CREDIT SUISSE | FIRST BOSTON

The New Basel Accord

TESTIMONY OF D. WILSON ERVIN

on behalf of

Credit Suisse First Boston

and

The Financial Services Roundtable

Hearings on Basel Capital Reforms
House Committee on Financial Services
February 27, 2003

Testimony of D. Wilson Ervin
Hearings on Basel Capital Reforms
House Committee on Financial Services
February 27, 2003

Introduction

Good morning Mr. Chairman. I want to thank you for holding these hearings today and allowing me to appear before the Committee. My name is Wilson Ervin and I am a Managing Director of Credit Suisse First Boston ("CSFB")[1]. I head our Strategic Risk Management (or "SRM") department and also chair its risk committee. I am presenting testimony today on behalf of CSFB and on behalf of our trade group, the Financial Services Roundtable[2]. CSFB employs approximately 22,000 people, primarily in the United States, and is a major participant in the capital markets. It ranks among the top firms in raising money for high yield companies and is a leading underwriter of mortgage and credit card financing. Moreover, the firm is among the largest managers of funds invested in private companies.

My Department at CSFB – SRM -- is responsible for assessing the risk profile of CSFB on a global basis and for recommending corrective action where appropriate. This objective is similar to many of the goals of bank supervisors, including the drafters of the proposed Basel Accord - to deter large losses and protect bank solvency.

The Basel II Capital proposals have been the topic of intense discussion and debate in the financial and regulatory community for the past several years. The proposed Accord is not a minor refinement to the bank regulatory process, but is, instead, a wholesale reform of bank regulation – a regime that covers roughly $2 trillion of capital and is a key economic engine for most developed markets. While the revisions are well intended and many of the specific

---

[1] Credit Suisse First Boston (CSFB) is a leading global investment bank serving institutional, corporate, government and high net worth clients. CSFB's businesses include securities underwriting, sales and trading, investment banking, private equity, financial advisory services, investment research, venture capital and asset management. CSFB operates in more than 89 locations across more than 37 countries on six continents. The Firm is a business unit of Zurich-based Credit Suisse Group, a leading global financial services company.

proposals are well-drafted, a change of this scale invokes the "law of unintended consequences". The impacts of these seemingly technical discussions will be far reaching, and we would be wise to consider them carefully before implementation.

Before I start, I would like to note that I have personally developed tremendous respect for the diligence and stamina of the regulators who have worked on Basel II. They have had to address a great many complex and challenging issues, and they have been tenacious in trying to develop a "best practice" solution for each. Balancing all of this and applying it to very different financial markets around the world - with political sensitivities in each – does not make this an easy job.

Yet, while there is much to admire in the new rules, there are also many elements that raise serious concern. Basel II has considerable momentum, and most people in the industry believe it will likely be implemented in the relatively near future. CSFB has worked hard to be a "constructive critic" of the new rules, particularly in respect to practical implementation. However, in spite of the hard work of the Committee and industry, substantial flaws still remain. In my opinion, these flaws are currently large enough to outweigh some of the very useful reforms that are included. We hope the Committee - in conjunction with regulators and banks - will use this opportunity to repair the process so that the Basle II reforms can live up to their original, very worthy goals.

Today I would like to focus on four "macro" issues that arise out of the proposed Accord:

1. The current Basel proposal is too complex, too costly and too inflexible to provide a robust, durable framework for bank supervision going forward. Implementing the proposed accord may have the effect of freezing the development of good risk management, and locking it into an "early 2000's" mindset.
2. The new Accord and its sensitivity to credit ratings will reduce liquidity in the credit markets during economic downturns, potentially extending or deepening economic recessions ("pro-cyclicality").

[2] The Financial Services Roundtable is a national association representing 100 of the largest integrated financial services companies in the U.S. providing banking, insurance, securities, and investment products and services to American consumers.

3. The Operational Risk charge proposed by the Basel Committee is premised on a fundamentally flawed concept – it is built on sand, not a solid foundation – and could actually distract from good risk management.
4. The disclosures required under the new Accord are likely to add at least 20 pages of highly technical disclosure to bank annual reports, raising costs and providing little or no information of value to the reader.

CSFB will be required as a Swiss bank to implement Basel II. Our implementation will be governed primarily by the Swiss EBK, but also by other regulators, including the Federal Reserve and the UK FSA. This interlocking patchwork of regulation can pose significant challenges for an international bank such as ourselves – for example we have been required to implement conflicting risk calculations by different regulators, making compliance a difficult "Catch-22". While we have been able to resolve these issues to date, this potential tension between "home and host" regulators will become a bigger issue given the much wider and more detailed Basel II regime.

Complexity, Cost, and Adaptability

The first topic I would like to address is the overall cost & complexity of the new rules, and the effect they will have on whether the rules remain relevant over time. CSFB believes that the framework currently under consideration by the regulators is simply too complex and too prescriptive to be an effective supervisory tool. The new rules will shift the regulatory regime strongly toward an inflexible, formula–based system, and will diminish the important role that is currently played by human judgment.

Most of this complexity is to be found in Pillar I, which describes the "recipe" for calculating capital requirements. The last draft of the Pillar I calculations ran to approximately 400 pages, more than 12 times the length of the original Basel Accord. The final page count is likely to run well over a thousand once all the technical papers are included. This is a common result from this kind of process. Once you start developing a system that attempts to capture the complexity of the real world into a series of mathematical rules, it is very hard to stop halfway. One issue or another will always be of major concern for some institution or country. Consequently you end up with a very elaborate system that tries to address all circumstances by becoming ever more complex, but which may begin to stagger under its own weight.

A particularly germane example of Basel's complexity is its proposal for asset securitizations. Asset securitizations are one of the most basic forms of financial transactions in today's marketplace, and are a keystone of how the US markets currently finance residential mortgages, consumer credit card balances and automobile loans. The draft rules being proposed by the Basel Committee for asset securitizations alone run to 40 pages – more than the entire 1988 Accord. They are daunting and often difficult to interpret (see Appendix 1) . The result is that only a few experts in each area are likely to understand this and other specialized rules of the Accord.

The monetary cost of complying with these rules for banks will be significant. For Credit Suisse Group, our holding company, we estimate that our initial costs will be $70mm to $100mm just to implement the system, plus substantial ongoing costs. Multiply that by the thousands of

banks within the banking system and this will amount to many billions of dollars of additional costs. Some of these costs will be passed on to consumers and corporations, and some of these costs may force banks to exit certain activities leaving these markets to unregulated entities.

A major driver of the cost / benefit ratio of the new rules will depend on how they are applied. For example, there are more than 80 specific requirements that must each be met to use the so-called IRB advanced credit system. If each of them is interpreted and tested to rigorous audit standards, there will be enormous costs in compliance, though the relevance to actual risk management will be small. I would note to the Committee that implementation costs will also be substantial for regulators as well as for the banking community.

Even more important, perhaps, than the direct monetary costs, are the indirect costs whether the new rules support the real risk management needs of the business, or whether they become an extra bureaucratic burden or a diversion. Banks will have to run these complex calculations regardless of whether they remain relevant as the markets evolve.

To make matters worse, the current Accord also compels banks to use the Basel II calculations in their internal management process in many areas, regardless of whether they remain relevant for business practices. If bank management is required to compute and manage by the Basel II rules anyway, further improvements in internal practice will be seen as both costly and irrelevant. As a result, the Basel Accord could actually slow the progress of better risk management techniques over time.

The Basel rules are based on the financial markets as they work today, but they are so complex and heavily negotiated, they will be difficult to update over time. This could have the effect of freezing much of the progress being made in risk management, and locking us into an early–2000's mindset, regardless of what the future brings.

Our proposed response to this problem is for the Basel Committee to place a much greater emphasis on the "Pillar II" section of the proposal. Whereas Pillar I sets out regulatory capital calculations in a detailed, prescriptive way, Pillar II is a section whereby regulators force firms to develop their own internal models and then scrutinize them through the examination

process. This "principles-based" approach has some important natural advantages vs. the complex black-letter rules prescribed by regulators under Pillar I of the proposal. Pillar II encourages banks and regulators to work together over time to improve risk management practice, rather than forcing compliance with a potentially dated rulebook. That process permits steady, evolutionary improvement and should therefore be more durable and relevant than the complex rules of Pillar I that are designed with today's markets in mind.

Addressing the cost and complexity issue will not be simple in the short time left before the rules are finalized. If these rules are all applied as black letter law and interpreted strictly, the new rules will be both costly and – since the risk management advances that lead in part to Basel II will not end in 2003 - increasingly irrelevant to real risk management We encourage an approach that emphasizes principles and simplicity as the rules are finalized and emphasizes the spirit of the new rules when assessing compliance.

Getting implementation wrong could have important implications for the level playing field, especially in the US, where non-bank competitors like investment banks, finance companies, and agencies represent a large part of the system. The Basel rules do not apply to them. If the Basel II costs are high, banks will earn a lower return on capital and therefore grow more slowly. There may even be some incentives to exit businesses or to de-bank altogether. In short, we may get a more uniformly regulated commercial banking system, but there may be fewer banks to regulate over time.

Pro-Cyclicality

The new rules will change how banks calculate and manage their capital and the amount of business they choose to do. If banks all act in concert – as they will tend to do under a common regulatory regime - this can significantly increase or decrease liquidity in the credit markets and ultimately affect the real economy. We have analyzed this effect over the last 20 years of credit cycles. Our calculations suggest that the impact on required bank capital will be substantial. In particular, the new Basel II calculations would require much more bank capital during economic recessions than the current system.

As a practical matter, consider the credit environment the last two years. We have seen huge numbers of credit rating downgrades, which have increased the real risk of bank portfolios. The current system is relatively indifferent to this change in terms of required regulatory capital, but the proposed system will require significantly more capital as companies are downgraded. Banks will have to choose between raising more capital during recessions or reducing the amount of lending that they do.

Cutting lending during a downturn is probably smart, if your perspective is focused solely on bank solvency. However, it raises significant issues for the wider economy. My personal estimate is that my bank would have cut back its lending by perhaps an additional 20% to 30% if the Basel II rules were in place during 2002. If all banks cut back at the same time, the potential adverse impact on the real economy could lengthen and deepen the recession. This process by which the rules would widen economic swings is called "Pro-Cyclicality".

We are currently in an economic slowdown; it is difficult to think that adding pressure on bank capital during this period would be helpful to economic recovery. In fact, it defeats part of the reason for regulating banks in the first place – in order to have a stable supply of capital to support the underlying economy. We need to be particularly careful here because the new system is imposed across the whole banking system and everyone will have to operate at the same time on the same rules. Herd behavior can make smaller problems into bigger ones.

The regulatory community has acknowledged this as a potentially serious issue, but I do not think the responses to date have fully addressed this issue. When the first quantitative proposals in January 2001 revealed a significant potential problem, the regulators did react with a revised and somewhat "flatter" risk-weight curve[3]. However, while this reduces the scale of the issue, it does not grasp the nettle. More recently, revised Pillar II proposals have added "stress tests" which can give rise to additional capital requirements[4]. The exact design of these tests is unclear but the language suggests they amount simply to an extra layer of buffer capital so that we will not need to dig into capital in tough times. In effect, this is like creating a second fire department, so that the first fire department never has to go to work. Creating two fire departments or requiring two pools of capital is expensive and doesn't seem to address the fundamental issue. That issue is that a risk sensitive system will inevitably lead to varying capital requirements through time, and that is a result that will require explicit management and thoughtful preparation. As with other areas of the Basel Accord, adding some flexibility to the rules is the simplest and most practical way of preventing these inevitable stresses from building up into major crises.

---

[3] Basel Committee on Banking Supervision, Working Paper "Potential Modifications to the Committee's proposals", Bank for International Settlements, November 2001.

[4] Basel Committee on Banking Supervision, Quantitative Impact Study 3 Technical Guidance, Bank for International Settlements, October 2002. Paragraph 381.

Operational Risk

In addition to its credit risk reforms, Basel II also focuses on Operational Risk – the risk of breakdowns in systems and people. While a more refined approach to credit risk has considerable merit, the proposed quantification of Operational Risk is, in my view, ill considered, wasteful and possibly counterproductive. It would be great to quantify and control all such risks with statistical methods; however there are fundamental reasons why Operational Risk will be difficult to measure in this way. Consider a comparison of Operational Risk to credit risk.

- In credit risk, we can measure our positions and maximum loss precisely. We create exposures only when we choose to, and so we know how much exposure we have.
- We can estimate the risk of each position via credit ratings or other techniques, and test these against a long history of how those ratings behave in different environments.
- Lastly there is market pricing for credit risks, so we have price signals to back up these estimates.

When you add all this up, I think there is real substance behind taking a more advanced approach in measuring credit risk. While it would be desirable to quantify Operational Risk in a similar fashion, it simply does not share any of the properties that help measure credit risk. Nobody "chooses" to have more fraud risk or more IT risk, and it is difficult to estimate what the maximum loss might be or how likely they are. It is difficult, if not impossible, to predict the risk of disasters and acts like the 9/11 tragedy, but that is what this part of the reform attempts to do.

In fact, I have yet to see anything substantial that suggests that Operational Risk is measurable in a way that is similar to market or credit risk. There have been insistent demands for "progress", and a "scientific approach", suggesting that the problem could be solved if we just tried a bit harder. Many of these efforts focus on trying to find small areas, such as processing losses that happen to be susceptible to statistical techniques, and trying to extrapolate these results to cover all other risks. But these issues are not generally relevant to major risks, such as fraud, a changing legal environment, or a major disaster. Operational Risk in capital terms is the risk of being fundamentally surprised. Yet it is difficult to predict and measure what you don't expect.

I am a model-oriented, technical person by training, but I do not want to be forced to rely on a model that is built on fundamentally flawed assumptions. I am highly skeptical that the intellectual foundations for this can be built on solid ground.

Basel II and other regulatory initiatives will push banks to spend a lot of money on Operational Risk systems and loss databases, but I personally feel that much of that money will be wasted. In fact, we may be creating a real danger – creating a false sense of security that we have measured Operational Risk and hence controlled it. I worry that we will all be a bit embarrassed if this emperor is shown to have no clothes.

Recent information from the Basel Committee has been somewhat encouraging in this area – it suggests an increased degree of flexibility in Operational Risk calculations[5]. I am hopeful that this will bear out through the final Basel drafting as well as through national implementation. But we will still have a long way to go, and I am concerned that we are likely to see some backsliding into prescriptive black-letter rules when regulators have to develop specific requirements for model approval.

---

[5] Basel Committee on Banking Supervision, Quantitative Impact Study 3 Technical Guidance, Bank for International Settlements, October 2002.

Pillar III – Disclosure Rules

One of the strengths of the Basel II proposals is that they look beyond just calculating and maintaining capital levels. In designing Basel II, regulators realized that capital requirements– the so-called "Pillar I" - could never ensure the safety and soundness of the banking system alone. They understood that ultimately it is more important to encourage constructive relationships between financial institutions, their supervisors and the market to produce good risk management. This reasoning, which has the strong support of the banking industry, has lead to the creation of the two qualitative Pillars of the Basel Accord: Pillar II (Supervisory Review) and Pillar III (Market Discipline).

The concepts behind the proposed rules for Pillar II and III are well accepted by the industry and regulators alike. However, many of the detailed proposals are cause for alarm in the industry, particularly in the Pillar III market disclosures section. Unfortunately, the development of Pillar III is an area where there has been little genuine consultation between the industry and the regulators, in contrast to Pillar I. I believe the proposals reflect this in a somewhat one-sided view of the risk profiles of financial institutions and the needs of their stakeholders.

We currently publish approximately 20 pages of risk information in our annual report, and we support transparency and disclosure as very worthwhile goals. The Pillar III proposals would add a large mass of additional disclosure which are highly technical in nature and which we believe will be of little benefit to the reader. We estimate that they would add another 20 to 30 pages to our annual report, more than doubling the current weight of disclosure on risk. Indeed, few people are able to digest all of the information that is already presented on risks, but now this information will could be lost in a deeper, more technical pile of data. The additional requirements proposed under Pillar III are more likely to confuse than illuminate.

Of particular concern are the numerous required disclosures that relate directly to the capital calculations performed within Pillar I. Instead of disclosing measures of risk used in internal risk management systems, these disclosures fix an explicit regulatory capital view of risk. In the most complex areas, such as asset securitization, these disclosures will surely be

mystifying to all but the most expert audiences. Moreover, given the likely longevity of the Basel II Accord (the current Accord is in its 14th year), there is a need to ensure risk management practice is able to mature beyond the concepts now embedded in the Basel II proposals.

Just as the market has moved beyond the current accord, there will inevitably come a time when some Pillar I calculations are no longer regarded as good measures of risk for all products. In that case, it must be possible for banks to alter disclosures to represent emerging best practices. Under Pillar III as currently proposed, banks will likely find themselves constrained to disclosing risks under a system that is no longer wholly relevant.

In designing the details of Pillar III, the Basel Committee has placed too much emphasis on quantity, rather than quality, of disclosure. It is emphasizing consistency by prescription instead of consensus. The Committee has ignored the successes of market consensus in recent years. For example, the demands of the market have produced broadly comparable and largely voluntary disclosures of market risk by banks. This is an example of how Pillar III should work. It would be more effective if Pillar III established a general set of principles, and then allowed the discipline of the market to produce continuous improvement in risk disclosure. This would produce information that the market actually desires, rather than seeking to impose today's ideas on future market participants by fiat.

Summary

We are at an important crossroads in the reform effort. A lot of good hard work on designing the framework and gaining political consensus has been accomplished. We have a high regard for the efforts of the Committee, and CSFB has tried to contribute to that discussion in a constructive manner. But unless the current edifice can be significantly streamlined, we risk that this project will be seen as a step back rather than a step forward.

Simplifying the massive weight of detailed rules in Pillar I will require much discipline in the next round of drafting. It is always easier to accept a bit more complexity to address specific issues as they come up, but that approach eventually leaves you with a very complicated, costly, and potentially out-of-date system.

It will also require a strong emphasis on the "spirit" of the rules when these rules move to the implementation phase with national regulators. If these rules are interpreted as black-letter regulations, each to be set to a highly technical audit standard, the costs of implementation will be high. Such an approach would mean the calculations would also become increasingly outdated and less relevant to good risk management over time. We can hope that all national regulators will avoid this pitfall, but as an international bank, we will still have to conform to the standards set by the strictest and most literal of our major regulators.

As a final comment, I believe that much more can be accomplished by increasing the emphasis on the concepts of Pillar II and Pillar III, and a focus on principles, rather than formulae. We should reduce reliance on the complex formulae of Pillar I and the overly prescriptive elements of the other pillars. This approach would not only help address "complexity, cost and adaptability", but could also help address the issues of Operational Risk and pro-cyclicality.

Pillars II and III have real people on the other side – regulators and the market. Real people can adapt to changes and new markets more easily than a rulebook can. These pillars, properly applied, also put the burden back where it should be – on the shoulders of bank management to demonstrate to the regulators and the public that they are doing a good job. That

is in the spirit of the Sarbanes-Oxley reforms, and I think it is a smart, durable way to improve discipline.

Lastly, it should also make the new system more responsive to change and therefore more relevant over time. Without these added benefits, I am afraid we might have to start work on a Basel *III*, well before we have had a chance to recover from the current effort.

Thank you.

Appendix 1. Example of complexity in the proposed Basel rules

The below is a summary of the proposed formula (the "Supervisory Formula" or SFA) for calculating capital for asset securitizations[6]. This formula applies to certain securitizations; in addition the rules specify at least three sets of risk weights based on credit ratings which must be used in certain other circumstances; these are not shown.

- Capital calculation under the SFA
  - For a securitization tranche of *support L* (the total notional of more junior tranches) and *thickness T*:

$$\text{Capital} = S(L+T) - S(L)$$

  - where

$$S(L) = \begin{cases} L & L \le K_{IRB} \\ K_{IRB} + K(L) - K(K_{IRB}) + d.K_{IRB}/\omega(1-e^{\omega(1-L/K_{IRB})}) & K_{IRB} < L \le L^* \\ S(L^*) + (L-L^*)\times floor & L^* < L \end{cases}$$

  - where

$$K(L) = (1-h)(1-B_{a,b}(L))L + B_{a+1,b}(L)c$$

Cumulative beta distribution functions

  - and

$$a = g.c$$
$$b = g.(1-c)$$
$$c = K_{IRB}/(1-h)$$
$$d = 1-(1-h)B_{a,b}(K_{IRB})$$
$$h = (1-K_{IRB})^N$$
$$f = \frac{v+K_{IRB}^2}{1-h} + \frac{K_{IRB}(1-K_{IRB})-v}{(1-h)\tau}$$

$$N = \Big(\sum_{\text{assets in pool}} EAD\Big)^2 / \sum_{\text{assets in pool}} EAD^2$$
$$LGD = 45\%$$
$$v = \frac{K_{IRB}(LGD-K_{IRB}) + \frac{1}{4}(1-LGD)K_{IRB}}{N}$$
$$g = \frac{(1-c)c}{f} - 1$$

- Significance of the parameters
  - K_{IRB} is the on-balance sheet total pool capital charge as a % of pool notional.
  - *N* is the "effective" number of assets in the pool.
  - *LGD* is average loss given default estimate for the pool; = 45% in foundation IRB approach.
  - ω is present to give a continuous marginal rate of capital. τ is present to account for "uncertain loss prioritization" These parameters will be ω = 20 and τ = 1000 per WPII, November 2002.

[6] Basel Committee on Banking Supervision, Quantitative Impact Study 3 Technical Guidance, Bank for International Settlements, October 2002. Paragraph 573.