DOWN THE ROAD TO PERDITION: HOW THE FLAWS OF BASEL II LED TO THE COLLAPSE OF BEAR STEARNS AND LEHMAN BROTHERS

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"For the last two decades, the Basel Committee keeps coming back to the same basic question: How much bank capital is enough?"[1]

- FDIC Chairman, Sheila Bair

I. INTRODUCTION

It is often said that a wise farmer should "never let a fox guard the henhouse." Echoing such sentiments, the U.S. FDIC Chairman, Sheila Bair, warned, "There are strong reasons for believing that banks left to their own devices would maintain less capital, not more, than would be prudent. . . . In short; regulators can't leave capital decisions totally to the banks. We wouldn't be doing our jobs or serving the public interest if we did."[2] Chairman Bair made these comments in response to the proposed U.S. adoption of the 2004 Basel Accord (Basel II), which allows banks to develop statistical models for quantifying their individual capital requirements.[3] Despite Chairman Bair's cautionary words, the U.S. Securities and Exchange Commission (SEC) became the first Federal agency to adopt the Basel II framework in late 2004.[4]

Under heavy pressure from broker-dealers such as Lehman Brothers the SEC adopted the Basel II framework through its Consolidated Supervised Entity (CSE) program.[5] At its inception, the CSE program had

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[1] Sheila Bair, Chairman, Fed. Deposit Ins. Corp., Remarks at the 2007 Risk Management and Allocation Conference (June 25, 2007) (transcript available at Factiva) [hereinafter Sheila Bair, Remarks].

[2] *Id*.

[3] *Id*. ("When will the Americans finish the rule? . . . . We are working on it. We want a consensus on appropriate safeguards that will allow our banks to implement Basel II.").

[4] *See* SEC Alternative Net Capital Requirements for Broker-Dealers, 17 C.F.R. § 240 (2009) [hereinafter Alternative Net Capital Rule].

[5] *See* Alternative Net Capital Rule, *supra* note 4; Letter from Joseph Polizzotto, Gen. Counsel, Lehman Brothers, Inc., to Jonathan G. Katz, Sec'y, U.S. Sec. & Exch. Comm'n (Mar. 8, 2004), *available at* http://edgar.sec.gov/rules/proposed/s72103/lehmanbrothers03082004.htm. [hereinafter Lehman Brothers

seven participants: Bear Stearns, Goldman Sachs, Lehman Brothers, Merrill Lynch, Morgan Stanley, JP Morgan, and Citigroup.[6] In particular, Lehman Brothers championed the CSE program as generally increasing competitiveness and aligning U.S. regulations with the European Union.[7] Fundamentally, these broker-dealers assured regulators that despite capital requirements being calculated internally, adequate risk-management policies and advanced statistical modeling would ensure that proper levels of capital would be maintained.

Despite the promise of the CSE, by March of 2008 three of the five participating firms had at least $30 of debt to every $1 in assets.[8] Such ratios are far in excess of the SEC's standard limit of $15 in debt to every $1 in assets.[9] Yet, even in the face of such alarming levels of leverage, the broker-dealers continued to assure the markets that they were in compliance with the CSE standards. On March 11th, three days before the collapse of Bear Stearns, SEC Chairman, Christopher Cox, stated that he had "a good deal of comfort" about the capital cushions being maintained by CSE participants.[10] Despite such assurances, by the end of September 2008 all but two of the original CSE participants had dissolved or been acquired.[11] More alarmingly, September 15th, 2008, the day Lehman

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Letter] ("Lehman Brothers applauds and supports the Commission in establishing a voluntary alternative method of computing net capital for certain broker-dealers. . . .").

[6] U.S. SEC. & EXCH. COMM'N OFFICE OF INSPECTOR GEN., SEC'S OVERSIGHT OF BEAR STEARNS AND RELATED ENTITIES: THE CONSOLIDATED SUPERVISED ENTITY PROGRAM iv, Report No. 446-A at iv (September, 2008) [hereinafter OIG Report].

[7] *See* Lehman Brothers Letter, *supra* note 5.

[8] Ben Protess, *Flawed SEC Program Failed to Rein in Investment Banks,* PROPUBLICA, Oct. 1, 2008, http://www.propublica.org/article/flawed-sec-program-failed-to-rein-in-investment-banks-101.

[9] OIG Report, *supra* note 6, at ix.

[10] Boyd Erman, *The Fed Rushes in as Wall Street Teeters,* GLOBE AND MAIL (Toronto), Mar. 12, 2008, at B1.

[11] Robert Schroeder, *Goldman, Morgan to Become Holding Companies: Companies get Access to Fed Lending in Exchange for Oversight*, MARKETWATCH, Sept. 21, 2008, http://www.marketwatch.com/story/goldman-sachs-morgan-stanley-to-become-bank-holding-companies. The remaining two firms, Goldman Sachs and Morgan Stanley applied to be bank holding companies, which effectively removed them from SEC oversight. *Id.*

Brothers filed for bankruptcy, surpassed 9/11 as the costliest day in Wall Street's history.[12]

Such events make Chairman Bair's words seem prophetic. The public is still left wondering what happened, and how regulators could have been so wrong? In an attempt to answer these questions, this Note will investigate the flaws of Basel II's capital requirements by examining the collapse of the investment banks Bear Stearns and Lehman Brothers.

Section II will discuss the relevant background and underlying principles of capital regulation. This information will lay the foundation for understanding how the Basel Accords operate. After establishing these basic principles, section III will outline the regulatory frameworks of the Basel I and Basel II accords. Next, section IV will explore how the U.S. Securities and Exchange Commission (SEC) applied the Basel II standards to investment banks and how the SEC rule contributed to the collapse of Bear Stearns and Lehman Brothers. Connected to the collapse of Bear Stearns and Lehman Brothers, section V will explore how the SEC failed to fulfill its regulatory obligations under the Basel II framework and how global regulators can avoid similar mistakes. Finally, this Note will conclude by recommending that global financial regulators reconsider the adoption of the advanced approach in light of the recent financial crisis, and return to a simpler form of regulation.

II. CONCEPTUAL FOUNDATIONS FOR THE REGULATION OF FINANCIAL INSTITUTIONS

A. WHY WE REGULATE INVESTMENT BANKS

In their simplest form, investment banks are financial intermediaries that pool money raised from investors, and invest that money in securities ranging from corporate stocks and bonds to mortgage-backed securities.[13] However, unlike depositors in a commercial bank, investors in an investment bank are not guaranteed a specific return and can theoretically lose their entire investment in the company.[14] In return for this additional risk, investment banks offer portfolios with a far broader range of investments and thus, rewards, than traditional commercial bank deposits.

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[12] Niall Ferguson, *The Descent of Finance*, HARV. BUS. REV., Jul. 1, 2009, http://hbr.org/2009/07/the-descent-of-finance/ar/1.

[13] RICHARD SCOTT CARNELL ET AL., THE LAW OF BANKING AND FINANCIAL INSTITUTIONS 555 (Vicki Been et al. eds., 4th ed. 2009).

[14] *Id*.

Some argue that investment banking is nothing more than a for-profit business similar to any other commercial enterprise.[15] As a result, the advocates of this position assert that investment banks should be subject to the same regulatory oversight as any other business.[16] Such oversight is often relaxed or entirely nonexistent. Nonetheless, every nation in the world subjects investment banks to some form of advanced regulatory supervision.[17] What is the reason for such regulation?

In 1911, Justice Rousseau Angelus Burch provided a clairvoyant answer when he described the economic role of banks as being "indispensible agencies through which the industry, trade and commerce of all civilized countries and communities are now carried on."[18] Though Justice Burch was specifically referring to commercial banks, his logic applies to investment banks as well. At the beginning of 2008, investment banks held assets in excess of $13 trillion (23% of total U.S. household financial assets).[19] Given investment banks' prominent role in creating and maintaining wealth, it should be of little surprise that the proper functioning of the investment banking industry is in the interest of every nation. Like the failure of a commercial bank, the failure of an investment bank carries greater significance than the failure of most other commercial enterprises. Not only does an investment bank's failure destroy the wealth of its investors, it erodes the public's confidence in the financial system as a whole, which reduces the flow of credit and, thus, commerce.[20] Accordingly, in order to preserve the flow of commerce and protect the wealth of households, nations impose regulations that seek to minimize an investment bank's exposure to a variety of risks.[21]

Today, financial regulatory schemes are based on several primary principles. First, regulators control entry into the banking industry through

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[15] PETER WALLISON, WHY DO WE REGULATE BANKS*?* 2 (Am. Enter. Inst., August, 2005) a*vailable at* http://www.aei.org/docLib/20050729_18781FSOAug05_g.pdf.

[16] *Id.*

[17] For list of nations, *see* INTERNATIONAL MONETARY FUND, REPORTS ON THE OBSERVANCE OF STANDARDS AND CODES, available at http://www.imf.org/external/np/rosc/rosc.asp?sort=topic#BankingSupervision (last visited May. 2, 2010) [hereinafter Observance Standards].

[18] Schaake v. Dolley, 118 P. 80, 84 (Kan. 1911).

[19] CARNELL ET AL., *supra* note 14.

[20] *Id*.

[21] L. Jacobo Rodriguez, *International Banking Regulation: Where's the Market Discipline in Basel II?,* POLICY ANALYSIS, Oct. 15, 2002, at 3, *available at* http://www.cato.org/pubs/pas/pa455.pdf.

the issuance of licenses and impose penalties on institutions that fall out of compliance with the requirements of entry.[22] Second, regulators generally impose capital requirements that force banks to hold minimum levels of money in reserve.[23] Finally, regulators attempt to impose market discipline on the financial industry through the public disclosure of financial information, which permits investors and depositors to assess the risk associated with a particular bank.[24] This Note is primarily concerned with the second principle, minimum capital requirements.

B. THE DEFINITION OF CAPITAL

When regulators refer to a bank's capital they are referring to the "financial cushion that depository institutions maintain to shield themselves from unanticipated losses."[25] In its simplest terms, capital is the amount by which financial institution's assets exceed the institution's total liabilities.[26] Core capital primarily consists of retained earnings and shareholder's equity.[27] It is a generally accepted principle of financial regulation that the larger a financial institution's capital, the more likely the institution will be able to repay its investors and avoid failure.[28] In addition, forcing financial institutions to hold a minimum level of capital helps incentivize reasonable risk-taking on the part of the company's shareholders.[29]

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[22] RESERVE BANK OF INDIA DEPARTMENT OF BANKING SUPERVISION, CORE PRINCIPLES OF EFFECTIVE BANKING SUPERVISION, §§ 1-2 (1999) (Discussing the essential elements of an effective regulatory system and licensing as core principles of banking regulation), *available at* http://www.rbi.org.in/upload/publications/pdfs/10115.pdf.

[23] *Id*. at § 3 (discussing capital requirements as core principles of banking regulation).

[24] *Id.* at § 5 (discussing the disclosure of financial statements as a core principle of banking regulation).

[25] PATRICIA MCCOY, BANKING LAW MANUAL: FEDERAL PRUDENTIAL REGULATION OF BANKS AND THRIFTS § 6.03 (Matthew Bender & Co. 2009).

[26] Capital is the "net worth of a business; that is, the amount by which its assets exceed its liabilities." InvestorWords.com, Capital, http://www.investorwords.com/694/capital.html (last visited April 12, 2011).

[27] Equity Capital is "[i]nvested money that, in contrast to debt capital, is not repaid to the investors in the normal course of business. It represents the risk capital staked by owners through purchase of the firm's common stock." Businessdictionary.com, Equity Capital, http://www.bis.org/press/p981027.htm (last visited Feb. 26, 2011).

[28] CARNELL ET AL., *supra* note 13, at 252.

[29] MCCOY, *supra* note 25.

The simplest form of capital regulation is called a "debt-to-capital ratio." For investment banks, the debt-to-capital ratio represents the ratio of total debt to total equity capital. A higher ratio indicates that the investment bank has more risk associated with its portfolio of investments.[30] For instance, suppose that an investment bank has $310 in assets, $300 in debt, and $10 in equity capital ($310 in assets - $300 in debt). By dividing total debt by total equity capital we arrive at a leverage ratio of 300/10 or 30-to-1. However, this simple measure of an investment bank's capital adequacy assumes that all assets are equally suited to providing an effective capital cushion. This assumption fails to account for each asset's level of risk and risk of default. To solve this obvious flaw, financial regulators developed "risk-adjusted" capital standards.[31]

C. RISK-ADJUSTED CAPITAL STANDARDS

To adequately account for each individual asset's unique risk profile, international financial regulators employ "risk-adjusted capital standards." This type of capital adequacy standard, pioneered in the 1988 Basel Accord (Basel I), requires that banks hold a level of capital commensurate with an asset's credit risk.[32] For instance, would you rather place your money in a bank that maintains investments in U.S. Treasury bonds or commercial bonds? Naturally, one favors the bank that invests in U.S. Treasury bonds because U.S. sovereign debt is backed by the full faith and credit of the American people. Similarly, banking regulators need to make judgments about the stability and value of a bank's assets when calculating the appropriate level of capital that should be held. In the above scenario the bank investing in U.S. Treasury bonds would be required to hold no additional capital, while the bank investing in commercial bonds would be required to hold a more capital in reserve.

This discrepancy results from the varying level of confidence that regulators have in the stability of the underlying asset. Since the bank's investment in Treasury bonds has few risks and a relatively stable value, regulators have a great deal of confidence that such an asset will act as an effective financial cushion to absorb a bank's unanticipated losses.

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[30] *Id*.

[31] *See generally* BASEL COMMITTEE ON BANKING REGULATIONS AND SUPERVISORY PRACTICES, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (1988), *available at* http://www.bis.org/publ/bcbsc111.pdf?noframes=1 [hereinafter BASEL I].

[32] *Id*. at 7-8.

However, the bank's investment in commercial bonds is inherently more risky. Commercial bonds are susceptible to interest rate fluctuations, the creditworthiness of the debtor company, and a host of other issues that threaten their stability and valuation. As a result of this additional uncertainty, regulators have significantly less confidence in the commercial bonds acting as an effective financial cushion. Accordingly, the primary result of employing risk-adjusted capital standards is to force banks with riskier portfolios of assets to hold larger amount of capital in reserve.[33]

III. THE DEVELOPMENT OF INTERNATIONAL BANKING REGULATION

A. BASEL I

In 1988, the Basel Committee on Banking Supervision (Basel Committee) completed the Basel I accord, which establishes a framework for measuring capital adequacy for internationally active banks.[34] Basel I, which has since been adopted by more than 100 countries, was developed in response to several financial crises during the 1980's.[35] The goal of Basel I is to stabilize the global banking system through uniform capital adequacy standards and to reduce regulatory competition by establishing common regulations for all banks.[36] Basel I accomplishes these goals by utilizing a risk-adjusted capital framework, focusing on the measurement of a bank's capital adequacy in relation to its credit risk.[37] Basel I was later amended to also account for market risk.[38] At the heart of Basel I is a three-step process: 1) determining total capital 2) determining risk-weighted assets; and 3) determining the risk-adjusted capital ratio.[39]

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[33] *See* MCCOY, *supra* note 26.

[34] BASEL I*, supra* note 31.

[35] RODRIGUEZ, *supra* note 21, at 7.

[36] BASEL I, *supra* note 31, at 1 ("[T]he new framework should serve to strengthen the soundness and stability of the international banking system; and…have a high degree of consistency in its application to banks in different countries with a view to diminishing an existing source of competitive inequality amount international banks.").

[37] *Id*. at 8.

[38] W. Ronald Gard, Article, *George Bailey in the Twenty-First Century: Are we Moving to the Postmodern Era in the International Financial Regulation with Basel II?*, 8 TENN. J. BUS. L. 161, 183 (2006).

[39] CARNELL ET AL., *supra* note 13*,* at 259-65 (discussing three phase process for calculating a bank's capital adequacy).

1. Total Capital: Tier 1 and Tier 2

Since not all forms of capital provide an effective cushion against losses, Basel I divides a bank's total capital into two tiers.[40] Tier 1 (Core) capital is the preferred form of capital and consists of common equity shares, non-cumulative preferred shares, and holdings in consolidated subsidiaries.[41] Because of its preferred status, regulators require that 50% of a bank's capital requirements be satisfied with Tier 1 assets.[42] Tier 2 (Supplementary) capital accounts for all other non-preferred forms of capital.[43] Tier 2 capital commonly includes hybrid capital instruments, subordinated debt, and general loan-loss reserves.[44]

Using these tiers, Basel I establishes limits and restrictions on the composition of a bank's total capital. Most prominently, Basel I limits Tier 2 capital to 100 percent of Tier 1 capital.[45] In other words, if a bank has $500,000 in Tier 1 capital and $1 million in Tier 2 capital, the bank's total capital can only be $1 million ($500,000 in Tier 1 capital and $500,000 in Tier 2 capital). Additionally, Basel I limits subordinated debt to 50 percent of Tier 1 capital.[46] For instance, if a bank has Tier 1 assets of $500,000 and subordinated debt of $1 million, the bank's total capital cannot exceed $750,000 ($500,000 in Tier 1 capital and $250,000 in subordinated debt). After appropriately sorting a bank's assets and applying the requisite restrictions, a bank's total capital can be determined by simply adding Tier 1 to Tier 2.[47]

2. Risk-Adjusted Assets

Next, Basel I values a bank's "risk-adjusted assets" by dividing a bank's total assets into four broad categories or "buckets."[48] Each bucket is assigned a specific conversion factor or "risk-weight" that is tied to the

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[40] *See* BASEL I, *supra* note 31, at 3-7 (discussing the constituent elements of capital).

[41] *Id.* at 14-15.

[42] *Id.* at 3-4.

[43] *Id.* at 4-6.

[44] *Id.* at 14.

[45] BASEL I, *supra* note 31, at 14.

[46] *Id.*

[47] *Id.*

[48] RODRIGUEZ, *supra* note 21, at 8.

credit risk associated with the assets contained in each category.[49] Specifically, the four buckets and their associated risk-weights are: 1) cash and government securities-0 percent; 2) interbank claims-20 percent; 3) debt secured by real property-50 percent; and 4) all other obligations, including corporate debt-100 percent.[50] Once a bank's total assets have been appropriately sorted into the above categories, the dollar value of each category is multiplied by the conversion factor.[51] The resulting dollar amounts represent the risk-weighted asset value for each category. For instance, if a bank has $100,000 in mortgages (debt secured by real property), the risk-weighted value of those mortgages is $50,000 (100,000 multiplied by the conversion factor of 50 percent).

In addition, Basel I also provides mechanisms for drawing otherwise off-balance-sheet obligations, such as letters of credit, into total risk-adjusted assets for purposes of capital adequacy.[52] Once again, off-balance sheet obligations are grouped into the same four buckets, and multiplied the by the conversion factors: 0 percent, 20 percent, 50 percent, and 100 percent.[53] By summing the risk-weighted value of categories 1-4 we can calculate a bank's total risk-weighted asset value.

3. Risk-Adjusted Capital Ratio

Finally, Basel I sets the ratio of minimum capital to risk-weighted assets at 8 percent,[54] of which Tier 1 capital must be at least 4 percent.[55] For instance, if a bank has total risk-weighted assets of $100,000, the bank would be required to hold a minimum of $8,000 in capital ($100,000 x .08). At least $4,000 of the $8,000 capital charge would need to be Tier 1 capital ($100,000 x .04). However, Basel I assumes that national bank regulators will require banks to operate with capital levels in excess of the 8 percent

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[49] *Id.*

[50] *Id.* at 8 tbl. 1.

[51] *Id*. at 8.

[52] BASEL I, *supra* note 31, at 19.

[53] *Id.* at 25 ("Once the bank has calculated the credit equivalent amounts, whether according to the current or the original exposure method, they are to be weighted according to the category of counterparty in the same way as the main framework…").

[54] *Id.* at 13.

[55] *Id.*

minimum.[56] Internationally active banks had until 1992 to bring their capital reserves into compliance with this ratio.[57]

4. Criticisms of Basel I

While Basel I represents an elegantly simple way of calculating a bank's risk-adjusted capital, the accord has been plagued by problems.[58] First, the use of broad risk categories and risk-weights incorrectly assumes that all assets within a single category are equally risky.[59] For instance, under Basel I the government bonds of Greece are assumed to be equally as risky as the government bonds of the United States.[60] As the current sovereign-debt crisis in Greece demonstrates, it is not only imprudent, but incorrect to assume that the same level of risk is associated with each individual asset in a particular risk group. Additionally, Basel I's broad-brush risk categories encourage banks to invest in riskier assets within a given risk category.[61] For instance, since all mortgages have a .50 risk-weight,[62] banks have an incentive to hold riskier (higher paying) mortgages without holding a commensurate amount of additional capital. These limitations were of great concern to global regulators who feared that the Basel I framework had not adequately accounted for the riskiness of a bank's assets.[63] As a result, the Basel Committee began work on a revised capital adequacy framework in 1999.[64]

B. BASEL II

In an effort to correct the pitfalls of Basel I, the Basel Committee released a revised capital adequacy framework known as Basel II in 2004.[65]

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[56] *Id.* at 2.
[57] Gard, *supra* note 38, at 178.
[58] RODRIGUEZ, *supra* note 21, at 9.
[59] *Id.*
[60] *Id.*
[61] *Id.* at 10.
[62] *Id.* at 8 tbl. 1.
[63] *Id.* at 11.
[64] *See generally* BASEL COMMITTEE ON BANKING SUPERVISION, A NEW CAPITAL ADEQUACY FRAMEWORK (June 1999) http://www.bis.org/publ/bcbs50.htm; *see also* MCCOY, *supra* note 26.
[65] *See generally* BASEL COMMITTEE ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL

The new accord is based on three pillars: I) minimum capital requirements for credit risk, market risk, and operation risk; II) Guidelines for effective supervisory review; and III) market discipline through enhanced public disclosures about capital adequacy.[66] This Note will primarily focus on how Pillars I and II contributed to the collapse of Bear Stearns and Lehman Brothers.

Though Basel II represents a significant departure from Basel I, key elements of Basel I were retained.[67] For instance, Basel II still utilizes risk-adjusted capital standards, the 8 percent capital ratio, and the classification of capital into Tier 1 and Tier 2.[68] However, Basel II does introduce significant changes to how the risk may be calculated under Pillar I.[69] In an effort to correct the "one size fits all" approach of Basel I, Basel II sets up two approaches to calculating a bank's minimum capital requirement, the "standardized approach" and the "advanced approach."[70]

1. Pillar I: The Standardized and Advanced Approaches

The standardized approach is best understood as a modified version of the basic risk-adjusted capital requirements in Basel I. The Basel Committee decided to leave this approach intact as an option for banks that may not be able to comply with the significantly more complex advanced approach.[71] Under the standardized approach, the concept of sorting assets into risk categories or "buckets" remains, but the number of buckets is increased.[72] Additionally, the standardized approach now forces banks to take a standard capital charge to account for market risk.[73] Finally, the standardized approach ties the risk-weights assigned to each "bucket" to the external credit-rating of the borrower as issued by companies such as Standard & Poor's.[74] By tying the risk-weight to the market-based credit

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STANDARDS: A REVISED FRAMEWORK, COMPREHENSIVE VERSION (June 2004) http://www.bis.org/publ/bcbs107.pdf?noframes=1 [hereinafter BASEL II].

[66] *Id.* at 2.

[67] MCCOY, *supra* note 25 at § 6.03[2].

[68] *Id.*

[69] *Id.*

[70] BASEL II, *supra* note 66, at 15, 48; MCCOY, *supra* note 26 at § 6.03[2].

[71] MCCOY, *supra* note 25, at § 6.03[2]a.

[72] BASEL II, *supra* note 66, at 15, 23 (discussing individual risk categories and associated risk-weights); MCCOY, *supra* note 25, at § 6.03[2]a.

[73] MCCOY, *supra* note 25, at § 6.03[2]a.

[74] BASEL II, *supra* note 65, at 19-27 (discussing the assessment of credit risk using the ratings from "external credit assessment institutions").

ratings, it is hoped that banks will be less inclined to engage regulatory arbitrage.[75]

By making these modifications, the Basel Committee hoped to correct the problems of Basel I and preserve the basic risk-adjusted capital framework for the banks that chose to utilize it. However, for the largest internationally active banks the Basel Committee developed a far more complex form of capital adequacy standards aimed at providing banks with great flexibility.[76]

The Basel Committee's goal in developing the advanced approach was to give weight to the qualitative differences in banks' [risk management] choices.[77] The advanced approach permits the largest internationally active banks to estimate their own levels of risk or "risk-weights" by utilizing their own internal value at risk (VaR) statistical models.[78] The advanced approach is based on the assumptions that banks are better informed about their own risk profiles than regulators, and that banks have a natural incentive to avoid undue losses.[79] It was hoped that the additional flexibility provided by the advanced approach would help banks realize more consistent profits through improved capital deployment.[80]

i. Understanding the Value at Risk Statistical Model

Value at risk models (VaR) "measure the risk of a portfolio of assets by estimating the probability that a given loss might occur."[81] Put differently, VaR models tell us that there is an X percent probability that a portfolio will lose more than X dollars over a certain period of time.[82] Under Basel II, banks using the advanced approach are required to develop

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[75] MCCOY, *supra* note 25, at § 6.02[2]a.

[76] THE FEDERAL RESERVE, CAPITAL STANDARDS FOR BANKS: THE EVOLVING BASEL ACCORD 398 (Sept. 2003) http://www.federalreserve.gov/pubs/bulletin/2003/0903lead.pdf [hereinafter *FRB Capital Standards*].

[77] Gard, *supra* note 38, at 189.

[78] *See* BASEL II, *supra* note 65, at 48-112 (discussing the mechanics and requirements of the "internal ratings-based approach").

[79] MCCOY, *supra* note 26, at § 6.03[2]b.

[80] Gard, *supra* note 38, at 189-90.

[81] *The Risks of Financial Modeling, VaR and the Economic Meltdown: Hearing before the Subcomm. on Investigations & Oversight,* 111th Cong. 59 (Sept. 2009) (Statement of Richard Bookstaber, Risk Manager, Bridgewater Associates) [hereinafter *Risks of Financial Modeling*].

[82] *Id.*

VaR models that have a confidence levels of 99 percent, meaning that the model is incorrect only 1 percent of the time.[83] To construct a basic VaR model a risk-manager would take the following steps: 1) identify all the assets held in a portfolio; 2) obtain the daily returns for each individual asset for the past 250 trading days (one year); 3) aggregate the returns for each individual asset to obtain the return for the entire portfolio over the past 250 trading days; 4) order the daily portfolio returns from highest to lowest to develop an estimate of the daily value at risk at the 99 percent confidence level, and 5) smooth the results by fitting the returns to the Normal distribution function and incorporating additional risk variables.[84]

However, like all mathematical equations, VaR models have limitations. For instance, a properly constructed VaR model needs to include variables that account for the probability of inherent risks, such as the risk of default.[85] A failure to input such variables or to input correct probabilities can result in an ineffective model that permits a financial institution to make imprudent investment choices. Additionally, VaR models are dependent upon the assumption that the past trading history for an asset is a reasonable representation of how the asset will trade in the future.[86] For instance, if the 250 trading day sample only includes a positive trading cycle, a very low probability of decline will be included in the model's predictions. Additionally, since VaR models operate at the 99% confidence level there is still a 1% chance that the model is completely incorrect.[87] A huge limitation of the VaR model is that it does not tell you whether the 1% represents a catastrophic or minor market event.[88] Thus, one should not be lulled into a false sense of security by the fact that VaR models employ advanced statistics. The quality and accuracy of VaR models will inevitably vary based on the quality of the inputs and those constructing it.

2. Pillar 2: Supervisory Review

Pillar 2 of the Basel II accord outlines four supervisory principles to guide regulators in participating countries.[89] The guidelines are meant to

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[83] *See* BASEL II, *supra* note 65, at 73.

[84] *Risks of Financial Modeling, supra* note 81.

[85] *Id*. at 59-60.

[86] *Id.* at 60.

[87] Joe Nocera, *Risk Mismanagement*, N.Y. TIMES, Jan. 4, 2009, at MM24.

[88] *Id.*

[89] *See* BASEL II, *supra* note 65, at 158-72 (Discussing the supervisory review process).

ensure that all regulators require that, "banks have adequate capital to support all the risks in their business… [and] to encourage banks to develop and use better risk management techniques in monitoring and managing their risks."[90]

The four principles are that: 1) banks should have a process for assessing their overall capital in relation to their risk profile and strategy for maintaining their capital levels; 2) regulators should review and evaluate banks' internal capital adequacy assessments and strategies as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Regulators should take appropriate action if they are not satisfied with the results of this process; 3) regulators should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum; and 4) regulators should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of the particular bank.[91]

The principles on supervisory review are an important aspect of achieving the uniform implementation of the accord. Such guidelines are necessary, because Basel II gives each member nation latitude in determining how to implement the framework.[92] In addition, the added regulatory complexity of Basel II requires adequate supervision in order to compensate for the added flexibility given to banks.[93] As the recent financial crisis has shown us, without proper regulatory oversight, risk-models can be approved without proper inspection and banks may be allowed to dip below minimum capital requirements before enforcement action is taken.

C. THE CONSOLIDATED SUPERVISED ENTITY PROGRAM

In 2003, the European Union (EU) issued the Financial Conglomerates Directive, which required that financial conglomerates operating with the EU be supervised by either EU financial regulations or

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[90] *Id.* at 158.

[91] *Id.* at 159-65 (discussing the "four key principles of supervisory review"); Rodriguez, *supra* note 21, at 14.

[92] *Id*. at 2 ("[T]he framework also allows for a limited degree of national discretion in the way in which each of these options may be applied, to adapt the standards to different conditions of national markets.").

[93] Erik F. Gerding, *Code, Crash, and Open Source: The Outsourcing of Financial Regulation to Risk Models and the Global Financial Crisis*, 84 WASH. L. REV. 127, 188 (2009).

by a set of substantially equivalent rules.[94] Given the comprehensive nature of the EU financial regulations, the major U.S. investment banks preferred to be regulated by the SEC.[95] Unfortunately, the Gramm-Leach-Bliley Act of 1999 created a regulatory void in the U.S. for systemically-important investment bank holding companies.[96] Nevertheless, major investment banks pressured the SEC to fill the regulatory void in order to avoid the exacting EU regulations.[97] In response to this pressure, the SEC created a voluntary supervision option for broker-dealers known as the consolidated supervised entity (CSE) program.[98] The CSE program incorporated the three pillars of Basel II, and allowed the SEC to supervise broker-dealers on a consolidated basis, including their holding companies and affiliates.[99] The goal of the program was to permit the SEC to monitor the systemic risks to U.S. regulated investment banks posed by their unregulated affiliates.[100]

As part of the CSE program, an investment bank could apply to the SEC for an exemption from the Commission's standard net capital rule.[101] After obtaining such an exemption and agreeing to consolidated supervision, the investment bank was permitted to compute its required capital using an "alternative method" that complied with the Basel II capital standards.[102] However, unlike Basel II, participating financial institutions would be required to maintain an overall Basel capital ratio of

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[94] Report of Examiner Anton R. Vukas, at 1484, In re Lehman Brothers Holdings, 433 B.R. 133 (Bankr. S.D.N.Y. 2010) (No. 08-13555) *available at* http://lehmanreport.jenner.com/VOLUME%204.pdf [hereinafter *Examiner's Report*].

[95] *Id*.

[96] *Id*.

[97] *See Lehman Brothers Letter*, *supra* note 5.

[98] *See Examiner's Report, supra* note 94, at 1484-85.

[99] *OIG Report*, *supra* note 6, at 2-3.

[100] *Id.* at viii ("The regime is intended to allow the Commission to monitor for, and act quickly in response to, financial or operational weakness in a CSE holding company or its unregulated affiliates that might place regulated entities, including US and foreign-registered banks and broker-dealers, or the broader financial system at risk.").

[101] *Id.* at 2. Under the standard net capital rule it must meet certain ratios and maintain minimum net capital levels based on the type of securities activities they conduct.

[102] *Id.* at 2-3.

not less than the Federal Reserve's 10 percent well capitalized standard.[103] Based on the specific risk qualities of its assets, a firm's internal risk modeling could require it to maintain a capital ratio well above the 10 percent minimum.[104]

Investment banks such as Bear Stearns and Lehman Brothers favored the adoption of the CSE program, because they believed that their superior risk-management systems would result in lower capital requirements.[105] However, Alan Greenspan aptly pointed out in 2002 that "all risk-management strategies rest on uncertain forecasts and the models underlying the frontier approaches . . . depend on key assumptions that rest on fragmentary or indirect evidence . . . To be sure, even the most sophisticated risk models will never be a complete substitute for experienced judgment."[106] Unfortunately, Mr. Greenspan's concerns were validated on March 14th, 2008, the day Bear Stearns declared bankruptcy.

IV. THE COLLAPSE OF BEAR STEARNS AND LEHMAN BROTHERS

On March 14th, 2008, J.P. Morgan acquired Bear Stearns in a federally orchestrated and assisted effort to save the financial markets from imminent peril.[107] At the time of its acquisition, Bear Stearns had a debt-to-equity ratio of 33 to 1.[108] Similarly, prior to its collapse on September 15th, Lehman Brothers' debt-to-equity ratio reached a high of 32 to 1.[109] Such ratios are in stark contrast to the SEC's standard net-capital rule, which only permits a debt-to-equity ratio of 15 to 1.[110] Yet, despite these

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[103] *Id.* at 3 ("The CSEs are required to maintain an overall Basel capital ratio of not less than the Federal Reserve's 10 percent 'well capitalized' standard for bank holding companies.").

[104] BASEL II, *supra* note 66, at 211.

[105] *OIG Report, supra* note 6, at 4.

[106] Alan Greenspan, Chairman, Federal Reserve, Remarks at the Conference on Bank Structure and Competition, Chicago, IL. (May 10, 2002) http://www.federalreserve.gov/boarddocs/speexhes/2002/20020510/default.htm.

[107] *See* David Ellis & Tami Luhby, *Bear Stearns Bailout Keeps Firm Afloat,* CNNMONEY.COM, March 14, 2008, http://money.cnn.com/2008/03/14/news/companies/jpm_bsc/index.htm?section=money_topstories.

[108] *OIG Report*, *supra* note 6, at 19.

[109] Lehman Brothers Holdings Inc., Quarterly Report (Form 10-Q), 89 (May 31, 2008), *available at* http://www.rns-pdf.londonstockexchange.com/rns/8436Z_1-2008-7-24.pdf.

[110] *OIG Report*, *supra* note 6, at 19.

alarmingly high rates of leverage, Bear Stearns and Lehman Brothers reportedly never fell below the 10 percent capital minimum of the CSE program.[111] How could these firms have been allowed to reach such high rates of leverage and how could the SEC have maintained confidence in the capital adequacy of these firms? The section below will demonstrate how flaws in VaR modeling, non-compliance with Basel II principles, and failures in SEC oversight helped diminish each firm's capital adequacy and contributed to their collapse.

A. FAILURE OF VAR MODELING (PILLAR I)

As previously discussed, the central innovation of Basel II is the advanced approach for calculating capital adequacy. Essential to the operation of the advanced approach is the VaR statistical model, which allows banks to calculate the risk associated with a particular portfolio of assets. However, as mentioned above, VaR models contain several assumptions that, if not recognized, will result in a distortion of the model's results. Specifically, the models will yield imprecise risk measures, which will adversely affect the level of capital held by the financial institution. It was precisely a lack of attention to the VaR model's assumptions and thus, its limitations, that helped drive Bear Stearns and Lehman Brothers to the brink.

One of the basic assumptions underlying any statistical model is that all of the variables are properly included. In a risk model such as VaR, this means that all of the known assets in a portfolio and their associated risk assumption are included.[112] For instance, if a bank were to construct a risk model for a portfolio of mortgage-backed securities, it would be essential that variables such as home prices, interest rate fluctuations, and delinquency rates were included. Such variables represent only the most basic forms of risk associated with mortgage-backed securities and are essential to producing models that yield accurate results. Yet, Bear Stearns' VaR models for mortgage-backed securities failed to adequately account for both the natural fluctuation in home prices and delinquency rates.[113] As a result, in the months leading-up to its collapse, Bear Stearns'

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[111] *Id.* at viii-ix.
[112] *Risks of Financial Modeling*, *supra* note 81, at 3.
[113] *OIG Report*, *supra* note 6, at 23.

risk-modeling floundered.[114] Because of these inconsistencies, internal memos suggest that the trading-desks began to ignore the advice of risk-managers.[115] Internal confidence in risk-modeling was further eroded when Bear Stearns abruptly replaced an experienced risk-manager, which resulted in the further disruption of the company's risk-management structure.[116]

Additionally, and potentially most critically, VaR models need to have sufficient historical trading and valuation data in order to accurately project future results.[117] For instance, if a financial institution's VaR model only contained data during a stable or positive market trend, the model may not accurately forecast potential downswings in valuation. Unfortunately, VaR models at most financial firms included historical trading data that did not adequately capture the volatility of the assets.[118] As a result, though the VaR models were operating correctly, they were not accurately projecting the risk of future downturns in asset valuations.

Because of the above and other limitations of VaR models, it is essential that they are adequately "stress-tested."[119] Since the VaR models operate at the 99% confidence level, there is still a 1% chance that the model is completely incorrect.[120] However, a huge limitation of the VaR model is that it doesn't tell you what can happen during the 1% of the time when it is wrong.[121] Thus, to assess whether the 1% represents a catastrophic failure or a small blip, stress testing puts the model through a series of hypothetical stresses to see how it will react. For instance, for a portfolio of corporate bonds a bank might place the VaR model through a test involving a dramatic change in interest rates. Though both Bear

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[114] Mark Pittman, *Cox's SEC Censors Report on Bear Stearns Collapse,* BLOOMBERG.COM, Oct. 7, 2008, http://www.bloomberg.com/apps/news?pid=21070001&sid=a6iXuZJG1L44.

[115] *OIG Report*, *supra* note 6, at 22-23.

[116] *Id.*

[117] *Risks of Financial Modeling*, *supra* note 81, at 3-4.

[118] Nocera, *supra* note 87 ("The whole intellectual edifice, however, collapsed in the summer of last year because the data input into the risk-management models generally covered only the past two decades, a period of euphoria. Had instead the models been fitted more appropriately to historic periods of stress, capital requirements would have been much higher and the financial would be in far better shape today.").

[119] Romain Berry, *Stress Testing Value-at-Risk*, J.P.MORGAN, http://www.jpmorgan.com/tss/General/Stress_Testing_Value-at-Risk/1159389400084.

[120] *Id.*

[121] *Id.*

Stearns and Lehman brothers did test their VaR models under certain historical scenarios, (including the 1987 stock market crash in the case of Lehman)[122] there is evidence that the models were not properly designed. For instance, at Bear Stearns the VaR model for mortgage-backed securities was never tested for a potential collapse in home prices.[123] As recent events have shown, such a test would have been critical to highlight potential flaws in how the model was constructed. Similarly, at Lehman Brothers management deliberately excluded risks to its real estate investments from firm wide stress tests.[124] Thus, Lehman's VaR models were never tested for economic shifts in the real estate market. These examples help demonstrate why adequate stress-testing is needed and why, if not conducted, firms cannot adequately prepare for the catastrophic 1%.

Murphy's Law tells us that "anything that can go wrong will go wrong." Unfortunately, the above represents a perfect example of this concept. The limitations of VaR modeling have been well documented since it was first created by J.P. Morgan in the early 1990's.[125] Yet, both Bear Stearns and Lehman brothers failed to take notice of these limitations, choosing instead to be lulled into complacency by the sirens song of mathematics. Not only did these firms ignore the flaws contained in VaR modeling, they also failed to take the necessary steps to help mitigate those risks. Thus, as critics of the Basel II advanced approach warned,[126] Bear Stearns and Lehman Brothers touted the superiority of their risk management systems, while in reality they were woefully unprepared. These inadequacies not only led Bear Stearns and Lehman Brothers to collapse, but led the global financial system down the road to perdition.

B. LACK OF COMPLIANCE WITH BASEL II CAPITAL ADEQUACY STANDARDS (PILLAR I)

Beyond the proper management of VaR models, Bear Stearns and Lehman Brothers demonstrated a troubling record of compliance with CSE and Basel II standards for calculating capital adequacy. The CSE program requires that a participating financial institution "calculate capital adequacy consistent with the international standards adopted by the Basel Committee

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[122] *OIG Report*, *supra* note 6, at 24; *Examiner's Report*, *supra* note 96, at 30.
[123] *OIG Report*, *supra* note 6, at 24.
[124] *Examiner's Report*, *supra* note 96, at 181-82.
[125] Nocera, *supra* note 87.
[126] *Sheila Bair Remarks*, *supra* note 1.

on Banking Supervision."[127] While both Bear Stearns and Lehman brothers complied with these standards on paper, serious lapses in compliance with the requirements resulted in questionable levels of capital being maintained.

In particular, Bear Stearns exhibited a troublesome pattern where each division of the company maintained separate VaR numbers for each portfolio of assets.[128] For instance, while the trading desk might have one set of VaR numbers, another division might be working with a completely different set of numbers for the same exact portfolio.[129] The inconsistency in VaR numbers between divisions undoubtedly diminished the effectiveness of the risk management infrastructure and prevented adequate "enterprise wide" risk assessments from being made. Such a state of affairs is of particular note, because it violated Basel II standards, and would have allowed Bear Stearns to choose the most favorable VaR numbers for calculating its capital charges.[130] Thus, though one division might have VaR numbers to suggest that the asset presented significant risks, requiring a higher capital charge, the company could chose to disclose a set of VaR numbers that painted a completely different picture. Such behavior is not only risky; it is fraudulent and inconsistent with the spirit of the CSE and Basel II.

Additionally, Bear Stearns failed to comply with Basel II by failing to markdown stressed assets in order to forestall the resulting capital charges.[131] For instance, when the market value of an asset declines, banks are required to "markdown" or reduce the value of the asset as it is recorded on their books. Bear Stearns attempted to avoid the corresponding capital charges by delaying such markdowns. This behavior is particularly incentivized during periods of market turmoil, because the cost of raising new capital can be expensive and can send a negative signal to the market.[132] Additionally, if a firm were to sell the asset, it might also incur additional capital charges as the value of its assets declined in relation to its debts. Thus, under Basel II, firms have a "perverse incentive to delay markdowns" to avoid additional and potentially costly capital charges.[133]

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[127] *OIG Report*, *supra* note 6, at 3.
[128] *Id*. at 29.
[129] *Id*.
[130] *Id*.
[131] *OIG Report*, *supra* note 6, at 30-31.
[132] *Id*. at 30.
[133] *Id*.

Finally, at Lehman Brothers a series of "Repo 105" transactions resulted in questionable capital charges being made.[134] A Repo 105 transaction is an accounting maneuver that allows short-term loans to be temporarily classified as a sale.[135] The cash obtained through these "sales" are then used to pay down debt, allowing the company to appear to reduce its debt-to-equity ratio by temporarily paying down liabilities.[136] In order to artificially reduce its capital charges and improve its debt-to-equity ratio in late 2007 and early 2008, Lehman Brothers use Repo 105 transactions to temporarily remove debt from its balance sheets.[137] Prior to its collapse, Lehman Brothers undertook "$38.6 billion, $49.1 billion, and $50.38 billion of Repo 105 transactions at the ends of fourth quarter 2007, first quarter 2008, and second quarter 2008 respectively."[138] Such behavior is in direct contravention of Basel II and the CSE program, since it allowed Lehman Brothers to illegitimately reduce its debt-to-equity ratio and corresponding capital charges.

The above series of events only corroborates Chairman Bair's predictions that banks have a natural tendency to hold less capital rather than more. Instead of choosing to comply with Basel II and CSE standards, Bear Stearns and Lehman Brothers used loopholes and outright tricks to delay the inevitable. Such behavior resulted in the systematic manipulation of capital ratios, and shows a complete disregard for the stability of the financial system. Yet, the above problems with VaR calculations and the deliberate manipulation of capital charges also demonstrate why Basel II and the CSE program contain guidelines for adequate regulatory supervision.

V. FAILURE OF SEC OVERSIGHT (PILLAR II)

Basel II requires that regulators "review and evaluate banks' internal capital adequacy assessments and strategies as well as their ability to monitor and ensure their compliance with regulatory capital ratios."[139] Additionally, Basel II requires that regulators "expect banks to operate above the minimum regulatory capital ratios and should have the ability to

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[134] *See Examiner's Report*, *supra* note 96, at 732-34.
[135] *Id*. at 732.
[136] *Id*. at 733-34.
[137] *Id*.
[138] *Id*. at 733 n. 2852.
[139] BASEL II, *supra* note 67, at 209.

require banks to hold capital in excess of the minimum."[140] In fact, the CSE program required that participants submit to regular inspections of the internal risk management control systems and gives the SEC the power to require a participant to maintain a capital adequacy ratio of at least 10 percent.[141] Yet, despite being aware of many deficiencies in CSE compliance, several documented incidents demonstrate how the SEC failed to use the powers at its disposal to enforce compliance.[142]

So what happened? Was the SEC asleep at the switch? Were the powers given to the agency inadequate? Sadly, the answer seems to be twofold. First, the agency seems to have fallen victim to the same market euphoria and sense of infallibility that plagued the very firms it regulated. Second, the SEC severely understaffed the CSE program, limiting its ability to effectively police participating financial institutions.

One of the major components of Basel II and the CSE is that firms utilizing the advanced approach submit their VaR models to regulators for approval.[143] Such a review process allows the regulating agency to assess the adequacy of the risk models before approving a firm's use of the advanced approach.[144] Yet, on several occasions, the SEC approved applications to become part of the CSE program prior to the firm's VaR models being reviewed.[145] In fact, in the case of Bear Stearns the SEC never issued a formal approval of the firm's VaR modeling.[146] To make matters worse, internal memoranda reviewed by the inspector general of the SEC suggest that the SEC was aware of the inadequacy of Bear Stearns' risk management systems, but blindly accepted executives' assurances that the systems would be updated and corrected.[147] It is unclear what might have been motivating the SEC to not properly review VaR models, but one thing is certain, the failure to do so set the CSE program down an ominous path from the beginning.

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[140] *Id*. at 211.

[141] *OIG Report*, *supra* note 6, at 3.

[142] *See generally OIG Report*, *supra* note 6; *Examiner's Report*, *supra* note 94.

[143] *OIG Report, supra* note 6, at 40.

[144] *Id.* ("The purpose of the inspection is to verify the information provided by the firm and to 'assess the adequacy of the implementation of the firm's internal risk management policies and procedures.'").

[145] *Id*. at 40-41.

[146] *Id.* at 41 ("While [the SEC] believes that Bear Stearns implemented corrective action, [it] never verified Bear Stearns' assertions that it had resolved this issue. . .").

[147] *Id*.

In another documented occurrence, the SEC became aware of inconsistencies in the VaR numbers being submitted to the agency by Bear Stearns.[148] As discussed above, Bear Stearns was maintaining multiple sets of VaR calculations for the same portfolios of assets and using the most favorable of these numbers to calculate its capital charges. Bear Stearns officials were unable to account for the inconsistencies, but appear to have assured the inspectors that they were taking corrective action.[149] Nothing in the OIG's report suggests that the SEC pursued these inconsistencies further.

Even after the collapse of Bear Stearns the SEC failed to take prompt corrective action against Lehman Brothers. For instance, in 2008 the SEC became aware that Lehman Brothers had characterized a multi-billion dollar deposit with Citigroup (made as a precondition to continued banking relations) as a liquid cash deposit.[150] Given that the deposit could not be withdrawn without adverse effects upon Lehman's day-to-day business operations, the SEC disagreed with Lehman's characterization.[151] However, instead of forcing Lehman Brothers to properly classify the deposit, the SEC took no enforcement action.[152] Instead, the SEC discounted the risk posed by the deposit's mischaracterization and characterized it as an "illiquid asset" for internal calculations only.[153] As a result, Lehman Brothers was effectively permitted to manipulate its debt-to-equity ratio and corresponding capital charges. Such behavior not only misled the investing public as to Lehman Brothers' financial health, it was a patent violation of the CSE program and Basel II standards.

Finally, in the months leading up to the collapse of Bear Stearns and Lehman Brothers, the SEC seemingly took little notice of the rapidly shrinking capital adequacy ratios and rapidly rising leverage ratios at each firm.[154] In fact, the SEC took no action between 2006 and 2008 as Bear Stearns' capital adequacy ratio fell from 21.4 percent to just 11.1 percent by March 2008.[155] While the CSE program and Basel II require that the agency take prompt corrective action to ensure that a firm operates with levels of capital above the minimum requirements, the SEC allowed Bear Stearns to come dangerously close to the 10 percent capital adequacy

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[148] *Id.* at 29.
[149] *Id*.
[150] *Examiner's Report*, *supra* note 96, at 1430-32.
[151] *Id*.
[152] *Id*.
[153] *Id*.
[154] *Pittman*, *supra* note 114; *Examiner's Report*, *supra* note 96, at 1508.
[155] *Pittman*, *supra* note 114.

minimum without so much as a written warning. It was not until two weeks before the March 14th collapse of Bear Stearns that the SEC sent a letter recommending that the firm raise additional capital.[156] How could the SEC have been so blind?

The answer to the above question is twofold. First, the SEC was simply caught up in the pro-market that plagued the very firms they regulated. Despite being aware of numerous violations, the SEC simply failed to act. In fact, one commentator described the SEC as succumbing "to the anti-regulation climate of recent years. Too many of its members just did not believe in regulation."[157] Such comments, in combination with the SEC's relaxed pursuit of known violations suggest a culture of complacency that bred inaction.

Moreover, an inspector general's report notes that since its inception, the CSE program had a "small number of staff."[158] In fact, even in 2008, the CSE program only employed seven inspectors, two in Washington, D.C., and five in the New York regional office.[159] Considering that these inspectors were charged with reviewing dozens, if not hundreds of VaR models per firm, it is hard to believe that adequate inspections occurred. Such a conclusion is buttressed by the fact that in September 2008 the CSE program had not conducted any inspections in 18 months.[160] Even six months after the collapse of Bear Stearns, only three inspections were in progress to "assess the adequacy of the implementation of firms' internal risk management policies and procedures."[161]

The SEC's failure to adequately comply with Pillar II of the 2004 Basel Accord should be a warning to global regulators. A failure to adequately police the use of the advanced approach will inevitably lead to inadequate levels of capital being maintained. However, adequate supervision requires not only promulgated regulations, but adequate staffing with the necessary expertise to evaluate the complicated VaR models. Most importantly, regulators need to remain skeptical of executive assurances that compliance will be forthcoming. As Basel II requires, agencies need to act swiftly to correct violations of regulations.

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[156] *Id*.; J. Robert Brown, *Reforming the SEC: Dodging a Legislative Bullet*, THERACETOTHEBOTTOM.ORG, Sept. 29, 2009, http://www.theracetothebottom.org/the-sec-governance/reforming-the-sec-dodging-a-legislative-bullet.html.

[157] Norman S. Posner, *Why the SEC Failed: Regulators against Regulation,* 3 BROOK. J. CORP. FIN. & COM. L 289, 289 (2008).

[158] *OIG Report, supra* note 6, at 49.

[159] *Id*.

[160] *Id*. at 49-50.

[161] *Id*.

VI. CONCLUSION

The above arguments point in favor of scrapping Basel II's advanced approach, which allows financial institutions to set their capital requirements according to their internal risk modeling. The spectacular failure of the VaR models to predict or adequately protect against the current financial crisis makes entrusting capital regulation to proprietary risk-modeling seem hopelessly misguided. In particular, the dismal record of the SEC's CSE program provides a warning to international regulators to reverse their recent adoption of the Basel II framework. Instead, international regulators should renounce the advanced approach and adopt the intermediate approach proposed by U.S. regulators in 2005 (Basel IA).[162]

Although the Basel Committee could revise the advanced approach to provide further guidance to international regulators (which the committee has already done),[163] the fundamental limitations and flaws of the advanced approach cannot be overcome. More detailed audit standards would simply increase the cost of both compliance and regulation. Additionally, as recent history has shown us, any updated guidance would require constant revision as the financial sector continued to evolve and develop new products. Moreover, more specific rules would only increase the burden on regulators who are already understaffed, overworked, and inexperienced. Basel II already requires regulators to review numerous risk models for a single institution, not to mention back-testing and stress-testing the very same models. Again, as the SEC experiment has shown, regulators whose resources are stretched have an incentive to be less rigorous.

Yet, even armed with sufficient resources, the advanced approach contains the worst elements of both rules and standards. Basel II gives international regulators a wide measure of discretion in deciding which banks may use the advanced approach and whether the firm's risk management systems satisfy the standards of Basel II. Such opaque and flexible standards make it difficult to compare the compliance of regulators in one nation versus another. This lack of transparency provides an incentive for regulators to forgo regulatory action so as to provide the

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[162] *See* Revised Risk-Based Capital Guidelines, 12 C.F.R. Part 325 (2006) [hereinafter *Basel IA*].

[163] *See, e.g.* BASEL COMMITTEE ON BANKING SUPERVISION, REVISIONS TO THE BASEL II MARKET RISK FRAMEWORK (Jan. 2009) *available at* http://www.bis.org/publ/bcbs148.pdf?noframes=1.

banks of their own country a competitive advantage. Though regulators attempted to forgo regulatory action under Basel I, their actions were easily discovered due to the simplicity of the regulatory framework.

Alternatively, Basel IA represents an intermediate approach to financial regulation that combines the best elements of Basel I and Basel II. Fundamentally, Basel IA provides meaningful improvements to the risk sensitivity of Basel I, while imposing minimal increases in regulatory burdens. To increase the risk sensitivity of Basel I, Basel IA significantly increases the number of risk-weight categories.[164] The addition of more risk-weight categories solves Basel I's greatest flaw (the "one-size-fits all" approach) by permitting financial institutions to adjust their capital ratios based on the institution's specific risk profile. Yet, by abandoning Basel II's advanced approach in favor of a standardized method for calculating capital adequacy, Basel IA also reduces the burdens placed on global financial regulators. No longer would regulators be forced to police dozens of firm-specific statistical models that are often complicated and beyond the comprehension of the average regulator. Instead, under Basel IA regulators would be free to calculate capital adequacy using a standardized formula that naturally adjusted to the risk-profile of each financial institution. Because of their simplicity, the regulations included in Basel IA are easier to understand and thus, facilitate compliance by financial institutions and adequate auditing by regulators. Further, the Basel IA standards are also more transparent; it would not only be easier for regulators to audit a financial institution, but would be easier for competitors and regulators in other countries to check whether there is adequate compliance. Finally, Basel IA's simpler rules allow regulators and interested parties to more adequately assess the credit and market risks posed by individual institutions. By adopting the Basel IA framework, global regulators will help to establish a sustainable path to global financial stability.

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[164] *Basel IA, supra* note 164.