

Chicago Fed Letter

Financial market and regulatory behavior over the business cycle

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How do financial firms respond to changing credit and market conditions? Should regulation and supervision be used to smooth out the business cycle? These and other important issues relating to the interplay between the financial sector, regulation, and the economy were addressed by industry participants, regulators, policymakers, and academics at the Chicago Fed's 2002 Conference on Bank Structure and Competition.

On May 8–10, 2002, the Federal Reserve Bank of Chicago hosted its 38th annual Conference on Bank Structure and Competition. The conference theme, “Financial Market Behavior and Appropriate Regulation over the Business Cycle,” centered on the impact the financial sector has on the business cycle and what policy alternatives may be appropriate to modify that impact. Recently, the financial sector has been thought to be contributing to the swings in economic activity. Given the expansion of financial engineering and technological innovation, developments within the financial sector can easily and quickly be transmitted to the real sector of the economy. This *Chicago Fed Letter* summarizes some of the conference discussions.¹

Chicago Fed President Michael H. Moskow opened by emphasizing the need to “understand the forces that drive financial firm behavior and how firms respond to changing credit and market conditions.” “It is imperative,” he added, “that we evaluate the alternative policy options available to regulators across the business cycle and the impact those options will have on the financial industry.”

In accepting that challenge, industry participants, regulators, academics, and policymakers addressed the following key questions:

- Are financial firms more resilient to economic shocks than in the past?
- Do current or proposed capital regulations exacerbate business cycles?
- Should regulation and supervision be used to smooth out the business cycle?
- What are the advantages and disadvantages of housing monetary policy and bank supervision in a single agency?

A distinguished group of speakers addressed these issues—Charles Goodhart, professor of Banking and Finance, London School of Economics; Sean Ryan, managing director, Fulcrum Global Partners; Karen Shaw Petrou, managing partner, Federal Financial Analytics; and Richard Spillenkothen, director, Division of Banking Supervision and Regulation, Board of Governors of the Federal Reserve System. In addition to the conference theme panel, other conference sessions addressed bank capital reform, bank behavior and macroeconomic activity, and the role of alternative regulatory structures and practices.

In his keynote address to the conference, Federal Reserve Chairman Alan Greenspan discussed the joint implications of regulatory and supervisory policies both for the macroeconomy and for financial market stability. Regulatory

Chairman Greenspan discussed the implications of regulatory and supervisory policies both for the macroeconomy and for financial markets and cyclical stability.

rules, like bank capital requirements, are designed to provide a constraint on bank risk-taking. But such rules can add to macroeconomic and asset-quality cyclicity. For example, "... capital constraints may induce tighter lending standards, or shrinking balance sheets, for a number of institutions at the same time, engendering significant real business-cycle effects," said Greenspan.

Following up on bank capital issues, Petrou noted that while the 1988 risk-based capital rules introduced by the Basel Committee on Banking Supervision were useful in bringing bank capital and bank risk profiles into better alignment, their crude design encouraged credit risk arbitrage. Under the Capital Accord, the Basel committee classified assets into different risk categories and assigned minimum capital requirements for each category. Banks were required to hold a minimum of 8% capital on risk-weighted assets. However, some of the risk classifications were somewhat questionable and the rules did not differentiate among the credit quality of borrowers. As a result, risk was often mispriced. To manage capital levels, banks often sold low-risk assets, because the associated capital requirements for these assets were too high. Similarly, banks retained higher-risk assets where the regulatory capital requirements were thought to be relatively low. The effect of this capital arbitrage was to increase the overall riskiness of a bank's assets. Greenspan noted the difficulty involved with introducing quality regulation—"We must, therefore, be aware of the implications beyond the original intent of a rule and consider its associated tradeoffs."

The business cycle

The business cycle refers to periodic swings in an economy's pace of production activity, characterized by alternating phases of growth and stagnation. Goodhart questioned the use of the word "cycle," because it implies regular patterns that are somehow predictable. Implementation of countercyclical policy is difficult because "our process of booms, punctuated by occasional busts, is inherently largely, though not wholly, unpredictable, and has in practice rarely been well predicted," said

Goodhart. He argued that the most difficult part of predicting economic cycles is separating temporary shocks from long-term trends. "The question whether the strong growth in labor productivity in the U.S. at the end of the 1990s was predominantly a shift in trend, or a temporary cyclical factor, has had a major influence on judgments about the fundamental value of equities and also on macro/monetary policy," said Goodhart.

What might contribute to recent procyclical swings in business activity? Greenspan indicated that part of it might be caused by larger adjustments in lending policies at larger banks. He noted that there has been a gradual decline in large bank loan portfolios over the past 25 years due to the increase in competition from money and capital markets for large bank customers. This may have resulted in a decrease in credit quality that has added to the increased cyclicity in loan performance.

Impact of new capital standards

Currently, the bank capital standards are being revised by the Basel committee under the title Basel II. A major objective is to limit the credit risk arbitrage opportunities available in the current accord. For one thing, the new accord will have a refined measurement framework that will account for differences in the creditworthiness of borrowers.

One of the controversial parts of Basel II is the internal rating based (IRB) approach to capital calculation that will be available to large banking organizations. This approach allows banks that have invested in internal credit risk models to utilize those models to determine appropriate capital levels. This would exploit the banks' expertise in quantifying risk and provide incentives for them to create and improve their models.

Petrou contended that internal credit risk models are overly complex and that Basel II would do little to prevent banks from continuing to play the capital arbitrage game. The new accord "can create some significant strains during periods of economic expansions and contractions as banks attempt to play the capital advantages," said Petrou. She said the potential distortions created

by improperly drawn capital rules were significant and recommended that less emphasis be placed on bank capital requirements and more on improving supervision.

Another controversial part of Basel II is the intention to require banks to hold capital for operational risks—defined by the Basel committee as the risk of monetary losses resulting from inadequate or failed internal processes, people, and systems or from external events. Three approaches to allocating capital to cover operational risk have been proposed. In the *basic indicator approach*, banks may use a percent of gross revenues as a proxy for overall operational risk exposure. The *standardized approach* segregates a bank's activities into standardized business units and lines to determine the level of operational risk in each unit. Finally, in the *advanced measurement approach*, the bank uses its internal models and loss data to determine the amount of capital to hold against operational risk.

Regarding the basic indicator approach, Petrou argued that Basel II is using the same crude approach used to measure credit risk before the introduction of the risk-based approach. Additionally, banks would be required to hold capital regardless of whether they invest in insurance, business contingency planning, and disaster recovery measures. Petrou argued that ignoring these mitigating factors would discourage banks from investing in them—an outcome that is contrary to Basel's stated goals.

Petrou also expressed concerns about the ability of larger banks to shift business outside of the bank to avoid capital charges, thus potentially increasing the total amount of financial system risk. Activities like asset management could be moved outside of the bank to avoid the operational risk capital charge altogether. She reiterated her call for a structure of regulation that is consistent regardless of whether the activity is conducted in a bank, securities firm, or insurance company.

Goodhart concurred with this assessment and discussed his concern about the potential impact on competition between banks and nonbanks, particularly

in the European Union (EU) where all financial institutions will be subject to an operational risk charge. In his view, it is hard to see what good the operational risk capital component would do, where it comes from, or why it would actually reduce systemic risk. He gave an example where the operational capital charge could be imposed on a fund manager that had little risk since the fund's holdings were segregated in custodian accounts. Therefore, "the idea that they have to hold 10% capital for a non-existent operational risk is causing a lot of concern in the EU," he said, and this would likely distort competition between the various financial sectors.

Although conceding that there is work to be done on various aspects of the Basel Accord, Greenspan suggested that "the basic cause of procyclical bank lending is less the result of rules (regulatory or self-imposed) and more our difficulty in predicting the future." He said risk management will not make it easier for bankers to predict the future, but it will tend to create an analytical structure and enforce a reference to past events, causing bankers to charge higher rates for loans with lower probability of repayment. "Enhanced risk management, by increasing our ability to focus better on probabilities, will tend to flatten cyclical lending patterns," he said. Greenspan concluded that Basel II will reinforce "the expectation of less procyclical contribution from banking by trying to accelerate the adoption of more formal, quantitative risk management techniques."

Macroeconomic role of supervision?

How should financial regulators respond to the business cycle? While Goodhart argued that neither markets nor regulators can reasonably predict turning points in a business cycle, he did suggest that regulators should maintain macro-level stability. Rather than focusing on the level of economic and financial variables, regulators should relate prudential requirements much more to the rates of growth of those variables and compare them with their long-term trends. For example "The faster the growth of bank's lending books, in general, and of their loan books, in particular, the higher the capital-asset ratio," said

Goodhart. This would have the effect of regulatory-tightening when bank profits are high and losses low, and regulatory-easing during downturns to stimulate the economy. In Goodhart's view, regulations should "prevent banks overextending themselves in booms, so that they are better prepared to take up the strain during slumps."

However, there were concerns about regulators' ability to act in a countercyclical manner. According to Ryan, countercyclical regulation is "intuitively appealing in theory, but simply doesn't work in practice."

Greenspan pointed out that it is difficult for bank supervisors to argue for restraint during an economic upturn, primarily because they cannot point to data that support their judgements until it is too late. Once problems are recognized, there may be a tendency to overreact. "As cyclical imbalances inevitably develop, the typical pattern has been an evaporation of optimism among lenders and asset holders and a herdlike propensity to seek an increase in risk premiums. As the economy deteriorates, fewer projects seem attractive as more of the previously extended credits become nonperforming. Cautious voices, including those of the supervisors, become prominent, now supported by the increasing evidence of deterioration. In such a situation, the supervisors call for more chargeoffs and higher capital. Credit becomes less available, and risk spreads widen, adding to the pressures for a further business contraction."

Spillenkothen argued that bank regulators do account for the state of the business cycle. They supervise banks to ensure that proper attention is being paid not only to risks, but also to the overextension of credit. While an analysis of the condition of a bank's loan portfolio continues to be a major part of the supervisory review process, more attention is paid to the processes banks use for managing the risks within that portfolio. This has helped supervisors to become more sensitive to asset deterioration and to laxity in credit standards. Spillenkothen also pointed out the increased importance supervisors have given to information disclosure by banks.

This was viewed as a welcome development. "Banks have never been as opaque as they are today," said Ryan. Because of this opacity, it is a challenge for the current accounting standards to truly capture the levels of risk banking institutions are taking, as some institutions are purposely hiding their true risk profiles through complex and sophisticated accounting entries. Ryan wants not only more disclosure, but also an improved system of financial reporting. "The pace of evolution in accounting standards has been far outstripped by the pace of evolution in both the underlying financial realities they seek to measure and in the skill with which financial institutions manipulate the accounting system to present to investors an increasingly subjective reality," he said.

Role of risk management

One of the objectives of Basel II is to induce banks to create and maintain internal risk classifications that can be used to better manage risk and allocate capital. Greenspan said that "the sad fact is that the adoption of best-practice risk-management techniques has been slower than desired. ... What is needed is a way to incorporate advances in quantitatively based risk management more generally into the operations of our large complex banking organizations."

Greenspan suggested that the result of the revolution in credit risk management is the growing ability to *measure* risk—

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“Better ability to quantify risk has begun to give the risk manager new authority in the credit-granting process.” While he conceded that this will not necessarily reduce credit availability at banks for riskier borrowers, improved risk management systems will increase a bank’s ability to measure the level of risk it is incurring and price it appropriately. As a result, he argued that “better risk management and the associated quantification have the real potential for reducing the wide attitudinal swings that are associated with the historical cyclical pattern in bank credit availability.”

Spillenkothen said that in his view the 1988 Basel Accord did not provide enough incentive for banking organizations to adopt risk-management systems. However, he added Basel II offers the promise of providing “banking organizations with greater incentives to improve their risk-management, credit risk measurement, and management processes.” Better risk management makes it possible to identify risks earlier. And this should assist the bank supervisor in assessing capital requirements earlier in the business cycle, dampening some of the procyclical elements that have been viewed as part of bank supervision.

Goodhart said there is no evidence that enhanced risk-management processes will lead to less procyclical contribution from banking—“I think that it is just a hope that making banks more

sensitive about their individual risk position ... will, of its own accord, reduce procyclicality. It is just wishful thinking.”

Monetary policy and bank supervision in the same agency

In discussing the motivations behind regulatory bodies and central banks, Goodhart suggested that there is a tension between looking at the micro- and macroeconomic aspects of proposed regulations. Regulators focus on how a proposal will affect individual banks, while central bankers are more concerned with the macroeconomic consequences of such proposals. Hence, the question arises whether monetary policy and banking supervision should be housed within the same agency.

Goodhart suggested that the primary reason for having both of these functions within the same agency is one of efficiency. If you separate the two functions, you lose information transfers between supervisors and the central bank. It is precisely the different macro and micro views that are necessary when a financial crisis materializes.

Greenspan noted that financial markets and banks are part of the same macroeconomic cyclical process and this is an important reason for having central banks remain in the bank regulatory process.

Regardless of the different macro and micro views on the impact of regulations,

Spillenkothen emphasized that the objectives of the central banker and bank supervisors are very similar. Both have significant interest in financial stability.

Conclusion

This year’s Bank Structure Conference highlighted the importance of understanding how financial institution behavior and the regulatory constraints on that behavior affect the overall economy. As Greenspan noted, “government programs, too, often have unintended business-cycle effects. The safety net—particularly deposit insurance and access to the discount window—clearly has an impact beyond the stability it brings by containing the deposit runs that once led to financial implosion. It induces intermediaries to take on more risk with less capital, creating what is arguably the largest problem facing modern bank supervisors—wide swings in credit quality.” Thus, the goal is to create a regulatory and supervisory environment in which banks prudently manage risks throughout the cycle, business cycles are not unnecessarily exacerbated, and the narrowly defined objectives of regulation are achieved without inducing distortionary behavior.

¹ For more details, see Federal Reserve Bank of Chicago, 2002, *Financial Market Behavior and Appropriate Regulation over the Business Cycle*, Proceedings of a Conference on Bank Structure and Competition, Chicago.