Regulatory Reforms and Remaining Challenges

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Group of Thirty, Washington, DC

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Abbreviations

CCP	Central Counterparty
CoCos	Contingent Convertible bonds
FDIC	Federal Deposit Insurance Corporation
FPC	Financial Policy Committee (of the Bank of England)
FSA	Financial Services Authority
GDP	gross domestic product
GSIFIs	Global Systemically Important Financial Institutions
OTC	over-the-counter
SIFI	Systemically Important Financial Institutions
SNB	Swiss National Bank
TCE	tangible common equity
VaR	Value at Risk

Introduction

The seven papers presented here reflect separate but interconnected speeches delivered at the 64th plenary meeting of the Group of Thirty, held December 2–4, 2010, at the Federal Reserve Bank of New York. The focus of the session was Regulatory Reform and Basel III, as well as Remaining Regulatory Challenges.

The Group of Thirty is grateful to the authors for their analyses. They are Mark Carney, Governor of the Bank of Canada; Paul Tucker, Deputy Governor of the Bank of England; Philipp Hildebrand, Chairman of the Governing Board of the Swiss National Bank; Jacques de Larosière, Conseiller to BNP Paribas; William Dudley, President of the Federal Reserve Bank of New York; Adair Turner, Chairman of the Financial Services Authority; and Roger W. Ferguson, Jr., President and CEO of TIAA-CREF. Their experiences and remarks highlight some of the most important regulatory challenges.

We hope that policy makers, regulators, and the financial community find this to be a useful addition to the debate underway.

Jacob Frenkel
Chairman
Group of Thirty

I. Countercyclical Capital Buffers and Basel III

by Mark Carney

The principal purpose of Basel III[1] is to enhance the resiliency of financial institutions. It does so via several mechanisms.

First, it creates global standards for liquidity. They are still a work in progress that will need to be further developed over the next few years.

Second, it introduces a leverage ratio as a complement to the risk-based Basel II framework. This leverage ratio acts as a safety net designed to protect against the risk that regulators and, potentially, financial institutions, think is low but in fact is not.

Third, it substantially raises the quantity, quality, consistency, and transparency of the Tier 1 capital base. The new minimum is 6 percent of risk-weighted assets, at least 75 percent (or 4.5 percent of risk-weighted assets) must be tangible common equity and the balance of which must be true loss-absorbing capital.

Fourth, it introduces two new concepts. The first concept is a capital conservation buffer of 2.5 percent of risk-weighted assets, which is above the minimum capital requirement. The idea behind this is to ensure that banks and supervisors take prompt corrective action so that banks can absorb losses during periods of stress. This conservation buffer would be complemented by a countercyclical buffer, the second concept, which would vary over time and which is the focus of this discussion.

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1 For details of the Basel III accord, its implementation and economic impact, please see http://www.bis.org.bcbs/basel3.htm.

There are a variety of other measures in the Basel III package that are very much integrated with other aspects of financial reform. So, for example, contingent capital and bail-in capital are very much part of the resolution initiatives. There are capital differentials between standardized and bespoke derivatives that feed back into the initiatives on central counterparties, which is ultimately part of market resiliency and resolution.

How the Countercyclical Capital Buffer Would Work

The countercyclical capital buffer extends the new capital conservation buffer by up to 2.5 percent during periods of excess credit growth associated with an increase in systemwide risk.[2] Countercyclical buffer requirements would be met by additional common equity or other fully loss-absorbing capital.

Its principal aim is to ensure that banks have adequate capital to absorb losses and maintain the flow of credit as financial imbalances are righted following a period of excess.

The buffer may also help to mitigate the frequency and extent of credit booms themselves by moderating the inherent procyclicality of the financial system. By increasing regulatory capital requirements when systemwide risks are rising, the countercyclical buffer ensures banks build their capital defenses when times are good and when additional capital can be readily obtained at an attractive price. Then, when the financial cycle turns and the systemwide risks crystallize, authorities can release the buffer to ensure the flow of credit is not constrained by regulatory requirements.

Decisions on the buffer add-on would be announced a year in advance to give banks time to react. In contrast, reductions in the buffer could take place immediately.[3] The consequences of a bank's capital falling below the level set by the countercyclical capital buffer will be

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2 Countries can impose a buffer larger than 2.5 percent if that is considered appropriate in their national context, but the reciprocity rules binding other jurisdictions will not apply to the amount in excess of 2.5 percent.

3 This advance announcement will reduce the extent to which banks may feel obliged to hold extra capital to protect themselves against the risk that the buffer may be activated, since it gives them time to increase capital after the announcement and, therefore, more choice in how they achieve higher capital levels. While this may seem lengthy, one should not underestimate the signalling component of buffer decisions and associated commentary on macrofinancial conditions, which are likely to affect bank behavior at the time buffer decisions are announced, not when they take effect.

the same as for the capital conservation buffer (that is, constraints on distributions of earnings).

To make this work, reciprocity across jurisdictions will be important. Authorities will set the buffer add-on that applies to credit exposures in their home jurisdiction, and proportions would be calculated on a risk-weighted assets basis. Internationally active banks will calculate a buffer add-on for each jurisdiction in which they have credit exposures, using the respective buffers in effect in each host jurisdiction.

Supervisors will be responsible for ensuring that the banks domiciled in their jurisdictions calculate their buffer requirements correctly on a consolidated basis, based on the geographic location of their exposures. Authorities have agreed to not impose a lower buffer on a domestic bank for a given foreign exposure than the buffer set by the supervisor in that jurisdiction. However, they can always impose a larger buffer if they believe it is warranted.

A Few Words on Triggers

The decision to turn on the buffer should be guided by a leading indicator of financial excess. In particular, research has shown that one of the bet indicators is the performance of the private sector credit-to-GDP ratio relative to its longer-run trend and one would look for deviations from that—a positive credit gap, in the terminology. This is an internationally available reference point that can guide authorities when making and, importantly, explaining, their decisions.

The credit-to-GDP ratio has several important advantages: it historically has been a leading indicator of banking crises in various countries, and that is quite a robust finding[4]; it is readily available and not subject to large revisions; it is less prone to strategic manipulation by individual institutions to which the buffer would be applied; and the fact that it is a trend that is normalized by GDP on a country-by-country basis means it can take into account the natural process of financial deepening, which is particularly important to emerging markets.

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4 One of the criteria used to assess the forecast performance of an indicator is the noise-to-signal ratio. This measure accounts for the frequency with which an indicator gives false-positive signals (that is, signals a crisis when one does not happen) and false-negative signals (signals no crisis when one happens). A BIS paper (M. Drehmann, C. Borio, L. Gambacorta, G. Jimenez, and C Trucharte, "Countercyclical Capital Buffers: Exploring Options," BIS Working Papers, No. 317, July 2010) shows that the credit-to-GDP ratio achieves the lowest noise-to-signal ratio (performs the best) among a range of indicators considered.

Importantly, this is not a mechanical exercise; the credit gap would be used as a guide. A variety of other sources of information would have to be taken into account in making these decisions. Given that we are looking for material deviation of trend associated with financial excess, this is a relatively episodic event. This is not normal functioning; normally, the buffer will be at zero.

Coincidence indicators will have to be used to release the buffer. The credit gap lags the turn in the financial cycle, not least because the denominator tends to fall, but also because credit can grow early on in the development of stress. Coincidence indicators to release the buffer include actual performance of the banking sector earnings, losses, asset quality, the cost and availability of credit funding spreads and the like, the prices of broad classes of assets such as real estate, and other measures. So, again, judgment should be used to determine when to release it.

Benefits of Basel III

There are three benefits of Basel III.

1. **Efficient capital management advice.** To clarify any misconceptions, Basel III substantially increases the minimum capital requirements. Under Basel II, banks had to carry 4 percent in Tier 1 relative to risk-weighted assets. But only half of that 4 percent had to be tangible common equity (TCE).

Then, in addition, in Basel II, capital was overstated by the fact that banks could carry a series of intangible assets on the asset side, such as mortgage servicing rights, deferred taxes, goodwill, and so forth, assets that, when banks needed capital to absorb losses, were not available for realization. So in effect, a number of banks had as low as 1 percent tangible common equity to risk-weight assets; forget about total assets. By deducting intangible assets from capital, increasing the requirement for common equity, and raising the risk weights on assets, the minimum capital requirements have increased in effect by as much as seven fold in some cases.

Nonetheless, given the experience of the financial crisis, many of those around the table, governors and heads of supervision, felt more should be done. In particular, the desire was to have a buffer above the minimum that was large enough to absorb losses in an average financial crisis. For example, the median capital loss in a crisis is about 5 percent of risk-weighted assets, suggesting that banks at the new minima of 7 percent would not be concerned absent corrective actions following a crisis. That is why the combination of the conservation buffer and the countercyclical buffer totals to 5 percent; but the idea was not to have banks carry that additional buffer in all states of the world. A fully risk-proof system is neither attainable nor deniable. For relative efficiency reasons, the idea is not to pile up so much capital on banks that they are never heard from again either as a source of risk or credit.

So that was one of the reasons we in Canada were comfortable with the ultimate calibration of Basel III. These countercyclical buffers should give banks additional loss protection when it is needed. In addition, it was important to us that contingent capital was included in the nonequity parts of Tier 1 and Tier 2 capital because, again, that is additional true loss-absorbing capital and a more efficient instrument than straight equity.

2. **Net benefits.** The Bank of Canada is comfortable with the new Basel III proposals, as we have actually done a fair bit of work on what the net benefits are. We conservatively estimate that the long-run net benefits of less frequent financial crises resulting from these reforms will average, for G-20 economies, 30 per cent of GDP in present-value terms, or about 10 trillion dollars. The analysis understates the benefits of the new rules and errs on the side of overstating the costs, because it only looks at one element, a lesser frequency of crises. It does not look at additional benefits, and one of the additional benefits of the package as a whole is to dampen the cycle. Ignoring the countercyclical buffer, the dampening of the cycle from the measures in Basel III is quite modest. It is about a 3-percentage-point reduction in the standard deviation of output. But in our estimation, there is a much more significant impact from macroprudential instruments, such as the countercyclical buffer.

The Bank of Canada has calculated that preliminary findings of the potential gains from this buffer, if properly used, is 4 to 6 percent of GDP in present value terms. So in other words, countercyclical buffers alone could increase the net benefits of reforms by about 20 percent.

Jaime Caruana at the Bank of International Settlements has done a lot of work to show how the buffer would have worked in the United

States, the U.K., and Spain in the run-up to the crisis to help constrain excessive credit growth and build capital cushions for banks to absorb some of the future losses. As he has illustrated, if a buffer had been in place, banks would have entered the crisis with capital cushions of 11 percent of risk-weighted assets rather than at 1 percent TCE, which was true in many cases. In fact, the Federal Reserve Bank of Boston has done a study that shows a related concept; if dynamic provisioning had been in place, there would not have been a need for TARP [Troubled Asset Relief Program] funds.

This is important even for foreign institutions with no domestic credit risk. For instance, if the new system had been in place in the run-up to the financial crisis, Swiss institutions would have fared better. There were some Swiss institutions that had substantial U.S. exposure, and so even if Switzerland did not have the buffer in place, what we have agreed in Basel is that if U.S. authorities had turned the buffer on, Swiss institutions would have had to set aside additional capital for those exposures, which consequently would not have grown as rapidly.

3. **This is a macroprudential tool well suited to the environment.** This last point relates to the fact that we are in a period, certainly within the G-3,[5] and more likely more broadly, where interest rates are going to be low for a period of time. Market expectations are certainly such that interest rates are going to be low for a period of time for a variety of reasons. Experience suggests that long periods of very low interest rates can be associated ultimately with excessive credit creation, unsustainable asset price increases, and underpricing of risk. These risks are particularly acute for countries in which the financial system is functioning reasonably well.

The consensus is that it is not the job of monetary policy to lean directly into these dynamics, but it is the job of macroprudential tools, and that normally is the conclusion of a speech of everybody who says, great, first line of defense is macroprudential tools. Well, what are those macroprudential tools? Certainly, loan-to-value ratio is being used for property markets, but if there is broader excess credit creation, one does have to look to measures such as the countercyclical buffer as the first line of defense. So we do see this as promising.

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5 Members of the G-3 are Germany, Japan, and the United States.

A final note to keep in mind regarding Basel III is that the official timeline for transition to this is enlightened or generous. In part, this is an accurate reflection of both the economic cycle and the postcrisis cycle. Basel III would not begin to come into effect until 2016 to 2018, and even then, it only comes into effect if needed. Our expectation is that this will be episodically applied.

II. Basel III, Too-Big-To-Fail, and Macroprudential Regimes

by Paul Tucker

Basel III corrects *some* of the big problems in the Basel I and Basel II Accords. I will first cover that, and then put it in the context of the wider debates about the too-big-to-fail issue and about macroprudential regimes.

I would highlight one big gap and three design flaws in the earlier Accords. The gap was, of course, liquidity. We entered this crisis with a banking system whose very essence is, obviously, to provide liquidity insurance, and was indeed providing lots of it to shadow banks, but which did not actually carry much liquidity itself. There is a perfectly legitimate debate about the details of the Basel plans on liquidity, but broadly speaking, the official sector is surely right in filling the gap in this area. We do need a Liquidity Accord.

The first design flaw in the earlier Capital Accords was applying a zero weight to 364-day lines of credit, which fuelled the shift of credit supply into unconsolidated vehicles, that is to say, shadow banks. Frankly, applying a zero weight to any type of asset leads to the asset being oversupplied.

A second design flaw was a capital regime for the trading book that did not take any account of the risk of big but rare swings in liquidity premia. In other words, the tradability in stressed conditions was ignored in the trading book. We need to require capital to cover the risks of swings in liquidity premia. That is one of the Basel Committee's agenda items for 2011, and it should be a priority.

But the third and most significant design flaw in the previous Basel Capital Accord was that instruments were included in regulatory capital that could not in fact absorb losses in a going concern.

At this point, I would like to tell a stylized version of some of our crisis experiences.

During the crisis—I can't remember whether this was toward the end of '07 or early '08—we held an emergency meeting in the Bank of England about a small bank or building society. So this is the Governor of the Bank of England, Mervyn King, and me, one or two others, and the experts on this particular bank. It was held either late in the evening or at the weekend, I can't remember which, but it is important to the story that it was a special meeting. The team comes in and they say: we've got this bank, it's made losses of 200 and it's got regulatory capital of 300.[6] But before they carry on, Mervyn and I and others exclaim, well, then, if it's got capital of 300 and losses of 200, if it's still solvent, can't it survive, why are we having this meeting as an emergency? The team goes on robustly: because its got only 100 of equity, which will be wiped out by the losses and so it's going to have to go into liquidation, and that could be one almighty mess.[7] We said, what do you mean its got regulatory capital of 300 but equity of 100? They said, well, all the rest is subordinated debt and hybrids and so forth, and those instruments absorb loss only if a bank goes into liquidation, and the U.K. doesn't yet have a regime for handling that smoothly.

In that meeting, anything other than common equity (and retained earnings) counting toward assessments of capital adequacy struck a severe blow in the Bank of England. In assessing the capital adequacy of firms, the Bank of England will place weight only on common equity and instruments that truly can absorb losses in a going concern or through orderly resolution procedures. This story exactly demonstrates the flaw in the earlier Capital Accords of including instruments under "regulatory capital" that could not actually absorb losses. (There is now a Federal Deposit Insurance Corporation-style resolution regime in the U.K., by the way.)

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6 Numbers invented for the purpose of demonstrating the story.

7 Given the UK's lack of a special resolution regime at the time.

New Instruments and Resolution Regimes: Tackling Too-Big-To-Fail

These issues have ended up being related to debates about new instruments and about resolution regimes. At the moment, there is a somewhat confusing debate going on about instruments that convert into equity at the point of nonviability; bail-in under contract; bail-in via resolution; and about Contingent Convertible bonds (CoCos). The latter convert into equity, with triggers based either on accounting ratios or market prices, and those triggers can be either distant from or close to nonviability. Over the next six months or a year, the official sector is going to have to tidy this up because it is easy for people to lose track of what this is actually about.

A few reflections on that.

There is agreement in the G-20[8] that there will be some kind of requirement for the most significant and complex firms in the world—so-called Global Systemically Important Financial Institutions (GSIFIs)—to carry greater loss-absorbing capacity over and above the Basel III minimum. There is a discussion about whether all of this greater loss-absorbing capacity must necessarily be met by common equity. Could it be met partly by, for example, CoCos rather than by common equity? Currently my personal view is that any CoCos counting towards greater loss absorbency could not have low triggers; they could not have a trigger for conversion at an equity ratio of let us say 5 percent because if a big universal bank got to the point where its equity ratio was getting that low but these instruments had not converted, the firm would most probably have imploded. So if CoCos were to contribute towards requirements for GSIFIs they must have high triggers; preemptive recapitalization.

There has been a debate about whether anyone would want to buy these instruments, and the official sector needs to be quite careful not to try to design every feature of them. Why should we be better at that than the market? We do, of course, need to be clear about what characteristics would be necessary for these CoCos to count toward GSIFI's greater loss-absorbing capacity. And if there isn't a market for them,

8 Members of the G-20 are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union.

then the banks and dealers concerned would just have to carry extra common equity or be less risky.

Where this particular debate meets resolution is really in the area of "bail-in." The "bail-in" label is both helpful and unhelpful. It is helpful in that it signals that we are talking about the opposite of bail*out* by the taxpayer and ensuring that losses fall on certain categories of creditor and on equity holders. But it is unhelpful insofar as there are at least two, probably three, ways of delivering this. One would be to write the terms of the trigger and the extent of the write-down into the indenture of a bond. In that case, no role is played by the authorities in the write-down of individual bonds.

Another, quite different route would be to make the haircutting (and partial conversion into equity) of certain classes of creditor a right of the resolution authority, either as part of an orderly rundown and sale or as part of resurrecting any viable core of the business as a going concern that would be released from resolution after a reconstruction of its capital structure (failure followed by restoration). It is fairly clear that countries should have this tool. Without it, they are ill-equipped to handle a crisis at a complex firm.

Crucially, and I want to stress this, those two variants of "bail-in" are not necessarily mutually exclusive, and they could have quite different triggers. And a possible hybrid, mentioned by some, would be for the authorities to trigger a write-down but for the extent of the write-down to be determined in the bond indenture. Without getting into too much detail on all that, what one realizes is that we enter immediately into territory where supervision meets resolution; the hybrid route risks muddying the distinction.

Note that CoCos and bail-in-as-a-resolution tools are not in competition. They operate at very different stages of a firm's life. CoCos can be used as a preventive measure. Bail-in is one potential resolution tool when, notwithstanding improvements in regulation and supervision and any earlier re-equification from CoCo conversion, a firm is in distress, is in the last-chance saloon. An interesting question is whether there are instruments that can be useful between those two poles, as a firm's capital is progressively eroded. Those might be bonds with triggers that were not high but were clearly prior to the point of nonviability.

Given the importance of resolution, the G-20 has endorsed a program of work by the Financial Stability Board to do the following things during 2011.

1. **Develop the Key Attributes that are needed in national resolution regimes** both for normal banks and, in particular, for the largest, most complex banks and other financial firms.

2. **Recommend how to remove the impediments to cross-border cooperation and coordination in this area.** Among other things, this will involve agreements among home and host countries on particular firms. I think this will have to be led or endorsed eventually by finance ministries and governments rather than just by central bankers and regulators, because this has to do with intervention in property rights and a degree of surrender of sovereignty, which only the executive arm of government, carrying their Parliament or Congress, can do.

3. **Steer the development of Living Wills for the most significant firms.** As all that work proceeds, this could change the way people think about the Basel III capital package and about the role and work of banking supervisors.

That is reflected in the way the planned new U.K. setup for supervision and regulation is being designed. Just as significant as the microprudential supervisor coming under the Bank of England umbrella is that the objective of bank supervision in the U.K. will no longer be cast in terms of the protection of depositors. Instead, the goal of bank supervision will be to contribute to the preservation of stability, and to ensure, in particular, that if a bank fails, it fails in an orderly way. Together with many other countries, the U.K. is certainly guilty of saying for many years that it did not have a zero failure regime while giving no thought as to how failure would actually be handled. Resolution regimes were a crucial missing set of instruments.

Countercyclical Buffers and Macroprudential Regimes

Another set of missing instruments concerned preserving stability in the face of credit booms. We see the countercyclical buffer in Basel III as only the first step toward creating a macroprudential regime. In the U.K., we debated whether we thought it was a good thing or a bad thing to include this in Basel III. The risk is that microsupervisors around the world might think this is the end of the story. But we concluded that it was important for Basel III to genuflect in the direction of cyclical macroprudential tools, in the interest of signalling to and within the microsupervisory community that this is the beginning of what may well prove to be a big change over the coming years and decades. And it will be helpful that the Basel III countercyclical buffer switches on semi-automatically unless overridden by the application of judgment, in light of the circumstances, by the authorities. To exercise that judgment, the authorities have to have a macroprudential, or systemwide, perspective and mandate.

In terms of how this is playing out in the U.K., we are on course to create a regime where the countercyclical instruments will probably include not only varying headline capital requirements but also varying risk weights on certain types of exposure. There is also a question of whether to have policies on loan-to-value ratios or haircuts.

More important, building resilience during booms ("countercyclical policy") is only one of three broad elements of the mandate that the U.K. government plans to give to the new Bank of England Financial Policy Committee (FPC). Another element will include monitoring developments beyond the core regulated community with a mandate to make recommendations to the U.K. government on when the perimeter of microregulation should be changed in the interests of stability. This can be thought of as a provision for countering shadow banking, where needed. I personally expect to take to the table the issue of how to address the threats to stability from the money market mutual fund industry, which is smaller in the U.K. but, as currently structured, still a fault line in the international financial system that confronts all authorities concerned about stability.

The third element of the FPC's mandate is in many ways the most interesting, and it carries an echo of the Paulson Plan in the United States. It is that the FPC will have a right to make recommendations to, and under certain conditions to direct, both the microsupervisor and the securities regulator to alter their rulebooks or policies so as to preserve stability. That might, for example, include the FPC leading on the broad parameters for a Systemically Important Financial Institution greater loss-absorbing capacity policy; and it might also have included stepping in, had only this regime existed a long time ago, to require over-the-counter derivatives to go through central counterparties or to enhance the framework for Asset Backed Securities/Collateralized Debt Obligation issuance and placement. The FPC will be a fairly revolutionary change in the U.K. setup.

Microsupervision in the U.K.

Finally, I want to discuss some points about central banks and microsupervision, given the planned establishment in the U.K. of a macroprudential umbrella for banking supervision.

First, the Bank of England's experience during the crisis underlined, if it needed to be, that the lender of last resort is unavoidably involved in trying to preserve stability. And it is distinctly uncomfortable being the lender of last resort if you do not have ready access to information about individual firms. That has had a bearing on the plans to bring microprudential supervision under the Bank of England.

At the Bank of England, we have not campaigned for the return of microsupervision to the central bank, but we did think that it was highly desirable to adopt Twin Peaks in the U.K.; that is, to split the Financial Services Authority (FSA) into two parts—a prudential supervisor and a securities regulator. And that having been decided upon, we thought it was perfectly reasonable—indeed, that there would be advantages—for the Prudential Regulatory Authority to be combined with the central bank, given the plan to give us the macroprudential mandate and that we are, inalienably, the lender of last resort.

The integration challenge is obviously significant, but we see an opportunity to make some improvements, working with FSA leaders. Just one example: Adair Turner, FSA Chairman, along with the FSA's Chief Executive, Hector Sants, has been driving increased analytical use of data in the FSA. That is one example of things that, when the Prudential Regulatory Authority comes to the Bank of England, we will be able to take further. We can also ensure that more weight is given to issues highlighted by market intelligence. But the big difference between microsupervision and the rest of the central bank is that there just has to be more delegation in microsupervision. Of course, there has to be senior management monitoring and guidance, and it is vital to increase the involvement of senior supervisors in line supervision. But this is not a function where all the decisions can be taken at the top or toward the top of the organization. That is one reason why the microsupervisor is going to be put in a subsidiary of the Bank with its own board, which Governor King will chair, with the chief executive, Hector Sants, coming from the FSA, and myself on the board and then, importantly, some independents, too. In this, at the Bank, we have been highly influenced by the structure in France, where microsupervision is part of the broader central banking group but has its own distinctive management lines of command and its own mandate.

Finally, and perhaps most important, a lot of what this is about in an institutional sense is going back to a broader definition of what central banking is about; where it is most certainly about maintaining the value of our money in terms of goods and services, but it is also about the value of private sector money (deposits) in terms of our money; that is to say, stability. There needs to be a major debate about how to best be accountable and communicate to the public on those border responsibilities and also about how international coordination will work. I think a reasonable prediction would be that in 10 years' time, the Committee on the Global Financial System will have a somewhat higher profile than it has had over the past 10 years.

III. Macroprudential Reform and the Swiss National Bank

by Philipp Hildebrand

My contribution today will revolve around the overall framework of macroprudential supervision, something that is not fully embedded in Basel III, except with the reference to the countercyclical capital requirements. My first topic will be what macroprudential supervision actually means and then, in an effort to be as specific as possible, I will explain how our own broader thinking about macroprudential policies is evolving at the Swiss National Bank (SNB) and how we plan to move forward in this area.

One of the key lessons of the crisis is that policy makers, at least in the Atlantic world, have not paid sufficient attention to the macroprudential character of their financial stability activities. The best definition I have heard of this is by the Bank for International Settlements. They defined it as activities that focus on the system as a whole and take individual banks or financial institutions into account only to the extent that they are systemically relevant.

Addressing Macroprudential Reform

There is a lot to learn about how to best deploy macroprudential policies. The challenges are formidable. Excesses in our economies, in our banking systems, and in our financial asset markets will first have to be correctly identified. We might well be in an environment where these things can become a problem if interest rates stay low over a long period of time.

Once problems have been identified, we then have to decide what instruments might be appropriate to deal with such perceived excesses or imbalances. Moreover, we will then have to face the difficult task of determining the appropriate timing and the right dosage in the deployment of macroprudential tools.

Finally, and this is key for central banks, we will have to be extremely careful and mindful of the interaction between macroprudential policies with anticyclical character and the transmission channel of traditional monetary policy.

In other words, a significant amount remains to be done, and we must get it right.

The starting point will likely be different from one central bank to another, depending on the histories, the respective experiences during the crisis, and the legal and operational setups and mandates. So there is unlikely to be one answer that fits all. Yet—and here the example of inflation targeting comes to mind—if we look back at this in 10 years' time, I suspect that there will have been considerable conversion around some general principles as to how to set up a reasonable macroprudential supervision framework.

Macroprudential Policies and the SNB

To be as specific as possible and to go a little further than just talking about macroprudential supervision in general terms, let me demonstrate how, in our own case, our thinking about macroprudential policies has evolved and how we plan to move forward in this area.

By way of background, a new central bank law was enacted in 2004. With that law, the SNB received a fairly classic legal mandate to "contribute to financial stability." That is all it says in the law and, in fact, all we have done during the crisis to stabilize the Swiss financial system was based on that one passage that mandates the SNB to contribute to financial stability.

In contrast, we have no formal competence in the area of banking supervision. Clearly, this model was put to a severe test during the crisis. What is striking about our experience in the crisis is that our legal mandate was sufficiently broad to allow us to play a key role in the far-reaching set of measures together with the government and the supervisory and regulatory agency, the Swiss Financial Market Supervisory Authority, to rescue UBS and to stabilize the Swiss financial system. At the same time, a second clear lesson has crystallized. There is a very large gap between the role the SNB was forced and legally able to play in its real-life crisis management and the absence of any specific formal competence in matters of prevention.

Broadly speaking and based on this experience, we see the need for two areas of reform.

First, our financial stability arsenal needs to be enhanced. It should be geared toward augmenting the resilience of the banking system and moderating its procyclical behavior. The logic is simple: given the inevitable role as lender of last resort, which is embedded in the law, the SNB will play an active role in combating a crisis. This role is undisputed; the law spells it out clearly. In light of that role, it would appear self-evident that the SNB is also expected to play a role in reducing the probability of a crisis emerging in the first place. Here, macroprudential supervision, which is at the interface between microprudential supervision, the classical supervision, and monetary policy, has a key role to play.

Second, after careful deliberation over the last 12 months or so, it is our sense that in order to play that role, the formal legal competences of the SNB in the area of prevention need to be enhanced carefully. We plan to work very actively with the government, the parliament, and the Swiss Financial Market Supervisory Authority to achieve that objective. In doing so, we will refer to the excellent analytical work that has been done in this area by Jaime Caruana and his colleagues at the Bank for International Settlements. We think these enhanced competences should ultimately be built on two pillars:

1. Going forward, the SNB should be in a position independently to have access to bank data that are essential to conduct ongoing and adequate financial stability valuations. Clearly, the inability to collect and independently assess data from the systemically relevant banks was a key weakness in our ability to work preemptively in the run-up to the peak of the crisis.

To give an example, the SNB had done a study on the valuation of the U.S. real estate market in 2006 that essentially concluded that there was considerable evidence that it was significantly overvalued, at which point, our financial stability division identified subprime mortgages as a risk. Subsequently, we asked the regulator to collect all relevant information on subprime exposure in the two biggest banks. UBS confirmed that they had approximately US$40 billion of subprime exposure, but that it was perfectly hedged. The reported net exposure was therefore zero. As a result, we backed off. In fact, we had no ability legally to verify this information. As it turned out, the exposure to subprime was indeed roughly US$40 billion. It was also true that the position was hedged but the hedge was only good for the first couple of percentage points of the price movement. Of course, literally, once things started moving, within a couple of days or within weeks, the hedge was gone and the full gross exposure became net. The rest of the story in the case of UBS is well-known. This was a seminal experience for the SNB with regard to the need to be able to access data independently.

2. The SNB should have a more formal role to play in proposing or deciding on regulation to clearly impact financial stability. To be specific here, the most prominent piece that we have in mind is that it should be our responsibility to mandate the countercyclical capital surcharge. In other words, it should be up to us to decide when to put it in place, and when to take it off. But it goes beyond the countercyclical capital surcharge to some of the legislation that is in the offing now of too-big-to-fail, interbank exposures, and loan-to-value ratios.

The ability of central banks to play a role in proposing or deciding on regulation is particularly important in the area of regulatory initiatives that aim to reduce the potential procyclicality of the banking sector, because such initiatives typically have close links to monetary policy.

I should add that we are convinced that we should seek these changes going forward without modifying the formal monetary policy mandate of the central bank. Safeguarding price stability must remain the key objective of the SNB's monetary policy mandate. So we are quite skeptical about having various aims with one instrument; therefore, if we are going to play this role, we must have additional instruments.

We also see no need at this stage to seek a fundamental overhaul of the model of separation between the SNB and our regulatory agency. Since 2007, we have operated under a memorandum of understanding, and I think that model has worked rather well. There are a couple of reasons why we should stay away, if possible, from questioning the separation model.

First, and perhaps most important, there should be no illusions about there being a perfect supervision model. There is no silver bullet as to how to do supervision. That is the main reason why we do not think it is worth questioning our current separation model. During one of our previous discussions, someone correctly noted that in all those cases where you had a separate model, after the crisis the argument is to merge, and in those cases where you had a joint model, the argument is to break it up. That only underscores the point that there is no perfect model.

Second, it seems to us that if we were to move to an integrated supervision model, we would run the risk of undermining the independence of the central bank.

Third, from a purely pragmatic point of view, the task of integrating a supervisor into the central bank is bound to be a formidable undertaking. At the SNB, we concluded that such a task could prove to be a significant distraction with regard to our core monetary policy mission.

Conclusion

It is profoundly in the interest of the central bank to have a strong and effective regulator who is focused on effective, intrusive, and far-reaching microprudential supervision. However, we feel that such microprudential supervision is not enough. Someone must keep an eye on, and assess the risks at, the systemic level. By design, by experience, and by trial and error, central banks are best equipped to do so. But if central banks are to play that role effectively, they must be equipped both in terms of mandate and toolbox to do it properly. The worst combination would be an implicit, let alone an explicit, expectation that the central bank fulfills that role but is deprived of the appropriate mandate and the necessary instruments to do so. That is an outcome central banks all over the world must avoid at all costs.

Accordingly, at the SNB we will initiate proceedings with parliament, with the government, and with the Swiss Financial Market Supervisory Authority to seek the necessary changes to our mandate. Essentially, the whole debate about central banks and macroprudential supervision comes down to a simple choice. Either central banks stick to doing purely traditional monetary policy. Given what we have learned during the crisis, this strikes me as a difficult proposition. Alternatively, if we are going to have a role to play in the area of macroprudential supervision, let us make sure we have the proper mandate and the appropriate instruments to do so.

We will see how this debate plays out in Switzerland. At the SNB, we have concluded that the current state is certainly not optimal.

IV. Remaining European and Global Challenges

by Jacques de Larosière

These remarks will be divided into two sections: first, what remains to be done in Europe after the adoption last September of the new supervisory organization; and second, how I see some of the challenges from a global perspective.

European Challenges

The "Report of the High-Level Group on Financial Supervision in the EU,"[9] which Leszek Balcerowicz and I contributed to, was issued in February 2009 and has been endorsed by the European Commission, the European Council, and an overwhelming majority of the European Parliament. The main challenges are the following.

For the supervisory authorities in the European Union, the three authorities that have been proposed (that is, banks, insurance, and markets) have to be established in early 2011, and staffed, financed, and chaired. It is going to be important to select the right chairs. We need people with independence, leadership, competence and, therefore, authority. They have limited powers, but they are real nonetheless. For instance, deciding on technical standards, which is the job of the authorities, will gradually promote a common rulebook for Europe.

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9 de Larosière, Jacques, et al., "The High-Level Group on Financial Supervision in the EU," Brussels, February 2009; http://ec.europa.eu/internal_market/finances/does/de_larosiere_report_en.pdf.

We face a situation where regulations are divergent and fragmented. Mediating different views between national regulators is also a big plus, and participating in colleges of supervisors of cross-border institutions will help those authorities to harmonize supervision from country to country, and also develop better supervision, raising the standards on the best practices.

The second aspect is the European Systemic Risk Board. This is the cornerstone of the proposed reform, which is to bring together under the aegis of the European Central Bank, the central bankers, the regulators, and a representative of the treasuries of the European Union in order to identify potential risks and dangers in the system and make recommendations to avoid the emergence of crises. The challenge here is the same: it is to get the job done and not just to express general statements. If warranted, recommendations should be precise and addressed to the responsible institutions. They should cover the widest range of issues and tools, be they monetary, fiscal, regulatory, or supervisory. One of the keys to success would be the availability of information. The presence of these new authorities in supervising colleges will, I hope, help to reduce the usual lack of communication that has too often hampered this type of exercise.

Global Challenges for Capital Requirements

From a global perspective, it is very good that capital requirements have been significantly increased with Basel III, and we should not underestimate the increase: the fact is that it is probably around 5 times more. This is indeed going to strengthen the resiliency of financial systems.

But, there are a few concerns. Adding many more layers of capital—and potentially more are to come with Systemically Important Financial Institutions, the countercyclical buffers, and leverage ratios on a non-risk-weighted basis—may not be the right thing to do. It is not the lack of capital, but the evaporation of liquidity, that brought down so many financial institutions during the financial crisis. Therefore, I believe that liquidity is the main issue. But if we insist too much, on top of the liquidity requirements, on adding new capital buffers, it could have serious negative consequences. Capital is difficult and expensive to raise, so banks will have to increase their profitability. They can do that through reducing operational costs, an ongoing effort, but that will not be enough. So they will be forced to increase the margins and fees they charge their clients. And if that does not suffice, they will be tempted to reduce their lending, which is the simplest way to improve the ratio, by cutting the denominator.

Now, this kind of development may not be too problematic for the "Anglo-Saxon investment bank model," because those banks clearly had to reduce the most risky part of their assets, and they are already "mitigating" the regulatory constraints on their risk-weighted assets. Most of that mitigation will result in reduced risks on assets and smaller balance sheets. This is no doubt satisfactory if we refer to the failures of many investment banks or semi-investment and commercial banks that were rescued by heavy public aid during the post-Lehman Brothers events. But this can also have unexpected and unwanted negative consequences on the continental European banking model.

Europe is often dealing with large banks with a strong deposit base and a very diversified portfolio of loans. In this model, banks play a fundamental role in the financing of the economy. In a country like France, 90 percent of the loans to small and medium enterprises come from the large institutions like Crédit Agricole, Crédit Mutuel, Caisses d'Epargne, BNP Paribas, Société Générale, and so forth. This explains that the European banks' balance sheets are, on the whole three times larger than in the United States. Nonetheless, these banks do not necessarily need to be subject to very high capital requirements, because they have diversified and stable risk profiles. Actually, most of them withstood the crisis practically without any public assistance. They have passed the test.

Why should one apply to them exactly the same rules as those destined to cope with riskier models? The rules in question may well be adapted to banks that individually represented some five or six times the gross domestic product of their country, because they had inflated their trading activities beyond reason. But when this did not happen, when the banks were well regulated, for instance, like in France by the Commission Bancaire, it does not make sense to apply a one-size-fits-all rule to these types of models.

I say this with some anxiety, because I already see some regulatory "unexpected" consequences and risks looming. In order to generate the profits needed to reach the new capital ratios, because they must have large profits to make reserves, some of these European well-diversified banks are envisaging increasing their margins and commissions, choosing the most remunerative—but riskier—assets, and reducing the share of less-profitable loans to the small and medium enterprises in the economy.

Now, if Europe were financed like in the United States, meaning roughly three-quarters financed by financial markets and only one-quarter by banks, one could have a relatively sanguine view about this. But in Europe, it is the reverse scenario. The European economy is overwhelmingly dependent on banks, so there is a real problem, and the European Union must act intelligently on what is a crucial subject. The economy is still very fragile. The upturn is only nascent and slow, and it is going to be very delicate to get that going if banks are forced to shift for regulatory reasons to a model where the search for returns on assets, which plagued the financial system in the run-up to the crisis, were to prevail over careful risk assessments of clients.

A final word on the shadow banking system: the more banks are heavily taxed in terms of capital requirements and other matters for their operations, or even forbidden to own hedge funds or engage in some types of operations, like proprietary trading, the more there is a risk that these operations will move to the shadow banking system. This is clear. Thus, if we want to avoid new systemic risks and just displace the problems, the current reregulation of banks has to be accompanied by regulation and supervision of nonbanks. However, this is difficult to do because of the complexity of the shadow banking system. Not much has been done in this area, which is concerning.

Global Challenges for Liquidity

As for liquidity requirements, they are not completely set, as we know, but there is no doubt that they are going to shape the future of the banking system, perhaps even more than the capital ratios. This must be seen in a global context. Indeed, a short-term liquidity requirement is a must. Banks have to be able to rely on marketable instruments to cope with, let's say, a one-month specific liquidity crisis in order to prepare themselves for the future. But we should be careful not to have too short term a view on the eligible instruments. For instance, why would one discard equities held by banks? In the United States, banks do not hold many equities, but in Europe they do. They are marketable and should be part of the assets eligible for inclusion in the ratio. If there is an idiosyncratic problem, there is no difficulty in allowing this. If the crisis is systemic and could hurt all forms of instruments, then the ratios would have to take into account the role of central banks as lenders of last resort.

The long-term ratio is much more difficult and debatable. The initial proposals by Basel went so far that they would have practically killed the transformation function of the banking system. One has to be careful to assess the impact of these and other global financial regulations on the way banks will be funded in the future. The purpose of the long-term ratio is to submit banks to a liquidity ratio based on the idea that each institution must be able to survive a stress situation for one year. This seems reasonable as long as the business models of individual banks are taken into account.

But even if that were the case, we should think of a few ramifications that are not very often stressed. Look at Solvency II. It is going to force insurance companies to get rid of their equity holdings. It is already happening. I have seen the figures in France. Their holding of shares was wiped out because these equities are heavily taxed in terms of capital requirements. As an alternative, they are going to focus on fixed-income assets. But, given the very low level of long-term interest rates today and the risks that this entails, insurance companies are incentivized to invest in short-term treasuries.

Money market funds are also being discouraged from investing in other than very short-term instruments, perhaps for good reasons, but they were a crucial provider of six-months or one-year liquidity to the wholesale markets, like the commercial paper interbank market. Who will provide these types of term funds to the markets now? Big banks? I doubt that they are going to be inclined to lend one-year liquidity to smaller ones.

Securitization is a crucial element for the financing of bank credit. It has almost evaporated, although it is very modestly reviving. Regulators and central bankers should work with banks to shape transparent and sound securitization models. Dodd-Frank, Basel, and Solvency II reforms are discouraging holdings by financial institutions of significant equity stakes. Certain orderly liquidation provisions of the Dodd-Frank reform will contribute to shorter-term funding.[10]

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10 Short-term debt holders who perceive that the failure of their issuing institution is imminent will have a strong incentive to withdraw their capital and flee because no one will know with confidence whether or not the Federal Deposit Insurance Corporation (FDIC) will choose to intervene by effectively exempting short-term debt from the coverage of priority-based recovery rules. The proposal may also increase the market's general bias for short-term funding. Prospective lenders to systemically important institutions will prefer to supply funding in the form of shorter-term instruments to capture the "option value" in the FDIC's discretionary authority.

It would be desirable to assess medium-term liquidity requirements not on the basis of an arithmetic ratio, but on several criteria including business-model types of activities, concentration versus diversification of activities, and assessment of mismatches that would take into account individual liquidity risk profiles. With all these rules and the shortening of the horizon on both sides of the bank balance sheet, it is not clear how the real economy is going to be financed, especially when intermediation is an important part of the financing.

Going Forward

Finally, on systemically important institutions, policy makers must focus on making banks less systematically damaging should they fail, but this is not the same as making them smaller. Financial stability and customer needs are best achieved by making capital requirements proportionate to the riskiness of an institution business model by improving the transparency of risks within the system and by enhancing supervision of both management and systemwide risks as they emerge. It is also clear that we have to review and enhance recovery and crisis resolution planning, which is extremely difficult at both the firm and country level.

V. Remaining Regulatory Challenges

by William Dudley

The subject of remaining regulatory challenges made me smile because it seemed to imply that somehow we had knocked off all the hard stuff and there were just a few loose ends to clean up, and I think the opposite is true. There has been progress on Basel III and over-the-counter (OTC) derivatives, but there is a lot more work to do in other areas, which I will discuss further. Even in the areas where there has been significant progress, Basel III and OTC derivatives, there are a few concerns, so let us start there.

One concern with Basel III is that the transition period is very long, and it will be some time before banks have the amount of high-quality capital we want them to hold in the long run.

The second issue is a competitive one, of equity. In order words, supervisors need to ensure that risk-weighted assets will be calculated on the same basis by banks around the world. So, if a bank was engaged in exactly the identical activities in, say, Switzerland, the United States, or the U.K., their risk-weighted asset calculation as they apply Basel III would end up with the same amount of risk-weighted assets. I do not think we are yet as certain as I would like to be here.

The third concern is the question of unintended consequences in terms of how banks react to Basel with changes in their business models and the market impact. One thing, of course, is the potential for activity to be pushed out from the banking system to the shadow banking system. In a paper on shadow banking published by Federal Reserve Bank of New York staff,[11] there is a chart of the shadow banking system that demonstrates the intermediation of the money flows from borrowers to creditors. It shows how complex and intricate everything is outside the core banking system. On one side of the chart are the borrowers and on the other side are the creditors, and all that complexity in between is the intermediation of money flows from borrowers to creditors. It becomes clear that the complexity of the shadow banking system we have brought into being in the United States and elsewhere is immense.

OTC Derivatives

It is worth discussing OTC derivatives because they do not get enough attention as a very important amplifier of the crisis, both in terms of the lack of transparency in the valuation of the OTC derivative instruments and in terms of counterparty risk and the inability to net down these bilateral exposures. In the case of Lehman Brothers' failure, the inability to net down those bilateral exposures created a much, much bigger mess.

There has been a lot of progress in this area in terms of commitments to standardize OTC derivatives and clearing them through central counterparties. There has been a commitment to make sure that all trade data on OTC derivatives, including standardized and nonstandardized, get reported to trade repositories. There is a lot of work underway by the U.S. Commodity Futures Trading Commission and the Economic Commission for Europe. There is lots of international activity; the Committee on Payment and Settlement Systems is engaged in a review of standards. The Financial Stability Board's OTC derivatives working group is looking at this issue, as well.

But there are still a lot of key open issues in terms of OTC derivatives activity. The first issue is what data go into trade repositories? Who has access to that data? Who has access to that data has very important implications for how transparent the sector is going to be. If the data are available to everybody, then the OTC derivatives market will no longer be so opaque. That would have strong implications for the incentives to standardize trades and how the end-user customer is going to be treated with regard to margin access and segregation of

11 Z. Pozsar, A. Ashcraft, and H. Boesky, "Shadow Banking," Federal Reserve Bank of New York Staff Reports No. 458, July 2010; http://www.newyorkfed.org/research/staff_reports/sr458.pdf.

collateral. What about Central Counterparty (CCP) access, especially from firms in one country accessing CCPs in another? This issue will be addressed in early 2011. How does the ownership of CCPs impact market structure and performance? A lot of the CCPs are dominated by the large security dealers, and that may have effects that are not always attractive.

Cross-Border Resolution

We have developed this U.S. resolution authority in the Dodd-Frank Act, but we still have many challenges in terms of doing cross-border resolution for large, globally complex firms. The Dodd-Frank Act has no extraterritorial statutory authority to do anything about what happens for a big U.S. financial firm beyond the shores of the United States.

The Global Systemically Important Financial Institutions work is a start as a sort of partial substitute for global resolution, that is, the idea of designating those firms that are really important globally and requiring them to have more loss-absorbing capacity. But it is not clear that that substitution is really sufficient because even with more loss-absorbing capacity, it cannot be ruled out that a large, systemically complex firm might actually fail.

Money Market Mutual Funds and Tri-Party Repo

Another area where there is a lot more to do is money market mutual funds, which are still vulnerable to runs that exacerbate financial instability. In addition, the tri-party repo made some progress, but there is still a lot more to do. The tri-party repo is an important short-term wholesale funding mechanism in the United States, where a custodian bank helps facilitate a repurchasing agreement between two parties. At its peak, it was over US$2 trillion in size. Now, it is about U$1.6 trillion in size. What we saw during the crisis is that tri-party repo had some inherent fundamental instabilities. The first instability was that the clearing banks through the operation of tri-party repo generate large interday exposures when they would unwind the tri-party repo every morning. And that becomes very uncomfortable for them when their counterparties, the securities dealers, start to become less healthy.

As a consequence of this, the end investors recognize that the clearing banks might at some point decide to leave them with their securities rather than send back the cash to them at the beginning of each day.

And, of course, then that uncertainty leads to a little bit more jitteriness on the part of the end investors because they do not want to be stuck with the collateral. They are not really interested in holding or liquidating the collateral.

There is half a solution to this to date. The Fed has put in action a process to reduce the clearing bank's large intraday exposures by changing how the unwind process works. It will probably take another nine months or so to complete this process. When this is all finished, the clearing banks will not be worried about being stuck with large intraday exposures, but we are stuck with the end investors who will still have incentives to run at signs of weakness because they do not want to take credit exposure, and they certainly do not want to be stuck with the securities at the end of the day.

There is no easy, obvious solution to this. The money market mutual funds don't want to pay for a central bank backstop. The central banks don't want to provide the backstop, and they certainly don't want to provide it for free, so it is not really clear what the right way forward is. One solution might be to tighten up the regulation of money market mutual funds in terms of the assets they hold and the degree of maturity transformation they undertake so they have fewer incentives to run away or less ability to run away at the first sign of trouble.

U.S. Implementation of the Dodd-Frank Act

Another important issue in the United States is going to be the implementation of Dodd-Frank. We have the Volcker Rule; we have the nonbank Systemically Important Financial Institution (SIFI) designation; we have the Financial Stability Oversight Council. There is a lot of work to be done and we can do that work well or we can do that work poorly. With the Volcker Rule, which places proprietary trade restrictions on financial institutions, the difficulty is going to be in the implementation. Pure proprietary trading is a very small part of total bank risk taking. And the financial crisis showed that much of the risk came about through customer-driven businesses. The biggest losses were really generated by the securitization activities surrounding subprime and the residual AAA tranche exposures that the banks thought were very low risk. So there is a real difficulty in discerning where to draw the line in terms of what is legitimate risk taking to facilitate customer business versus what is discretionary.

For example, if a bank has a very large euro currency position that it carries over the weekend, I would have viewed that as mostly proprietary. The market is deep and liquid; why doesn't it just liquidate that position prior to the weekend? Conversely, imagine that Mexico wants to hedge its future oil production and they want to lay that off with a big securities dealer. It is going to be very difficult for that securities dealer to work off that risk quickly, so they are going to have lots of risks on their books. However, that risk is really going to be customer driven, so it is probably a pretty legitimate thing to do. It is going to be hard to draw the lines here in terms of what separates one from the other.

Bright lines do not seem like the right approach because banks would just manage to operate around those bright lines in a very creative way. A trade-by-trade approach may not be workable because we may not have the supervisory capacity to assess the trades on a trade-by-trade basis. Maybe one part of the way forward is to use the risk management systems of the banks to make certain that the way they are doing their business is designed to ensure that the activity is customer focused rather than proprietary-risk focused.

Nonbank SIFI Designation

Nonbank SIFI designation is another big issue. What are the criteria? Where is the line drawn? How do you distinguish between firms that are very, very important versus collections of much smaller firms that individually are not important but may be systemically important as a group? A money market mutual fund is a good example of that. I do not think, going into the crisis, that anybody said, "oh, the Reserve Fund is a systemically important institution." But when the Reserve Fund broke the buck, obviously it was a systemic event in terms of the contagion. I also wonder if the focus on firms could not be usefully complemented by a focus on activities, as well. It does seem to me that the focus should be as much on activities that are undertaken in the financial system as it should be on firms that undertake those activities.

Shadow Banking System

Finally, returning to the shadow banking system, this is a huge issue. How is it going to be monitored? Who is responsible for monitoring it? To what extent can we address potential vulnerabilities in the shadow banking sector indirectly via our regulation of the banking sector? What are the appropriate tools to prevent excesses? If a problem is identified, who has the legal authority to intervene in the shadow banking system?

With regard to financial stability and use of macroprudential tools, one of the huge problems facing central banks around the world is the analytical basis for how the financial system is important in feeding into monetary policy and financial stability. The grounding there is quite poor. The academic community has for years bought into the efficient markets hypothesis, and the DSGE (dynamic stochastic general equilibrium) models that are used in the macro world really do not have a financial sector. So we have this interesting situation where we understand that the stability of the financial system is very important for the health of the economy, but we really do not have a good theoretical, analytical foundation for how to think about this going forward. One problem at the university level is that the macro people and the finance people are usually sitting in different buildings and they do not really work together.

Final Thoughts

There is a lot of work to be done. There is concern that it might be done poorly. In the United States, there is a lot of rule writing that has to be done in a very compressed time period. Some of the agencies that have to do this rule writing are quite small and have real resource constraints. It will be important that we ensure that we have the capacity to write good rules as opposed to just writing rules before we finish the process.

On the international side, there are many important things that need to be done. Even after this crisis, there is unbelievably inadequate information sharing across borders in terms of supervisors. Sitting in New York, we do not know very much at all about Deutsche Bank as a global bank. We can look at the U.S. piece. The Financial Services Authority can look at the London piece. Only BaFin (the Bundesbank and German Federal Financial Supervisory Authority) really looks at the whole thing, and even then we really do not have a very good idea about how these institutions look on an overall basis.

Despite all the lending that took place during the crisis, we have more work to do in terms of thinking about how lender-of-last-resort responsibilities unfold over time between home- and host-country central banks. How long should a host country central bank continue to lend? At what point is it reasonable to expect the home country authority to intervene and say that it is now their responsibility? That needs to be clarified. So as for “remaining regulatory challenges,” there is some work to do.

VI. Measuring Reform's Success Thus Far

by Adair Turner

My comments revolve around four questions:

- First, are Basel III capital requirements adequate or should we have set them still higher?
- Second, have we actually solved the too-big-to-fail problem? That is, if a large, complex, cross-border trading bank got into trouble, could we actually resolve it without systemic disruption?
- Third, have we in our reform program been too focused on some specific institutions, that is, banks, and not enough on complex market linkages?
- Fourth, alongside our constant rules, what discretionary through-the-cycle tools do we need to contain the excesses of the credit cycle?

Basel III Capital Requirements

A lot has been achieved with Basel III. We went from an environment where effectively there was a minimum 2 percent core tier 1 ratio to, effectively, a 7 percent minimum. But it is also important to understand that we have simultaneously changed aspects of the numerator, the denominator, and the ratio. The definition of capital in the numerator has been tightened and some important changes to the definition of risk-weighted assets in the denominator have been made, in particular some initial moves in relation to the trading books of banks. So, overall, this is a really quite significant increase in the capital requirements for banks.

Nevertheless, there is a strong theoretical case that if we were starting with a greenfield site designing a capitalist and banking system de novo, one might have gone for a much higher level still. It is startling how little cushion we are running on. When you take a prime mortgage under the Basel II advanced model techniques, you can produce a weighting as low as 10 percent of total assets for risk-weighted assets. Multiply 10 percent by the new minimum of 7 percent and you have 0.7 percent. So against a 100 book, you have a 0.7 equity cushion. It does not feel like all that big a cushion for having made mistakes in your models.

It is also notable that banks in the early 20th century ran with much higher levels of capital than they do today. But we had a market economy, we had credit intermediation, we had economic growth. It is also notable that when we get into situations of systemic stress such as the Irish banks at the moment, the sort of capital adequacy needed to reassure the markets that the banks are safe are the sort of levels that the Irish regulators are now imposing. They are more like 12 or 14 percent core Tier 1, not 7 percent. What that illustrates is that our 7 percent levels really do not guard against the sort of self-reinforcing losses that can occur in systemic interconnected crises. They will guard our big banks against idiosyncratic failure but they will not be sufficient to deal with systemic problems. It is the latter that really matters for big banks. The chances of having to deal with the idiosyncratic failure of one of our largest banks are relatively small. The essence of what we are trying to do with our largest banks is make the system more stable.

Finally, there is a robust theory, essentially coming from Modigliani and Miller, that if we always had a higher level of bank capital, say 15 to 20 percent core Tier 1, there would have been no adverse impact on a social optimality but instead simply a banking system that would have settled at a lower return on equity/lower risk equilibrium but which would still have preferred its functions in the real economy.

So, overall, if we were starting anew, there could be a strong case for a significantly higher level of equity capital. But, of course, like many things in life, we are not starting anew, we are starting from where we are, and we are starting after 50 or 100 years during which the private sector—incentivized both by the tax deductibility of debt and the inherent put option of limited liability—has continually sought out a higher level of leverage than is socially optimal. That is the situation that we are in. And we cannot simply say, okay, well, the optimal greenfield solution would be X. We cannot get there without imposing transitional deleveraging on the economy.

So I think of Basel III as a balance between a theoretical case for potentially still higher capital requirements and the need to avoid harmful transitional effects. It is a good balance and it will make a major difference. But there are three areas of unfinished business on the capital ratio side of the regulation.

1. There is a fundamental issue with the trading book capital regime. When we look at the situation pre-crisis, the aspect of the capital regime that was totally and woefully wrong was the trading book capital regime and the misapplication of simplistic Value at Risk (VaR) models. What we have done so far, in the steps that were put in place over the last year, is sort of a bandage over the worst problems through the use of stressed VaR and resecuritization charges. But we now need to return to the fundamental question of why we have a separate capital regime for trading books versus banking books, and what the appropriate form of that is.

2. We have placed a major burden on supervisors to ensure that good risk analysis is what is being used by banks and being allowed by regulators. This relates to the VaR point because it relates to the general use of models; we do need to realize that we have moved toward advanced model-based, risk-focused approaches to capital. And there is a real danger that across the world, we do not have a level playing field because different supervisors in their model approval processes could be applying completely different standards. And if you sit on top of a regulatory authority and the figures tell you that the banks have people assure you that we have X percent of capital relative to risk-weighted assets, how do you know whether those figures are truly reassuring, given that they are based on an empire of activity within the supervisor and within the bank?

This is an issue in response to which we should be developing a much greater degree of peer review, and we should challenge one another as supervisors about the judgments we are making in risk-weighted assets. That relates to supervisory cooperation and openness and challenge, but we have made very little progress so far.

It also raises the issue, late in the day, of course, of whether within the Basel II risk-weighted regime, which we have carried over to Basel III, we would not have been wiser to have category-specific floors. We took mortgages from a 0.5 weight and we moved them to an advanced model system where some of them carry a weight as low as 10 percent. Why did we not move to an advanced model-based approach but with a floor, with, for instance, all mortgages having at least a 25 percent risk weight? That would effectively be a category-specific gross leverage ratio. That might have had merit, and maybe we should come back to that issue.

3. The Systemically Important Financial Institutions (SIFI) surcharge is the third unfinished area. It overlaps with my second question: if a large, complex cross-border trading bank, a Goldman Sachs, a Citi, a Barclays, got into trouble, if with those banks we reached a position that is the equivalent of autumn 2008, could we now resolve them smoothly, avoiding both the disruption and contagion effects of letting them fail as in Lehman's case, but also avoiding the taxpayer equity injections of Citi or RBS? Well, the blunt answer is no. As of now, we could not do it because if one of these firms got into trouble, we would be worried that placing them into a resolution regime would produce a shock to the system through the complex interconnectedness of their deposit relationships, their derivative relationships, and so forth. We would be worried about whether there would be run and contagion effects and whether we could impose losses on debt providers without undermining their key functions to the real economy.

The Too-Big-To-Fail Issue

So at the moment we are not yet in a position where we could resolve issues in SIFIs, and that is clearly a problem we have to address. To understand the nature of a problem and to suggest one possible solution to it, it is useful to think about the different categories of liabilities existing on the liability side of the balance sheet and the difficulties of imposing losses on those categories—that is, thinking about the liability side of the balance sheet in terms of the categories, going up from common equity through subordinated debt (sub-debt), senior debt instruments, interbank and other counterparties, noninsured depositors, insured depositors, the whole of the derivative and repo markets, and so forth. What is interesting about these is that they were all meant to be able to absorb losses and market discipline. We had resolution procedures and we had bankruptcy and insolvency procedures, which theoretically could have imposed losses on all of these (or in the case of the insured depositors, on the insurance schemes). However, in the crisis, in relation to the systemically important firms, the most we were actually willing to do was impose losses on the equity holders and keep everybody else sound. With some smaller banks, we went a little bit further up the liability side of the balance sheet. With one, we got as far as senior debt instruments but not uninsured depositors because we did not have to go to uninsured depositors. With INDY MAC (Independent National Mortgage Corporation) it went to uninsured depositors as well as senior debt.

So, the issue is, what do we have to do to create real loss absorbency and market discipline? It strikes me that there are three different propositions being put forward, but they closely overlap—three different possibilities of how we actually get the loss-absorbing capacity, and how we make sure that we neither have the contagion and disruption effects nor the need to put in taxpayer capital.

1. The first is simply higher capital requirements, that is, higher levels of loss-absorbing capital. This is a solution, whether at the common equity level or at the sub-debt level, or with forms of sub-debt that would be convertible to equity in a smooth Contingent Convertible bonds (CoCo) fashion. That relates to the whole debate about the SIFI surcharge and what we should do there.

2. At the other end of the spectrum, there is the resolvability or statutory bail-in process. This is what Dodd-Frank purports to have solved. The proposition is that if we have resolution procedures that can rapidly impose losses, conversion, or both on all liabilities to the extent required, then we can keep the crucial functions for the economy going while avoiding taxpayer injections.

What worries me is whether that is really credible, and for two reasons.

First, you get hugely bigger numbers of counterparties and instruments so that you have gone from dealing with going from tens or hundreds of subordinated or preference-type instruments, to hundreds and perhaps a few thousands of senior debt instruments, but to tens or hundreds of thousands of noninsured depositors and derivatives, and so forth.

Second, the further you go up, the shorter the term of the liability and therefore the greater the danger that when you get close to applying this resolution, you simply have a disruptive run. That is why although one way forward is to say we are going to have resolution regimes and we are going to make them work effectively and that these really could involve the imposition of losses on noninsured depositors, I am not convinced that we will ever make that really work for complex cross-border banks rather than wholly domestic banks or relatively straightforward retail banks.

3. The third option is what I have called turning senior debt into a reserve army of capital to cover extreme events. The logic is that when you focus on that level, you are dealing with a small enough number of instruments that it is manageable, and you are dealing with instruments that have long enough maturity that they cannot run. There is, therefore, a potential solution to our too-big-to-fail problem that involves a focus on senior unsecured debt instruments but which would require those senior unsecured debt instruments to have five features. They would need to be:

- Junior in preference to uninsured depositors and to derivative contracts and to things further up the balance sheet.

- Subject to smooth resolution processes, which would enable regulators, in a very straightforward fashion, to impose haircuts or debt-to-equity conversion rapidly to enable the ongoing entity to continue. It really does not matter whether you achieve that through a statutory resolution regime or a contractual resolution regime as long as you achieve it.

- A large enough percentage of either risk-weighted assets or liabilities that it makes it close to certain that in almost all states of the world the imposition of losses or debt-to-equity conversion on that slice would be sufficient to achieve recapitalization and smooth ongoing operation without taxpayer support.

- Long enough in maturity that they are not in danger of running; that is, what we count here is only stuff with, for instance, more than a year to run before maturity.

- Finally, and crucially, not owned by other banks but owned by nonbanks. If they are owned by other banks, we will have solved the idiosyncratic problem but not the systemic problem, which is not terribly valuable, since the key risk with very large banks is not the idiosyncrasy risks but the systemic risks. So we have to get enough of the liquidity side of the balance sheet into the hands of investors who are not part of the banking system itself.

So this is a way forward that does not involve just piling up more and more equity or sub-debt or rely solely on resolution procedures, but focuses on regulating senior debt instruments that we have never really regulated before either in quantity or in its characteristics.

The Focus on Specific Institutions

My third question was, have we been too focused on specific institutions—banks—and not enough on complex market linkages? It is interesting, when you go back to the crisis, to remember some of the things that happened in the early stages, and that many did not have anything to do with banks. We had Bear Stearns closing redemption gates on some of its hedge funds, which shocked the system in mid-2007. We had the 2007 to 2008 worries about the structured investment vehicles and the conduits and the fire sales that they were doing and the liquidity support out of the banking system. We had money market funds breaking the buck. And in September and October 2008 we had all those complicated linkages in the derivative and repo markets producing a sudden increase in the collateral that investors were demanding against each other, which was then shocking the system. We had a lot of wholesale secured financing runs and we had procyclical processes of fire sales.

And a lot of it was not occurring within banks. It was occurring in the middle of the shadow banking system. In response, however, we have spent a lot of our time reregulating banks and setting capital and liquidity requirements to banks. Now, I can defend that, because banks are incredibly important institutions that are both leveraged and maturity transforming, and it is when they go wrong that we really go from potentially containable problems to catastrophic effects on the real economy.

But this description of the causes and the steps of the crisis also suggest that alongside looking at banks, we need to return to those elements of the credit extension system that lie outside banks in the shadow banking system. We need to understand the totality of what goes on in nonbank credit flows, but, crucially, we need to locate where, within that map of the shadow banking system, we find the distinctive features of banking: leverage and maturity transformation.

What was going on in that system was extreme maturity transformation, but maturity transformation that was difficult to see because it was sliced up into many steps. We need to understand that better, and we may need to develop regulatory responses that get us into the regulation of haircuts and collateral arrangements within that wholesale financing arrangement, making sure that in the good times the collateral arrangements are strong enough that when things turn down they are not suddenly being increased in a way that shocks the system and produces powerful procyclical effects.

Utility of Discretionary Through-the-Cycle Tools

Finally, do we need discretionary and through-the-cycle tools to contain the excesses of the credit cycle? Yes, we do. It is reasonable to say that before the crisis we had developed a very strong economic and regulatory philosophy. That philosophy was that macroeconomic monetary stability and good rules were sufficient conditions for financial stability—that provided we had central banks pursuing defined or implicit low inflation targets through the use of the interest rate and regulators applying a constant and clearly defined set of rules on an institution-by-institution basis, those two things were sufficient to deliver macro and financial stability.

A key lesson from the crisis is that that is simply not true and that we need to recognize the credit and asset price cycles and, in particular, the cycle of the credit extension against real estate as a phenomenon in and of itself, which requires a set of macroprudential tools that lean against those winds. It is a crucial fourth element of extra things that we need to do in the regulatory regime.

Conclusion

In terms of measuring the success of the reform thus far, we need to think critically about these four topics:

- Capital requirements of Basel III need to be examined closely to ensure that the right balance is struck in determining appropriately high levels of reserves while avoiding harmful transitional effects.

- To address the too-big-to-fail issue, we need to create real loss absorbency and market discipline, which can be done in one of three ways: mandating higher loss-absorbing capital requirements, the use of bail-ins, or turning senior unsecured debt instruments into reserves.

- Along with looking at banks, we need to monitor the shadow banking system and develop regulatory responses to nonbank credit flows.

- Finally discretionary through-the-cycle tools must be used in order to prevent future crises.

VII. Next Steps for Regulatory Reform

by Roger W. Ferguson, Jr.

There are several areas of regulatory reform that need work, as has been made clear by the papers presented here. However, I would like to start with what has been accomplished in regulatory reform.

First, regulators have finally come to grips with the definition of capital. When Bill McDonough was chair of the Basel Committee, and certainly when Jaime Caruana was chair, the question of the definition of capital was high on the list of things to be done. It seems as though people have come to an agreement on that.

Second, although it is incomplete, the focus on macrostability issues is consistent with the work that we have just done. Macrostability seems very much at the top of regulators' lists. Countercyclical capital regimes, buffers, etcetera, have been debated, and some resolution is being achieved. The same thing goes for leverage ratios. Leverage ratios were contentious in the United States. They were not available in Europe. Now, regulators are finally coming to terms with the fact that we need leverage ratios, because we are probably going to get it wrong otherwise. More institutions now understand the value of using stress testing as part of their risk management activities.

Remaining Issues in Regulatory Reform

There are areas of reform that do still need work.

First, there is resolution authority. The resolution authority is certainly something that looks good on paper. Whether it can be executed in practice is the question.

Second, there is the regulators' notion that there are many in the investing community excited about debt with the components of bail-in. This is a notion to be tested. Depending on the return on these instruments, it may turn out that there will be very few investors.

Third, we have not really acknowledged the fact that we must drive institutions to do better with their own risk management, their own corporate governance, and their own oversight. This is a fundamental issue. The banks have yet to take seriously their obligations in these regards, independently of what the regulators are doing.

Fourth, we have yet to come to grips with the question of counterparty market discipline. There was a time when we thought that would be part of the solution—and I still believe it is part of the solution. But we have not quite figured out how to incent banks to focus on risk management. So while we have been focused in the last two years on capital, and appropriately so, all of the other things that are part of what I describe as "the regulatory infrastructure" have not yet been advanced, in my assessment.

Finally, and most important, there is the issue of moral hazard. One might argue that the amount of effort the regulators have put into thinking through capital leaves the counterparties free to assume that we have got it all right and that we are confidently capable of dealing with Systemically Important Financial Institutions, or SIFIs. But that is not the case.

We have now decided that the world has SIFIs, and we understand that. But who and what are they? Scale and size are simply not adequate measures. Some institutions that are very large in terms of assets probably are not systemically important. Why? There are three reasons.

First, the whole world of SIFIs has to take into consideration what other regulators are doing, and whether they are doing what they need to do to keep those institutions well managed. Here, I mean regulators outside of the banking system: insurance regulators, securities regulators, and so forth.

Second, there is the issue of maturity transformation as an indication of systemic risk. If maturity transformation really is the issue, you will find some large, complex institutions that do very little of that. They match their assets and liabilities relatively closely because that is the reason they exist. I would say the same thing about leverage. There are huge institutions that use relatively little leverage. That might immediately take them out of the SIFI world.

Third, there is the amorphous but incredibly important concept of business model. To what degree are institutions chasing quarterly earnings, for example, and does that drive them into being SIFIs versus other institutions that perhaps have less of those sorts of incentives?

Unfinished Business

Now, on to the other issues that are very important in terms of unfinished business in the United States and globally.

The first is consumer protection. In the United States, we are about to have a very large independent bureau funded by the Fed to oversee consumer protection. The challenge is how does this agency manage to protect us from ourselves without undercutting the natural desire to have creativity, novelty, and advances in products and services from which we can all benefit? Sure, there are products and services that can be misused, but on the other hand, any financial product can also be appropriately used. So how do we think about that in the context of consumer protection?

Another issue is housing finance. In the United States, we still have two large and now fully government-owned entities, Fannie and Freddie. They were surely an element of the problem in America, and broadly speaking, of the problem that we face globally. It was clearly unwise to have the U.S. government tied to a for-profit, privately owned institution. There were many who were concerned about that. We still have not yet come to a resolution of that in the United States, and that issue is of great importance.

Finally, and most important, we have not yet addressed the question that is implicit. The challenge for the banking industry 15 or 20 years ago was whether banks could get a return on assets above 1—a return on equity into double digits. We have seen the results of banks attempting to do that. We have not questioned at all the banking model that is going to be required to go forward. Building up this capital by definition is going to imply a lower return on equity. That is not inherently a good thing or a bad thing; it is a fact.

Conclusion

I commend the many who have done a great deal of good work for the last few years. The sad truth, however, is that the litany of remaining regulatory challenges is probably as long, if not longer, than the litany of challenges successfully attacked. These challenges need to be addressed if regulatory reform it to be successful and able to mitigate and prevent future financial crises.

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