Chapter 22. Indirect Regulation of Hedge Funds

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Abstract

This book chapter examines theoretical approaches for hedge fund regulation and emphasizes indirect regulatory means for the industry. The chapter shows that indirect regulation of the hedge fund industry attains most regulatory objectives while providing the industry with sufficient leeway.

Key Words: hedge fund, Regulation, Indirect Regulation, Private Investment Funds, Private Equity, Diversification, Compliance, Optimization, Indirect Regulation, Regulatory Models

JEL Categories: K20, K23, K32, L43, L5, O31, O32

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I. Introduction

Hedge fund regulation is faced with several unique factors that make it different from other financial regulations. Markets will be at risk and investors are insufficiently protected without adequate regulation. Regulators can use a number of direct regulatory tools including capital, margin and reporting requirements, and mandatory regulation to regulate hedge funds.[1] Yet, regulators are faced with the problem of jurisdictional arbitrage, i.e. if they regulate directly, hedge funds may relocate offshore and escape from regulation altogether. If regulators impose weak regulations, investors may not be afforded adequate protection.

Several key factors necessitate some level of hedge fund regulation. hedge funds present some level of systemic risk because of the sheer

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[1] *See* Wulf A. Kaal, *Private Investment Fund Regulation – Theory and Empirical Evidence from 1998 to 2016* (U of St. Thomas (Minn.) Legal Stud. Res. Paper No. 17-13, 2017); Wulf A. Kaal & Dale A. Oesterle, *The History of Hedge Fund Regulation in the United States* (U of St. Thomas (Minn.) Legal Stud. Res. Paper No. 16-05, 2016); Wulf A. Kaal, *The Private Fund Industry Five Years After the Dodd-Frank Act – A Survey Study*, 35(2) REVIEW OF BANKING AND FINANCIAL LAW 624 (2016); Wulf A. Kaal, Barbara Luppi & Sandra Paterlini, *Did the Dodd-Frank Act Impact Hedge Fund Performance?* (U of St. Thomas (Minn.) Legal Stud. Res. Paper No. 14-09, 2014); Wulf A. Kaal, *The Impact of Dodd-Frank Act Compliance Cost on the Hedge Fund Industry* (U of St. Thomas (Minn.) Legal Stud. Res. Paper er No. 14-11, 2014); Wulf A. Kaal, *Hedge Fund Manager Registration Under the Dodd-Frank Act*, 50 SAN DIEGO L. REV. 243 (2013); Wulf A. Kaal, *Hedge Fund Regulation via Basel III*, 44 VAND. J. TRANSNAT'L L. 389 (2011).; Wulf A. Kaal, *Private Fund Valuation: Retailization, Regulation, and Investor Sustainability*, 28 REV. OF BANKING & FIN. L. 581, 581-83 (2009).

size of these funds have caused and may cause again disruptions in the world economy. The demise of Long-Term Capital Management LLP (LTCM) illustrated the systemic implications of hedge funds. The LTCM bailout also illustrates that moral hazard problems can arise with hedge funds. Moral hazard can also occur because high enforcement costs might make it too costly for the lenders to hedge funds to prevent moral hazard even when the lender is fully informed about the hedge fund's activities.

The lack of transparency and asymmetric information between regulators and hedge funds is also a significant source of the moral hazard problem. The asymmetric allocation of information between regulators and hedge funds is in part prompted by the secrecy under which hedge funds operate. Their penchant for secrecy originates in hedge funds' need to stay competitive to generate the returns demanded by their clients. The less information the market has about hedge funds' activities, the easier it is for them to compete with other funds. In turn, the greater the secrecy the less the market impact of funds' dealing in a particular security, currency or other financial instrument. The combination of strategies and diverse financial products allows hedge funds to trade up to the limits of what was permissible by a given market. National and international regulators do not have the resources to fully investigate or regulate the activities of hedge funds. Hedge funds are lobbying to preserve information asymmetries as far as possible and avoid enhanced transparency.

In order to remedy the unique challenges presented by hedge fund regulation, regulators appear to be adopting a middle ground by taking an indirect regulatory approach, which when rigorously applied by banks and financial institutions that are counterparty to hedge funds can help prevent systemic disruption.

This book chapter evaluates the prevalent regulatory approaches for hedge funds. Among those are direct regulation, indirect regulation, so-called prudential hedge fund regulation, and eventually co-coordinated international co-operation. The chapter shows that indirect regulation of the hedge fund industry attains most regulatory objectives while providing the industry with the needed freedoms. The chapter concludes with an examination of the benefits of indirect regulation of the hedge fund industry.

II. The Need for Hedge Fund Regulation

The leading case of a hedge fund that affected world markets illustrates the factors that mandate hedge fund regulation. The demise of Long Term Capital Management (LTCM) affected the financial industry at large.

LTCM collapse almost brought world financial markets down with it. It is the most well publicized case of a hedge fund that got into severe difficulty when faced with extreme market volatility. 1998 was a tumultuous time for many hedge funds, but LTCM's collapse in particular exposed the risks that hedge funds were taking and raised awareness concerning the risk tolerance of banks, prime brokers and investors.

The LTCM Cayman Islands fund, Long-Term Capital Portfolio, LP used trading strategies, which included convergence trading[2] and dynamic hedging.[3] LTCM held around 80% of the balance sheet positions in government bonds of G7 countries. Such positions in government bonds were supported with repo and reverse repo agreements with a variety of counterparties. LTCM traded on and off-exchange derivatives in interest rates and equity products and also engaged in foreign exchange dealing to support these other activities. LTCM had $4.8 billion in capital prior to the crash and controlled $160 billion in stocks and bonds. In addition, derivatives of the fund had a notional value of $1 trillion.

LTCM performed strongly in the bull market of the mid and late 1990s. It produced returns, net of fees, of approximately 40% in 1995, and slightly less than 20% in 1996 and 1997.[4] In 1997, the managers of the fund increased the fund's balance sheet leverage by reducing its capital base by 36% to $4.8 billion rather than increase its equity positions.[5] On January 1, 1998, the fund had a balance sheet leverage ratio of more than 25 to 1.[6]

Many of LTCM's trades went wrong at the same time. It became obvious that while the fund was diversified in terms of markets, its overall strategy was not diversified. When the risk spreads continued to widen, the losses LTCM suffered in individual

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[2] Wei Xiong, *Convergence Trading with Wealth Effects: An Amplification Mechanism in Financial Markets*, 62 Journal of Financial Economics, 247, 247-92 (2001).
[3] Simon Benninga & Zvi Wiener, *Dynamic Hedging Strategies*, 7 Mathematica in Education and Research, no. 1, 1998, at 12.
[4] Philippe Jorion, *Risk Management Lessons from Long-Term Capital Management*, 6 EUR. FIN. MGMT. 277, 281-81 (2000); PRESIDENT'S WORKING GROUP ON FINANCIAL MARKETS, HEDGE FUNDS, LEVERAGE, AND THE LESSONS OF LONG-TERM CAPITAL MANAGEMENT (1999) [hereinafter President's Working Group].
[5] Jorion *supra* note 4 at 281-82 ($4.7B); President's Working Group *supra* note 4 at 11.
[6] Jorion *supra* note 4 at 28; President's Working Group *supra* note 4 at 12 ("more than 25-to-1").

markets greatly exceeded what conventional risk models suggested were probable, but these were estimated during more stable periods. Investors globally sold risky investments for safer ones, liquidity premiums increased, market liquidity declined and LTCM was unable to reduce its trading positions. The situation was exacerbated by the enormous leverage used by the fund in its drive to capture profits from the smallest market movements.

LTCM's leverage contributed significantly to its demise. LTCM´s leverage was achieved in various ways, including derivatives transactions, short sales, repurchase agreements and direct financing loans. Its negotiating power led LTCM to increase its leverage by obtaining favorable terms for these transactions.[7] In spite of the fact that leverage was key to LTCM´s high returns, it also magnified LTCM´s losses.

Right after the announcement of the Russian debt moratorium in mid-August 1998,[8] investors began to seek superior credit quality and higher liquidity.[9] Hence credit spreads[10] widened in markets

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[7] U.S. GOV'T ACCOUNTABILITY OFF., GAO-00-3, LONG-TERM CAPITAL MANAGEMENT: REGULATORS NEED TO FOCUS GREATER ATTENTION ON SYSTEMIC RISK 6 (Oct. 1999) [hereinafter U.S. GOVT' ACCOUNTABILITY OFF.] (Among these preferential terms were credit enhancements, including re-hypothecation rights, zero initial margin and two-way collateral requirements.).

[8] *See* President's Working Group *supra* note 4 at 12 ("debt moratorium").

[9] *See* U.S. GOV'T ACCOUNTABILITY OFF. *supra* note 8 at 4 (There are two separate but related types of liquidity. Funding liquidity is the ability of a hedge fund to hold its market positions and meet the cash and/or collateral demands of counterparties, other credit providers and investors. Asset liquidity, on the other hand, refers to the ability to liquidate an asset quickly, and in large volume, without substantially affecting the asset´s price. An asset that cannot be liquidated in a short period of time without substantially affecting the asset´s price is considered an illiquid instrument.).

[10] *See* President's Working Group *supra* note 4 at 14 (A credit spread is the difference between the yield (the percentage rate of return) of a treasury security and a non-treasury debt security (e.g. corporate bonds) that are identical in most respects (particularly the term of the obligation), except with respect to credit rating.).

around the world, creating major losses for LTCM and other market participants.

The Bank for International Settlements ("BIS") describes the events of the summer of 1998 as follows:[11]

"In mid-August 1998..... financial markets around the globe experienced extraordinary strains, raising apprehension among market participants and policy makers of an imminent implosion of the financial system. As investors appeared to shy away from practically all types of risk, liquidity dried up in financial markets in both industrial and emerging economies, and many borrowers were unable to raise financing even at punitive rates. Prices for all asset classes except the major industrial country government bonds declined and issuance of new securities ground to a halt."[12]

In August 1998, LTCM suffered losses of US$1.8 billion, bringing the loss of equity for the year to over 50 percent. As its condition worsened, LTCM's credit arrangements became more rigid and the daily market-to-market valuation for collateral calls became more contentious.[13] Significantly, prior to the crash the banks and brokers were lending LTCM 100% of the value of collateral for the fund. When the banks began to make their margin calls the $4.8 billion capital kept in the bank for the purpose of the odd call dwindled quickly.[14]

The fund required a large capital injection to stay afloat and the amount of money that LTCM owed other companies was so large that these companies may have also been pushed to the edge of

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[11] BANK FOR INT'L SETTLEMENTS, *69th Annual Report*, 43 (June 7, 1999) [HEREINAFTER BANK FOR INT'L SETTLEMENTS], https://www.bis.org/publ/ar99e.pdf.

[12] *Id.* at 43.

[13] President's Working Group *supra* note 4 at 12-13.

[14] *Id.*

insolvency if LTCM were left to go bankrupt. The positions of a bankrupt hedge fund are generally liquidated, but the already unstable world credit markets would have collapsed if lenders sold LTCM's collateral to the value of $1 trillion to recoup their costs. After initial prompting from the Federal Reserve, Wall Street's elite met and fourteen firms, such as Goldman Sachs, Merrill Lynch, Salomon Smith Barney and JP Morgan eventually agreed to participate in a consortium to bail out LTCM by committing between $100 million to $350 million each.[15] In total, the consortium injected US$3.6 billion in private equity in the Fund and received a 90% stake in LTCM´s portfolio and operational control in return.[16]

1. Industry Practices

LTCM's demise also illustrates the problem of secrecy in the industry. LTCM was able to reach its position pre August 1998 because of the degree of secrecy surrounding the business and its activities. LTCM was considered unique because of the large scale of its activities and size or its positions in certain markets.[17] BIS considered LTCM to be "market-maker" in some markets.[18] LTCM´s counterparties often treated it more like an investment bank than a hedge fund. Counterparties were not provided with specific information regarding the fund's risk profile in either the balance sheet or income statements supplied. Long-Term Capital's strategies

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[15] DANIEL A. STRACHMAN, *GETTING STARTED IN HEDGE FUNDS* 21 (1st ed. 2000).

[16] *Private–sector Refinancing of the Large Hedge Fund, Long-Term Capital Management Before the H. Comm. on Banking and Fin. Serv.*, 105th Cong. 4 (1998) (statement of Alan Greenspan, Chairman, Federal Reserve of the United States).

[17] *See* U.S. GOV'T ACCOUNTABILITY OFF. *supra n*ote 7 at 5.

[18] *See* BANK FOR INT'L SETTLEMENTS *supra* note 11 at 110.

were supposedly low risk and at the time they would have seemed conservative to LTCM's banks.

The LTCM case essentially illustrates the risks in the hedge fund industry arising from utilizing high leverage, managing very large positions, inadequate risk management strategies, investor redemptions, funding liquidity, insufficient monitoring of fund credit quality by counterparties and insufficient provision of information to counterparties rendering monitoring ineffective.

The commercial relationships between lenders and hedge funds were exposed following LTCM's crash. LTCM made some bad investment decisions, but Wall Street and the banks also played a large part in the collapse. Hedge funds are significant clients and counterparties to banks, particularly because they take on risks that other financial participants would not, borrow massive amounts and are willing to pay a premium for borrowing. Therefore, banks management still view business from hedge funds as desirable. LTCM grew as large as it did because banks lent it money without regard for whether this money could be paid back. Banks put their own existence at risk with their lending practices during this time.

LTCM changed the hedge fund industry practices. A direct result of the LTCM crisis was a general shift from hedge fund activity and for those who stayed invested in the industry, towards less risky forms of hedge funds. Investing became more of a buyer's market, which is slowly encouraging a higher degree of information disclosure, and risk control and risk management have also become a higher priority for many hedge funds. The amount of leverage used by hedge fund managers has fallen as a direct result of the LTCM demise.[19] This latter factor was due to another important development in the form of restrictions placed on lending to hedge funds.

While trading desks of major banks and securities firms are constrained by internal risk management functions, by risk-based capital requirements and by public disclosure of the firm's overall trading activity, hedge funds are subject to fewer public disclosure requirements and less monitoring. Disclosure by hedge funds to counterparties and investors are often made by using balance-sheet concepts, which are not informative about the nature of the exposures to market risk and credit risk.

2. Regulatory Reactions

In the aftermath of the near-collapse of LTCM and the prolonged regional economic crises,[20] regulators considered if and how to bring hedge funds under their regulatory authority. Regulators initially called into question the risk management systems of banks and securities firms recommended various changes to those practices, increasing the disclosure requirements applicable to financial institutions that are counterparties or creditors of hedge funds.[21] They also considered imposing disclosure requirements on hedge funds to enhance transparency.[22]

Regulators have assumed that the risk models used by financial institutions including LTCM do not take the right snapshot of the economy.[23] They recommended changes to the regulatory

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[19] *See* President's Working Group *supra* note 4 at 31.; Wulf A. Kaal & Timothy A. Krause, *Hedge Funds and Systematic Risk: Handbook on Hedge Funds*, 3 (2016).
[20] I.e. Asian contagion and Russian debt market.

[21] *See* U.S. GOV'T ACCOUNTABILITY OFF. *supra* note 7 at 2-3.

[22] *See* President's Working Group *supra* note 4 at 31-32.

[23] *Id.* at 29-31.

framework as well as the risk models.[24] These recommendations include: improvements in public disclosure by hedge funds through regulations and legislation,[25] and good practices guidelines for foreign exchange trading;[26] stronger counterparty risk management by institutions providing credit to hedge funds;[27] stronger risk management by all hedge funds;[28] enhanced regulatory oversight of banks and securities firms which provide credit to hedge funds;[29] and finally measures to improve the market infrastructure to facilitate the liquidation of large leveraged hedge funds.[30]

The regulatory infrastructure as it existed before LTCM and as it continue, for the most part, today continues to be subject to increased scrutiny in the aftermath of the LTCM debacle. Hedge funds are exempt from U.S. SEC reporting requirements, as well as from regulatory restrictions on leverage or trading strategies, if they comply with certain requirements.[31] Hedge funds structure and size of fees is also generally still unsupervised.

III. Regulatory Approaches

The literature on model approaches to hedge fund regulation identifies four core models: 1. National direct regulation, 2.

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[24] *Id*. at 31-32.

[25] *Id*. at 31-33.

[26] *See Id.* at 43.; FABRIZIO SACCOMANNI, MANAGING INTERNATIONAL FINANCIAL INSTABILITY: NATIONAL TAMERS VERSUS GLOBAL TIGERS 64 (2008).

[27] President's Working Group *supra* note 5 at 31, 34-35.

[28] *Id.* at 31, 34-35.

[29] *Id.* at 34-35.

[30] President's Working Group *supra* note 4 at A-1-A-2.

[31] Kaal, *The History of Hedge Fund Regulation in the United States supra* note 1 at 5-6.; Kaal, *Hedge Fund Manager Registration Under the Dodd-Frank Act supra* note 1 at 9-11.; Kaal, *Hedge Fund Valuation: Retailization, Regulation, and Investor Sustainability supra* note 1 at 31-32.

Prudential regulation, 3. Co-ordinated international cooperation, and 4. Indirect regulation.

1. National Direct Regulation

National direct regulation is the prevailing form of hedge fund regulation around the world. While most regulators generally favor letting market forces discipline hedge funds, political and market pressure to consider approaches for reducing creditor and systematic risk associated with investments in hedge funds often make direct regulation a natural choice for regulators. The objective of direct regulation would be to prevent the excessive expansion in the size and risk-taking by hedge funds that could lead to disruption in financial stability. Direct regulatory approaches can involve licensing requirements, compliance requirements, risk management, fit and proper tests, and minimum standards for capital, among others.[32] The overarching objective of national direct regulatory approaches is typically market integrity, transparency, efficiency and the reduction of systemic risk.[33]

Competition among regulators can have knock-on effects on transparency. Information is already flowing more freely between different national regulators. Multinational institutions like the IMF, BIS and FSF all play useful part in this, but it is bilateral communication between national regulators that matters most for transparency. Co-coordinated international Co-operation, i.e. a global regulator, would negate this competition between national regulators. Even if, hypothetically, a global regulator could replace national

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[32]Giorgio Tosetti Dardanelli. *Direct or Indirect Regulation of Hedge Funds: A European Dilemma*, 2 EUR. J. OF RISK REG. 463 (2011).
[33] Troy A. Paredes, *On the Decision to Regulate Hedge Funds: The SEC's Regulatory Philosophy, Style, and Mission*, 2006 U. ILL. L. REV. 975, 975 (2006).

regulators it would require a global consensus on what exactly should be regulated. Given national incoherent political interests and the problem of uniting them to set up an international body, the idea of a single global regulator is not on any serious agenda.

Regulators are cognizant of the negative effects of overregulation.[34] The imposition of additional limitations on hedge funds can impose unwarranted burdens on other types of private investment pools, such as venture capital funds and structured financings that do not raise the same concerns as hedge funds in terms of systemic risk.[35]

2. *Co-coordinated International Co-operation*

Policy makers and international policy makers consider cooperation in hedge fund regulation by way of setting up of an international body to control worldwide hedge fund investment strategies and investing. The first and foremost reason for this initiative is the problem of establishing jurisdiction over hedge funds as a significant number operate through offshore financial centers.[36] And, in turn, imposing national direct regulatory requirements may drive more hedge funds offshore. U.S. regulators have therefore called for co-operation and the adoption of international regulatory standards at least by the key jurisdictions.[37]

Proponents of this international authority have claimed that this initiation of a co-operative and comprehensive international co-

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[34] Carl Ackermann, Richard McEnally & David Ravenscraft, *The Performance of Hedge Funds: Risk, Return, and Incentives,* 54 THE J. OF FIN. 833, 833-74 (1999).

[35] Paredes *supra* note 33.

[36] Wulf A. Kaal, *Hedge Fund Regulation via Basel III*, 44 VAND. J. TRANSNAT'L L. 389, 389 (2011).

[37] Andrew J. Donohue, Dir., Div. of Inv. Mgmt. U.S. SEC, Speech at the Fordham Journal of Corporate and Financial Law's 3rd Annual Symposium on the Regulation of Investment Funds: Regulating Hedge Funds and Other Private Investment Pools (Feb. 19, 2010).

coordinated action would ensure proper standards and timely international surveillance.[38] Supposedly, it would also, while inherently costly, be the most effective way to maintain integrity of the markets and hedge against the risks posed by hedge funds. It would further serve the collective interest of the markets, its intermediaries, investing public and the international community. It has been conjectured that the objective of such an exercise is not just to identify weaknesses but also rather to ensure the identified material weaknesses are addressed in a prompt and effective manner by the regulators which could ultimately reduce systemic risk to the global financial system.

Co-coordinated international co-operation may never become a realistic regulatory option. The administrative costs, the immense transaction costs as well as the costs of setting up such a venture and, most importantly, the differing interests especially of off-shore heavens and, hence, jurisdictional arbitrage will ultimately hinder such actions.[39] The effects of coordinated international cooperation on the hedge fund industry and world-wide financial markets could also be significant. Hedge funds may be able to afford to relocate off-shore with all its detrimental repercussions, i.e. costs, client losses etc. but certain market segments and jurisdictions will inevitably suffer when all its hedge funds are forced out.[40] Also, the inevitable restructuring of investment strategies by various hedge funds may

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[38] Eric Helleiner and Stefano Pagliari., *The End of Self-Regulation? Hedge Funds and Derivatives in Global Financial Governance, in* GLOBAL FINANCE IN CRISIS: THE POLITICS OF INTERNATIONAL REGULATORY CHANGE 123-152 (Eric Helleiner, Stefano Pagliari & Hubert Zimmermann eds. 2009).

[39] Eric Helleiner and Stefano Pagliari, *Towards a New Bretton Woods? The First G20 Leaders Summit and the Regulation of Global Finance,* 14 NEW POLITICAL ECONOMY 275 (2009)7.

[40] Eric J. Pan, *Challenge of International Cooperation and Institutional Design in Financial Supervision: Beyond Transgovernmental Networks*, 11 CHI. J. INT'L. L. 243 (2010).

result in a significant loss of foreign direct investment (FDI) for various countries participating in the co-coordinated international co-operation.

3. *Prudential hedge fund Regulation*

Prudential hedge fund regulation is a combination of indirect and direct measures intended to enhance regulatory opportunities. Prudential control measures include improved supervision and regulation of credit providers, a firmer market infrastructure, increased disclosure, enhanced national market surveillance and good practice guidelines for foreign exchange trading.[41] Currently, no precise formula exist for devising effective integrated prudential hedge fund regulation. Comprehensive prudential controls, are, according to this model's assumptions, supposed to cover the entire process of a transaction and should include controls and systems, risk management, internal audit and the compliance functions.[42] The model further assumes that effective supervision is considered to increases the effectiveness of controls on conduct and is therefore deemed to be one of the major tools employed to prevent systemic instability in the market.

One of the major constraining factors that constricts effective prudential supervision of hedge funds is the complex trading-, investing- and corporate structure of active international hedge funds. Because of these complex structures, both of hedge funds and financial intermediaries, most supervisory authorities base their judgment on rather thin information.

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[41]Lartease Tiffith, Comment, *Hedge Fund Regulation: What the FSA Is Doing Right and Why the SEC Should Follow the FSA's Lead*, 27 NW. J. Int'l L. & Bus. 497 (2006).

[42] Claudio Borio, *Towards a Macroprudential Framework for Financial Supervision and Regulation?*, 49 CESIFO ECON. STUD. 181 (2003).

Several improvements are needed for the prudential regulatory approach. Those include: 1. a multi-dimensional assessment of risks of intermediaries and supervision of intermediaries on a group basis rather than as a stand-alone registered entity basis, 2. expansion of what is being reviewed, e.g. rather than restricting supervision to merely sales practices, a hedge fund's controls and systems, risk management policies and products, conduct, capital adequacy, its fitness and properness and also systemic implications should be assessed. Information collection from these supervisory activities should also be made available to other co-supervisors if legally permitted.

Transparency is deemed to help improve systemic stability and effective supervision. The model of prudential regulation assumes that in order to monitor effectively the financial position of a hedge fund, a supervisor needs to be able to assess the potential impact of key affiliates on the registered entity.[43] This means, information about a hedge fund's conditions, decisions and actions needs to be made accessible to the supervisor. Additionally, to prevent the build-up of financial and economic imbalances, the gathered information needs to be visible and understandable to other regulators and the public.

A broad international effort will need to be initiated for supervisors to collect and collate consistent, comprehensive information with adequate disclosure on strategies and system on a regular and timely basis for dissemination. The use of such an approach can augment market pressures on intermediaries to

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[43] Avinash Persaud, *Macro-Prudential Regulation Fixing Fundamental Market (and Regulatory) Failures*, World Bank (2009), available at http://documents.worldbank.org/curated/en/337731468161952385/pdf/503470BRI0Box31ponse0Note601PUBLIC1.pdf.

harmonize their disclosures and hopefully, an increase in capital through competitive and market processes.

The following qualitative regulatory approaches can be considered when assessing the adequacy of current prudential hedge fund regulation: 1. Improvements in financial intermediaries` risk management, 2. Improving the role of regulators in individual firms` risk management, 3. Improvements in market practice at industry and firm level, 4. Improved transparency – reporting and disclosure.[44]

IV. Indirect Regulation

Indirect regulation of hedge funds is a regulatory approach that emphasizes the regulation of counterparties to hedge funds and intermediaries rather than hedge funds themselves. By regulating counterparties and intermediaries, the most critical regulatory issues may be addressed while not affecting the hedge funds themselves directly.

Indirect regulation if often the only feasible regulatory tool for regulators seeking to lower risks associated with the hedge fund industry and protect investors and markets. In many jurisdictions, regulators do not have (full) direct regulatory authority over hedge funds. The regulators can use the regulatory authority over their respective regulated entities, such as securities regulators over broker-dealers, prime brokers, material affiliates of broker dealers in order to regulate hedge funds indirectly. Regulators are also relying on private sector practices by counterparties and creditors to constrain hedge funds´ degree of leverage and potential systematic failure. They recommend that banks and institutional investors tighten credit

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[44] Erlend W. Nier, Jacek Osinski, Luis I. Jacome, & Pamela Madrid, *Towards Effective Macroprudential Policy Frameworks: An Assessment of Stylized Institutional Models* (IMF Working Paper 11/250 2011).

standards, limit counterparty credit exposure, improve procedures for estimating potential future credit exposures and stress testing and use collateral.

Indirect regulation may be attaining the best equilibrium of regulatory practices. Relying on private sector practices by counterparties and creditors minimizes regulatory expenses significantly. Indirect regulation enables a state of equilibrium between costs and attainments of regulatory initiatives. Indirect regulation allows the hedge fund industry to preserve the necessary opaqueness of the activities of hedge funds if hedge fund's counterparties become the primary regulatory targets. Indirect regulation helps ensures that hedge funds can continue to operate world-wide and expose and capitalize on market inefficiencies.

Several downsides and risks exist for the indirect regulation of the hedge fund industry. The risk management process through which regulators can regulate banks and hedge funds thereby indirectly poses a challenge to banks and financial institutions because the opaqueness of the activities of hedge funds. Regulators who regulate banks' risk management processes are in essence asking banks to fully assess the risks they incur in engaging with hedge funds as their counterparties. That assessment is often dubious at best. The absence of a common measure with which to calculate leverage and exposure and the dynamic nature of hedge funds´ trading strategies is just one example that shows the incomplete nature of any risk assessment of hedge funds as counterparties. Competition among creditor banks can also lead to compromising on important elements of the risk management process and agreeing to overly generous credit conditions.

1. Fund Regulation via Banking Supervision

Indirect hedge fund regulation via banking supervision is an approach to hedge fund regulation that focuses on the international nature of banking regulation as a means of curtailing risks associated with the international operations of hedge funds as banks' counterparties. In this context, the capital adequacy standards in the Basle framework are part of the foundation of the lending practice to hedge funds and help frame indirect regulatory tools via banking supervision.

Banking supervision offers several essential benefits for indirect hedge fund regulation. Information asymmetries and moral hazard are the major concerns demanding hedge fund regulation. Banking institutions and other financial intermediaries that make private loans are well suited to reduce adverse selection and moral hazard problem in financial markets.[45] Banks have particular advantages over other financial intermediaries in solving asymmetric information problems.[46] They have advantages in preventing risk taking by borrowers because they can use the threat of cutting off future lending to improve a borrower's behavior.[47] Banks also have advantages in reducing moral hazard because they can engage in lower cost monitoring than can individuals.[48] Banks also have advantages in contracting, i.e. specifying interest rates, collateral requirements, and other contractual terms that help sort borrowers

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[45] As pointed out in Edwards and Mishkin (1995), the traditional financial intermediation role of banking has been in decline in both the United States and other industrialized countries because of improved information technology that makes issuing securities easier. Nonetheless, banks continue to be important in the financial system.
[46] Frederic S. Mishkin, *Prudential Supervision: Why Is It Important and What Are the Issues?*, *in* PRUDENTIAL SUPERVISION: WHAT WORKS AND WHAT DOES NOT, 4 n. 1 (Frederic S. Mishkin ed., 2001).
[47] *See* Joseph E. Stiglitz & Andrew Weiss, *Incentive Effects of Terminations: Applications to the Credit and Labor Markets*, 73 AM. ECON. REV. 912, 912 (1983).
[48] *See* Douglas W. Diamond, *Financial Intermediation and Delegated Monitoring*, 51 REV. OF ECON. STUD. 393, 393 (1984).

into risk pools that reduce adverse selection and moral hazard incentives for borrowers to engage in risky activities. Furthermore, banks` advantages in information collection activities are enhanced by their ability to engage in long-term customer relationships and to issue loans using lines of credit arrangements.[49] Moreover, banks` ability to scrutinize their borrowers` checking account balances provides them with an additional advantage in monitoring the borrowers` behavior.[50]

2. *Capital Adequacy Standards*

Capital adequacy standards and their regulatory influence on the credit market and credit policies of banks and hedge funds play an increasingly important role for indirect hedge fund regulation. The Basel framework provides several core benefits for indirect regulation of the hedge fund industry. The Basel framework aligns regulatory capital requirements more closely with underlying risks, and provides banks and their supervisors with several options for the assessment of capital adequacy.[51]

The Core Principles for Effective Banking Supervision (the principles)[52] represent a global standard for prudential regulation and supervision of banks. It presents a comprehensive set of twenty-five

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[49] *See* Allen N. Berger & Gregory F. Udell, *Did Risk-Based Capital Requirements Allocate Bank Credit and Cause a „Credit Crunch" in the United States?*, 26 J. MONEY, CREDIT & BANKING 585, 588 (1994).

[50] Leonard I. Nakamura, *Commercial Bank Information: Implications fort he Structure of Banking, in* STRUCTURAL CHANGE FOR BANKING 131-60 (M. Klausner & L.J. White eds., 1993).

[51] Linda E. Rappaport, Global Financial Regulatory Reform Proposals, in PRAC. L. INST., TAX LAW AND ESTATE PLANNING COURSE HANDBOOK SERIES: TAX LAW AND PRACTICE: HOT ISSUES IN EXECUTIVE COMPENSATION 83, 85 (2010).

[52] Basel Committee on Baking Supervision, *Core principles for effective banking supervision,* BANK FOR INTERNATIONAL SETTLEMENTS (1997), available at https://www.bis.org/publ/bcbsc102.pdf.

Core Principles that have been developed by the Basle Committee[53] as a basic reference for effective banking supervision. The Basel Committee designed the principles to be applied by all member countries in the supervision of the banks in their jurisdictions. The vast majority of member countries have endorsed the principles and implement them. The Basel Committee sees the formulation of the Core Principles Methodology as an iterative process, with refinements made as experience is gained.[54] The Core Principles are being updated periodically to encapsulate developments in regulatory and supervisory standards and procedures.

The Core Principles may be the groundwork of effective banking supervision and there may be various overlaps with the New Capital Adequacy Framework, i.e. various principles in the New Framework are closely linked to criteria for assessment of compliance with the Core Principles in the area of Capital Adequacy. Yet, the New Framework, which, adopted by more than one hundred countries, is important for indirect hedge fund regulation.

The Basle Committee on Banking Supervision issued on 16th January 2001 a proposal for a New Basle Capital Accord dubbed Basle II[55] that, once finalized, will replace the 1988 Accord ("Accord"). Basle II outlines a series of measures which, taken collectively, amount to a fundamental revision to the Committee's

[53] Id. The aim of the Core Principles is to strengthen financial systems of countries to prevent global economic instability through effective banking supervision. The principles relate to: preconditions to effective banking supervision, licensing and structure, prudential regulations and requirements, methods of ongoing banking supervision, information requirements, formal powers of supervisors, and cross-border banking.
[54] Basel Committee on Baking Supervision, *Core principles for effective banking supervision,* BANK FOR INTERNATIONAL SETTLEMENTS (2012), available at https://www.bis.org/publ/bcbs230.pdf
[55] Basel Committee on Baking Supervision, *Core principles for effective banking supervision,* BANK FOR INTERNATIONAL SETTLEMENTS (2001).

1988 Accord.[56] The New Basle Capital Accord is more extensive and complex than the 1988 Accord. But the complexity of the new framework could be perceived as a natural reflection of the advancement and innovations in the financial marketplace and the need for a more risk-sensitive framework.[57] Intended only to apply to internationally active banks, and representing an informal agreement between the central banks and bank supervisory agencies of the G –10 countries, the 1988 Accord has since become accepted as the de facto universal standard for assessing banks´ capital adequacy. Thus, a proposal to revise the Accord is a matter of immense significance for the international financial system. The new framework, however, is intended to align regulatory capital requirements more closely with underlying risks, and to provide banks and their supervisors with several options for the assessment of capital adequacy. The Committee's objective was to lay the groundwork for a flexible capital adequacy framework that has the capacity to adapt to changes in the financial system and will enhance safety and soundness.[58]

The proposal is based on three mutually reinforcing pillars that allow banks and supervisors to evaluate properly the various risks that banks face. The New Basle Capital Accord focuses on: minimum capital requirements, which seek to refine the measurement framework set out in the Accord; supervisory review of an institution's capital adequacy and internal assessment process; and

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[56] Basel Committee on Baking Supervision, *Core principles for effective banking supervision,* BANK FOR INTERNATIONAL SETTLEMENTS (1999), available at https://www.bis.org/publ/bcbs107.pdf

[57] *Id.*

[58] Basel Committee on Banking Supervision, *Core principles for effective banking supervision,* BANK FOR INTERNATIONAL SETTLEMENTS (2004) Available at https://www.bis.org/publ/bcbs107.pdf.

market discipline, through effective disclosure to encourage safe and sound banking practices.

When discussing the New Capital Adequacy Framework, dubbed “Basle II” and its successor “Basel III”, from the perspective of hedge fund regulation, it is important to understand the historical events and pressures under which they were developed. The final stages of the New Framework’s preparation began in the aftermath of the rescue operation for LTCM and the turbulence in financial markets, which followed the Russian government’s forced restructuring of its own short-term debt and its moratorium on the servicing of a wide range of private-sector external obligations in August 1998. Accordingly, Basle II was, at least partly, motivated by the events surrounding LTCM and, therefore, by the same concerns and problems.

V. Conclusion

The Basel Framework attains the desired incomplete regulation as a regulatory minimum standard. Moreover, the Framework provides a voluntary standard. Investor and creditor relations are improved by enhanced transparency and reliability. Participating banks reinforce the relation with its creditors and, hence, hedge funds. The three pillars of Basle II and its successors, constitute a set of rules applicable to financial intermediaries i.e. banks which indirectly regulate hedge funds. Applying the Basel Framework to hedge fund regulation is in conformity with the requirements of incomplete contract theory.

Indirect regulation of hedge funds removes the problem of lacking jurisdictional authority and, thus, jurisdictional arbitrage. The Basel Framework is a framework for banks worldwide. The Basel Framework is a single unilateral Framework that enhances transparency and lowers transactions costs by replacing various national frameworks that would otherwise be necessary.

Indirect regulation enables the hedge fund industry to avoid costs by implementing their own risk monitoring systems and measurements. Accordingly, indirect regulation helps address the danger that hedge funds might not be sufficiently profitable to justify their 2/20 fee structure to clients.

Moral hazard and associated systemic risks are addressed by indirect regulation. Systemic risk problems are addressed because the Basel Framework regulates the credit standards of banks but indirectly also hedge funds' level of leverage. Hence, credit markets are saver. Moral hazard problems are addressed because the Basel Framework guarantees, by introducing market discipline, internal ratings and supervisory review, a change in lending practice and disclosure. This, in turn, will further decrease the capital – leverage ratio of hedge funds. Hence, moral hazard problems comparable to the LTCM case are less likely to occur. Fewer moral hazard problems, in turn, have a knock-on effect on the fee structure of hedge funds and the associated milder moral hazard problems. Moral hazard is also addressed because under the Basel Framework banks calibrate, at least partly, their own risk with their own risk measurement tools and ex post opportunism of hedge funds is less likely considering that not only hedge funds but also their financial intermediaries are endangered to lose their reputation and market position in case it transpired that their risk evaluation of a counterparty hedge fund is insufficient. The Basel Framework provides adequate protection against opportunism by enhancing banks` review of counterparty risk.

Indirect regulation via capital adequacy under the Basel Framework also helps to address problems with asymmetric allocation of information between regulators and the hedge fund industry. The third pillar under Basel II provides that disclosure requirements and recommendations are set out, which will allow market participants to assess critical information describing the risk profile and capital adequacy of banks. Those risk profiles cover hedge fund exposures and their credit lines. Thus, hedge fund's dependency on banks and other financial intermediaries will enable banks to negotiate terms in a more favorable way when faced with critical financial scenarios. Negotiations, in turn, are likely to decrease information asymmetries.

The Basel Framework facilitates considerable advantages in the internal ratings-based approach, under which capital requirements would be set on the basis of a bank's own quantitative and qualitative assessment of its credit risk. This is especially effective in terms of addressing problems of asymmetric information. For instance, internal ratings may incorporate supplementary information about borrowers that is usually beyond the reach of institutions providing external credit assessments, and may cover a much broader range of borrowers. This information, in turn, may be made accessible to other financial intermediaries and investors. Information asymmetries are, thus, minimized.

The internal rating-based approach under the Basel Framework also incentivizes banks to undertake further development of their internal techniques for managing and measuring credit risk which would have knock-on effects on hedge funds. On the other hand, however, hedge funds need to remain in secrecy because the less information the market has about hedge fund's activities, the easier it is for them to stay profitable.

Indirect regulation of the hedge fund industry balances regulatory objectives with industry needs. A preferable regulatory solution allows hedge funds to remain in secrecy while addressing information asymmetries. Indirect hedge fund regulation via the Basel Framework addresses information asymmetries. At the same time, under an indirect regulatory approach, hedge funds can remain exempt from disclosure and transparency requirements. Only financial intermediaries are required to unveil that information.

Indirect regulation via the Basel Framework also addresses the major constraining factors on effective supervision such as the complex trading-, investing- and corporate structure of active international hedge funds. The Basel Framework is extended on a consolidated basis to holding companies of banking groups in order to ensure that risks within the entire banking group are considered. Accordingly, it addresses these complex structures, both of hedge funds and financial intermediaries, allowing most supervisory authorities to base their judgment on improved information.

Indirect regulation of hedge funds via the banking supervision in the Basel Framework also removes the need for joint regulatory action and individual regulators' transaction costs and implementation costs. An international framework such as the Basel Framework does not to require more than one implementation. It is then the responsibility of the participating banks to comply with the framework. Hence, implementation and transactions costs for national regulators can be avoided.