future.

We thank Kurt Schuler and Robert Yee for such a wonderfully insightful exchange and Richard Cooper, Maurits C Boas Professor of International Economics at Harvard and formerly Under-Secretary of State for Economic Affairs, and Chairman of the Federal Reserve Bank of Boston. To view the full interview:

http://centerforfinancialstability.org/research/Cooper_Yee_0916.pdf

Tom Synott's Post Conference Comments On Infrastructure

Paying for our much-needed Infrastructure Program

There is wide-spread agreement that our infrastructure – roads, bridges, water systems, railroads, mass transit, flood control, power grids, and the like – is in great need of repair, rebuilding, or replacement. The American Society of Civil Engineers (ASCE) gives it an overall grade of D+, pretty poor for the world's leading economy.

There is much less agreement on how to pay for it, especially when we consider what needs to be done. The proposals of $50 billion in infrastructure spending by both major presidential candidates fall far short of what's needed. The highly successful Interstate Highway Program proposed by President Eisenhower amounted to ½ to 1% of GDP during its initial years.

US GDP in 2016 will be over $18 trillion. If we were to match the Interstate Highway Program, that would be between $90 billion and $180 billion annually for 10 years, $900 billion to $1.8 trillion in total. Indeed, the ASCE estimates that about $950 billion is needed right away. No wonder politicians shy away from this subject.

Fortunately, there is a straight-forward way to raise the necessary funding. Let us create a Federal Infrastructure Bank, modeled on some long-standing Federal agencies. The Infrastructure Bank would sell bonds to the public and then re-lend the money to states, municipalities, and agencies like the New York Port Authority at low interest rates and for long terms.

Here is the possible twist though. US corporations are parking huge amounts of cash overseas at low, even negative, interest rates. Encourage these companies to bring their money home by buying Federal Infrastructure Bank bonds. As long as they hold them, the money will not be considered repatriated. They would undoubtedly be willing to accept 1% on a 10-year bond under these conditions.

Over the longer-term, these infrastructure investments will improve the productivity of the economy, aiding those corporations that buy the bonds. In the near-term, it will provide substantial employment for people with many levels of skills and education, also creating income and demand from which the large corporations will additionally benefit. Indeed, perhaps such concrete spending will result in the old-fashioned 3X multiplier we counted on in

the 1950s and 60s. Debt service on $1 trillion would amount, at most to $10 to $20 billion per year. Surely this can be afforded in our $2 trillion federal budget.

To do such a major program right will require one or two years of careful planning and will need to involve many different constituencies. The rebuilding program itself will take at least 10 years. The time to start is Now.