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HEDGING RISK: HEDGE FUNDS AND THE POLITICS OF FINANCIAL REGULATORY HARMONIZATION

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ABSTRACT

Hedge funds introduce considerable volatility into global financial markets. Given the volume of capital they mobilize, hedge funds are capable of precipitating 'herding' — the underlying dynamic behind the transmission of financial distress and the precursor to systemic crises. Greater regulatory oversight of hedge-fund activities could reduce these excesses without necessarily impinging on the self-correcting mechanism of the free market. Presently, there is no regime or monetary authority in place that would compel states to undertake efforts to enhance existing regulatory structures so as to mitigate the exigency of systemic risk. That coordination has not been achieved exposes both the obstacles facing monetary cooperation for establishing a more robust international financial order and the limitations of liberal theories of international cooperation. It also makes evident the importance of hegemonic participation in the construction of economic regimes in an era of accelerating financial globalization.

Les fonds de haie introduisent la volatilité considérable dans les marchés financiers globaux. Donné le volume de capitale qu'ils mobilisent, les fonds de haie sont capables de précipiter 'herding' — le fondamental dynamique derrière la transmission de détresse financière et le précurseur aux crises du système. La plus grande inadvertance régulatrice d'activités de haie-fonds pourrait réduire ces excès sans empiète nécessairement sur le corrigeant automatiquement le mécanisme du marché libre. En ce moment, il n'y a pas de régime ou l'autorité monétaire à sa place qui obligerait des états entreprendre des efforts pour améliorer des structures régulatrices existantes si comme adoucir l'exigence de risque du système. Cette coordination n'a pas été atteinte expose les deux certains des obstacles font face à la coopération monétaire pour établir un ordre financier, international et plus robuste et les limitations de théories libérales de coopération internationale. Il fait aussi évident l'importance de participation de hegemonic dans la construction de régimes économiques dans une ère d'accélérers la mondialisation financière.

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TABLE OF CONTENTS

I. INTRODUCTION: RISK IN THE INTERNATIONAL FINANCIAL SYSTEM

"Like a trapeze artist, the financial system can perform miraculous tricks but experience a bone-shattering fall if allowed to perform without a net"

Barry Eichengreen (2004)[1]

As the global economy continues to become a more integrated whole, national economies will become increasingly vulnerable to the ebb and flow of speculative cross-border financial investment. Both domestic economic stability and welfare are progressively becoming a function of the strategic decisions of foreign investors.[2] Stability in the international financial system, as Charles Kindleberger once urged, ought to be considered a 'public good' — one in line with minimizing national economies' exposure to systemic risks (1978 [1996]: 1, 3). Yet historical experience teaches us that the international financial system is prone to setbacks. Financial crises, as Robert Gilpin insists, are becoming a "recurrent feature" in the global political economy (2001: 263).[3]

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[1] In *Capital Flows and Crises* (2004), pg. 282.

[2] For more on the pressures exerted by international financial markets on government policymaking, see Mosley (2000).

[3] The frequency of crises in the contemporary period is twice as high in relative terms as it was in the pre-1914 world economy under the gold standard (Eichengreen, 2004: 18).

In the last two decades alone there were 90 banking crises that caused financial losses equaling or exceeding those endured by the U.S. banking system during the Great Depression (Edwards, 1999: 209). The fact that disturbances in the global economy have become commonplace — an upshot of the volatility inherent to international capital markets — has led some to believe that global banking and currency crises have become "a scourge of our times" whose devastating effects can be most aptly compared to those wrought by famine and war (*Economist*, 2004*b*: 76).[4]

Facing the many risks associated with speculative finance, the international financial system fails to boast formidable safeguards that would prevent the onset and transmission of a major financial crisis in the future. Together with existing international agencies, states have neglected to create a consolidated institution or regime that could oversee short-term financial transactions and their effects on the underlying welfare of their national economies. The few preventative regulatory mechanisms that have been devised on both unilateral and ad-hoc multilateral bases are unlikely to avert severe financial turmoil from breaking out of isolated contexts. Further, there is nothing built into these existing frameworks to effectively reduce the prospect of systemic risk by protecting against *contagion* — the transmission of financial shocks from one market to another.[5] It is clear that this type of risk-management must be implemented at a transnational level, introducing sophisticated and broadly-devised regulations that would manage the more volatile components of cross-border financial investment. Some, such as the International Monetary Fund's (IMF) economic counselor Raghuram Rajan and New York Federal Reserve Bank president Tim Geithner, have urged for more "stress-testing" of the international financial system to determine its resilience and the magnitude of shocks that it can comfortably absorb (*Economist*, 2005*b*; Wighton, 2004). In recent decades, the system has seen its share of distress. Unfortunately for both regulators and

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[4] A typical financial crisis costs nations approximately nine percent of their gross domestic product (GDP) while recent banking and currency crises, such as those in Argentina and Indonesia in the late 1990s, claimed over twenty percent (a financial shock larger than that experienced during the Great Depression) (*Economist*, 2004*b*).

[5] It should be noted that there are scholars who would stand in disagreement with this assertion. Some, such as Ethan Kapstein (1994) and Eric Helleiner (1992), contend that there is a sound regime presently in place, "centered around" BIS-central bank cooperation, to prevent large-scale international crises and underwrite stability in the global economy (Helleiner, 1992: 43, 45). Kapstein argues that a "regulatory structure for international economic activity" already exists as well as "political structures" that provide an adequate "safety net" for the international financial system (1994: v).

national officials, very little can be inferred from previous crises for every crisis is unique. Regulations therefore should not to be instituted in a knee-jerk manner. Further research needs to be conducted in order to determine the nature and development of financial crises in the modern era.

Effective intervention in the form of strong regulatory provisions could reduce the frequency of regional financial crises by preventing isolated outbreaks of banking and currency collapses from spilling-over into dominant capital markets. This entails, in my judgment, targeting those investors and investment vehicles that tend to exacerbate financial instability in international money and equity markets. A good place to start may be to look at some of the more volatile yet least regulated market participants — highly leveraged institutions (HLIs) — and specifically, hedge funds. Narrowly construed as private investment partnerships comprised of a sophisticated (read ***high net-worth***) investor base, hedge funds shift staggering amounts of wealth within and between markets. The IMF estimates that hedge funds can mobilize between US$600 billion and US$1 trillion in foreign-exchange derivatives contracts when speculating against a foreign currency, a sum of funds larger than the gross domestic product (GDP) of a mid-sized industrialized economy (Gowan, 1999: 98).

As one economist puts it, nations no longer find their economies dwarfed solely by ever-expanding global markets, they are now even rendered small relative to the position-taking capacities of "a small number of hedge funds" (Eichengreen, 2004: 306). "Nimble and quick off the mark," hedge funds are able to precipitate herding both into and out of asset markets and thus affect asset values "either directly", through the positions they take, "or indirectly, via the tendency of other market participants to follow their lead" (IMF, 1998: 4). At times, the "mere rumor that they are taking a position may encourage other investors to follow" (Eichengreen & Schinasi, 1999: 6). "It is natural," as William Fung and David Hsieh point out, "to find their footprints in most major market events" (2000: 2, 35). Closer scrutiny of hedge funds may yield discoveries pertinent to understanding the gestation of systemic financial disturbances. Their activities "may serve as a leading indicator of market turmoil" and monitoring their operations may therefore "provide early indication of potentially dangerous risks assumed by the market as a whole" (Ibid: 35).

Due to their sheer size and the several dozen high net-worth investors that often comprise their aggregate capitalization, hedge funds have often been deemed 'too big' and 'too sophisticated' to fail. I will argue however, that the size of HLIs' resources, coupled with the substantial investment decision-making autonomy conferred unto fund managers, allows these institutions to behave rather *irrationally* by unwinding their positions following sub-standard risk-assessment calculations. Though it is beyond the scope of this work to empirically validate those conjectures to any conclusive extent, I want to raise the notion that by being some of the largest and at the same time least regulated actors both on a domestic and global level, HLIs may potentially be a source of instability in the international financial system and therefore require greater attention by regulators and academics alike. By advancing a supply-side theory of systemic crises, I will look at not only investment as an aggregate variable, but at the *microstructure* of global finance, that is, the specific participants and channels that are disproportionately accountable for the transmission of crises. I will argue that effective constraints can indeed be placed upon these actors without necessarily impinging on the dynamics of free competition — the cornerstone of our contemporary international financial order.

Aside from addressing some of the risks that these vehicles pose, I will also try to offer a simple explanatory model why international cooperation either in the form of regulatory harmonization or data collection initiatives has not been achieved to any great degree thus far. Despite the need for more information on the subject, only sparse attention has been given to the risks posed by HLIs, in part perhaps because of the rather novel nature of their operations. My arguments will be formulated in the context of the discourse on international regimes and theories of cooperation, asking in the process, What are the opportunities if any, for greater collective monitoring and harnessing of speculative surges of 'hot money' on the international financial system? And perhaps more specifically to this study, What are the prospects and challenges facing the creation of an international financial regulatory regime that would oversee hedge fund investment? In addressing those questions, I will advance a basic analytical framework that hopes to explain why intergovernmental cooperation in creating any semblance of harmonized regulatory standards has been both fleeting and episodic, focusing primarily on the traditional theoretical metrics used in studies of international affairs, namely, the

incentives and interests of states as well as the distribution of power, both political and economic, between them.

While outlining some of the obstacles to greater international regulatory coordination, I hope to demonstrate that while they may indeed seem daunting at this present juncture, they should by no means be perceived as insurmountable. Cooperative multilateral initiatives can indeed be forged into lasting regimes if states acknowledge the converging interests they share in regulating the activities of larger, more exuberant private financial actors. In order for that happen of course, the taboo surrounding regulation and specifically, with market intervention, needs to be dispelled. Some of the more obvious impediments to international monetary cooperation are built on the principle that markets are sacrosanct and that the discipline imposed through free and open markets successfully discourages financial indiscretion. Free and open markets, the rationale follows, are normatively superior structures of socioeconomic order with built-in self-equilibriating mechanisms. The presumption could not be a more mistaken one. Recent crisis have illustrated that the liberalized international financial system currently in place is indeed susceptible to catastrophic collapse.

The importance of preventing an international financial crisis — an event that threatens all actors directly involved and many who may not be — far outweighs the romanticism of preserving an unfettered international marketplace. Moreover, crisis-preventing safeguards and risk oversight implemented on a transnational level can be effective deterrents against the exigencies of mobile capital without necessarily reducing liquidity or impinging on private asset allocation decisions. I contend that by targeting vehicles such as the rapidly proliferating yet scantly regulated private investment partnerships that are becoming increasingly active internationally, the collective vagaries of financial speculation can be effectively intermediated by public authorities without stifling the autonomy of the individual investor. Whether this should come in the form of a comprehensive multilateral regulatory regime or a consolidated supervisory agency that would oversee the activities of HLIs is for states to ultimately decide on. However, the resolve to create such an entity simply does not exist at this time.

Regulatory harmonization can rarely come about to any great degree without support from the world's strongest financial power and economic behemoth, the U.S. As

repeatedly demonstrated in the past, the U.S. can present the necessary political and economic incentives to galvanize international support for the harmonization of regulatory policies and can equally nix proposals that have been tabled by other nations when opposing those policies squares with its domestic interests. The U.S.'s reticence with regard to harmonizing policies concerning the behavior of private investment vehicles and specifically, HLIs, is in line with their opposition to imposing an industry-wide regulatory regime domestically. Though most hedge funds' operations are based off-shore, many have their management departments domiciled in the U.S. Whether U.S. regulatory officials' interest in maintaining a loosely regulated environment for hedge-fund investment outweighs their preference for preserving a stable international financial system is contentious and difficult to assess. The reasons for its complacency cannot be readily surmised without meticulous inspection of the domestic politics of the American financial system. In consideration of brevity, I will do little more than speculate on the motives behind the U.S.'s resistance to hedge-fund regulation. Exploration of those reasons can be the focus of another analysis. I propose instead to demonstrate that it is indeed within the interest of international regulators and the entire community of states that are tied to the global economy to meaningfully scrutinize the issue of cross-border hedge-fund investment and regulate those vehicles if need be in a manner consistent with preserving the integrity of the international financial structure and reducing the threat of systemic risk.

I also do not intend to quantitatively test the impact of HLIs to any conclusive extent. This would be an overwhelming task at present given the dearth of reliable data on the topic. Instead, I wish to look at the conspicuous absence of inter-regulatory coordination between states on this matter and highlight some of the incentives that states share in harmonizing their regulatory policies with respect to hedge-fund activities. At a bare minimum, greater attention needs to be given to HLIs and a more comprehensive body of data needs to be aggregated by a neutral agency — one not partial to the hedge fund question.[6] Only two significant multilateral reports have been published on these

[6] Much of the existing data has a somewhat dubious empirical content for most of it continues to be compiled by either the participants themselves or organizations inextricably affiliated with either hedge funds or fund operators. Nevertheless, the international community seems content with the data that has been collected to date. Government agencies in the U.S. for instance, regularly invite fund managers and

actors to date: (i) "Hedge Funds and Financial Market Dynamics" (1998), authored by Barry Eichengreen and Donald Mathieson under the auspices of the IMF, and (ii) the "FSF Working Group on Highly Leveraged Institutions" (2000), issued by the Financial Services Forum. Both were released shortly following the turmoil of the late 1990s and both reports concluded that hedge funds played only a marginal role in the gestation and diffusion of the crises. Some IMF directors were dissatisfied with the findings of the May 1998 IMF report and its portrayal of hedge funds as innocuous bystanders. They demanded a more rigorous examination of hedge-fund involvement in the crisis-affected markets and demanded that the IMF's managing director at the time, Michel Camdessus, report the disagreement in the director's main report (Gowan, 1999: 99).The impetus behind a more penetrating inquiry into the impact of HLIs on the global economy however, cannot arise without the insistence of the world's leading financial power, which was clearly lacking at the time and for all intents and purposes, is still absent.

Put simply, while "the logic of markets is borderless, the logic of politics remains bound" (Pauly, 1994: 4). It is to the study of this reciprocal interaction between financial markets and the limited progress of international regulatory cooperation that this paper intends to speak to. There is an important interplay tangled within the finely-calibrated nuances of global finance between systemic events and domestic repercussions, with the former having formidable implications for the latter.[7] The absence of a concerted transnational resolve to construct a regulatory framework or regime that would serve to reduce systemic risk and preserve stability in the international financial system poses an interesting dilemma to scholars of international relations and in particular, theories surrounding intergovernmental cooperation and regime formation. Liberal-institutionalist theories predicated on functional explanations of cooperation would predict the emergence of regimes and other formal cooperative arrangements where joint gains could be enjoyed (international financial stability and the solvency of private market

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industry insiders to participate in forums such as the Securities and Exchange Commission's Roundtable on Hedge Funds in May 2003, which was organized to address the impact of hedge fund strategies on the U.S. economy.

[7] As one scholar notes, the "tension that exists between domestic interests and international public goods, poses a fundamental dilemma for policymakers and requires additional investigation by scholars of international cooperation" (Kapstein, 1992: 287). This indeed may be why Singer insists that "it is imperative that scholars of international relations learn more about [regulators'] patterns of cooperation" (2004: 532).

participants, for instance) through the deterrence of a shared threat (say, systemic failure). Competing models such as the theory of hegemonic stability, meanwhile, are grounded in power-based interpretations of cooperation. The shortage of coordination with regard to protecting the global financial system may indicate that the presence of mutual interests is an insufficient variable on its own to induce the creation of a regime, even in situations where there may be an obvious 'public good' at stake that happens to fall within the preference curves of all actors involved. This absence of cooperation may illustrate the failure of liberal institutionalist and demand-driven, functional analyses of regime building and namely, their emphasis on the conditional incentives of converging state interests and the inverted Coase Theorem. This study intends to add specifically to the understanding of the incentives and barriers to the construction of regimes under conditions of deepening financial interdependence.[8]

Further inquiry needs to be conducted by political economists into the irreconcilable logic between bounded politics and borderless economics. The politics of financial internationalization in particular, is a nebulous facet of the globalization process that has been relatively neglected within political-economic discourse (Helleiner, 1992: 49). Closer attention has been directed to the fragility of the international financial system from non-academic circles in recent years and it is important that scholarship keeps apace in investigating this rapidly evolving landscape. Deepening integration and continued financial innovation will undoubtedly test existing weaknesses in political and regulatory structures. Greater analytical exploration must be done on the disaggregated complexities of international finance so as to better understand its impact on national markets and the international economy as a whole. Scholars of international political economy can contribute to this important discussion by drawing attention to the importance of devising appropriate regulatory mechanisms for managing what are becoming increasingly global phenomena – phenomena that simply cannot be effectively managed unilaterally. The specific focus of this piece is providing a possible explanation for why the international community has failed in erecting coordinated structures of transnational governance that

[8] One caveat needs to be imparted before proceeding. Not unlike the two dominant theoretical models within regime theory – realist, or power-based formulations, and neoliberal-institutionalist, or interest-based understandings of cooperation – I have chosen to adopt the rational choice model for reasons of simplicity and parsimony.

would manage the impact of risky, short position-taking institutions such as hedge funds on both the international system and individual economies. It also intends to provide some insight on the role of hegemonic leadership in the construction of economic regimes in an era of highly liquid foreign-exchange markets and extensive financial-market enmeshment, an era incidentally, in which hegemony as a structural feature of the international order is in purported decline.[9]

II. THE RENESSAINCE OF ARBITRAGE AND THE CHANGING NATURE OF RISK

"If the eighties had made greed acceptable, the nineties had elevated it to an art form"

Ben Mezrich (2002)[10]

We are enjoying an era of unprecedented opulence, underscored by staggering levels of cross-border capital and financial flows. Driven by political decision-making and calculated economic policies, the world economy is fast becoming a more integrated whole. The presence of quantifiable incentives has compelled many nations, especially those lying on the periphery of the core of the world economy, that is, on the fringe of major capital and credit centers, to deregulate their markets so as to expediently integrate themselves into global capital markets. Post-World War II institutional and bilateral promotion has encouraged governments to steadily continue down the path of economic reform and toward greater financial market liberalization. In addition to these political developments, exogenous advancements made in information-technology and communications in the last few decades have quickened the pace of investment and broadened its impact on national markets.[11] Such changes in the structural environment of financial investment have also altered the nature of the instruments and products

[9] The study will, if only lightly, touch on the idea that there may indeed be more than simply structural or exogenous reasons for American hegemonic decline in carrying responsibility of preserving a stable international financial system. In other words, this decline or retreat from hegemonic responsibilities may not be as involuntary as it appears.

[10] In *Bringing the House Down: The Inside Story of Six MIT Students Who Took Vegas for Millions* (2003), p. 12.

[11] Rapid advancements in information and telecommunications technology ought to be considered as exogenous variables that have proliferated over-the-counter (OTC) capital transactions—financial exchanges made bilaterally between parties, usually through computer or telephone communication, rather than on the floor of an organized exchange. These exchanges are often intermediated by brokers and/or dealers (Mathieson & Schinasi, 2000: 112).

available to market participants. The existence of a liquid foreign-exchange market (a product of the post-Bretton Woods era of floating exchange rates) along with the proliferation of a wide array of complex, over-the-counter (OTC) modern financial instruments such as derivatives[12], complicated hedging and arbitrage products, and a sophisticated futures market[13], has revolutionized the international financial system and led to an astounding growth in transborder capital movement.[14] Freed from the fetters of regulatory oversight and technological limitations, money has gained an unprecedented degree of mobility.

Supplementing the structural adjustments that have taken place in freeing international capital is the progress that has been achieved in the study of financial investment and the behavior patterns of investors. What used to be guesswork, the practice of 'forecasting the psychology of the market' has become a *science* of sorts — an epistemology enriched by the contributions of applied mathematical and computational models. This amalgamation of academic discovery and practical expertise has culminated in revolutionary new methods of modeling investor behavior, helping traders anticipate and offset market volatility.[15] Quantitative finance, as it has come to be

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[12] A contract whose value is based on the performance of an underlying financial asset, index, currency exchange-rate, or other investment. As David Held puts it, derivatives are attractive instruments because they "allow agents to hedge themselves against the risk of adverse movements in the underlying price of a product" (1999: 207). As of March 1995, the total outstanding value of global derivative contracts was US$47.5 trillion, or roughly twice the value of world economic output at the time (Strange, 1998). Over-the-counter derivatives pose both real and conceptual risks for financial authorities. For a comprehensive review of some of these, see LiPuma and Lee (2004).

[13] A futures contract is an agreement to buy or sell a specific amount of a commodity or financial instrument at a particular price on an agreed-upon future date. A complex instrument often utilized by established investors is an option based on a futures contract, the value of which varies with the value of the futures contract, which in turn, varies with the value of an underlying commodity or security (essentially, a futures contract based on a derivative).

[14] Some of the more esoteric financial devices even allow investors to buy and sell financial assets and currencies "into the *future*," which makes for an attractive but incredibly unpredictable and indeed, unstable trading environment [emphasis added] (Held, 1999: 189).

[15] Robert C. Merton was one academic who confirmed the growing interplay between academic and practical applications to financial management. In an autobiography provided to the Nobel Foundation, the Nobel-laureate and Long-Term Capital Management (LTCM) partner and co-founder remarked that his experience in the investment world epitomized "the theme of the productive interaction of finance theory and finance practice" (http://nobelprize.org/economics/laureates/1997/merton-autobio.html; Dunbar, 2000: 179). Fellow LTCM partner and Nobel-laureate, Myron S. Scholes, echoed Merton's remarks on the relationship between research and practical methods in his own autobiography: "[b]y applying financial technology to practice, I have achieved a better understanding of the evolution of financial institutions and markets, and the forces shaping this evolution on a global basis" (http://nobelprize.org/economics/laureates /1997/scholes-autobio.html). It should be noted however, that both Merton and Scholes wrote their

referred to, has introduced ever newer forms and layers of risk management. The innovations that have accompanied it have reduced participants' exposure to value fluctuations in the marketplace and as such, increased aggregate yields. New investment vehicles such as HLIs have come into vogue for their ability to harness these advanced techniques of asset-management. Hedge funds for instance, combine a portfolio of complex instruments with sophisticated trading strategies so as to 'hedge' risk, that is, reduce or offset it. Nevertheless, in spite of the innovative advancements in academic understanding — the conceptualization of derivative pricing-models and other complex systems of measuring market volatility — crises and institutional failures continue to occur. In the last few decades of financial commerce, the difficulties of quantifying and modeling human psychology, or more precisely, the failure of models to account and anticipate anomalous or *irrational* behavior, have been taken to their logical conclusion. The frenzy that surrounded the more severe financial and banking crises in recent years revealed the "psychological impulses that lay beneath all human behavior," the very impulses that can occasionally "defy the tangible dictates of supply and demand" (Greider, 1997: 56). As one prominent scholar of international political economy puts it, "although individuals may be rational, financial speculation is a herd phenomenon in which the seemingly rational actions of many individuals lead to irrational outcomes" (Gilpin, 2001: 266).

Increased sophistication in investment practices poses new challenges to financial regulators and very few facets of global finance have eluded the grasp of national monetary authorities and regulatory bodies more regularly than short-term speculative flows in the form of complex financial instruments. As Philip Cerny contends, the astounding growth in cross-border financial transactions and innovation in information technology have "dwarfed" the public resources needed for monitoring and controlling financial activity, "thereby making preexisting state-based patterns and systems of regulation and intervention less effective" (1998: 10). Moreover, the growing use of OTC derivatives and other products, their broad distribution at times across several different markets, and the complexity and extensiveness of counterparty obligations, make it

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autobiographies prior to the catastrophic unraveling of LTCM in 1998 and the corresponding dissolution of its partnership.

exceedingly difficult for national regulators to gauge to any degree of preciseness, their country's net exposure to foreign investors. This inability to accurately measure disaggregated exposure makes it virtually impossible to assess total risk and in turn, to anticipate the onset of distress. Failure to readily quantify risk exposure is of both national and systemic concern, implicating both lender and debtor and both host and provider of capital. In addition to this difficulty, the financial resources available to states are simply insufficient to abate a crisis of systemic proportions. Even the more powerful economies are unable to single-handedly prevent the collapse of the global financial system if faced with acute and sudden distress.

Regulatory policies have lagged behind innovations in financial investment.[16] Monetary authorities are constantly playing catch-up and "because financial activities evolve more rapidly than official oversight, the gap between regulator and regulated seems to have widened" in recent years (Mathieson & Schinasi, 2000: 96). It is a case of "bloodhounds tracking greyhounds," as the former head of the Bank for International Settlements (BIS) Financial Stability Institute quipped (Mayer, 2001: 283). New instruments and investment products have been devised specifically to circumvent existing regulations and collective investment vehicles such as hedge funds regularly side-step policies prohibiting excessive concentrations of capital. International financial markets remain the last unbridled, globally deregulated frontier for speculative capital flows, hence the burgeoning amount of cross-border financial transactions in recent decades following the inception of the floating exchange-rate regime. Save for the occasional ad-hoc bilateral and multilateral agreement, no legitimate authority exists outside that which pervades within national jurisdictions and there is at this time no international agency to mediate financial interaction between participants across disparate markets. Whether states have voluntarily receded from or never actually occupied this area of deregulated financial and monetary space is irrelevant. What is important is that

[16] As Charles W. Calomiris and Robert E. Litan maintain in a Brookings Paper on the prospects of financial regulation in the global system, keeping abreast of the constantly evolving trading strategies of private institutions will be an overwhelming task for regulatory supervisors. "The proliferation of financial instruments," they argue, "coupled with innovative investment and trading strategies, keeps financial institutions several steps ahead of regulators who inevitably lag in gaining the requisite expertise required to assess the new risks" (2000: 290-1). The gap between financial innovation and the response in regulatory supervision moreover, presents challenges for international agencies to not only devise consensual policies but also to arrive at common standards and methods of doing so (Ibid: 290).

states and domestic authorities are faced with a constantly evolving set of challenges which they cannot cope with to any great degree of effectiveness on an independent level.

Progress in finance and portfolio theory enhanced understanding of the study of the microstructure of investment and financial intermediation by conceptualizing investment practices in continuous-time settings. The same ought to be done by domestic and international monetary authorities. The global financial system should be viewed as a composite of diverse cogs and imperfectly-calibrated yet continuously moving parts where the engine of change, that is, the mechanism of both growth and contraction — of volatility, in a sense — is the dynamic interaction between the various agents and participants and the outcomes which that interaction produces. Assessing systemic risk requires that the activities and exposure of private participants be collated across both space and time. The reflexive character of time makes it nearly impossible to quantify aggregate risk to the system at a fixed point. Exotic financial instruments render the task even more daunting. This has forced monetary authorities to adopt a responsive rather than an anticipatory approach to addressing crises. The absence of a harmonized set of policies implemented to prevent isolated currency crises from spilling over into other markets and taking on regional or even systemic dimensions is a glaring shortcoming of the contemporary order. The responsibility of this burden falls squarely on the shoulders of states, who have measurable incentives to preserve stability in the international financial system not only for their respective populations but for their financial-market participants as well. Collectively, they have failed to devise provisions to this point that would curtail threats to the basic operational health of the system.

SYSTEMIC RISK

Two of the more prominent but by no means recent factors affecting not only the distribution of power capabilities throughout the international system, but the nature of the system in its totality, are: (i) deepening interdependence between the interacting units, whether they be states or market participants, and (ii) emerging new threats to the stability or equilibrium of the international order, of which systemic risk is one. Both of these aspects shape and delineate the contours of the international system and constitute variables that through their continued interplay, determine the structure within the

system. Interdependence creates converging interests and mutual vulnerabilities while at the same time opening up new channels through which threats to the system proliferate and challenge the existing order. Given the complex dialectic between the processes and the degree of their entanglement with one another, there exists a growing need to manage one process, that of deepening financial integration, in a manner conducive to the suppression of the other, that of systemic unraveling. This can only be effectively achieved trough the intermediation of regimes or international institutions, or through concerted behavioral coordination among the various participants, both public and private, a prospect much less likely to occur given the diverse, pluralistic interests of the parties involved.

One by-product of deepening integration and the vast amount of inter-dealer transactions and shared positions is that there are few uncorrelated markets in the contemporary international financial system. This means that the ripple effects of financial strains in one area of the globe can often be felt in neighboring regions. The last few international banking and currency crises have highlighted this reality. Following investors' position unwinding during the frantic period following the currency depreciations in Southeast Asia, there was a fall in the dollar/yen exchange rate by 15 percent in 30 hours in October 1998, resulting in a drop of 25 percent in less than a month. The depreciation showed that liquidity can be frighteningly elastic, even in one of the world's principal foreign-exchange markets (de Brouwer, 2001: 5). Financial journalist Martin Mayer perhaps put it best: "The lesson of 1997 and the 'contagion' from the Asian crisis is that the emergence of new markets for new instruments in new places has placed a great strain on the supervisory capacities of all banking regulators, who must know what is going on in faraway places because their own banks are likely to be involved" (2001: 241).

Financial crises have far-reaching economic and social reverberations which most states are simply ill-equipped to manage on an individual level. The fact that many markets are engrossed in a competitive struggle to attract capital into their markets to begin with makes them particularly vulnerable. Systemic risk introduces another dynamic into the equation of regulatory oversight, one that also cannot be effectively addressed on a unilateral basis. Largely ignored or discounted before financial contagion became a

realistic possibility during the 1997 Asian Crisis, systemic risk threatens both host and client, both national economies and market participants, and indeed, the stability of the entire global economy, and subsequently, all financial markets tied to its core. Simply understood, systemic risk is the potential for the failure of one financial institution to "progressively engulf and topple" other institutions, instigating in the process, "a domino or cascading effect" of widespread institutional and banking failure that renders the entire financial system "dysfunctional" (LiPuma & Lee, 2004: 104, 158). This definition of systemic risk is synonymous with contagion risk, and contagion is indeed at the root of systemic instability.

As remote of a possibility as systemic breakdown may seem, the presence of risks in international capital markets creates opportunities for sporadic malfunctions in the form of institutional failures. Such failures have become a "structural feature" of the contemporary international financial system which "no government can insulate its economy from" (Held, 1999: 233-4). When experienced in succession, institutional failures can trigger a chain-reaction given the density of inter-market positions that underlies the global economic system. In a highly enmeshed world economy, as former U.S. Treasury Secretary Larry Summers points out, "financial linkages lead to market correlations" (2000: 6). Poor asset performance in one market will invariably spill over and affect asset markets in another market (Ibid: 6). Furthermore, since "communications are so quick, and positions so closely synchronized through the hedging processes in the derivatives markets, a cascading collapse can begin in remote corners [that] nobody is watching" (Mayer, 2001: 319). Indeed, in a tightly integrated financial system, investor retreat will usually be enough to introduce the bracing certainties of systemic risk. The modern international financial system provides many channels for the transmission of financial disturbances given that the majority of transactions between individual markets are "intermediated by a relatively small number of large internationally active institutions" (Mathieson & Schinasi, 2000: 41). In the absence of effective safeguards against what is a relatively recent problem facing public authorities, the existing structure of the international economy will continue to be prone to the spill-over of domestic financial and macroeconomic troubles into other markets.

A systemic crisis, "like the explosion of a nuclear power plant, is simultaneously improbable yet too potentially devastating to ignore," remark LiPuma and Lee (2004: 158). Unfortunately systemic failure is no longer as improbable as the authors suggest. Recent financial crises have provided an ominous glimpse into how a large crisis of systemic proportions could conceivably unfold. "Unprecedented volatility in the stock, bond, and foreign exchange markets" meanwhile, demonstrates "that instead of settling down, the postmodern financial system is acting up" (Mayer, 2001: 3). As was suggested above, new financial instruments and practices pose formidable challenges to regulatory officials, but they merely constitute the more conspicuous threats posed by global finance. The international financial system requires insulation to prevent undue stress from bringing it near the precipice of collapse. This may come either in the form of comprehensive regulatory oversight or a regression back to a more restrictive financial order. In any event, states share a collective interest in enacting policies that would block the channels through which financial shocks are transmitted throughout the global system since they are all at risk (even though only unequally). It would be unwise to attempt to reduce systemic risk by stifling financial innovation. Instead, public authorities ought to examine the nature of systemic risk and scrutinize the actors, if any, that may potentially spark or exacerbate instability. A good place to start is to explore at the dynamics that underlie systemic failure. We will begin with contagion and then proceed to examine the role that private actors play in transmitting distress between markets.

THE ONSET OF CRISIS: CONTAGION AND ITS PRECURSORS

Scholars provide varying definitions of contagion. Their particular understanding of contagion is usually predicated on the factors which in their judgment are most responsible for driving the phenomenon. Barry Eichengreen, Andrew Rose and Charles Wyplosz perceive contagion as a "clustering" of speculative attacks over a short period of time (Eichengreen, 2004: 108). The two most often cited channels through which crises are transmitted between two nations are trading linkages and macroeconomic policies. Countries involved in an extensive trading relationship, it is thought, are more susceptible to exporting financial instability to other markets, as are countries that bear common

macroeconomic policy-sets. The logic is straightforward. In the context of trade, a currency attack on one nation leads to a depreciation of its exports and results in a current account deficit for its trading partner, accompanied eventually, by diminishing international reserves in that partner's central bank and sparking in turn, an attack on its currency (Ibid: 159). There are of course other ways negative shocks can be transmitted through trade, but the one described above is the most predominant. Eichengreen, Rose and Wyplosz (2004) conducted an empirical study using data from twenty industrialized economies over a thirty year span (1959-1993), covering 2800 separate observations. They discovered that countries that trade disproportionately with one another are more liable to transmit financial shocks between them than nations sharing similar economic and financial policies. For their particular sample period, trade linkages were the "dominant" channel through which contagion effects were propagated (Ibid: 184).

A heightened level of trade in goods and services however, does not always explain why contagion occurred nor provide an adequate explanation for why in certain contexts, contagion did not occur where it logically ought to have given the close trading relationships of the nations in question. There is perhaps no better repudiation of the trade-linkages approach than evidence provided by recent financial crises. Kaminsky, Reinhart and Végh (2003) offer the example of the crisis in Mexico in 1994. At the time the Mexican peso was devalued, only two percent of Argentina's and Brazil's exports went to Mexico, yet the effects of contagion left an indelible mark on the Argentine and Brazilian economies (Ibid: 8). The trade approach would likewise fail to explain the occurrence of contagion between the Russian and Brazilian markets, where there was an absence of significant bilateral trade (Brazilian exports to Russia accounted for less than one percent of its total exports), yet Brazil's interest rate spreads doubled and equity prices fell by more than twenty percent in the weeks following the Russian default (Ibid: 8, 25). Thailand likewise did not share extensive trade linkages with the countries of the Southeast-Asian region that would later be adversely affected by the floatation of the baht on 2 July 1997. As for instances where heightened bilateral trade fails to explain the *absence* of contagion, Kaminsky, Reinhart and Végh cite the example of Argentina and Brazil in 1999. The equity market in Argentina actually appreciated by twelve percent in

the week following Brazil's devaluation of the real on 13 January 1999 despite the fact that nearly thirty percent of Argentine exports at the time went to Brazil.

There is a healthy amount of recent academic literature stressing macroeconomic commonalities as the primary channel of contagion. In the case of crises being diffused between markets on the basis of macroeconomic similarities, it is presumed that investors with diversified portfolios across several markets that bear similar properties will scale back their exposure in those markets if a shock were to occur in one of the markets for fear that other investors will do the same. Nevertheless, recent empirical studies, particularly that of Guillermo Calvo and Enrique Mendoza (2000) and Itay Goldstein and Ady Pauzner (2004), have demonstrated that contagion occurs between countries that do not necessarily share similar economic 'fundamentals' (Calvo & Mendoza, 2000: 81, 110; Goldstein & Pauzner, 2004: 151-2). More important than trade linkages and policy similarities in determining the scale of contagion effects they argue, are the variables of the degree to which investor portfolios are diversified and the transmission of information between market participants.

Goldstein and Pauzner infer that crises are sometimes transmitted between markets that have no observable link between them but simply share the same groups of investors (2004: 170). They understand contagion to be a process where the "coordinated" withdrawal of investments by a set of investors in one market increases the "probability" of a financial crisis in another (Ibid: 153). Access to different sources of information and varying interpretations of that information, the so-called "structure of information," as they put it, enables investors to "uniquely determine" how a shock experienced in the primary market will affect the way investors will respond in other markets (Ibid: 153). The response will be a function of a combination of the conditions in those markets and the outcomes in the primary market, but more so the latter than the former. The decision to keep one's investment in a given market will depend on the actor's capacity to tolerate the allocation decisions of other investors which have a direct impact on values in that market. This capacity is determined in turn, by the performance of the investment portfolio in the original market. If losses are experienced, it will make the actor more risk-averse to developments in other markets and subsequently render him more likely to withdraw his investments from those markets. Their definition thus rests

on the mechanism of a 'wealth effect' — that investors have a floating "absolute risk aversion", decreasing or increasing according to the performance (gains and losses) of their portfolios in previous instances (Ibid: 153, 174). A highly diversified portfolio then, makes investors acutely sensitive to shifts in values and correspondingly, the actions of other investors.

Calvo and Mendoza (2000) depart somewhat from the propositions of Goldstein and Pauzner by emphasizing the cost and availability of information as the chief determinant of contagion. Where Goldstein and Pauzner focus on the wealth effect, Calvo and Mendoza suggest that the cost and tediousness of collecting information on say, several fundamentally uncorrelated financial markets, makes actors and institutions susceptible to draw inferences from the actions and signals of other, potentially better informed participants, and in the absence of such signals, rely on information deduced from crises occurring in other markets. By applying simulated models to data obtained on portfolio diversification and information costs from recent financial crises, the authors discovered that growing financial globalization and broadening of securities markets may indirectly strengthen contagion effects. There study focuses on the costs of acquiring information, where the marginal gain of paying fixed costs for obtaining country-specific information is reduced when markets become increasingly integrated, particularly when traders face incentives to engage in short-selling, which they often do in speculative attacks.

Increased internationalization of global capital markets reduces the incentives of relying on private information and makes it more efficient for actors to simply emulate "arbitrary" portfolios unrelated to fundamental asset prices (2000: 79, 81). Imitative behavior then, following the model put forth by Calvo and Mendoza, is proportional to the cost of acquiring additional information. If the cost goes up relative to the mean return of a given institution's portfolio to that of general market performance, then there will be a "range of multiple equilibria" under which traders will "rationally choose" to imitate rather than making their own assessments (Ibid: 81). The result, according to the authors, is a case of *rational* contagion — "a situation in which utility-maximizing investors choose not to pay for information that would be relevant for their portfolio decision" (Ibid: 81). The effects of rational contagion, it should be added, will be

magnified in the presence of rumors, which large institutions can often stir up with relative ease. If such distortions are indeed by-products of growing financial globalization in modern securities trading, then certain actors, particularly those large enough to spread rumors and attract 'noise traders,'[17] can have a disproportionate influence on market developments.

The explanatory range of Calvo and Mendoza's findings is nevertheless somewhat limited. The empirical emphasis they place on investors with portfolio's anchored largely in globally-traded financial assets and in jurisdictions that offer a greater degree of capital convertibility, restricts their model's applicability only to advanced, industrialized economies. "Small, illiquid markets," as Kaminsky, Reinhart and Végh point out, "are likely to be under-represented in international portfolios" and therefore "shielded" from the effects of contagion according to the model provided by Calvo and Mendoza (2003: 6). Historical experience proves however, that peripheral markets are just as prone if not more so, to the exigencies of contagion. Kaminsky et al. urge an analysis that looks more closely at financial-sector ties and specifically, net portfolio bond and equity flows between countries, rather than simply the diversification of investor portfolios. "Financial crises that have not set off major international dominoes," they suggest, "have usually unfolded against low volumes of international capital flows" (Ibid: 10). With less capital tied up, investors face less pressure to adjust their portfolios to an isolated shock which makes them less likely to run from a market. The work of Kaminsky, Reinhart and Végh makes a good critique of the limitations of trade-based theories of contagion and the authors offer an interesting alternative. Nevertheless, focusing on the precursors of contagion is only half the story. Their study falls short of making a concrete analysis of the engine of contagion, that is, the inherent processes that drive market runs, asset-price volatility and ultimately create the liquidity shortages that result in contagious financial crises. It is to the determinants of contagion — the underlying processes of herding and informational exchange — that we now turn to.

[17] 'Noise traders' is a term originally conceived by Albert Kyle (1985). It refers to investors that rely on sub-optimal signals such as rumors, sentiments or the reputation of the firms or traders that they choose to model their decisions after.

HERDING AND THE MECHANISMS OF DISTRESS TRANSMISSION

Herding is plainly understood as "behavior patterns that are correlated across individuals," where investors emulate the strategies or position-taking of other actors without having access to the same information and irrespective of underlying fundamentals (Devenow & Welch, 1996: 604; Fung & Hsieh, 2000: 7). The decision to imitate other actors is usually driven by the presumption that thee actors being imitated have greater access to information or are simply more adept at utilizing their private information to enhance the performance of their portfolios. Herding distorts the self-equilibriating market mechanism for it compels investors to disregard their own information for the gains of positive feedback externalities — that is, the presumption that jumping on the bandwagon will compel other actors to do the same (Kaminsky, Reinhart & Végh 2003: 4). Albert M. Wojnilower, former chief economist at First Boston bank, once remarked that markets resemble "a collection of overlapping crowds". He wrote that "[t]raders must and do therefore respond literally instantly to all news to which they think other traders might respond. Whether the news is considered economically significant or even true is immaterial" (Greider, 1997: 124).[18] In an international financial economy where decisions are sometimes made hastily and in high volume, actions often speak louder than information and therefore may have a greater effect on outcomes. The way that investors will respond to signals deduced from the actions of others will therefore have a significant impact on market events. As Benjamin Cohen observes, whether it is in highly organized asset markets or panicky foreign-exchange markets, "outcomes are highly sensitive to the strategic interdependencies of decisionmaking [*sic*]" (1998: 137-8). Market-specific information is an expensive commodity and investors rarely have the luxury of collecting their own information nor do they have the time to rigorously scrutinize it.

It comes as no surprise then that information-sharing networks have proliferated at an exponential level in the financial services industry. Real-time information is at a premium as transactions are becoming increasingly instantaneous. Financial firms are some of the largest purchasers of information-technology hardware and software

[18] Also in Albert Wojnilower, "The Central Role of Credit Crunches in Recent Financial History," Brookings Institution Economic Papers: No. 2 (1980).

(Calomiris & Litan, 2000: 285). One by-product of the accelerating financial globalization in the contemporary period and persisting informational and performance asymmetries is that investors are finding it increasingly "optimal to mimic market portfolios", making imitative behavior a growing phenomenon in global securities trading (Calvo & Mendoza, 2000: 110). Given the dearth and expense of accurate information, it is often more efficient to follow market trends, or better yet, the decision-making of players who by virtue of their reputation or capitalization, are considered reliable market leaders.[19] Several studies have been conducted on the decision-making tendencies of social groups acquiring information in sequential order by observing the actions of other individuals in their group who preceded them in the sequence.[20] These dynamic processes of informational diffusion are called "information cascades," a term that was originated by Ivo Welch (Banerjee, 1992; Bikhchandani et al., 1992; Welch, 1992, 1996; Avery & Zemsky, 1998). Information cascades arise when market participants either elect to ignore their private information and signals and follow the actions of others under the presumption that those actors are better-informed, or conversely, where actors imitate actions simply because other participants preceding them in the sequence have done so. While they often turn out erroneous, information cascades can nevertheless lead to "fads" in securities markets, that is, "drastic and seemingly whimsical swings in mass behavior without obvious external stimulus" (Kaminsky, Reinhart & Végh, 2003: 4). Swings of this sort can in turn lead to severe distortions of fundamental values and a deviation from the efficient price level, a development which would run contrary to the findings of orthodox economic approaches to asset-market pricing.

As advanced by Eugene F. Fama and Merton H. Miller, the efficient market hypothesis (EMH) posits that in a market where all parties are sufficiently informed, asset

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[19] The practice of patterning one's investment strategies after market leaders has a rather rich history. The positions taken by Nathan Rothschild in the 1820s on the London Stock Exchange, for instance, were closely scrutinized by other traders who credited the eminent financier with having "superior information and intuition". Not surprisingly, the decisions of Rothschild would on occasion, precipitate the mass unwinding of positions and "general flight" from a given stock (Ferguson, 1998: 287).

[20] See the work of Avery and Zemsky (1998), Banerjee (1992), Bikhchandani, Hirshleifer and Welch (1992), Calvo and Mendoza (2000), and Shiller (1995). The aforementioned studies look at the transmission of information as an important catalytic variable in herding. The most pertinent to the study of hedge-fund behavior is perhaps the work of Guillermo Calvo and Enrique Mendoza, who conducted an empirical analysis of financial globalization and its tendency to produce favorable conditions for contagion by promoting imitative behavior among asset-market participants.

prices do not deviate far from a constant norm. In other words, prices consistently remain at their *correct* level. The hypothesis maintains that "left to themselves, capital markets generate asset prices that, given of course readily available information, are best estimates of the present value of future income streams from capital assets" (Bello et al., 2000: 167). In reality however, and as was demonstrably evident in both the Mexican and Asian financial crises, both assets and capital are sometimes grossly overpriced and stray from their theoretically appropriate levels of value, particularly during stock market bubbles. This value overshooting prompts, in turn, excessive risk taking on the part of market participants. The EMH thus somewhat misleadingly predicts that market forces are always both self-correcting and self-regulating. Demonstrated by the experiences of both Mexico and Asia, but perhaps even more dramatically by Latin American countries during the 1982 debt crisis, capital does not always flow in a disciplined manner. Information asymmetries may have something to do with this. Nevertheless, markets, for several possible reasons, do not always and invariably tend toward equilibrium. Hence exuberant investor behavior may need to be periodically curtailed in some manner so as to prevent the onset of instability in the form of excessive price volatility. Despite its practical limitations, the EMH gained considerable popularity for it "seemed to dispel," as Devenow and Welch put it, the previously held notion that markets can behave irrationally and be "driven by herds" (1996: 605).

Modern theoretical explanations, albeit still largely in their nonage and grounded in anecdotal evidence, have uncovered inconsistencies in the EMH. Recent literature on the dynamics of herding shows that utility-reducing outcomes in the form of price overshooting can occasionally result from what were initially rational impulses on behalf of investors. Indeed, there is a consensus in the financial literature reviewed above that persisting informational asymmetries make imitative behavior a rational exercise (Avery & Zemsky, 1998: 726; Calvo & Mendoza, 2000; Kaminsky, Reinhart & Végh, 2003: 5). In fact, a large proportion of contemporary scholarship on financial theory has focused on *rational* forms of herding. Rational herding assumes that actors will take stock of things such as the incentives for emulation, the externalities of their behavior, and the utility of drawing inferences from others in favor of relying on their own private information. In the presence of information cascades, or when the payoffs accrued to an actor increase

with the amount of participants adopting the same course of action, herding becomes quite rational (Devenow & Welch, 1996: 605).[21] Conversely, non-rational herding implies that actors will mimic the decisions of others, foregoing any type of rational calculus much like "lemmings," who follow each other blindly (Ibid: 604; Avery & Zemsky, 1998: 724). The non-rational view is usually dismissed given that it is difficult to reconcile with the principle of the rational-actor model at the heart of economic theory.

Avery and Zemsky, who define herding as a "socially inefficient reliance on public information," introduce yet another variable to understanding the inefficiencies associated with herding: the *quality* of information (1998: 728). The quality of traders' information (third dimension of uncertainty, following the authors' taxonomy) is one of three facets of uncertainty that traders must take into account when they make their decisions. The others are the effect that a price shock would have on a financial asset, which the authors term as *value uncertainty* (single dimension), and the occurrence of that shock, termed *event uncertainty* (second dimension).[22] As the number of dimensions of uncertainty increase, so too does the probability of herd behavior and more extreme effects such as significant short-run mispricing (Ibid: 726). Their conclusion is that value uncertainty is insufficient to precipitate herd behavior. In order for herding to occur, there must be an exogenous shock to the asset whether through a sudden unwinding of positions or otherwise which traders are unaware happened. When those two dimensions are combined with a third — uncertainty over the composition of informed versus uninformed actors, where traders are unsure of the quality of information their counterparts possess — significant price inefficiencies will arise. For Avery and Zemsky then, information asymmetries will be a critical determinant not so much of herding, but of the extent that herding leads to an inefficient deviation from fundamental prices. In conditions where credit is widely and readily available, in the thralls of a speculative bubble for instance, the herding dynamic can be especially destabilizing. It can increase

[21] In the investment world, relative performance is often a better gauge of success than absolute performance, particularly in underperforming markets. "A poor investment decision affects absolute performance dramatically, but if all actors take similar action, the decision affects relative performance negligibly"; conventional thought therefore says that it is "better to be wrong in a group than wrong alone" (Mosley, 2000: 746).

[22] See table 1.1

asset prices "way beyond fundamental justification" and subsequently heighten the probability for a "sharp correction" to take place (*Economist*, 2005*b*).

Table 1.1

Dimension of Uncertainty	Type of Information	Outcome Produced
SINGLE DIMENSION	VALUE UNCERTAINTY - EFFECT OF SHOCK TO ASSET VALUE (a)	PRICE ADJUSTMENT PREVENTS HERDING
SECOND DIMENSION	(a) + EVENT UNCERTAINTY - EXISTENCE AND EFFECT OF A SHOCK (b)	HERD BEHAVIOR
THIRD DIMENSION	a + b + QUALITY OF TRADERS' INFORMATION	HERD BEHAVIOR LEADING TO SHORT-RUN MISPRICING

Perhaps the most significant contribution of Avery and Zemsky's study is the notion that in the presence of information asymmetry, market participants are equally liable to mimic the decisions of well-informed traders as they are to imitate poorly informed traders who herd. In both cases, imitative behavior is rational from the standpoint of the imitators as they cannot effectively distinguish between a set of actors acting on sound information and actors that are merely herding. In the event that participants herd without being certain of the informational composition of the market, substantial asset-market mispricing will be introduced.

Financial theorists have only recently begun to explore the effects of information cascades and their tendency to produce imitative behavior. Their findings are profoundly linked to the study of market participant behavior and specifically, herding. They also bear an important relevance to HLIs, who are vital purveyors of information to other, smaller actors. Imitation is logically consistent with the notion of rational asset-allocation when smaller and lesser informed actors imitate the positions taken by larger, more sophisticated participants, since the latter face greater pressures to acquire accurate information and would therefore be expected to employ more efficient methods of processing and filtering it. This is why the basic cascade model is germane only when "*actions* rather than *private information* are publicly visible" (Devenow & Welch, 1996: 609) [emphasis theirs]. Actions can be deceptive and herding can misleadingly imply that the actors who are herding have access to sound information that compels them to retreat.

Emerging markets, it has been argued, can be easily destabilized when even a small number of well-capitalized actors, who are conscious of each other's actions, elect to herd (Eichengreen, 2004: 293). If herding occurs, "a few early individuals can have a disproportionate effect" on prices and can thereby breed excessive volatility in asset markets (Kaminsky, Reinhart & Végh, 2003: 4). Avery and Zemsky (1998) corroborate this notion with almost verbatim terminology. "The earliest decisions," they write, "can have a disproportionate effect over long-run outcomes in the economy" (1998: 724). The role of early participants is profoundly relevant to the discussion of hedge funds that follows in the next section. The reader should therefore refer back to some of the theoretical underpinnings of herding and the dynamics of information transmission when trying to assess the full impact of hedge-fund investment on broader market developments. Before continuing with the analysis, it is important to draw attention to the ways in which under-regulated private actors and specifically hedge funds, exacerbate risk in the international financial system. As I will argue in the proceeding section, HLIs are disproportionately active in those channels of cross-border financial activity through which crisis-inducing shocks often arise, and therefore require a closer examination of their capacity to undermine the integrity of international markets.

III. HIGHLY LEVERAGED INSTITUTIONS AND SYSTEMIC RISK

Among the more innovative alternative asset-management vehicles made available to high net-worth investors in recent years are hedge funds.[23] Difficult to define precisely, hedge funds are privately organized partnerships that offer investment opportunities to the wealthier members of the population. Typically, they are pools of no more than 100 investors (so as to comply with regulations limiting market concentration[24]) that take a broad range of positions and employ risky investment strategies in several asset markets (Eichengreen, 2003: *fn.* 170-1). The glamour behind hedge funds lies in their ability to

[23] The minimum investment necessary to participate in a hedge fund partnership ranges from US$250,000 to as high as US$10 million.

[24] In the U.S., these regulations are outlined by the Securities Act of 1933, the Securities Exchange Act of 1934, and the Investment Company Act of 1940.

enjoy significantly high *alpha* — risk-adjusted returns — by widely diversifying their positions across various markets (*Economist*, 2003; Edwards, 1999: 196). They are classified under the category of highly leveraged institutions for they frequently purchase securities, derivatives contracts and other financial instruments on margin with credit obtained from institutional lenders.[25] Under U.S. regulations, hedge funds are exempt from the strict leverage limitations that pension and mutual funds are subject to under the provisions of the Investment Company Act of 1940. The leverage they are able to obtain on their existing capital base allows them to employ a wide array of investment strategies, speculating between closely aligned instruments and nominal spreads between securities prices. Typical funds often engage in *short selling*, that is, borrowing securities and then proceeding to sell them shortly thereafter with the expectation that they can be repurchased in the open market at a lower price before having to reimburse the original lender. This strategy is sometimes counterbalanced by taking long positions in other markets. Hedge funds are thus said to take on a "market neutral strategy" by taking long positions so as to offset the risk incurred from their short positions (Brown, 2001: 303).

Hedge funds have enjoyed great success in recent years, consistently generating returns in the low double-digits. In the last decade alone, the hedge-fund industry has experienced tremendous expansion as both individual and institutional investors such as pension and education endowment funds have been drawn into relationships with hedge funds by the impressive performance record of collective investment partnerships. Much of their allure comes from the perception that hedge funds out-perform traditionally managed, long-position-taking-only vehicles such as mutual funds. No longer the cottage industry it was when Alfred Winslow Jones first developed the idea of a hedge fund in 1949, hedge funds are now fast-approaching US$1 trillion in assets under management. Given their mystique and propensity to regularly produce extraordinary returns, hedge funds may have indeed become the "blackboards on which dreams of high finance are drawn" (Anderson & Atlas, 2005: 3). There have even been discussions of expanding the industry out to the 'less experienced' and more casual investor (Brown, 2001: 303).

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[25] 'Leveraging' refers to the "magnification of the rate of return (positive and negative) on a position or investment beyond the rate obtained by direct investment of own funds in the cash market" and is done through the purchase of securities on margin and collateralized borrowing (Mathieson & Schinasi, 2000: 111; Eichengreen & Mathieson, 1999: 6). Leverage is usually built up through favorable arrangements with institutional lenders.

In theory, hedge funds reduce volatility in the overall portfolio by distributing risk across various unrelated markets. However, the proposition that hedge funds are less volatile than the more tightly-regulated mutual funds, if indeed accurate, would debunk the commonly accepted orthodoxy that volatility[26] and risk are correlated metrics. In practice, hedge funds are both volatile and exceedingly risky vehicles. They take on significantly more risk than their mutual and pension fund counterparts and thereby produce higher returns on the average. The added risk, coupled with having less regulatory supervision over them than other institutions, allows hedge funds to regularly outperform mutual funds but not market indices, due to the heightened volatility in the aggregate hedge-fund portfolio (Ackerman, McEnally & Ravenscraft, 1999: 833). It also incidentally makes hedge funds more susceptible to the occasional spectacular collapse.[27] Moreover, given the capital that they are capable of readily mobilizing between markets, hedge funds have a significant impact on the daily trading patterns of fellow investors and subsequently, developments taking place within global financial markets. As a result, they are increasingly brought up in the debate regarding the mechanisms and actors which may be responsible for precipitating financial crises in the international system.

A. HEDGE-FUND OPERATING STRUCTURE AND LEVERAGING CAPACITIES

Hedge funds can be categorized into three main species, each employing different strategies based on their particular investment preferences and varying capacities to obtain leverage. Macro funds, the first and most common type of hedge fund, usually invest in mature markets, focusing on macroeconomic indicators such as national current

[26] Volatility is a measurement of the standard deviation in price returns. It demonstrates how the returns are spread around the average.

[27] The case of LTCM is perhaps the most widely publicized account of a large hedge-fund collapse and most grim in terms of the magnitude of its implications, though it is by no means the only one. See for instance the cases of Laser Advisors, Gotham Partners IM, Eifuku, Paramount Financial Partners, LP, Amaranth Advisors, and Tiger Management. Some of them, such as Michael L. Smirlock's fund, Laser Advisors Inc., and Paramount Partners, were brought before the SEC under charges of defrauding investors. In the case of Paramount, the SEC obtained an injunction preventing the fund's manager, Von Christopher Cummings, from soliciting or receiving assets after indicting him and his partners of conducting a Ponzi scheme for the purposes of financing dubious personal expenses. In terms of spectacular failures, Julian Robertson's fund — Tiger Management — lost over US$2 billion speculating on the Japanese Yen in October 1998, forcing Robertson to shut down the fund in March 2000 (Peltz, 2005: 37). Amaranth Advisors, meanwhile, lost almost US$5 billion in a week on "a bad bet on natural gas" (Wessel, 2006: A2).

account levels, inflation rates, and the real exchange rate, in order to determine the allocation of their portfolios. Global funds meanwhile, take positions in multiple markets, picking stocks and options based on corporate and company prospects. Finally, Relative hedge funds, take bets on and track spreads between closely related bundles of securities (i.e. treasury bills and government bonds). This last class of funds is usually the most leveraged since they take a larger range of positions to realize more tangible returns on their investment (IMF, 1998: 4). All three classes use increasingly sophisticated strategies in an effort to offset risk with complexity, and perhaps more precisely — with volume (Neville, 2005: 75). As Adrian Walking, head of the global foreign-exchange solutions group at Union Bank of Switzerland (UBS), argues, "[v]olume is key for hedge funds: when they go into positions they need to buy in reasonable size" (Neville, 2005: 75). The most startling figure associated with hedge funds is the notional value of the contracts these partnerships carry in their management portfolios, some obtaining leverage ratios as high as 100 times their capital base through preferential borrowing terms.[28] It is this operating capacity that makes HLIs particularly disruptive. The "most dramatic" financial losses in recent crises were experienced by the higher leveraged category of funds (Ackerman, McEnally & Ravenscraft, 1999: 872).

The decision-making and strategy-devising powers of hedge funds are quite centralized and usually in the hands of the manager and founding partners. Hedge-fund offering memorandums conventionally provide fund managers with the flexibility to engage in a wide range of investment ventures, instruments and markets. Managers are subject to a high watermark threshold that obligates them to make up prior financial losses before they are able to collect managerial fees. Approximately eighty-five percent of funds are subject to such a provision (Peltz, 2005: 36-7). This "aggressively" performance-oriented fee structure would ostensibly present incentives for risky decision-making (Brown, 2001: 307). The compensation structure not only encourages managers to make haste assessments but also contributes to a high attrition rate among hedge

[28] Boasting several prestigious Wall Street equities investors and two Nobel-laureate economists, LTCM was able to obtain a leverage ratio of 167 times their capital base. In early 1998, the fund managed a gross notional derivatives portfolio worth about US$1.2-1.3 trillion (Eichengreen & Mathieson, 1999: 11; Mathieson & Schinasi, 2000: 79; Eichengreen, 2003: 182).

funds.[29] Nevertheless, their proclivity for risk-taking is sometimes offset by survival instincts. A non-performing fund is obviously more desired than a non-existing one. In addition to this, most fund managers invest their personal wealth in their funds and therefore have a personal stake in the success of the fund. Hedge funds are thus guided by the imperative of producing returns on investment but not at the expense of an excessive risk-oriented approach that would imperil the existence of the fund. This feature of their operating structure may perhaps account for why hedge-fund managers are so "nimble", engaging in "dynamic" trading strategies and "changing their positions frequently" (Fung & Hsieh, 2000: 7, 22, 28). Being fleet-a-foot can often ensure a fund's survival.

Stephen Brown's contention then that hedge-fund managers are not the "gunslinging risk-takers" of anti-market folklore is only partially correct (2001: 302). Because of the risk-averse psychology of fund managers, funds rarely remain in a market long enough to see through the readjustment of market prices back to fundamental equilibrium. In accordance with their compensation structure, hedge funds are discouraged from staying in a market for long and their investor base "demands much shorter results," forcing them, as Fung et al. maintain, to focus their investment on the short term (2000: 407). In addition, given their often complex entanglement in several thousands of contracts, the aggregate exposure of which being compounded by the leverage they are able to obtain, hedge funds simply cannot afford to meet a large number of simultaneous margin calls for additional collateral and because of this, they have a substantially lower tolerance for price movements or when dealing with derivatives, wide convergences or divergences between different asset values. Positions may have to be "unwound rapidly" when there is a fear of losses, and this sudden unwinding may have a depressing impact on market prices (de Brouwer, 2001: 56; Kaminsky, Reinhart & Végh, 2003: 6). This "self-preserving behavior" of HLIs, contends the current president of the New York Federal Reserve, is "more likely to exacerbate rather than mitigate an expected deterioration of asset prices and market liquidity" (Wessel, 2006: A2). Funds are able to out-perform other, slower-moving participants, by shifting their assets during the more tempestuous periods. This ability to consistently out-perform other market participants

[29] The average life span of a typical fund is about three and a half years and over sixty percent of funds close operations within three years (Economist, 2005*b*; Edwards, 1999: 196). In 2004 alone, over 270 hedge funds were forced to dissolve (Anderson & Atlas, 2005: 4).

relies heavily on their capacity to preempt changes in market conditions. Therefore the volatility often associated with hedge-fund portfolios is derived not from an inherent risk-taking approach but on the contrary, a risk-averse strategy which makes hedge funds tremendously shifty.

Despite the risks they pose to capital markets, HLIs such as hedge funds are nevertheless generally perceived by mainstream financial theory as participants that perform constructive market-improving functions. They are believed to add liquidity and help realign equity prices closer to their fundamental values by exposing persisting price inefficiencies.[30] Consistent with this perception is the belief that hedge funds naturally employ strategies (leveraging included) that are in line and proportional to satisfying these functions. With respect to leverage then, the perceptive observer may duly ask: If an institution is employing sound investment strategies, why should the scale of its operations be of concern?

The answer is twofold. Firstly, as mentioned above, a borrowed capital base can induce fund managers to employ loss-averse strategies so as to avoid having to pay margins when assets suddenly depreciate. This makes managers sensitive to even the smallest of price movements (Harmes, 1999: 14). Small price shifts can have a significant impact on a hedge-fund portfolio given that total exposure is usually high. In markets where hedge funds are heavily invested in, managers will likely withdraw their capital rather than suffering sharp losses. Faced with that predicament, the fund manager will thus "moderate risk exposure rather than increase it" (Brown, 2001: 307). Brown provides the example of the capital flight that occurred prior to the collapse of the Malaysian ringgit in the Asian crisis. By the time the ringgit fell, hedge funds were almost entirely out of the Malaysian market, seeking refuge from the impending turmoil (Ibid: 309). There is also evidence that hedge funds made a similar play during the technology bubble of 1998-2000, unloading tech stocks prior to the mass investor exodus out of the sector in 2000.[31] These instances lend credence to the inferences of Goldstein

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[30] Hedge funds purportedly act as both suppliers of liquidity and *fillers*, since they are said to provide liquidity when voids arise (Fung, Hsieh & Tsatsaronis, 2000: 407).

[31] See Rose (2004) and Marcus K. Brunnermeier and Stefan Nagel, "Hedge funds and the Technology Bubble" in *Journal of Finance* (2004, Vol. 59, Issue 5: p. 2013-40). Brunnermeier and Nagel's contention is that during the tech bubble, hedge funds did not play the corrective role that finance theory would predict by "nudging misaligned and irrationally priced securities to the rational path" but rather rode the frenzy, so

and Pauzner (2004), who argue that the tendency of actors to reduce holdings in a market depends on the proportion of their investment in that market. "When this proportion increases," the authors maintain, market actors "risk more by not running in that country, and thus have a stronger incentive to run" (154)

The alternative scenario is when hedge-fund exposure is widely distributed between several markets. Here, managers may prefer to leave invested assets in a market, even under the suspicion that values will imminently decline.[32] The case of LTCM comes to mind and specifically, their clinging onto Russian fixed-income securities during the ruble crisis. The rationale behind sticking with the Russian *Gosudarstvennye Kratkosrochnye Obligatsii* (GKO) bonds was elementary. An abrupt withdrawal of funds could engender unnecessary panic among investors, who may in turn proceed to retreat from other emerging markets that bear similar macroeconomic indicators thereby adversely impacting the hedge fund's entire portfolio. The presumption being made was that the crowd will behave in a predictable manner, which in this case, it had not. But LTCM's rationale was ostensibly contrary to the findings of Goldstein and Pauzner. The fund's partners knew however, that they had the capacity, both materially and through their reputation, to single-handedly engender confidence in the market. It is astounding with what conviction the LTCM partners gambled on the behavior of their fellow traders and reveals perhaps, the emphasis managers place on anticipating the reaction of the investor 'mob'. The partners later explained their misfortune as a 'once-in-a-million-years' occurrence. Their belief would have bordered on sheer arrogance had it not been academically compelling that fellow investors would have likely followed their lead.

As hinted to above, highly leveraged actors make decisions under bounded rationality[33] due to their low-capitalization and the internal pressures they face to produce

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to speak, by taking advantage of the exuberance, or the "predictable investor sentiment," as they put it, of less informed traders (Rose 2004; Brunnermeier & Nagel, 2004: 2014).

[32] If prices do fall and margin calls are made, some funds may even go so far as to liquidate some of their holdings in other markets so as to meet the calls and keep their positions in a given market (Eichengreen, 1999: 11; Goldstein & Pauzner, 2004: 173). Investors may precipitate contagion by liquidating contracts and securities in one market to keep positions in another, given the significant interconnectedness between many emerging and industrialized markets. See Goldstein and Pauzner (2004) for more on how a diversified portfolio can lead to self-fulfilling crises.

[33] By this I mean hedge funds face a limited decision-making time horizon and therefore often have to rely on imperfect information. The cost of acquiring information can also be taken into account, as firms will

returns given their performance-based operating structure. Fund managers take on risk to "stand out on the upside" at certain times and at other times, are "prone to herding" so as to "avoid standing on the downside" (*Economist*, 2005*b*). Given the magnitude of transactions often involved in a market move made by hedge funds, a fund's action, whether it be retreating from a market or staying put, is likely to draw the attention of other investors and induce a following. Therefore, as I will argue in the following section, the scale of highly leveraged hedge-fund investment on its own may be enough to precipitate significant price movements in global financial markets.

B. INFORMATIONAL DYNAMICS: HEDGE FUNDS AS MARKET LEADERS

Economists and institutional reports have for the most part, downplayed the impact of hedge funds on financial markets and their role in escalating the magnitude of isolated economic crises. Most claim that the data regarding HLIs' ability to precipitate 'herding' is simply inconclusive.[34] Conventional financial theory maintains that no single investor or institution is capable of engineering "structural shifts" in the prices in securities and currency markets since "there are so many players in these markets and these players act largely rationally, linking their buying and selling to their judgments about the underlying economy concerned" (Gowan, 1999: 96). Barry Eichengreen and Donald Mathieson dismissed the notion that hedge funds played a significant part in the chaos in Asia in their investigation of the issue for the IMF in 1998. Deeper exploration of the matter however, exposes some obvious limitations in the data they compiled. By their own admission in a later work, Eichengreen and Mathieson revealed that their 1998 analysis was limited to hedge-fund positions in five hard-currency markets and therefore overlooked "plenty of anecdotes to the contrary from smaller markets" (Eichengreen, 2004: 336 *fn.* 5). Among these, were a few of the Asian markets implicated in the crisis of 1997. They admitted that the "dynamics" of a depreciating asset market and the subsequent margin calls that it triggered created difficulties for hedge funds and other

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often economize on information if it is costly and "where the risk of doing so, in terms of expected returns, is least" (Mosley, 2000: 742).

[34] The IMF, for instance, maintains that evidence of a relationship between hedge fund positions and general investor behavior is "scanty" (1998:5). See also Eichengreen (1999: 11; 2003); Eichengreen and Mathieson (1999); Mathieson and Schinasi (2000); Fung & Hsieh (2000: 35); and Brown (2001: 309).

investors to remain liquid, forcing them to unload into what were essentially falling markets (Ibid: 272). HLIs are the largest participants in market runs and can therefore have a great deal of influence on movements in asset and currency markets. Hedge-fund positions represented about US$7 billion, or a quarter, of Thailand's US$28 billion in foreign obligations during the Asian financial crisis (Fung & Hsieh, 2000: 32; Eichengreen & Mathieson, 1999: 9; Eichengreen & Park, 2001: 7). Some estimates have hedge-fund Thai baht positions as high as even US$15 billion (de Brouwer, 2001: 57). At any rate, they were by far the largest players in the Asian currency markets at the time. It is not surprising then that hedge funds' flight out of the region was taken note of by other participants who eventually followed their lead.

Measuring the degree to which hedge funds affect markets, day traders and other institutional investors is a complicated venture. Accurate data pertaining to hedge-fund positions as well as the leverage they obtain is "virtually impossible" to acquire for academic purposes, making it exceedingly difficult to measure to any degree of precision, the impact that hedge-fund behavior may have on market developments (de Brouwer, 2001: 11, 77, 171; Fung & Hsieh, 2000: 3; Edwards, 1999: 208; Eichengreen, 1999: 2, 5, 6; Eichengreen & Mathieson, 1999: 12; Eichengreen & Park, 2001: 2; Fung, Hsieh, Tsatsaronis, 2000: 387, 410). Nevertheless, by virtue of their sheer size and notional worth, the fact that hedge funds can employ volatile investment strategies and cause substantial instability in host capital markets is indisputable.[35] Supplementing this is the scholarship that has emerged in recent years in the field of behavioral finance — a discipline that looks at asset pricing in "psychological terms" (Rose, 2004). The work of historical economist Charles Kindleberger has been especially prescient. Kindleberger infers that rational individual action can sometimes yield collectively irrational results, the classic example of which being the panic and chaotic retreat for the exits that ensues in a theatre fire in spite of the fact that everyone is acting on a rational individual impulse

[35] As will be discussed below, hedging portfolios are often denominated in derivatives, swaps, and futures, which makes regulation an especially difficult task for financial authorities. Instruments such as derivatives and futures are particularly unstable and can initiate massive swings in asset markets. One can recall the collapse of the famous, long-standing Barings Bank on 26 February 1995 when Nick Leeson, a 'gunslinging' derivatives trader in the bank's Singapore office, lost over £700 million when the futures contracts he had bought on Japan's Nikkei-225 stock market had suddenly depreciated (Lucatelli, 1997: 37).

to head for the exit (1996: 199).[36] Kindleberger's contention is relevant to market failure in that individual investors, in market-mediated contexts, will often succumb, for rational purposes, to a collective fervor that produces suboptimal outcomes.[37] Collective responses to external stimuli can moreover, produce a much different effect than the responses of individuals. "It is well known," as Wojnilower observes, "that crowds generate, transmit, and respond to messages (rumors included) very differently from individuals" (Greider, 1997: 124).

Hedge funds operate in a manner that is rational from their perspective but occasionally strays from the fundamental or "rational" price level (Rose, 2004). They often purchase, and quite sensibly so, illogically priced assets for they can readily predict the behavior of day traders, who will often follow their decision-making patterns (Ibid). The fact that hedge funds are often the "pioneers" — that is, the "first to trade" — supports this notion (Fung, Hsieh & Tsatsaronis, 2000: 407). Funds need to be the first to trade in case they need to preemptively reverse their positions before the market swells. They can therefore initiate a shift in the tide of asset-allocation since few investors are in a position to comfortably ignore prevailing trends. In this important sense, hedge funds are considered 'trend-setters' in asset markets. The cost and availability of market information are factors that play an integral role in this process.

William Greider argues that "in the mythology of economics, markets were treated as disinterested arbiters of reality, individual buyers and sellers who collectively made rational judgments based on the best available information" (1987: 681). In reality however, firms will often take shortcuts to avoid paying additional informational costs (Mosley, 2000: 743). This is especially true when a small set of indicators provides an adequate reading of the market and also where there is a diminishing marginal utility of acquiring additional information. When information is scarce or expensive, firms will sometimes rely on cues provided from observing the behavior of their competitors. This is where the distorting effects of informational cascades come into fruition and why the

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[36] Both economists and sociologists, Kindleberger claims, are often guilty of making the presumption that both "man and men are rational" (1996: 20).

[37] This particular understanding of market failure is derived from the definition provided by Keohane but is distinct in the sense that it presumes that despite occasionally suboptimal results, actors make rational calculations, exhausting *all available* resources (1984: 43). Keohane suggests that actors' failure to properly survey and utilize resources at their disposal results in market failure.

often-made presumption of "observational independence" is "dangerously naïve" (Edwards, 1999: 206). Investors will indeed make decisions with, for lack of a less nebulous term, sub-optimal information. In fact, interference with market forces has been justified by some economists on the grounds that "international markets often exhibit herd behavior based on incomplete information" (Solomon, 1999: 151). Notwithstanding this tautology, information, and misperceptions[38] in particular, are pivotal features of the herding process.

The positions taken by hedge funds can potentially engender and drive a 'herd following': the underlying dynamic behind market runs and the transmission of financial distress (the precursors, as I argued earlier, to a systemic crisis). The volume of their net portfolio exposure misleadingly enlivens the perception that HLIs act on "sound" or credible information, given their smaller margin for error. Large macro funds, as de Brouwer contends, "have the attributes of informed rational speculators," which "make them the prime player on which to herd" (2001: 149). Moreover, hedge funds can also create 'noise' through a sudden increase in aggressive trading that can arouse the attention of other investors.[39] Larger, more leveraged institutions are therefore a powerful source of informational cues for smaller participants who often take "copy-cat positions" (Eichengreen, 2003: 179; de Brouwer, 2001: 48).[40] In this sense, hedge funds are said to possess a "normative authority" in the markets (Harmes, 1999: 17). Therefore, where sequential trading takes place, hedge funds can attract imitation from other investors independent of changes in asset performance and fundamental values. When

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[38] Shleifer and Summers refer to these as "pseudo-signals" (1990). I will more conveniently refer to them as misperceptions. The adjective "pseudo", I believe, unfairly implies an element of deceit. Informational signals, in themselves, are neutral cues. The problem however, is that HLIs are quite often misperceived as being sound information gatherers on the basis of their sophistication and the resources available to them. "[Mis]perceptions and beliefs about the large player's positions have a chilling effect," as de Brouwer indicates, "on other players taking the alternative position in a market, for fear of being on the wrong side of the momentum in the market" (2001: 59, 92).

[39] This may include less benign forms of signaling such as rumor spreading, falsifying electronic transactions, threats to attack a currency, and excessive dealing during quiet periods (de Brouwer, 2001: 95, 129). Noise trading was a practice that was readily exploited by Nathan Rothschild in his dealings on the London Stock Exchange. Wary of imitation from other investors, Rothschild employed 'jobbers' to foment confusion in the markets. He would have "one set of agents selling, and another buying the same stock so that there was no ascertaining what in reality was the object of his maneuvers" (Ferguson, 1998: 287).

[40] As mentioned above, hedge funds, interestingly enough, have also been found to influence the asset and credit allocation decisions of their creditors and counterparties who often employ many of the same strategies and take similar positions to those taken by HLIs.

one takes into account the operating structure of funds and their proclivity for volatile trading strategies, the dangers associated with imitative behavior become quickly apparent.

Faced with a shorter and more pressing time horizon, hedge funds are more 'trigger-happy'. It limits funds to taking only a narrow set of financial-market indicators into consideration and focusing in on the shorter run (Mosley, 2000: 750). They are liable to liquidate holdings on "poor" or imperfect information. This may in effect initiate a sequential trading spiral that leaves investors reeling out of markets as a consequence essentially, of the risk-averse impulses of a fund manager. This is even further magnified when hedge funds, whether consciously or unwittingly, act in concert and retreat for the exits like the theatre-goers in Kindleberger's analogy. Market participants cannot readily distinguish between a group of well-informed traders making a move on the basis of fundamentals and a group of poorly informed traders that are simply herding (Avery & Zemsky, 1998: 726, 737). This uncertainty inevitably leads to a distortion in price level since traders will be forced to herd either way.

Day-traders are well aware of hedge funds' tendency to hold on to assets for a "much shorter horizon" and the impact that an *en masse* unwinding would have on values (Fung & Hsieh, 2000: 22). Because hedge funds are large enough to "unilaterally" affect asset prices, investors often have no recourse but to follow their lead (Harmes, 1999: 17; de Brouwer, 2001: 4). This makes for a scenario in which there is one class of investors acting on a rational impulse to avoid loss, albeit acting with bounded rationality, and another group quite rationally following their lead and emulating their positions so as to avoid standing on the downside of a market move. Herding however, will likely lead to 'overshooting' — a deviation from the efficient price level — due to the realization of Avery and Zemsky's third dimension of uncertainty (refer back to table 1.1). It is a case of two sets of rationally behaving participants yielding an *irrational* outcome — significant short-run mispricing and a divergence from economic fundamentals produced by the effects of herd behavior. This is precisely what happened in the European bond markets during the 1993 global bond rally when hedge fund holdings, according to the research of Fung and Hsieh, "converged onto the same positions" (Ibid: 23). The rational investor in that particular episode had no alternative but to follow suit.

In some cases, investors will ignore the signals and funds will be left to collectively converge around their own expectations, which is somewhat distinct from herding. An organic convergence of positions however, can be equally destabilizing. In situations where institutions have access to the same information, employ similar trading styles and distribute their portfolios across a similar spectrum of markets, they will likely perform the same trades, sometimes even simultaneously (Fung & Hsieh, 2000: 7). Hedge funds will frequently exhibit style convergence. While this dynamic may have different causal factors, it often has the same detrimental effects as conventional herding.

Perhaps the best documented case of a 'convergence play' among hedge funds is the 1992 Exchange Rate Mechanism (ERM) crisis in the European Monetary System (EMS) (Fung, Hsieh & Tsatsaronis, 2000: 380-2; Eichengreen, 2004: 230). There, hedge funds held an astounding US$11.7 billion in short sterling positions, an amount equal to 4.4 percent of EMS central banks' official reserves and 11.7 percent of the amount the central banks later expended to defend their currencies (Fung, Hsieh & Tsatsaronis, 2000: 382). It is "reasonable to conclude" then, as Fung and Hsieh argue, that aggregate hedge-fund positions in the European market had a "material impact" on the value of the sterling, eventually forcing British authorities to devalue the pound and drop out of the ERM (2000: 18). Devaluations in the sterling and Italian lira coincided with the unwinding of large hedge-fund positions in both currencies as fund managers anticipated that the high-inflation countries would have no recourse but to realign their currencies.

The correlation between the currency devaluation and hedge-fund earnings was therefore hardly spurious. It was a self-fulfilling prophecy in some ways. Currency values were unsustainable and hedge funds converged their speculative bets around the expectation that values would inevitably have to be realigned. As a consequence, they pushed the currencies over the edge, materializing their expectation. According to IMF estimates, hedge funds used over US$300 billion to make the convergence play. The crisis in the EMS was important in its own regard for it demonstrated to scholars that peripheral markets "do not have a monopoly on vulnerability to contagion" (Kaminsky, Reinart & Végh, 2003: 11). Small, industrializing economies were no longer the exclusive victims of hedge-fund convergence moves. Aside from the ERM crisis, Macro funds were also alleged to have converged around the same expectations in East Asia in

1997, acting in concert with one another and utilizing a similar menu of indicators (de Brouwer, 2001: 157).

The speculative attack that was waged against the Hong Kong dollar in August 1998 following the ruble's devaluation in Russia is another example where hedge funds converged in their positions and incited a currency crisis.[41] By all estimates, hedge funds held an astonishing US$10 billion in short positions in the Hong Kong market, equivalent to about six percent of Hong Kong's GDP (FSF, 2000). According to the 2000 FSF study on highly leveraged institutions, four large hedge funds held futures, options and other derivatives contracts, totaling a value of forty percent of all outstanding equity contracts in the Honk Kong market in early August 1998. Data collected indicates a concentrated establishment of short positions by two funds shortly before the Hong Kong Monetary Authority (HKMA) intervened. By the end of the month, four hedge funds held 50,500 contracts, which was equivalent to forty-nine percent of total market positions, with one fund holding one third of those contracts (such a concentration of positions, it should be noted, would have been illegal in many exchanges, including that of the U.S.'s) (Ibid; de Brouwer, 2001: 79). With the objective of pushing their positions into profitable directions, funds engaged in highly aggressive tactics in the equity, interest-rate and exchange-rate markets. According to Gordon de Brouwer, the Hong Kong experience demonstrated that funds "were acutely aware of the effect of *perceptions* of their presence" on other investors, and aware that investors would "try to copy their positions in order to benefit from the price dynamics set in train by these positions" [emphasis added] (2001: 90). Hedge-fund involvement resulted in significant price overshooting and eventually necessitated a US$15 billion dollar HKMA injection into the stock market which had depreciated by sixty percent from the period between late 1997 and August 1998 (Ibid: 73).

In addition to the dangers posed by style convergence and imitative behavior is the intrinsic and extensive involvement of investment banks, securities brokerages and other counterparties, in hedge-fund operations. Financial institutions are becoming increasingly entangled, at times in very complex webs of liabilities, with funds (FSA,

[41] For a detailed review of hedge-fund involvement in Hong Kong's financial markets in 1997/98, see FSF (2000) and de Brouwer (2001: 73-95).

2002: 19). Relationships between hedge funds and private investment banks are in many ways reciprocal. Private firms are usually the primary lenders to hedge funds and funds are more likely to run with a strategy proposed by a bank's propriety desk if that firm has invested capital in it (Neville, 2005: 76). Even more sobering is that the investment banks often imitate the positions of their clients through their propriety trading desks. "Nothing," as LiPuma and Lee note, "exaggerates systemic risk more than the existence of a substantial and increasing quantity of interdealer positions" (2004: 104). This dilemma of counterparty entanglement was perhaps best underscored by the losses of the firms and brokerage houses implicated in the LTCM unraveling. Goldman, Sachs & Co., Merrill Lynch, Bankers Trust and Salomon Smith Barney reported losses in the hundreds of millions following the third quarter of 1998, blaming them on "relative value trades"—the trading strategies used by LTCM and other funds prior to the financial crisis of the summer (Edwards, 1999: 200, 206). Hank Paulson, the former co-chairman at Goldman, was quoted in saying that his firm's risk modeling ignored the saliency of the "copy-cat problem" (Ibid: 206). Had Federal Reserve officials not intervened, a default by a single over-capitalized hedge fund could have resulted in the "seizing up of markets," according to the former Fed chairman, and would have "impaired the economies of many nations" (Greenspan, 1998: 5).

The excesses of market failure will therefore be egregious where hedge funds have a large portfolio exposure, where there is significant counterparty involvement, and where investors and counterparties are inclined to disregard their private information and emulate the decisions of HLIs — inherently rational behavior that can potentially be disastrous if leveraged actors make decisions under bounded rationality, as they often tend to do. Herd behavior can thus be seen as the product of a process initiated by highly leveraged actors who act under the strain of a shortened time horizon and where there is a pressing impulse to preempt the sale of depreciating financial securities. Rapidly declining values will continue to fall as more investors decide to ride the speculative wave put in motion by the investment decisions and trading of larger, more leveraged

institutions.[42] Whether investors mimic the position-taking of hedge funds because they believe that funds are a credible source of informational cues about fundamentals or simply anticipate inevitable adjustment after a reallocation of hedge-fund assets can only be determined by a probe into the cognitive processes of the individual trader and is for all intents and purposes, irrelevant to the analysis of systemic risk. In any event, hedge funds are large enough to induce herd behavior and likewise large enough to produce a price shift in the absence of imitative behavior. In this sense, hedge funds can affect financial-market dynamics through both "action-based" and "information-based" manipulation (de Brouwer, 2001: 159). A rapid withdrawal of capital out of a market by an HLI can precipitate mass capital flight which can potentially undermine the local financial and banking sectors and in turn, threaten the welfare of the real economy by spilling over into dimensions of wealth creation and capital formation.

C. PROSPECTS FOR GROWTH AND INDUSTRY REGULATION

Hedge funds have been quite adept at exploiting loopholes in domestic financial regulatory structures and most effectively, in the U.S. (Rogoff, 1999: 32). Funds issue investment opportunities on a private basis and therefore do not register as securities issuers. As a result, they are exempt from having to publicly disclose their performance or asset positions (Eichengreen & Mathieson, 1999: 7). Many funds are unlisted and are unregistered entities.[43] Still, some hedge funds are held offshore in order to evade domestic regulations. What makes hedge funds particularly elusive is that most funds anchor their portfolios in OTC derivatives contracts which, given their complex and clandestine nature, are some of the most sophisticated and most difficult instruments for public officials to supervise. During the period of June 1998 to December 1999, the

[42] The notion of hedge funds as market leaders is one tenuously addressed by political economic discourse due to the rather recent emergence of highly-leveraged institutions, the surreptitious manner in which they operate and in turn, the difficulties involved in quantitatively assessing their impact. Recent, more cutting-edge work in the field of international political economy has given greater attention to financial innovation and the increased disintermediation of global capital markets. See Harmes (1999), for instance.

[43] Hedge funds such as Caxton Associates, Moore Capital, Renaissance Technologies, SAC Capital Advisors, Maverick Capital, and Highbridge Capital Management for instance, which collectively manage several billions of dollars in assets, have prodigious performance records and are therefore considered "too inaccessible" to be listed in a Standard & Poor's index of investible funds (*Economist*, 2005*a*: 2).

notional value[44] in global OTC derivatives markets increased from what was an already staggering sum of US$72 trillion to US$88 trillion (Mathieson & Schinasi, 2000: 27). According to the Bank for International Settlements (BIS), the daily turnover of derivatives assets has grown to surpass the daily turnover of foreign-exchange, rising over fifty percent between April 1995 and April 1998 alone, to a total value of over US$1.4 trillion. The complex linkage of their value to that of an underlying asset and its floating worth make derivatives unstable yet attractive instruments in hedging portfolios.[45] Reputable funds can purchase derivative products with capital obtained through collateralized borrowing, meaning that the only way regulatory authorities can currently impose restrictions on hedge-fund activities is indirectly, by applying capital adequacy standards to the commercial and investment banks that provide funds with additional liquidity. Recently proposed regulations in the U.S. (discussed in greater detail below) were intended to force many hedge funds to register with the Securities and Exchange Commission (SEC) for the first time in February 2006. However, the reforms were ultimately overturned and likely would have represented only a marginal step toward reducing the assortment of risks that hedge funds pose.

Some observers have taken the position that the hedge-fund industry is becoming more responsible in its practices. Eichengreen and Park for instance, argue that there was an observable reduction in hedge funds' use of leverage following the LTCM collapse, providing anecdotal evidence in support of their hypothesis (2001: 2). Nevertheless, it seems likely that the reduction was driven more by hedge funds wanting to assuage the fears of their principal investors rather than a genuine commitment to radically reform their operating style. Whatever cuts were actually made were temporary, and taken in the wake of the 1997-1998 crises for the purposes of attracting investment back into hedge funds until the post-crises witch hunt for culprits had subsided.

Industry prognostication suggests the continued expansion of hedge-fund operations. The total amount of capital under management is both growing and becoming

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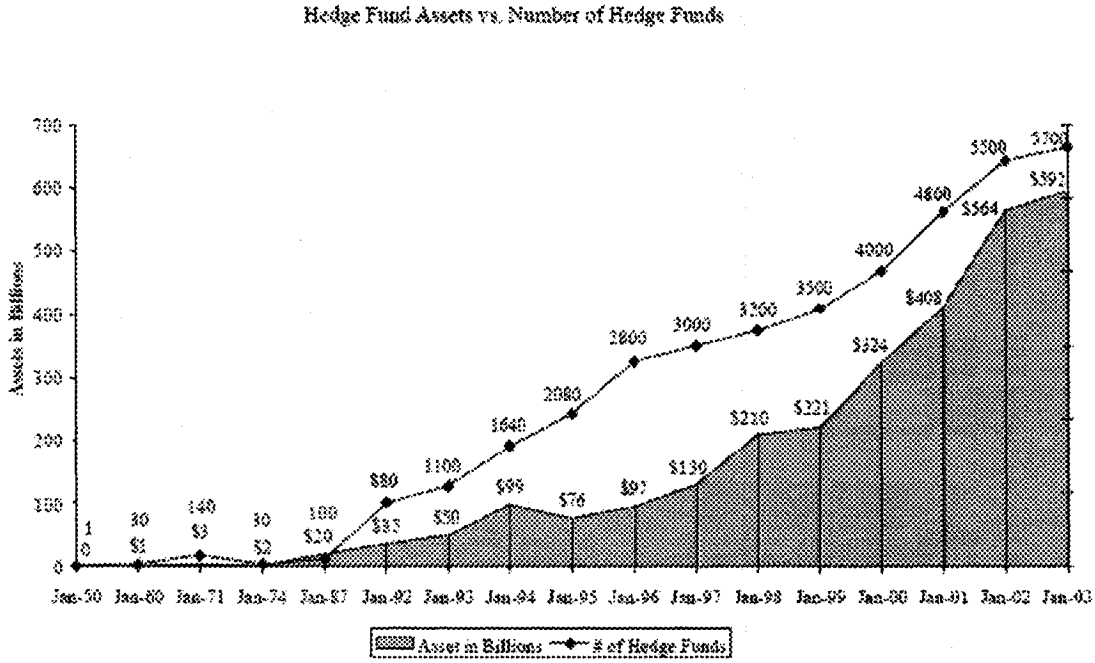
[44] The notional value here represents the aggregate reference amount for the payments of derivatives contracts.

[45] Warren Buffet has called derivatives "financial weapons of mass destruction" for their inherent volatility, continuing proliferation and capacity to "escalate the breath and severity of failure" (in LiPuma & Lee, 2004: 104, 158).

increasingly concentrated as well.[46] The unabated growth in derivatives trading discussed above is arguably one factor contributing to the continued growth in hedge-fund investment (LiPuma & Lee, 2004: 91). Funds will continue to aggrandize financial power so long as there are individuals and institutions willing to invest in their portfolios. Retail distribution of hedge-fund products will entice the lower net-worth, less sophisticated investor, while tying up a greater portion of the economy's wealth in hedge funds. There are plenty of signs to suggest that the industry is going more "mainstream" (Atlas, 2005). In late 2005, Highbridge Capital Management, a US$9 billion hedge fund acquired by J.P. Morgan Chase in 2004, will market and manage Highbridge Statistical Market Neutral fund — a mutual fund available to individuals prepared to invest as little as US$10,000. By retailing to a less affluent investor base under the advertisement of a more tightly regulated partnership, Highbridge is an example of both the steady expansion and constant innovation of the hedge-fund industry.

Figure 1.1

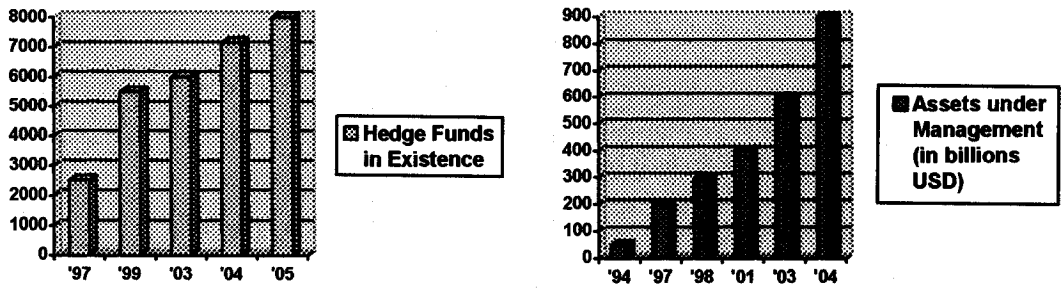


Source: Henessee Group (2003)

[46] Indeed, money invested in hedge funds in recent years is growing at a faster rate than the number of hedge funds in business (see figure 1.2). Some accounts characterize the industry as being already "highly concentrated" (Fung & Hsieh, 2000: 4). In 1997, twenty-seven funds controlled over one-third of the total industry assets (Ibid: 5; Fung, Hsieh & Tsatsaronis, 2000: 406).

What may be of even greater concern to regulatory authorities in the years ahead is the rapid expansion of the industry, not only in terms of the continuing proliferation of hedge funds and growth in their capital base, which will have its own set of implications for authorities to grapple with, but also the revolution of hedge-fund strategies. Regulators will have to manage what is fast-becoming a cornucopia of investment products that are either linked to or derived from the performance of hedge-fund portfolios. This new family of derivatives — known as *structured products*[47] — uses risky leveraging ploys to enhance returns. It is likely that they will make the hedge-fund industry an increasingly "specialist derivatives business" (Schreiber & Smithson, 2005: 54). This will undoubtedly make data collection with the objective of determining aggregate hedge-fund exposure in mind, a more complicated process. Hedge funds have

Figure 1.2



already been identified as the primary culprits behind the astounding growth in the foreign-exchange derivatives market in the past three years (Neville, 2005: 75). It is foreseeable that their operations will branch out into other sectors.[48] If so, funds will have to avail themselves of newer and more complex instruments. As the industry grows larger and hedge funds become increasingly the vehicles of choice among institutional and retail investors, the more the distinction between the hedge-fund investment and traditional

[47] These are loosely defined as instruments whose value is derived from the performance of an underlying managed account such as a hedge fund or hedge fund composite index (Schreiber & Smithson, 2005: 53).
[48] Hedge funds are even beginning to participate in corporate takeovers and private equity ventures. According to *BusinessWeek* magazine, in the past year alone, hedge funds have seized 23 companies with a value of approximately US$30 billion (Thornton & Zegel, 2005: 32). New York-based Cerebus Capital Management, for instance, owns and controls companies with a net-worth over US$20 billion. The real impact of this shift in ownership is quite stark. While hedge funds supply the "jet fuel for mergers and acquisitions", the companies they control collectively employ tens of thousands of people and generate significant domestic wealth. Hedge fund operators, as Thornton and Zegel argue, are thus emerging as a "new managing class" in corporate America (2005: 34).

asset-management sectors will become blurred (*Economist*, 2005*a*: 6). There is nothing to suggest that the growth of hedge funds will spontaneously taper off, after all, as one industry insider observes, "hedge funds are not an asset class, so there is no asset class to burst".[49] It will be a complicated venture to maintain regulatory standards in stride with this constantly evolving industry.

International strategies for improving risk management and heightening supervision over HLIs have been for the most part unsuccessful. Most of the initiatives to date have been built on three main imperatives, or 'pillars,' of public oversight: (i) the creation of capital adequacy standards[50], (ii) urging greater counterparty transparency and financial disclosure, and (iii) embracing a 'market discipline' approach. Preference has been give to national over international initiatives and to private over public agencies (Eichengreen, 2003: 196). Because banks and other institutional lenders are seen as the chief facilitators of leverage, some, such as Franklin Edwards, have urged for greater regulation of banks and securities firms, perceiving them as the "primary market-makers" (1999: 205-6). In a free and well-functioning market however, lenders are held in check by the threat of financial loss and are thereby compelled through the discipline imposed by the marketplace to make prudent lending decisions. Unfortunately, commercial and public lenders have been repeatedly shielded from the consequences of their risky credit allocation decisions — the Mexican and Asian bailouts serve as more recent examples of this. Rescues of this sort not only produce the so-called 'moral hazard' phenomenon, but also undermine the self-regulating logic of the market, making for a volatile international financial system. Capital adequacy standards have been strongly promoted by institutions such as the IMF and the Basle Committee of banking supervisors. Harmonization, however, has been difficult to achieve on this matter, just as it has been in reaching a consensus on international accounting standards for derivatives.[51] "Attempts to develop international regulatory standards for securities markets," as Philip Cerny maintains, "have quickly become bogged down in national differences of regulatory style," whether it be in determining appropriate capital adequacy measures or establishing minimum

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[49] Jane Buchan, chief executive of Pacific Alternative Asset Management, a fund of funds with an asset base of more than US$7.2 billion under management (in Anderson & Atlas, 2005: 2).
[50] Regulations that force banks to either retain a fixed minimum of capital or raise the margin and collateral requirements that they impose on their lenders.
[51] See "Better a mongrel than nothing" (*Financial Times*, 1 April 2004).

corporate disclosure and registration standards (1998:14). Some countries have demanded an overwhelming number of national exceptions to the capital adequacy requirements drafted through ad-hoc forums such as Basel II.[52]

In spite of the incentive for cooperation and obstacles to unilateral action, virtually no progress has been achieved in creating harmonized international standards that would limit the trading or position-taking of HLIs, whether in the form of increasing requirements on collateralization levels or imposing limitations on the leverage that can be obtained on top of base equity. As alluded to above, raising existing capital adequacy ratios for investment banks and securities firms is one alternative. It would restrict the credit that is provided to hedge funds by financial intermediaries and thus indirectly limit the aggregate notional positions that could be taken by HLIs. Such regulations may include establishing minimum margin and collateral requirements as well as limits to total intermediary exposure to individual funds (Eichengreen & Mathieson, 1999: 8). However, banks and securities firms should not be targeted at the exclusion of HLIs. It is bewildering that some observers, such as Edwards, urge depositors and shareholders to "discipline" banks and securities firms for "taking imprudent risks" in their relationships with hedge funds, while at the same time ignore the recklessness of funds themselves and the important role they play in generating distress (1999: 206).[53] Going after the primary lenders may be a tenable starting point but one has to be mindful that in a world with scores of capital providers, many of which having been drawn into lucrative arrangements with hedge-funds, there will be plenty of firms willing to extend credit. Perhaps best exemplified by the case of LTCM, hedge funds can strategically build up leverage by simply diversifying their credit sources. In that particular instance, many creditors were in fact oblivious to each other's involvement and the extent of total counterparty exposure. In the absence of harmonized information-sharing arrangements, "U.S. regulators may have known the outlines of U.S. banks' exposure and Swiss regulators may have been aware of the exposure of Swiss banks, but they did not know

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[52] See "Bothersome Basel" (*Economist*, 2004*a*) and "Exceptions to Basel II 'should be cut'" (*Financial Times*, 22 April 2004).

[53] Much like many skeptics of direct hedge-fund regulation that are nevertheless concerned with systemic financial fragility, Edwards believes the "fault" lies squarely on the shoulders of "those who are willing to trade with, lend to, or invest in, hedge funds" (1999: 208).

the exposure of one another's banks and therefore the risks to the international financial system as a whole" (Eichengreen & Mathieson, 1999: 9).

Applying greater capital adequacy ratios or limitations on the amount of leverage on capital (equity base requirements) that hedge funds can obtain would be a more effective alternative to prudential regulation. It would likely atone for the misperceptions created through heavy notional capitalization and thereby abate the potential for herd behavior. In this manner, by instituting minimum equity-to-credit ratios on hedge-fund borrowing, the more disruptive private market participants could be brought within the purview of regulatory oversight without necessarily thwarting the productive formation and self-allocation of capital. However, measures that would limit the position-taking or leverage levels of hedge funds are perceived by most authorities and industry insiders as being overly draconian. Most of the suggestions and multilateral discussions have converged around the voluntary self-regulation of financial-market participants and the strengthening of market discipline as sufficient methods of risk-management. Regulators have subsequently opted for less invasive measures of regulating hedge-fund activity that hinge more on counterparty risk management through mandatory disclosure rules, though only to a limited degree for the time being. A template of sound practices for private investment vehicles has been advanced by the SEC and other agencies, but serves only as a mere suggestion to participants.

Hedge funds should be forced, according to critics of the current regulatory provisions, to disclose their total derivatives exposure, the expectations and contingencies that underlie their calculations, as well as their past performance record (Edwards, 1999: 206).[54] Central banks, regulators and hedge-fund counterparties are believed to have access to information which they have yet to disclose to researchers (Eichengreen, 1999: 9). Greater disclosure would provide authorities with a clearer and more accurate reading of total market risk. The knowledge and research offered by industry experts and so-

[54] The U.S. President's Joint Task Force on Hedge Funds, Leverage, and the Lesson of Long-Term Capital Management has called for quarterly public disclosure of hedge-fund portfolio information. The SEC continues to debate the proposal and it is likely, given the Commission's equivocation on the matter, that if the regulations were to be adopted at all, they would be tailored toward investor protection, the reduction of fraud, and ensuring that managers comply with the objectives of the original offering memorandum.

called "epistemic communities" may play an integral part here.[55] Regimes are not formed in a "cognitive and institutional vacuum" (Hasenclever, Mayer & Rittberger, 1997: 37). Networks of industry insiders can potentially be more successful in identifying collective interests than national regulators and monetary authorities for they are largely disembedded from traditional structures of political accountability. The "control over knowledge and information," Peter Haas remarks, "is an important dimension of power" and "the diffusion of new ideas and information can lead to new patterns of behavior and prove to be an important determinant of international policy coordination" (1992: 2-3). It should be noted however, that with the authoritative reputation that such communities possess, they can inhibit policy-harmonization just as readily as they can promote it. With regard to the hedge-fund problem, there are complications associated with the involvement of such groups, particularly since many operate within the industries directly affected by the type of policies and regulations that may be enacted.

Much of the existing body of information exploring the behavior and performance of hedge funds is compiled by organizations such as the Henessee Group LLC, MAR (Managed Account Reports, Inc.)/Hedge, Hedge Fund Research Inc., and hedge-fund advisory firms such as Tremont Advisors. Almost all of these organizations are affiliated in some way with industry actors, whether they are principals in or financed by funds or funds of funds. Hedge funds choose to register and report to these agencies on a voluntary basis. Given the self-reporting basis on which most of these organizations run, the information they provide may be misleading. For instance, there is a significant non-reporting bias built into these databases, particularly in leverage reporting (de Brouwer, 2001: 31). In one hedge fund tracker, from the 1,068 funds that reported to it in the first quarter of 2000, 160 (or fifteen percent) of those funds disappeared by year's end (Clash,

[55] Perhaps the most comprehensive definition of an epistemic community is the one offered by Ernst Haas, who sees them as a community "composed of professionals (usually recruited from several disciplines) who share a commitment to a common causal method and a common set of political values. They are united by a belief in the truth of their model and by a commitment to translate this truth into public policy" (1990: 41). For more on epistemic communities and their capacity to shape actors preferences in policy coordination initiatives, see Peter Haas (1992); Emanuel Adler and Peter Haas, "Conclusion: epistemic communities, world order, and the creation of a reflective research program," in *International Organization*, vol. 46, no. 1 (Winter, 1992): 367-90; and James Sebenius, "Challenging conventional explanations of international cooperation: negotiation analysis and the case of epistemic communities," in *International Organization*, vol. 46, no. 1 (Winter 1992): 323-65.

Lenzner, Maiello & Lee, 2001: 4-5).[56] The implicit association with the very actors that hedge-fund reporting agencies collect information on raises suspicions concerning the validity and impartiality of their data collection procedures. Nevertheless, despite its rather dubious nature, it is the only substantial body of industry knowledge that public authorities have to work with. It is arguable that regulators would be better prepared to anticipate crises with greater disclosure and information but nevertheless could do very little however to forestall a crisis without the right supervisory oversight in place. Regulators seem content with only improving transparency for the time being. In the UK, one of the FSF Working Groups investigated the quality and timeliness of disclosure with respect to the exposure of financial institutions to HLIs. However, their findings, as echoed by the Deputy Governor of the Bank of England, concluded that any propositions of "direct regulation of internationally mobile funds are unlikely to be workable".[57]

Though it may seem unlikely that market participants' behavior could ever be reigned in by political authority without disrupting the more beneficial and organic processes of the free market such as the efficient allocation of capital, it is actually participants' over-zealous behavior, particularly in imitating the decisions of their *seemingly* more rational counterparts in an unmediated setting, that tends to distort fundamentals and debilitate global financial markets. Indeed, even in our contemporary era of real-time transactions, digitalized banking, and highly-liquid foreign-exchange markets, some capital movements may just be too voluminous and participant behavior simply too 'irrational' to be left to their own devices. The regulators' task lies not in stifling the market mechanism but rather in limiting the irregularities of complex financial products and volatility associated with sophisticated arbitrage practices — anomalies that are putatively remote but can nevertheless arise. Such aberrations tend furthermore, to surface at the most inopportune times due to the reflexive dynamics of continuous-time

[56] Victor Niederhoffer, a commodities speculator and manager of one such hedge fund, reported an asset base of US$125 million to MARHedge in July 1997 and simply unlisted his fund when the fall in the Thai baht had dissolved his fund's entire wealth in October of the same year (Clash, Lenzer, Maiello & Lee, 2001: 5).

[57] Remarks made by Mervyn King in a speech entitled, "Reforming the international financial system: the middle way," delivered at a session of the Money Marketeers at the Federal Reserve Bank of New York on 9 September 1999.

arbitrage and arguably even more so, to the irrational nature of participants and their propensity to imitate the behavior and position-taking of other (often poorly-informed) investors. These deviations from both rational asset-allocation and underlying market fundamentals should not be considered as unlikely distortions but rather the anomalous effects and occasional malfunctions of the marketplace and namely, the pressure it exerts on actors to anticipate both shifts in relative asset values as well as the adjustments and decisions of their counterparts. Such pressures are properties built into the structure of the contemporary international financial system. Merton was correct in modeling asset-pricing as an endless spiral in perpetual motion. Indeed, the entire financial landscape conforms to much the same model. It would be ill-advised to think of it as a suspended abstraction, and regulatory measures must capture the evolving, dynamic character of the marketplace in order to be effective.

The hedge-fund issue is not one that international monetary authorities ought to be sanguine about. Despite the salience of the issue, the international community has been slow off the mark to address hedge-fund activity to any comprehensive degree. Current proposals for establishing position-taking limits and margin requirements for hedge funds face daunting challenges. Much like in the regulation of other components of cross-border investment, existing regulatory measures, limited as they are, have been devised primarily on a national rather than cooperative transnational level (Eichengreen, 2003: 196). Efforts to tighten nationally-imposed regulations will likely present incentives for funds to conduct their transactions in offshore financial havens, thus "neutralizing efforts to constrain their activities," as Eichengreen and Mathieson contend (1999: 14). And there is no international framework to prevent their migration offshore. Greater international regulation is therefore critical. Without it, funds will simply relocate their operations to a less regulated jurisdiction. However, as frightening of a prospect as systemic financial instability is, international coordination and the ability to secure compliance from offshore centers, the authors remark, are "things that cannot be simply assumed" (Ibid: 14). So as there are a number of incentives for reducing herding there are likewise numerous obstacles facing such efforts, not least of which that of the evasiveness of monetary cooperation and the inherent collective action obstacles that

consistently thwart cooperation in international financial affairs.[58] States' failure to address systemic financial risk in a cooperative if not coordinated manner, though it is discernibly in everyone's interest to do so, presents a puzzle to existing theories of international cooperation and is the focus of the next section.

IV. REGIME THEORY AND THE POLITICS OF REGULATORY HARMONIZATION

Anarchy continues to pervade relations between nation-states, as do consequently war and conflict. The international order is regularly upset by inter-state conflict and aggression and will continue to be so long as states pursue their interests in an unmediated manner in what is more or less an anarchic global environment.[59] This is not to suggest however, that the "anarchical" condition of the modern international system fashions "insuperable obstacles to cooperation" (Zacher & Sutton, 1997: 2).[60] Both conflict and cooperation, as Peter Katzenstein suggests, "emerge from the never ending process of redefining social and political identities that generates consensually shared and contextually appropriate standards of action" (Adler & Haas, 1992: 387).[61] The absence of supranational authority, combined with the existence of shared interests and mutual vulnerabilities, creates fertile conditions for the creation of institutional bodies that can manage, if not govern[62], expanding interdependencies between states, and thereby reduce the prospect of interstate conflict and other undesirable systemic disturbances. The presence of systemic risk presents an exogenous incentive for greater regulatory

[58] As Oran Young writes, collective action problems "can and often do delay or block efforts to reach agreement on institutional arrangements" and are "beyond mere expressions off noble sentiments" (1991: 284).

[59] This of course follows the structural-realist approach which assumes states to be rational-unitary actors that are "functionally symmetrical" and always "power-maximizing" (Krasner, 1982*a*: 186).

[60] By no means should the condition of the international system be characterized as "homogenous" or monolithic, cooperation as Axelrod and Keohane argue, is indeed occasionally attained and "varies among issues and over time" (1986: 226).

[61] Also in "International relations theory and the analysis of change," in Ernst-Otto Czempiel and James Rosenau, eds., *Global Changes and Theoretical Challenges* (1989, Lexington, Mass.: Lexington Books, pg. 295).

[62] Indeed, international regimes — the focus of this section — can be referred to as "governing arrangements" through which states "regulate and control transnational and interstate relations" (Keohane & Nye, 1989: 5). Following its creation, an international regime "governs the political bargaining and daily decision-making that occurs within the system" (Ibid: 21).

convergence and institutional cooperation in line with promoting that objective. There are measurable and compelling incentives for reducing systemic fragility. It is estimated that over US$100 billion would accrue to emerging markets alone if financial crises could be averted altogether (*Economist*, 2004*b*: 76). Dominant markets in turn, have an interest in keeping peripheral markets stable. Harmonization can potentially emerge out of the pressures of exogenous, decentralized concerns, with systemic risk being one such example. The prospect of a systemic financial crash poses a dilemma to regulatory authorities characterized by high negative externalities, high incentives for coordination (or conversely, significant costs for regulatory divergence), and an acute need for institutional assistance. Yet although such pressures and incentives may be necessary to spur cooperation, they are insufficient on their own. Power asymmetries will determine the extent of every state's interest in mitigating systemic risk and the size of the burden they are capable of carrying in promoting that objective.

The main task facing regulatory authorities today is that of reigning in the actors and stifling those strategies that are liable to undermine the more productive facets of financial globalization. Ostensibly, the regulation of highly leveraged pools and other investment vehicles would run counter to some of the multilateral agreements that have been struck with respect to capital account liberalization in recent decades. Systemic risk nevertheless poses a much greater threat that must be offset by making some private actors more accountable to the mediation of public monetary authorities and regulatory bodies. Underwriting stability in the world economy, as Kindleberger wisely noted, ought to be thought of as providing a 'public good'. Hegemonic leadership has failed in this regard and it has been ad-hoc, make-shift efforts that have on a number of occasions, spared the international financial system from utter collapse. The success of these initiatives can be attributed more to providence however, than to skillful intervention, although the combination of both effective intervention and good fortune was undoubtedly critical. In any event, it is obvious that ephemeral leadership is neither a sustainable nor desirable safety net given the limited resources available to public authorities and the undesirable side effects that often accompany large-scale international

assistance.[63] The difficulty of anticipating the precise breadth of a financial crisis further compounds the problem of limited monetary resources at the disposal of states and international financial institutions (both domestic and international lenders-of-last-resort). Whether assistance can be readily deployed is another element of organized intervention that remains in question and has attracted scrutiny from academic observers (Kindleberger, 1978 [1996]: 146-189). Systemic risk will be a mainstay in the global economy if states remain committed to dealing with crises on an ad-hoc, unilateral basis. Moreover, the resources available to existing international institutions such as the IMF or the BIS are simply too small to forestall a crisis from spreading like wild fire if it were to strike the money centers of the global financial system.

STRUCTURING COOPERATION

Coordinating the relations between a set of egoistic, self-interested actors, particularly when the primary interest of these actors happens to be self-preservation, remains a tall order. Regimes, writ large, have had limited success on account of these challenges. The task in forging cooperative relations lies in changing the incentives for cooperation, or at minimum, altering actors' perceptions of those incentives. Modifying states' perceptions regarding the utility of undertaking cooperative action can subsequently alter the "strategic choices governments make in their own self-interest." (Axelrod & Keohane, 1986: 252). In some contexts, such as economic relations, interests may very well converge, or alternatively, they may be coordinated in such ways as to maximize joint gains. While in other areas, such as national security, the interests of individual states are anything but harmonious.[64] A harmony of interests, in the classical economic sense, is self-regulating, and thus requires no special coordination. But cooperation does, due to the frequent inability of autonomous action "to secure pareto-optimal outcomes" (Krasner, 1982*a*: 186). It is in these impasses that institutional cooperation in the form of

[63] The phenomenon of "moral hazard" and the culture of "opportunism" it breeds is one example of a negative externality produced through *ex post* intervention and assistance.

[64] Harmony can be distinguished here from cooperation. While harmony requires a "complete identity of interests", cooperation emanates from situations that have a "mixture of conflicting and complementary interests" (Axelrod & Keohane, 1986: 226). The dichotomy between security (conventionally, a zero-sum arrangement) and economic relations (potentially and often a positive-sum scenario) best illustrates the fundamental difference between cooperation and a harmony of interests.

regimes can facilitate and *consensualize* individual preferences and enhance collective understanding of mutual aversions, thereby narrowing the watershed between what are ostensibly diverging interests. Conceptually, the dysfunctional logic of the contemporary order of sovereign, egoistic states can be reconciled with the grandiose vision of supranational monetary governance through a "weakly institutionalized order wherein independent but still sovereign states, motivated either by the desire to avoid common evils or the need to secure common goods, voluntarily coordinated their policies" (Pauly, 1994: 5). The foundation for a "political architecture" for global capital markets has yet to be laid down (Ibid: 17). One structural variable that can mobilize and serve as the basis for cooperative initiatives and potentially spur the formation of regimes, thus in turn, producing a delicate balance between interconnectedness, general systemic welfare, and national economic stability, is the growing mutuality of interests among individual nation-states. Indeed, a "mutuality of interest" is one of the three factors that Robert Axelrod and Robert Keohane see as accounting for the "emergence, or non-emergence, of cooperation under anarchy," and moreover, one of the "structural conditions that affect strategic choices leading to cooperation or discord" (1986: 253).

Restructuring actors' preference orders in favor of compliance to international financial regulations can only be plausibly achieved through the identification of a mutuality of interest or in other words, by revealing a compatibility between states' self-interests and the mutual, or common interest. Successful regimes are those where the general interest of the community has emerged and has been discerned.[65] They are usually the ones that are constructed on the basis of "patterns of common or

[65] Managing bundles of both converging and intractable interests depends on "disaggregating" not coalitions of interests, but rather the seemingly irreconcilable aggregate of particular, or unitary, interests (Haas, 1990: 129). Reducing a group of competing and sometimes conflicting set of plural interests into a single, common will, or mutuality, is an overwhelming task. In his criticisms of the classical model of democracy, Joseph Shumpeter addressed some of the challenges associated with trying to discern a prevailing common will out of an "infinitely complex jumble of volitions, influences, actions, and reactions, [...] an indeterminate bundle of vague impulses" that suffers from a deficit of both "rational unity" as well as "rational sanction" (1954: 253). A solution to this dilemma may lie with the classic conception of the 'General Will' as conceived by Jean-Jacques Rousseau. His notion of the General Will (or mutuality of interest, for our purposes here) was predicated not on a crude aggregate sum or "will of all", as he referred to it, but rather as the "sum of the differences of these distinct wills, arrived at by canceling out the "pluses and minuses" of competing private interests (1950: 26). When the particular or individual interests of the parties prevail over the general, or mutual interest of the community, the net effect achieved is the opposite of the common interest, thus imposing a strain on the freedom and welfare of the collective.

complimentary interests" (Keohane, 1984: 78). [66] Regimes that are built on the foundation of a mutuality of interest in a particular issue-area are found to be more durable than regimes that simply proscribe the limitations of behavior and deter the pursuit of incompatible objectives (Zacher & Sutton, 1996: 16). Such regimes are also "instrumental" in advancing shared objectives and in helping achieve common goals (Adler, 1992: 144). We can therefore think of regimes as "devices to facilitate mutually beneficial agreements" (Keohane, 1983: 158-9). In systemic risk, states share a resounding mutual interest in suppressing a common threat to their individual and collective economic security. Quite naturally then, they would share a corresponding desire for forming a global regulatory regime that would reduce the risk of systemic failure.

Participation in an international regulatory initiative, whether it be in regime formation or comprehensive policy harmonization, would allow states to enjoy benefits resulting from the reduction of the transaction costs associated with unilateral oversight. As described above, independent decision-making in issue-areas characterized by converging interests and common aversions quite often produces sup-optimal outcomes. States may have an enduring preference for pursuing their objectives and interests in an autonomous manner but nevertheless at times create and comply with norms and principles in order to realize greater joint gains (Haas, 1990: 172).[67] Regimes are thus created when individual states realize the futility of unilateral action and forgo independent decision-making so as to deal with issues of common interest on a multilateral level (Stein, 1983: 127). As Arthur Stein suggests, "there are times when

[66] The Antiballistic missile (ABM) arms control treaty, signed by the United States and the Soviet Union in 1972, lends credence to the idea that cooperation emerges out of a disaggregation of converging and conflicting interests. As Emanuel Adler contends, the parties were able to "converge" and create an effective ABM regime largely because they saw it as a "key to advancing both their irreconcilable interests and their shared interest of avoiding nuclear war"— a fear shared by both superpowers (1992:101-2).

[67] Balance of power theory, for instance, assumes that states act out of self-interest when they join together against an aspiring hegemon. Their ability to cooperate and form a collective body in spite of the primacy of self-reliance and their preference for the autonomous pursuit of their interests reflects the fact that states' "primary goals are interrelated and can be conceived as a nested hierarchy of instrumental goals" (Paul, Wirtz & Fortmann, 2004: 37). States' highest order objective is securing their own survival and states may cooperate with one another under certain conditions in order to advance that interest. The theory also maintains that states have a shared interest in quelling a common threat or aversion, which compels them to "band together" so as to assist one another in defeating this threat (Ibid: 102). The construction of a regulatory regime that would mitigate the threat of systemic collapse is therefore somewhat analogous to the process of 'balancing' against the threat of a rising power.

rational self-interested calculation leads actors to abandon independent decision making in favor of joint decision making" (Ibid: 132, 140). Systemic risk provides a fertile opportunity for increased joint decision-making. "It is the very autonomy of states and their self-interests," Stein adds, that leads sovereign nations to construct regimes when faced with dilemmas (Ibid: 140). International regimes in policy-areas involving converging interests are therefore consistent with the classic unitary-rational analyses of state behavior. In this sense, the creation of an international regime that would harmonize behavior is in some ways akin to the escape from the natural condition and the formation of civil society in the tradition of Lockean social contract theory. "The same forces that lead individuals to bind themselves together to escape that state of nature," Stein insists, "lead states [...] to collaborate with one another" (1983: 132). Given the anarchic nature of the international system, states must at times "voluntarily surrender" some of their natural liberties in exchange for the protection of both life and property (Lucatelli, 1997: 6). These may qualify as examples of the "incentives" that Keohane refers to when discussing the underlying motives that drive rational egoists to collaborate and form regimes (1984: 78).

Regimes that have historically had greater success are those in which the dynamics of policy coordination necessitate greater cooperation among the members and discourage unitary defection on the basis of rational self-interest. In the interest of subduing collective economic concerns like systemic risk, it is in the immediate self-interest of all states to comply with the norms and policy prescriptions set by an international regulatory authority and to expect reciprocal compliance from other jurisdictions. As mentioned above, an actor's engagement in multilateral initiatives to reduce systemic financial risk can be compatible with realist conceptions of the unitary-rational state. Egoism drives individual nations to engage in cooperative ventures with other states and form regimes in order to advance their individual interests. The by-product of this process is an overall collective benefit. Under transparent conditions, the existence of a mutuality of interest can maximize payoffs and induce regime formation.

DECLINING UTILIY OF UNILATERAL OVERSIGHT

The necessity for an institution or multilateral framework that would reduce the prospect of herd behavior and at its root — irrational participant behavior — is made even more pressing given the diminishing utility of unilaterally-imposed regulations. Capital and exchange controls are no longer politically or economically feasible because of the almost universal conviction in neoliberal policies and the self-regulating market, and perhaps even more importantly, because capital controls often put the financial sector in question at a competitive disadvantage vis-à-vis rival markets (Singer, 2004: 531). Given the competitive dynamics of an increasingly interdependent global economy, states can no longer feasibly apply capital controls unilaterally without scaring off market participants and forfeiting beneficial capital inflows. In an era of accelerating global financial movements and where domestic growth is so closely tied to the ability to attract such flows, measures that impede on the free flow of capital are considered by foreign investors as draconian intrusions into the marketplace. Furthermore, policies that threaten to interfere with the steady influx and outflow of capital often promote "regulatory arbitrage" by market participants who are determined to maximize returns at minimal levels of cost and risk. In the absence of concerted harmonization, hedge funds, like most other financial institutions looking to insulate themselves from the costs of regulation, will "shop around in offshore markets to circumvent domestic regulation" (Rogoff, 1999: 32). The presence of these disincentives to capital-market regulation can spur a *de facto* race-to-the-bottom in financial deregulation.

In light of the pressures exerted on states to remove restrictions on financial movements and implement full capital account convertibility, it seems highly unlikely that states would willingly sabotage their competitive advantage in attracting foreign capital by unilaterally imposing taxes on capital flows. Nations elect instead to divest their domestic markets of the controls and regulations placed on capital movements. Investors are often lured in by differentials in regulatory structures and more specifically, regulatory laxity. A state that lubricates the channels available for the transmission of foreign capital and minimizes barriers to the flow of money coming in and out of its market has a superior competitive advantage vis-à-vis rival, possibly more restrictive markets. This pressure to deregulate is a market-induced factor that constrains the ability

of states to enact policies that may be in the best interest of their long term financial stability. The pressure to conform to this sweeping trend of liberalization also means states are liable to adopt policies and create conditions favorable to the cross-border flow of money and consequently institute policies that are congenial to the transmission of speculative shocks. Streamlining regulatory structures also has the effect of weakening states' capacities to address their immediate needs with regard to the movement of investment in and out of their financial jurisdictions. Dominant markets are equally susceptible to the pressures of deregulation. Regulators naturally see this phenomenon as "one of the main arguments for harmonizing standards" (Ibid, 32). Without some form of concerted regulatory oversight even the larger and wealthier economies will be ill-equipped to deal independently with the exigencies and speculative excesses of international capital markets.

Although nations can unilaterally promote an open global financial order through convergent yet uncoordinated liberalization, they cannot through unilateral action, create a 'closed' or regulated international order.[68] For one, regulation directed at slowing the tremendous velocity of cross-border capital flow, limiting its staggering volume, or simply softening the impact of shocks from volatile capital movement on national or regional economies, cannot feasibly take the form of an international transactions tax the sort proposed by economist James Tobin in the late 1970s, for instance, for two important reasons. First, no nation would impose such a tax unilaterally without risking virtual exclusion from global financial markets — a prospect most states, particularly those lying on the fringe of world markets, would desperately want to avoid. Secondly, a multilateral imposition of regulatory controls would mean a reversion to a restrictive protectionist order — an order whose underlying premises the post-Bretton Woods international monetary order has been designed to reject.[69] Aside from the political implications of imposing restrictive domestic controls on the inflow of foreign capital, there are other inherent problems with the Tobin tax. An international tax levied on currency

[68] I will have more to say on this in the proceeding section.

[69] For an example of the staunch institutional resistance that proposals for capital controls and international regulatory measures have been met with, see "Misplaced hope in Tobin's tax" (*Financial Times,* 19 March 2002). It is both exceedingly difficult and costly to erect protectionist fences without an international agency to enforce them multilaterally. As Kenneth Rogoff observes, most of the "grand schemes" proposed for the installation of international capital controls have been simply infeasible in the "absence of a supranational legal authority" (1999: 39).

transactions and other forms of exchange controls would tighten market liquidity and therefore may have the effect of exacerbating rather than reducing volatility in the marketplace (G7 Report, 2001: 3). Moreover, it is quite difficult to distinguish between speculative flows and other capital movements such as short-term credit and trade financing flows. The Tobin tax could potentially create "distortions" in financial markets, characterized by diminishing levels of capital formation and a commensurate drop in growth rates (Ibid: 3).

It would be difficult in an age of deepening economic integration and policy convergence to conceive that intervention in the form of active multilateral regulation of cross-border financial movements would be a mainstay. Capital controls have degenerated into measures adopted almost exclusively by developing countries and emerging markets and often for "transitional" purposes only (Eichengreen, 2004: 282). Controls intended for unilateral purposes are indeed gradually becoming the relic of a forgone monetary era. Alan Stockman and Alejandro Hernandez conducted an empirical study on the effects that an increase in the taxation of foreign exchange and foreign asset earnings has on exchange rates and concluded that capital controls — the taxes on income derived from holdings of foreign interest-bearing assets — have "major effects" on exchange rates and an adverse impact on a nation's terms of trade (1988: 373). They discovered that the installation of exchange and capital controls in the form of either taxes or quantitative restrictions, "raises the gross cost of importing foreign goods by taxing the foreign money required to purchase them," thus raising domestic terms of trade "through an appreciation in the domestic currency" and thereby reducing domestic consumption of imports (Ibid: 363, 372).[70] Unilaterally imposed restrictions therefore, can have damaging effects on a country's general economic well-being.

It would appear that the individual state's influence as an "autonomous designer of regulation" is in decline as transnational market forces become more formidable (Cerny, 1998: 1). Have states and existing international institutions become the night-watchman of global finance? One thing is certain. The increasing securitization and

[70] Stockman and Hernandez's findings are especially important since they apply to a host of different types of assets, such as stocks, bonds, forward contracts, future contracts, currency options, futures options, currency swaps, interest rate swaps — virtually any asset whose real returns can be significantly affected by domestic exchange and capital regulations (1998: 373).

sophistication of financial instruments — the contemporary versions of the "resurgent market forces" of the post-Bretton Woods era — has made regulating cross-border capital flows all the more difficult (Eichengreen, 1996: 196). It is becoming an overwhelming endeavor to implement controls without distorting productive transfers of money and to design controls intended for specific components of transnational capital and not others (Eichengreen, 2004: 305). These and other complications facing regulatory authorities reflect the gap that has developed between financial innovation and lagging political-economic scholarship on the evolving structure of global finance and the unprecedented challenges it poses for national markets and economies. Existing mechanisms of regulation have degenerated into arcane and indeed, obsolete forms of political interference into the sophisticated workings of highly liquid international financial system. Regulations devised to obstruct the flow of speculative investment are likely to become "increasingly comprehensive, onerous, and one fears, distortionary" (Ibid.: 305). They are no longer within the mutual interest of nations committed to the expansion of a global economy built on an open international financial order.

Financial activity can be held in check either through the unilateral imposition of capital and exchange controls by individual states, or through cooperative, multilateral initiatives. It is unlikely however, that states will be able to adequately manage the vicissitudes of global capital markets unilaterally, nor even desire to take on such a burden. As Eric Helleiner observes, it became obvious during the 1970s and early 1980s that states were unwilling to move toward greater closure of their national economies because of the "enormous economic and political costs" associated with imposing tight controls (Ibid: 198). In other words, the incentives for remaining 'open', for most economies, continue to dwarf the costs associated with openness. Unilateral moves toward greater closure and restrictiveness have become neither politically sensible nor economically viable courses of action. "The prospect of financial autarky as a way of avoiding fast and furious contagion," as Kaminsky, Reinhart and Végh indicate, "is not particularly attractive as a long run solution" (2003: 17). As the complex networks of cross-border movements of capital continue to intensify, the pressures they place on what is a largely deregulated international financial system will mean that states wishing to effectively prevent speculative financial investment from exerting undue stress on their

own economies will likely have to do so on a more collective basis. Nevertheless, cooperation in international financial affairs, much like in many other issue-areas of salient national interest, is unlikely to arise spontaneously.

COLLECTIVE ACTION DYNAMICS AND THE ELUSIVENESS OF COOPERATION

There are other, less obvious obstacles to international financial regulation that can be explained by failures not in markets, but in coordination problems. States wishing to revise the existing liberal international financial order face significant collective action obstacles. Increasing capital-market integration cannot be sufficiently explained using theories that emphasize state preferences. Nor can the complex nature of financial integration be unbundled using explanations with an exclusive focus on political decision-making. A significant part of the explanation behind the accelerating phenomenon of financial-market enmeshment can be provided by exploring the collective action dynamics at work.

Some political economists and perhaps most extensively among them, Eric Helleiner, have written on the collective action obstacles facing the creation of a restrictive international financial order.[71] The collective action logic in international financial and monetary relations is fundamentally different from that which exists in international trade. In contrast to the trading system, which requires cooperation to maintain its openness, the international financial system requires cooperation to create a *closed*, or restrictive, order. Furthermore, while the liberal international trading order was brought about largely through institutional promotion and multilateral coordination, the financial system is conversely sensitive to unilateral state action. Thus, an open, or liberal financial regime, can be created through uncoordinated, unilateral promotion and in the absence of multilateral coordination, given states' need to attract foreign capital (Helleiner, 1992: 34-5; 1994). As Helleiner suggests, "individual states [are] able to promote the emergence of an open financial order unilaterally(...)" (1994: 197). The dynamics change, however, when it comes to regulating finance once the international financial order has been liberalized. A closed financial order is extremely difficult to

[71] See for instance "States and the future of global finance," *Review of International Studies* 18 (1992): 35, and *States and the Reemergence of Global Finance* (1994): 17-18, 22, 196-8, 207-8.

create given the formidable incentives to deviate from the principles of such a regime and open one's market to the influx of capital.

There is thus a fundamental inconsistency between the unilateral liberalization of a state's *trading* position and its unilateral *financial* liberalization. One would be remiss to underemphasize the "dynamic" incompatibility that exists between an open trading order and a tightly-regulated international financial system.[72] In order to gain access to foreign goods and services markets, countries are obliged to mutually liberalize trade policies in order to avert the prospect of countervailing protectionism. The presence of clear incentives for defection and the temptation to "free-ride" by unilaterally erecting barriers to trade, while your counterparts dismantle theirs, necessitates formal cooperation between trading partners. There is an underlying assumption of coordinated action in the creation of a liberalized trading order. Conversely, a liberal financial order can be promoted through unilateral action without the need for coordination.

Markets lying on the periphery of the global financial centers of capital are in a competitive struggle to attract liquidity for domestic investment, to stimulate growth, or simply to correct their current and capital account deficits. In order to gain access to capital markets and to lure foreign investment, counties actively deregulate their markets and create lax conditions for foreign investment. A country can enjoy calculable payoffs by liberalizing its financial market, regardless if other markets reciprocate or not. There is no paralleling need to coordinate policies as there is in the trading order since there is no potential for the occurrence of the prisoner's dilemma situation that is inherent to trading relations. This should come as little surprise given that capital now regularly flows in irrespective and sometimes even conflicting paths to trade routes.[73] Financial-flows often *intersect* bilateral and multilateral trading patterns. Indeed, capital-flows do not follow the paths of trading relations but rather cut trough them, entangling independent markets in a complex web of financial ties. As mobile finance flows from market to market in the global economy, capital networks begin to form and the international financial system becomes a more comprehensively integrated domain.

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[72] For more on this point, see Eichengreen (1996: 194).

[73] The suggestion here is that financial flows travel sometimes in a manner that does not correspond to bilateral or regional trading arrangements. A nation's financial portfolio does not always conform to its trading relationships. Money simply flows to regions where it anticipates the greatest return on investment and there is not the same ostensible need for reciprocity as there is in international trade.

There is little to suggest that national policies will naturally converge in light of the strong competitive dynamics associated with the continuing deregulation of global capital markets and the compelling incentives for defection from a closed financial order (Helleiner, 1995: 334). One possible way for states to surmount these barriers may be to undertake collective policy-harmonization initiatives with the backing of an international agency or regime. An institution of this sort could promote harmonization by drawing states' attention to the dangers of non-cooperation. Fortunately, there are existing frameworks in place on which greater regulatory harmonization can be fostered while taking advantage of economies of scale. Cooperation with regard to financial instability would by no means be a nascent development. Significant progress has been made under the auspices of various institutions and initiatives.

The prospect of an international banking crisis during the early 1980s constituted a mutually-shared threat to nations and provided a fertile opportunity for progress in central bank cooperation among the G-10 nations.[74] The result was the institutionalization of monetary and banking cooperation under the BIS. In line with the response to that particular crisis, more autonomy and political clout could be conferred unto the "BIS-centered regime" that is purportedly already in place (Helleiner, 1992: 22). The institution could both promote and assist in coordinating greater regulatory harmonization between foreign markets. In this way it could buffer the international financial system from unanticipated shocks in a preventative rather than reactive manner. Though it is best characterized as a "weak regime" for now, the BIS could one day be an effective venue where states could table proposals for regulatory reform as well as scrutinize proposed methods of protecting the international financial system from the occasional yet unavoidable disruption (Ibid 43). As Kapstein points out, "[w]hether international policy coordination will emerge" out of central bank cooperation or elsewhere, "will hinge on systemic and domestic constraints," and whether those constraints and needs can one day be reconciled under a single regulatory framework (1992: 286). I have argued that there

[74] It should be noted however, that though the impetus for cooperation may have come from an epistemic convergence among central bankers, little could have been accomplished in the way of harmonizing regulatory standards without hegemonic participation. Indeed, proactive involvement by both the U.S. and British authorities was instrumental in influencing the more weary nations to adopt the proposed risk-weighted capital standards.

is indeed an opportunity for progress in that regard. However, it requires an external shock or presence that would stimulate cooperation and a reexamination of mutual interests. The discernable presence of systemic risk is obviously insufficient on its own, given the limited progress in creating international regulations to date.

Though regimes can behave as independent or autonomous variables once they are created, they are ultimately formed and maintained by nation-states (Lucatelli, 1997: 7; Krasner, 1982*b*). States' demand for regimes therefore, must remain fervent. Some may point out that maintaining states' endorsement in this regard is a tall order. This should not suggest however, that a comprehensive regulatory regime cannot emerge in the context of a state-centric international order. Its emergence, much like all other regimes, is contingent upon several important conditions. Firstly, a regime of this sort is most likely to emerge and remain formidable where there is an overt or at least discernable mutuality of interest between the actors, which in this case, I have endeavored to show that there is — that of reducing systemic risk. Secondly, notwithstanding the presence of high incentives for cooperation, there must also be resounding support for the creation of a regime from the world's most powerful nations, and in particular, those that would need to be intensely involved in its construction.

The contours and substance of a global regulatory regime would therefore be significantly determined by the material relations between its constituents or more precisely, the political-economic power structure. Other actors, such as academic and epistemic communities, could contribute to the process only in so far as effecting a reordering of hegemonic preferences. But even that would be a significant accomplishment, for these groups are often more successful in preserving the status quo, as they have in the hedge-fund debate, than in bringing about meaningful reform. In the case of international financial regulation, hegemonic support does not exist, and is the leading variable, I argue, accounting for the absence of comprehensive policy harmonization in this vital issue-area.

V. HEGEMONIC INTERESTS AND U.S. REGULATORY AMBIVALENCE

The summary of interest-based theory above intended to show that in spite of pressing incentives for regime creation, states have been unable to create a regime that would serve to stabilize the international financial system. The fact that little institutional cooperation has been achieved reveals certain weaknesses in demand-driven, neoliberal theories of international cooperation. I argue that theories that stress relative power capabilities are more useful in explaining the obstacles that stand in the way of forming harmonized standards that would regulate hedge-fund activity than those that emphasize converging national interests. In policy areas as complex and dense as international financial relations, realist theoretical models such as the hegemonic stability theory have an arguably wider range of applicability than do liberal-contractualist models.

THEORETICAL APPROACHES TO HEGEMONY

When the hegemonic stability theory is applied to the study of international regimes, it purports that regimes are created and sustained by actors who possess a preponderance of power resources, relevant to a specific issue-area (Hasenclever, Mayer, Rittberger, 1997: 89-90). Neorealist formulations maintain that international regimes cannot be forged without some form of power structure that would promote cooperation.[75] The greater that preponderance of power is, or the more asymmetrically that power is distributed, the more likely regimes will emerge (Keohane, 1984: 34). On the other hand, regimes are unlikely to form in the absence of a unipolar configuration of power *or* when a hegemon expresses resistance to their formation. A powerful state can unilaterally prevent the emergence of a regime either actively, by openly discouraging its formation, or passively, by simply refusing to participate in or endorse it. Active hegemonic opposition can come in the form of anything from subtle denunciations to more coercive measures like sanctions or attacks on reputation. Conversely, when a state possesses the resources and capabilities to be able to divert world income, it can readily provide the incentives or

[75] By power structure in this particular context, I am referring to the "distribution of capabilities" or power resources "among similar units" in the international system (Keohane & Nye, 1989: 20-1; Haggard & Simmons, 1987: 503).

threats, if need be, to stimulate cooperation or induce greater behavioral coordination. Likewise, hegemonic states are able to enforce multilateral agreements by providing the resources and technical assistance necessary to induce compliant behavior.

Similar to other theories that have gained currency over the years in the study of international affairs, what the theory of hegemonic stability loses in its crude simplicity, it gains in parsimony. Power, both political and market-based, is an immeasurable variable whose influence cannot be ignored in the process of forging international regimes. Every statute and stipulation is intensively negotiated during the bargaining that precedes agreement, and it is during this phase of constructing international regimes where the underlying dynamics of power can determine outcomes. Even those who view regimes as potentially autonomous entities that deserve scrutiny as independent actors such as Keohane and Nye in their seminal work *Power and Interdependence*, contend that international regimes, at best, are "intermediate factors between the power structure" of the international order and the "political and economic bargaining that takes place within it" (1989: 21). Neoliberal institutionalists have written extensively on the irrelevance of the distribution of power resources in the international system in certain issue-areas around which regimes have been created. Hegemonic will, they argue, may be sufficient to induce regime formation but may not always and invariably be necessary. Structure however, simply cannot be discarded as a critical determinant of regime resiliency, if not a determinant of their formation. As Arthur Stein intimates, it is "interests" that "determine" the prospects for regime building, and "the distribution of power should be viewed as determinants of interests" (1983: 135).

Regimes can conceivably emerge in certain specific policy-areas even without strong hegemonic resolve, given of course an appropriate set of circumstances and stimulus. The management of systemic financial risk may constitute such a context, particularly since a systemic crisis would threaten the foundation of another political-economic order tenuously built on international cooperation — the liberal international trading order. "By bringing economic disruption and instability simultaneously to each major state," Helleiner contends, "a major international financial crisis might provide the catalyst to encourage collective action aimed at controlling financial movements" (1992: 36). The 1982 debt crisis revealed to monetary authorities that international market

failure is indeed a real threat, and therefore compelled policymakers, as Oatley and Nabors argue, "to create mutually beneficial international regulations" in the form of the 1987 Basle Accord (1998: 35). The potential for a global financial crisis could therefore precipitate cooperation by presenting states with calculable incentives for policy coordination. As Oran Young notes, shocks and crisis to the system "increase the probability of success in efforts to negotiate the terms of international regimes" (1999:341-2). Though they have certainly increased dialogue between nations on questions of systemic economic fragility, crises in recent decades have thus far been unsuccessful in stimulating marked cooperation.

Proponents of the neorealist position would be quick to point out the shortage of hegemonic promotion in this matter. Without closer analysis however, one should resist the temptation of making the presumption that endorsement from powerful nations is the critical missing piece to what are inevitably jigsaw puzzles of interests and identities converging around shared notions of utility-improving courses of action. Some considerably robust regimes have been formed in certain issue-areas in the absence of significant hegemonic participation.[76] This is why stricter versions of the hegemonic stability theory, particularly those that argue regimes will neither be created nor effectively maintained without strong hegemonic leadership, have arguably become defunct (Hasenclever, Mayer & Rittberger, 1997: 103). Counterfactuals aside, unless there is an implicit desire on the part of the hegemon to leave its dissent unfelt, a nation with preponderant power will usually be unwary of exerting pressure in a specific policy-area if the outcomes of increased cooperation would somehow square with or impinge on its more salient interests. The success of negotiated regimes in issues such as ozone depletion, whaling, trade in endangered species, and pollution control in the Mediterranean Basin, can be attributed more so to hegemonic indifference than to some

[76] See the work of Oran Young for instance, on the cooperation that has been achieved on the Arctic and in environmental affairs in the absence of hegemonic leadership: *Resource Regimes: Natural Resources and Social Institutions* (University of California Press, Berkeley, CA: 1982); *International Cooperation: Building Regimes for Natural Resources and the Environment* (Cornell University Press, Ithaca, NY: 1989); "The politics of international regime formation: managing natural resources and the environment," *International Organization* (43: 1996): 349-76; *International Governance: Protecting the Environment in a Stateless Society* (Cornell University Press, Ithaca, NY: 1994); "Institutional linkages in international society: polar perspectives," *Global Governance* (2: 1996): 1-23; and with Gail Osherenko (eds.), *Polar Politics: Creating International Environmental Regimes* (Cornell University Press, Ithaca, NY: 1993).

intrinsic quality that somehow allowed these regimes to overcome collective action impediments and emerge in the absence of leadership. In fact, it is doubtless that any regimes have ever emerged in issue-areas where there was a strong hegemonic resolve to preserve the status quo.[77] With respect to hedge-fund supervision, hegemonic instincts lean against proposals for greater regulation. The U.S. has a considerable stake in preserving a deregulated domestic and international environment for hedge funds. Its unwillingness at times even to enter into debate about the disruptive nature of highly leveraged vehicles would leave scholars of portfolio management and the progress that has been achieved in the discipline of behavioral finance, befuddled.

U.S. INTERESTS AND INTERNATIONAL POLICY CONVERGENCE

Dominant markets possess a significant amount of power when it comes to setting the agenda for policy harmonization. This power need not be exercised through direct political pressure, market pressure will occasionally suffice, and regulatory authorities are well aware of the impact their domestic strategies will have in determining whether their foreign counterparts will emulate or conversely, afford to resist adopting the same policies. When dominant markets forego the use of overt political power and opt for less-coercive, market-based persuasion, the incentives provided to smaller jurisdictions are said to be of a decentralized nature (Simmons, 2001: 609-11). By virtue of their wealth and international prestige, hegemons are rarely, if ever, oblivious to the externalities of their internal behavior and the effect which domestic courses of action will have on other nations. In this way a hegemonic state holds a powerful advantage vis-à-vis its rivals: that of knowing which policies it shall adopt and the systemic impact those reforms will likely have based on weaker markets' capacities to resist emulation.

It is costlier sometimes for a hegemon to alter its preferred regulatory posture than to endeavor to adjust the policies of any number of other states (Simmons, 2001: 595). Fortunately, a hegemon rarely has to engage in such an undertaking since market

[77] Liberal theorists are sometimes tempted to think that a preponderance of power is unnecessary or even irrelevant in negotiating some regimes and are quick to cite successful institutional arrangements that have emerged out of a hegemonic vacuum. See Oran Young (1991), Duncan Snidal, "The limits of hegemonic stability theory," *International Organization*, Vol. 39 (Autumn: 1985), pp. 579-614, and Isabelle Grunberg, "Exploring the 'myth' of hegemonic stability," *International Organization*, Vol. 44 (Autumn: 1990), pp. 431-77.

incentives are often enough on their own to precipitate adjustments in the policies of rival markets. A hegemonic power will rarely expend political resources when the incentives produced by domestic policy reforms suffice. If decentralized market pressures are enough to behoove a recalcitrant nation to adopt policies similar to those of the dominant market, it begs the question of to what extent are market pressures and incentives to replicate policies *truly* decentralized if they are invariably tied to the regulatory-setting preferences of the dominant financial center? Regardless of whether a powerful nation feels it has an interest in stimulating harmonization and whether it chooses to wield political or coercive means in line with that objective, that is to say, whether a hegemon resorts to the 'stick' or the 'carrot', is irrelevant. Most foreign jurisdictions' policy autonomy will be unavoidably constrained by virtue of the impact that hegemonic domestic adjustments and policy reforms have, irrespective of whether the reforms were intended to exert pressure on those markets or not.

In the post-World War II era, the U.S. has been unequivocal in making their sentiments known and wielding political or market power on occasion in order to construct an international order congenial to its preferences and compatible with its own domestic regulatory posture. Following the breakdown of the stable exchange-rate system in March 1973, there were pockets of states, including the Western European countries and Japan, wishing to institute cooperative controls for the purpose of reducing the more disruptive, short-term flows of money (Helleiner, 1994: 107). There was little support for such initiatives however, from the principal financial centers. The U.S. was steadfast in its position that capital mobility would both encourage international trade and promote sound economic policies, and thus repeatedly blocked proposals to establish cooperative controls.[78] Without categorical support from the dominant economies, states were able to accomplish very little to avail themselves of the benefits of capital controls. Indeed, as Helleiner notes, the U.S.'s continued opposition to cooperative controls "effectively killed the initiative" (1994: 109). Cooperative action would be ineffective without the

[78] For a more comprehensive account of their position, see for instance the report submitted by the IMF executive directors to the Board of Governors in August 1972 as well as the 1973 *Economic Report of the President to Congress*, which states that "controls on capital transactions for balance-of-payments purposes should not be encouraged and certainly not be required in lieu of other measures of adjustment nor should they become the means of maintaining an undervalued or overvalued exchange rate" (in Helleiner, 1994: 106).

world's leading economy, financial markets, and currency on board. The U.S. also began to progressively oppose capital controls imposed on a unilateral basis as well, insisting that controls implemented for the maintenance of inappropriate exchange rates or controls that would interfere with international trade and productive capital allocation had no place in an increasingly integrated global trading system. The U.S.'s position on the issue would later become embodied in the institutional stance of the IMF when the Fund amended its articles of agreement to include capital mobility as a prevailing imperative (Article 4-1).

The U.S. has the market influence and political suasion to demand cooperation or regulatory and supervisory reform "as a ticket for both access to the U.S. financial system and to dollar support in the event of a crisis" (Helleiner, 1992: 40).[79] Perhaps the most telling example of hegemonic influence in the modern financial era has been in the adoption of capital-adequacy and measurement standards under the 1988 Basel Accord. The Basel Committee of banking supervisors had debated the merits of adopting common standards for several years before the accord was ratified. No progress was achieved until an Anglo-American bilateral agreement had been struck which "induced" the committee to adopt similar adequacy ratios (Calomiris & Litan, 2000: 294). The significance of the U.S. and U.K. accord and specifically, U.S. influence in precipitating the convergence of standards, has been well documented.[80] U.S. regulators were particularly concerned with preventing American financial institutions from experiencing a competitive disadvantage vis-à-vis foreign rivals if foreign regulators were to adopt the standards in lieu of a multilateral agreement (Ibid: 285). The 1987 Basle Accord is to some degree also representative of the driving U.S. interest in retaining market dominance and satisfying the domestic demands of competing lobbies (Oatley & Nabors, 1998).[81] American policymakers did not shy from wielding financial market power in that instance in order

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[79] See "States and the future of global finance," in *Review of International Studies* (1992), no. 18: 31-49.
[80] See for instance Gowan (1999), Kapstein (1992) and (1994), Helleiner (1994), Calomiris and Litan (2000), Oatley and Nabors (1998), and Singer (2004).
[81] Singer concurs with these findings, arguing that the willingness of regulators to engage in international harmonization efforts is "constrained by the preferences of elected officials" (who are in turn influenced by domestic political pressures) in a principal-agent relationship (2004: 535). He departs somewhat however from the arguments of Oatley and Nabors by qualifying and supplementing their research with the literature on joint gains and functional explanations of cooperation.

to force foreign regulators to adopt the standards that the U.S. wanted to see instituted (Ibid: 36). The new standards transferred income from foreign institutions and namely, Japanese and European commercial banks, to compensate for competitive disadvantages and the costs of regulation.

The U.S.'s resistance to recent proposals of harmonizing capital adequacy standards in international securities trading is another case of the nation protecting its domestic interests, in this case, that of preserving a competitive advantage in the derivatives business over their European competitors (Singer, 2004: 553). European firms are subject to standards applied on a consolidated basis, meaning that minimum capital adequacy levels have to be maintained for all of the firm's divisions and subsidiaries, while their American counterparts only face requirements if they are registered broker-dealers. In consequence, many parent and holding companies of American securities firms are left unregulated, which allows them to offer derivatives contracts and other OTC instruments at competitive price levels thereby "threatening the market share" of European firms and holding a "dominant position in the global market" (Ibid: 558). U.K. regulators were naturally bothered by this and pushed for the creation of a global standard under the umbrella of the International Organization of Securities Commission (IOSCO) during the period of 1988 to 1992. The efforts of the U.K.'s Securities and Investments Board (SIB) went to no avail as regulators were unable to arrive at an agreement.

Outright U.S. opposition to creating harmonized securities regulations was instrumental in defeating the proposal. Domestically, U.S. securities firms were determined to make their dissent known and their opposition to proposals of increased supervision was profoundly "felt" in Congress during the debates on the Market Reform Act — a bill eventually passed in 1990 requiring greater disclosure from holding companies and other unregistered affiliates of securities firms (Ibid: 560). What is most peculiar about the IOSCO episode is that the U.K.'s capital requirement levels were substantially lower than the U.S.'s and the SIB advocated a global standard in line with the lower U.K. levels. Rather than harmonizing their standards with those of the British market or meeting at a halfway point, U.S. regulators simply pulled out of the negotiations and *ipso facto* expressed preference with the existing disparities. Maintaining a stratified regulatory structure in global securities trading ensured that the

primacy of the U.S. derivatives market would not be compromised. The official position of U.S. regulators was that U.K. capital levels were "dangerously low" and insufficient at their current levels to protect the system against insolvency if a crisis were to strike (Ibid: 551). In spite of these concerns, there was no impetus on behalf of U.S. officials to urge the harmonization of standards at more appropriate levels so as to strengthen the resiliency of international securities markets.

Most recently, the G-7 finance ministers and central bankers met in Ottawa in February 1999 with the intention of agreeing in principle on the creation of an agency that would oversee and potentially regulate against financial disturbances in the global economy. The German, French and Japanese officials were adamant about bolstering control mechanisms and instituting regulatory provisions against hedge funds (Gilpin, 2001: 276). Their proposals were dismissed by the U.S., who resisted against the idea of vesting regulatory powers in an international authority. Eventually the parties agreed to create the Financial Stability Forum[82], where they could meet and consult semi-annually in the aim of strengthening existing information-sharing channels for assessing systemic risks. The ministers neglected however to create a criteria by which they would assess risk in the future nor to establish a set of guidelines by which crises would be contained so as to prevent the spillover effects associated with contagion. American officials insisted moreover, that hedge funds be left out of the discussion.

As evidenced by their resistance to the proposed regulatory reforms tabled by other nations in recent decades, U.S. authorities seem more or else content with the status quo. Their approach will conceivably continue to focus on engaging other nations in an "expanding set of dyadic regulatory relationships" founded on a network of information-sharing agreements between the SEC and securities regulators in other jurisdictions (Simmons, 2001: 613-4). The existing American preference for bilateral over multilateral supervision even carries over to the market, where bilateral counterparty supervision has been pushed by U.S. monetary officials as a supposedly viable check on continuing deregulation. One example of U.S. support for increasing disintermediation on the basis of bilateral logic came following the 1987 stock market crash, when Federal Reserve and

[82] An idea originally conceived by Hans Tietmeyer, president of the German Bundesbank.

BIS officials, with the ostensible objective of reducing risk in the markets, urged two-party netting settlements between market participants over multilateral netting through the international clearinghouses (Mayer, 2001: 215). As a result, they placed undue pressure on individual banks to properly profile and monitor their counterparties and introduced greater risk in the system. Nevertheless, cooperation through bilateral channels does have the advantage of economies of scale, that is, the marginal transaction costs of negotiating are reduced with each successive agreement. And the incentives to "replicate" those formal agreements, as Simmons points out, will increase with the continued internationalization of global securities markets (2001: 614). The presence of systemic risks therefore, will heighten the need for more cooperation, yet that cooperation will have to inevitably take on a more multilateral dimension.

THE ANTI-MONEY LAUNDERING REGIME

Both the U.S. and Britain are reluctant to impose stricter regulations on hedge funds for the belief that it would have no other effect than to make funds relocate their operations to less regulated, offshore jurisdictions. In a recent SEC forum on the implications of hedge-fund investment, Afsaneh Beschloss, CEO and Chief Investment Officer of Carlyle Asset Management Group, echoed those concerns: "If we put a lot of extra regulation on U.S. prime brokers, what is that going to do? The business will go offshore over which we have no control." And as one Financial Services Authority (FSA) official indicates, if the effect of increased domestic regulation would be to move hedge fund business offshore, then regulation would be virtually ineffective in reducing the risks associated with a systemic financial crisis (*Risk*, 2005: 48; de Brouwer, 2001: 213). Dominant markets appear to be in a bind. If they elect to unilaterally fasten regulations on hedge-fund investment, the industry will supposedly migrate offshore. This suggests that dominant financial centers are somehow engrossed with small, offshore jurisdictions in a competition of regulatory laxity or a so-called 'race-to-the-bottom', as it is commonly referred to.

With respect to the pressures of a regulatory race-to-the-bottom, Simmons perceptively points out that "it seems utterly arbitrary" to believe that a hegemonic power with a preponderant market share and innumerable competitive advantages over its rivals

would participate in a "downward competitive spiral" with them (2001: 601). It is "unlikely" that a dominant market will "reverse its domestically preferred regulatory course" on account of competitive pressures from a handful of small Caribbean and other offshore financial havens (Ibid: 601). U.S. fears over the offshore migration of hedge-fund business would seem unwarranted. The U.S. is the primary domicile for hedge funds and has substantial market advantages that would not be easily compromised by regulatory competition from other jurisdictions, even if the U.S. were to tighten its regulatory regime at home. Hedge funds cater to an affluent clientele that is believed to be sufficiently experienced and informed to understand the risks associated with complex fund strategies. A client-base knowledgeable enough to grasp the sophisticated workings of complex financial vehicles would likely be hesitant to make substantial investments in partnerships that anchor their portfolios in markets that have failed to implement regulatory standards and supervisory protocols in line with those of OECD economies. Officials nevertheless continue to express concerns over offshore competition. Their concerns however are difficult to reconcile with their unwillingness to promote the formation of global regulatory standards that would eliminate regulatory disparities while bolstering the international financial system.

In contrast to the limited progress made in harmonizing securities trading and hedge-fund regulations, there has been considerable progress achieved in standardizing financial policies and regulations with respect to the suppression of transborder criminal practices. The international anti-money laundering regime, for example, represents a relatively successful global prohibitive regime insofar as securing compliance and ratification in spite of the presence of diverging national interests on the matter. It is also a case where public and indeed, systemic concerns, have trumped the interests of the private sector. Similarly to the issue of hedge-fund regulation, the role of regulatory arbitrage in influencing divergence and competitions in laxity was likewise a significant source of concern for policy-makers. Some financial jurisdictions and offshore havens are heavily dependent on financial services industries whose competitive success in the international system is derived from providing their clients with banking anonymity and other services that provide secrecy and refuge for offshore capital. Hence, countries such as Lichtenstein and Luxembourg and smaller offshore jurisdictions like Antigua and the

island of Vanuatu were wary of imposing regulations endorsed by anti-money laundering agencies for fear of losing a large market share.

What arguably accounted for the relative ease with which inter-state cooperation in this issue-area was crystallized into a robust international regime was the endorsement and that was supplied by the dominant financial markets and specifically the U.S., which was in favor of applying greater regulatory stringency in an effort to curtail money laundering and other illicit banking activities. In addressing the issue of money-laundering, U.S. officials and policy-makers were keen to enforce their notions of a sound prohibitive regime abroad. Instead of simply unilaterally imposing regulations in its own market, the U.S. opted to promote the formation of regulatory agencies that would monitor illicit banking on a transnational level. After it was created in 1989, the Financial Action Task Force (FATF) would press for standardization and perform facilitative functions by helping nations adjust to the new anti-money laundering provisions of its list of "Forty Recommendations" for regulatory tightening.

According to the logic laid out in Beth Simmons' analysis of the mechanisms of policy harmonization (2001), the case of systemic risk is somewhat similar to that of money laundering in that it is an issue characterized by *high negative externalities* for the principal center and *low incentives* for foreign markets to emulate policy innovations. Yet the U.S. has responded in a starkly different manner in each case. With respect to the money laundering threat, the American officials pushed for international regulations embodied in a comprehensive, broadly-based regime. In some instances, it even applied "hardball political pressure" in order to invoke compliance and precipitate the adoption of the regulations implemented in the U.S. market (Simmons, 2001: 607).[83] Today, recalcitrant jurisdictions are subjected to both political pressures, in the form of sanctions, and market incentives, in the form of inevitable reputational losses as the consequences of defiance (*Economist* 2005*d*; Simmons, 2001).[84] The U.S. Patriot Act, for instance,

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[83] As a means of combating money-laundering activities as well as assisting in profiling potential terrorist transactions, banks and other financial intermediaries in the U.S. are required by law to file detailed reports on all customer transactions over US$10,000. Roughly thirteen million of these reports are filed daily (*Economist*, 2005*d*).

[84] It should be noted that by creating international standards, the U.S. was driven arguably more by its domestic interest of reducing the narcotics and psychotropic substances trade, a criminal practice which goes hand-in-hand with money laundering, than a normative goal of universally prohibiting money laundering in the international system.

carries provisions that authorize the severance of financial relations between U.S. banks and foreign institutions that fail to comply with the norms of banking security and 'due diligence'.[85]

Conversely, with respect to the question of hedge funds and the limited regulatory oversight currently in place to supervise their activities, the U.S. has adopted an ambivalent approach at best. U.S. officials have opposed policy harmonization proposals in several instances and thereby have preserved what is presently a heterogeneous regulatory order. It appears that the principal financial centers do not want to exert the type of political pressure they did on offshore jurisdictions in the aim of curtailing cross-border money laundering practices. There is a much more mature and concerted regime in this domain, based on very similar principles to those that would need to be implemented in order to manage the activities of hedge funds. Overt threats to security and welfare are often the most effective stimulant galvanizing regulatory reform. The initiative to reduce systemic risk however, receives considerably less concern and suffers from a deficit of consensus that the suppression of criminal financial practices, for instance, does not. One reason for the disunity among regulators may be that few of them agree on the appropriate methods of mitigating financial risk. Some will inevitably support more austere measures while others will allow their private ideologies to interfere with meaningful debate. The political process behind financial policy harmonization will thus provide a critical backdrop to cooperative initiatives in the future. And as history reveals, politics will more often hamper rather than promote progress. One thing is certain, without the world's most dominant market on board, international efforts to institutionalize regulatory provisions that would strengthen the international financial architecture are unlikely to achieve significant progress.[86]

HEDGE FUNDS IN THE U.S.

Hedge-fund regulation is a topic of controversy in U.S. political circles, immersed in somewhat of a partisan divide that sees Republicans opposing regulation and Democrats

[85] The concept of 'due diligence' refers to knowing one's customer by following comprehensive client-profiling protocols.

[86] To quote de Brouwer: "The lack of consensus — and, more particularly, the fact that the United States does not see market-integrity issues as relevant at this stage — means that a global policy approach to this particular issue is currently unlikely" (2001: 197).

urging for greater supervision.[87] Federal regulators and public officials are rarely in agreement over the extent of the risks that these entities pose to the domestic market and investors. The most predominant view is that in spite of the need for more research into their activities, hedge funds perform an important role in domestic and global capital markets. The head of the New York Federal Reserve, Timothy Geithner, recently commented on the "valuable role" played by hedge funds in financial markets, saying that regulation, whether in the form of capital adequacy standards or limitations on leverage, is "not on the horizon" (Wighton, 2004). Even demanding greater disclosure of hedge-fund positions is undesirable according to Geithner, since it would likely "undermine" hedge funds' ability to "function properly" (Ibid). Not unlike many of his colleagues, his suggestion on how to mitigate the systemic risks associated with hedge-fund investment was not to target the funds themselves but rather to strengthen the resilience of the market infrastructure — the so-called 'market discipline' approach.[88] Responsibility with regard to investor indiscretion, he adds, lies squarely with institutional lenders and counterparties who need to devise more effective risk-modeling assessments in their relationships with individual funds. Geithner's comments reflect the views of many of his colleagues. Policy makers in the U.S.and abroad have been more

[87] More than a few Republican Senators and House Representatives have gone on record in opposing hedge-fund regulation such as: Sen. John Sununu (R-NH); Chairman of the Senate and Banking Committee, Richard C. Shelby (R-Al); Sen. Mike Enzi (R-Wyo), who has referred to hedge funds as "a two percent problem" in financial markets (Senator Michael B. Enzi "Regulation of the Hedge Fund Industry" Senate Committee on Banking, Housing, and Urban Affairs July 15, 2004); Acting SEC Chairman at the U.S. Chamber of Commerce, Cynthia A. Glassman; current SEC Chairman, Christopher Cox (R-Cal); and SEC Commissioner, Paul S. Atkins, who referred to former Chairman William Donaldson's spate of regulatory reforms as a "*Moby-Dick*-like pursuit," noted that many respected government figures such as Federal Reserve Chairman Alan Greenspan, opposed the measures, and retorted that "the commission would do better to keep its eye trained on mutual funds" (Peterson, 2004). Both Greenspan and former Treasury Secretary, John W. Snow, have also argued that regulatory oversight is simply not needed for an industry that caters to a sophisticated clientele who are sufficiently informed of the risks accompanying hedge-fund operations.

[88] The 'market discipline' approach was eloquently summarized by the arguments of Charles Grandante, Managing Principle of the Hennessee Hedge Fund Advisory group during an SEC Panel on the role and structure of hedge-fund investment on May 14, 2003: "We should not interfere with the freedom of hedge funds to determine how best to meet their objectives. Perhaps the degree of regulation should be a function of the market's needs. We need to protect the retail investor, and at the same time, allow capital formation to meet other investor needs, whether they be hedge funds, venture capital, or private equity. Now, since retail investors already have access to shorting Reg 'T', options, futures, distressed debt, illiquid stocks, unregistered limited partnerships, oil, gas, real estate, you name it, the core of the issue you're addressing is not the regulatory differences between mutual funds and hedge funds, but how can we protect the retail investor without inhibiting the free determination of hedge fund investment objectives and their uses of investment strategies. We need diversified market choices and capital formation, not homogenized choices."

concerned with avoiding any measures that would "adversely affect" hedge-fund activities in their own markets than addressing the negative systemic externalities these institutions may yield (de Brouwer, 2001: 5).

The SEC has been a staunch promoter of prudential, 'market discipline' regulation and prefers it over any regulatory intrusion that would stifle financial innovation or private investment strategies. It has repeatedly rejected proposals for "ex ante structural regulation" which has had the effect of impeding various international cooperative initiatives devoted to regulating or standardizing international securities markets (some of these were discussed earlier) (Cerny, 1998: 17; Underhill, 1995).[89] Recently, there has been an effort domestically to rearticulate regulatory standards under the umbrella of investor protection legislation — what Philip Cerny would identify as Type II re-regulation (1998: 9). This is in line with the emphasis placed on prudential regulation — securing the stability and soundness of the banking sector and keeping the domestic financial system liquid. Regulatory provisions in the U.S. have therefore targeted the integrity of the industry and the credibility of fund managers rather than hedge funds' broader systemic implications. In the previous five years alone, the SEC has cited 51 cases against hedge funds, over a tenth of its total enforcement initiatives, involving damages of over US$1 billion in total and implicating over 400 funds (*Economist*, 2005*a*: 6; Peterson, 2004: 2). Since June 1999, the SEC has brought causes of action against 97 different funds on charges of defrauding investors (*Economist*, 2006: 62).

In October 2004, the SEC tentatively demonstrated its resolve in cracking down on fraud and abuses by managers, narrowly passing a new provision requiring all funds with an asset base of US$25 million or more and 15 U.S. clients to register with the Commission and submit their books to random SEC inspection.[90] Funds were also

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[89] See Simmons (2001: 612-5) on the ambivalence of the U.S. to promote the harmonization of information-sharing standards among securities regulators.

[90] The new rule was passed by a slim three-to-two margin in which then Republican chairman William H. Donaldson sided with Democratic commissioners Harvey J. Goldschmid and Roel C. Campos in voting in favor of the new regulation. The new provision faced stark opposition from the two other Republican commissioners, Cynthia A. Glassman and Paul S. Atkins, who voted against it. Donaldson made no misgivings about the new regulations, stating that it "would be a major dereliction of the commissioner's responsibility not to monitor hedge funds" (Peterson, 2004: 1). "Hedge funds control too much money to be operating without anybody knowing what's going on," he added (Peltz, 2005: 32). The opposition expressed by both Atkins and Glassman meanwhile, was more indicative of the general mood of GOP

expected to designate a chief compliance officer. Nearly half of all hedge fund managers are already registered investment advisors so the regulation was likely to have only a negligible effect on exposing the credibility of individual hedge-fund operators. Nevertheless, an estimated 1,200 managers registered for the first time with the Commission when the regulation took effect in February 2006.[91] Retailization, that is, providing access to the less sophisticated, retail investor, will magnify the impact of hedge funds. This expansion will likely highlight the need for increased prudential regulation of the industry and oversight intended for enhancing investor protection. This will undoubtedly bolster the current practice of preventing market failure through "ex post enforcement and litigation" (Cerny, 1998: 16).[92]

The initiative to protect investors by enacting forced hedge-fund registration took a hit when the SEC's new requirement was overturned by the Court of Appeals for the District of Columbia Circuit on 23 June 2006. In *Goldstein, et al. v. Securities and Exchange Commission (D.C. Cir. June 2006)*, the court ruled that the SEC's use and interpretation of 'client' in the registration requirement did not correspond to the understanding of the term as posited under the statute of the Investment Advisers Act of 1940. In his 19-page opinion, Judge A. Raymond Randolph wrote that a fund manager "owes fiduciary duties only to the fund, not to the fund's investors", and therefore is not required to register as an investment adviser under the strictest definition. The new SEC rule was thus vacated. The experience proved that efforts to intensify hedge-fund regulation may also encounter and have to contend with substantial legal hurdles along the way.

Aside from the legislative and legal challenges that hedge regulatory proposals may have to grapple with, there are also social considerations, reflected in the political arena, which may also hinder such efforts. The success of many institutional investors

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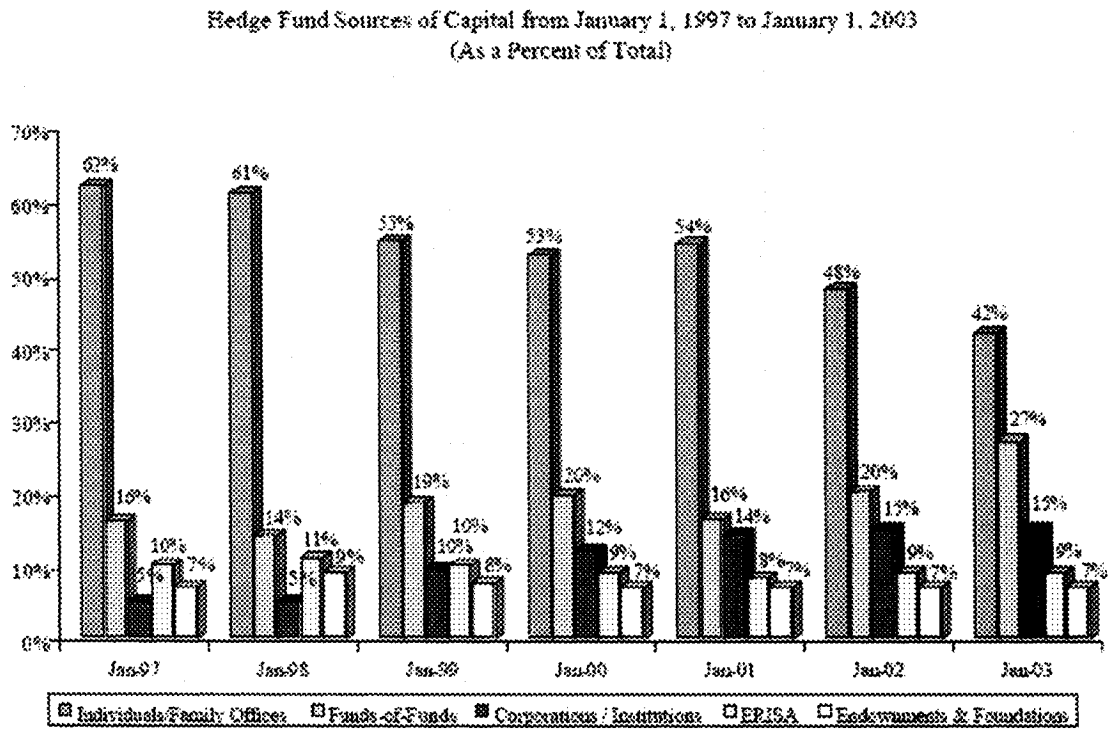
incumbents on the hedge-fund question, some of whom, such as Senate Banking Committee Chairman, Richard S. Shelby (R-Ala), and Senator Michael Enzi (R-Wyo), were openly critical of the new regulations. The partisan divide over what the desirable extent of hedge-fund regulation ought to be made the adoption of the new rules quite controversial.

[91] This included disclosing names, addresses and other personal information with the commission, as well as detailing the specifics and disaggregated values of their asset portfolios.

[92] Hedge funds have already begun to market their portfolios to retail investors online. At Hedgebay.com, investors are able to participate in an online auction over entry into traditionally inaccessible hedge funds. See "How hedge funds are bought and sold online" (*Economist*, 4 August, 2005), for more on this topic.

that invest in hedge funds, such as pension and university endowment funds, is becoming increasingly linked to hedge-fund performance. Foundations and endowments were the organizations traditionally most inclined to invest their capital in hedge funds but now other institutional investors are jumping on board, including company and public pensions (see figure 2.1).[93] From the 1,800 largest pension funds, endowments and foundations in the U.S., nearly one-quarter invested in hedge funds in 2003 — an increase of twelve percent from 2000 (Weinberg & Condon, 2004: 2). Subsequently, a

Figure 2.1



Source: Hennessee Group (2003)

larger demographic has their savings and wealth invested in hedge-fund portfolios. Investor exposure is therefore broadening, no longer are only high net-worth individuals involved in hedge-fund operations. As hedge funds gradually broaden their investor-base, investors will become increasingly sensitive to any proposed regulatory reforms that

[93] The state of New York has announced that it will allocate US$88 billion of its pension fund to hedge-fund portfolios in the next few years, while the pension funds of teachers in Texas and Ohio and funds of public employees of Chicago and California, made similar commitments (*Economist*, 2005: 2). Calpers, a Californian state employees retirement fund, is planning to double its current investment of US$500 million (Weinberg & Condon, 2004: 2). Institutional investors are estimated to invest over US$250 billion in hedge funds over the next five years (Anderson & Atlas, 2005: 4).

would potentially encumber hedge-fund activity. This sensitivity would in turn reflect in investors' political sentiments. As Peter Gowan contends, "any regulatory drive" that would exert a "depressive effect" on hedge-fund investment would subsequently "cut off the politicians involved in pushing for the regulation from important and broadly based political constituencies" (1999: 56). Hedge-fund retailization could significantly alter social considerations of the issue and consequently subject regulatory proposals to the polemics and negotiations of the political process.

The emphasis U.S. regulators place on industry self-regulation and market discipline is misplaced. It raises the question of whether highly leveraged partnerships and similar financial actors can really create effective self-regulatory structures in the form of a transnational private regime that would reconcile their activities with the greater economic and social good. The market discipline approach has been advocated by more orthodox economists and is grounded in the ideologies of Friedman and Hayek. Its primary objective is to protect investors and the integrity of markets. Yet hedge funds pose risks that threaten more than just their own personal survival and the wealth of their investors. As Stephen M. Cutler, director of enforcement at the SEC insists, hedge funds "use leverage that mutual funds cannot," so the impact of that US$1 trillion[94] under hedge-fund management "is magnified" (Anderson & Atlas, 2005: 2). The concern therefore lies "not just with the investors in the hedge funds but the hedge fund's impact on the markets" (Ibid.: 2). Failures indeed happen and it is the responsibility of public authorities to tailor policies according to the lessons they have derived from crises that have occurred to date. At the SEC Roundtable Discussion on Hedge Fund Strategies and Market Participation on 15 May 2003, Andrew Lo of the Harris & Harris Group and professor of finance at the Sloan School of Management at MIT made the insightful remark that, "There are very, very few spectacular failures but then again, there are very, very few spectacular earthquakes. Each one of them is fairly significant and I think we can learn a great deal from these kinds of failures."[95]

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[94] Hedge-fund assets have burgeoned in the last decade at an astounding rate, increasing five-fold over the period. It is predicted they will surpass the US$1 trillion mark as early as 2007 (Peterson, 2004: 2).

[95] In the same discussion, Lo was asked to address the notion of whether hedge-fund investment carries certain inherent risks with it, to which he responded: "The answer is that hedge funds *are* risky. I know that that sounds rather surprising to some but the fact is if there's one lesson that we've learned from modern financial economics, it's that there's usually a relationship between risk and expected return. And

AMERICAN WEALTH AND U.S. PRAGMATISM

The U.S.'s motives in maintaining a largely deregulated operating environment for hedge funds within its jurisdiction are similar to those of the "light touch" regulation practiced by the FSA in the U.K. The British market has become the world's primary center for the trading of complex derivatives products, with a daily trading turnover of US$643 billion (Dunbar, 2005: 46).[96] It is the financial center for over 500 internationally active banks and close to 200 securities firms. Hedge-fund transactions have been estimated to account for nearly half the volume of activity on the New York and London Stock Exchanges on any given day (Anderson & Atlas, 2005: 1; *Economist*, 2005*a*: 3). In fact, few areas of the international order are so "profoundly dominated" by so few states and characterized by such staggering asymmetry, Simmons writes, as financial internationalization (2001: 592, 615).[97] Loose supervision of hedge funds and the financial services sector in general is therefore a reflection of both the competitiveness of U.S.-based partnerships vis-à-vis European and Asian rivals, and the political clout funds are able to wield within the U.S.[98] With respect to the latter, a deeper analysis into the domestic politics behind American resistance against regulating hedge-fund investment would possibly look at indicators such as: (a) political rent-seeking — the campaign contributions made by hedge-fund managers and executives to political parties and in particular, members of the House and Senate Banking Committees[99], and (b) the share of politician portfolios

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we know that hedge funds have yielded higher expected returns than many other investments. As a result, you would expect that they would have higher risk in one form or another. Now, I do agree that [when] looking at volatility as a measure of risk, for most hedge funds volatility is quite low, but the same can be said for lots of other things that we would all regard as risky. For example, think about an insurance company that insures earthquakes. If you take a look at the returns on those kinds of companies, you'd find that they have very low volatility, very high sharp ratios except every once in a while, in the parlance of Wall Street, you have your face ripped off."

[96] The U.S. comes in at a distant second with a trading sum of US$355 billion (Dunbar, 2005: 46).

[97] Simmons adds that because of this conspicuous asymmetry of power and influence in international markets, rule and policy harmonization can be understood using a "fairly simple framework," since most regulatory innovations will originate with the principal markets (2001: 615).

[98] The conjecture regarding the political and market power of hedge funds within and beyond the U.S. market is one shared by Gilpin (2001: 276) and Eichengreen (1999, 2003).

[99] MARHedge (Managed Account Reports LLC), a publishing and information services company that collects data on alternative investment strategies, reported that in the last congressional elections, employees of Tudor Investment Corp. donated about US$354,000 to Republican candidates opposed to hedge fund regulation, while employees and managers of Caxton Corp., another large U.S. fund, donated roughly US$77,000. See "Political contributions favor GOP" (accessed

invested in hedge funds, funds of funds, or investment banks whose profits are in any way linked to hedge-fund returns.[100]

Commercial banking operations and the investment management industry were once clearly separated sectors within the U.S. economy. The financial services industry in particular, has been historically segmented under the 1933 Glass-Steagall Act and the Bank Holding Company Act of 1956. In the last few decades however, the barriers protecting segmentation within the American financial system have gradually eroded (Calomiris & Litan, 2000: 284; Gowan, 1999: 53). The effects produced by this desegmentation have wedded the activities of hedge funds and important commercial and investment banks in complex patters of transactions and liabilities. According to a report published by Credit Suisse First Boston, investment banks and brokerages generated over US$25 billion from servicing hedge funds in 2004 — an estimated one-eighth of Wall Street revenues for that year (Anderson & Atlas, 2005: 1). The performance correlation between hedge-fund portfolios and investment banks is an offspring of the fact that hedge-fund and investment bank activities are becoming more increasingly connected. Banks no longer solely provide funds with credit. Financial institutions now often trade on behalf of hedge funds, restructure their derivatives contracts, and underwrite the equity needed to short securities. Of the US$45 billion of revenue generated through hedge-fund investment in 2004, approximately one-third to one-half represented profits,

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at:http://www.marhedge.com/news/MAR.News.asp?s=MARH -2004-10-28-12-30-30p1.htm). In a 1998 Council on Foreign Relations paper, former Democratic Party Chairman Ron Brown advised former U.S. president Bill Clinton on the importance of implementing economic and monetary policies that would curry favor with large private financial institutions and investors who could reciprocate in turn with generous political contributions for the campaign trail (Gowan, 1999: 56). The incentive of campaign contributions also played a role, according to Oatley and Nabors, in getting Congress to approve of stricter domestic capital adequacy standards and press their regulatory officials to use the Basle Committee as a forum to pressure foreign regulators to do the same so as not to "alienate" domestic financial institutions (1998: 45).

[100] Here, the partisan divide on the issue of hedge funds is a little more obscure. Although Democrats have been the most vocal about introducing greater regulatory oversight for hedge-fund activities, some have been directly involved with hedge funds and publicly implicated in fund scandals. The most prominent of which was former New Jersey Senator Robert Torricelli (D), whose investment in Porpoise Fund, a US$13 million partnership, became well-publicized when it suddenly went sour. Senator Hillary R. Clinton (D-NY), whose investment portfolio is conveniently managed by a blind trust, regularly participates in the "100 Women in Hedge Funds" association, an organization whose mission is to advance the hedge-fund industry by making it more accessible to the business activities of professional women. Senator Jon S. Corzine (D-NJ), a former chairman of the investment banking firm Goldman Sachs, when asked to comment on the recent launching of a former colleague's US$3 billion hedge fund (Eton Park Capital Management), insisted his wealth is invested by a blind trust but remarked that "it had damn well better" be in Eric Mindich's new fund (Sender & Zuckerman, 2005: A7).

which in turn, translated into over US$6 billion of profits for U.S. banks and investment firms (*Economist*, 2005*a*: 5).[101] Hedge-fund holdings amount to a modest 3.6 percent of U.S. equities and corporate bonds, however, due to their high trading-frequency, funds generated nearly US$3.4 billion (or twelve percent) of domestic brokerage commission dollars in 2004 (Weinberg & Condon, 2004: 4).

If the prospect of institutions transplanting their operations to offshore havens is a concern for federal officials, it is bewildering how they are able to tolerate the offshore prime brokerage affiliates of investment houses such as Goldman Sachs and Morgan Stanley Dean Whitter, for instance, who happen to be some of the largest leverage providers for hedge funds. Federal Reserve Board regulations, particularly Section 220 — or Regulation "T", as it is more commonly referred to — governs the extension of credit by brokers and dealers to clients for the purposes of purchasing securities and establishes initial margin requirements on certain transactions. According to the regulation, clients may only borrow up to fifty percent of the purchase price of securities when they make purchases on margin. Investment firms can side-step Regulation "T" when they conduct business through their offshore prime brokerage offices. Some observers see this is as yet another indication of the need to harmonize margin requirements across the board so as to limit the leveraging capacities of hedge funds and other HLIs (Eichengreen, 1999: 22*fn*).

For U.S. investment firms however, servicing hedge funds through the conduit of offshore affiliates has become a very lucrative enterprise. Michael Steinhardt, one of the more successful hedge-fund managers, revealed in an interview that throughout the twenty years of dealings he had as a Goldman Sachs client, his fund generated over US$60 million in commission and trading revenues for the firm (Schifrin, 1998). Investment firms and brokerage houses rarely disclose accurate figures regarding earnings derived from servicing their hedge-fund clients.[102] Nevertheless, the relationship between hedge funds and investment banks makes for a perfect match. Funds are willing

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[101] Profits derived from hedge-fund investment generated over one-quarter of both Morgan Stanley and Goldman Sachs' returns for 2004 (*Economist*, 2005: 5).

[102] Though exact figures are unavailable given the opaque nature of the industry and the secrecy of investment firm-hedge fund relations, *Forbes* estimated in 1998 that firms the size of Morgan Stanley, Goldman Sachs, J.P. Morgan and Merrill Lynch, earn roughly US$200-300 million a year by servicing funds (Schifrin, 1998). Those figures would likely be much higher today, given the rapid growth of the hedge-fund industry in the last several years.

to do business with virtually any institution that has access to favorable borrowing rates and the typical prime brokerage charges anywhere between 75 and 150 basis points *above* its personal borrowing costs which explains why they are often eager to court hedge funds and accommodate their leveraging needs (Ibid). As voracious traders, hedge funds are the ideal clients, generating hundreds of millions of dollars in commission revenues that accrue to American investment firms annually.

A substantial share of the wealth generated through hedge-fund investment remains in the U.S. market and is subject to the domestic capital gains tax structure. In addition, since funds conduct the bulk of their investment in short-term positions, they rarely avail themselves of more favorable, long-term capital gains treatment and as a result, are subject to the top tax rate. Almost all hedge-fund investors are considered high net-worth and have an income level large enough to push them into the highest bracket of taxation. Depending on the state, as American states have varying tax rates on income derived from capital assets, the typical hedge-fund investor will often pay up to thirty-five percent of gross earnings, leaving only a slight return on his initial investment.[103] At present, receipts from capital gains taxation amount to approximately three percent of federal revenues. Depending on market performance, that could mean revenues as high as US$110 billion per annum, as they were in 1999, corresponding to the rapid rise in stock prices and the explosive growth of hedge funds during that period. With the volume of trading on the New York Stock Exchange tripling between 1993 and 1999, capital gains receipts jumped from US$25 billion in 1991 to US$62 billion in 1996, before finally reaching their peak in 1999 (Phillips, 2002: 103). The relationship between the rise in trading and contemporaneous expansion in hedge-fund assets seems hardly spurious. Funds generated tremendous returns for their investors during this surge. Federal revenues procured through the capital gains taxes will most likely continue their steady rise with the expansion of hedge-fund services into the retail sector.

In his foreword to Samuel Lubell's 1955 work *The Revolution in World Trade*, former American financier and presidential advisor, Bernard Baruch, delicately alluded to the "essential oneness" of American "economic, political, and strategic interests" (xi).

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[103] Under the Internal Revenue Code, short-term capital gains are subject to a federal tax of thirty-five percent of earnings while long-term gains are taxed at a rate of fifteen percent.

His remark seems no less relevant today. The regulatory policies promoted by the U.S. are often "exogenous expressions of the domestic political economy" (Simmons, 2001: 595). Lubell urged this very same approach in his book, calling for a "synthesis" between economic and political strategies. The goal of U.S. foreign economic policy, he noted, ought to be to "devise a program under which actions taken to safeguard our national security help meet our economic problems and what is undertaken economically helps fill our strategic needs" (1955: 125). The U.S. chooses at times to disengage itself from hegemonic responsibilities so as to preserve its preferences at home, which have "retained a strong domestic political position" (Helleiner, 1992: 46). Its retreat from these responsibilities may also explain its apparent "lagging" as a hegemonic power (Ibid: 45).

The U.S. financial system is deep and liquid enough to secure itself from most convulsions in peripheral markets. So long as crises remain regional in scope without major externalities for dominant financial centers, then they are viewed as undesirable yet tolerable phenomena. It should come as no surprise then that what often enters into the U.S.'s strategic calculus when determining their level of involvement in emerging market banking and currency crises is the net overall exposure of U.S. participants in those markets and the quantifiable shocks that could potentially reverberate to its domestic market if contagion were to occur. In line with these concerns, the U.S. harbors an embedded preference for retaining the power to address disturbances in the international financial system according to what I call *piecemeal pragmatism*, that is, an approach of reacting to isolated shocks on an ad-hoc, unilateral basis (and multilateral if need be), in accordance with how those disturbances pertain to the immediate interests of its own domestic financial and banking sectors. As revealed in their disposition in responding to recent crises, particularly in 1994-95 in Mexico and in 1997 in Southeast Asia, the U.S. is content with addressing global financial instability on an *ex post*, case-by-case basis. And if an isolated crisis was to indeed generate a significant degree of external fallout, precipitating the dynamics of contagion to the point where the strains experienced by the international financial system were to spill over into the U.S. market, U.S. officials are confident that international assistance, whether in the form of bilateral initiatives or institutional support from the BIS or the IMF, could be readily summoned. Their confidence rests on the U.S.'s capacity to exert leverage in these forums as the largest

constituent and shareholder and perhaps even more importantly, as the world's largest economy.

The U.S. has demonstrated its satisfaction with piecemeal unilateral efforts on numerous occasions and is ambivalent about regulating volatile financial participants and their practices under a multilateral framework, even if the failure to do so means flirting with systemic risk.[104] Realist theories or theories that emphasize the indicators of power and material abundance would explain the prevailing interests of the U.S. market, and its stake in preserving free capital mobility for the assortment of firms that drive its diversified financial services industry and in turn, the logic behind maintaining a deregulated arena for hedge-fund investment. Their preference for this approach explains in part why, in spite of the lip-service paid to the merits of a self-regulating marketplace, occasional violations of free-market principles are perpetrated quite readily when such intervention is in line with U.S. domestic and geoeconomic interests. The well-orchestrated rescue of Long-Term Capital Management (LTCM) from the brink of default through the efforts of the New York Federal Reserve bank in concert with a group of investment banks directly threatened by the prospect of Long-Term's collapse, provides a case in point. The event saw U.S. authorities scrambling to secure additional channels of liquidity so as to preserve the solvency of some of its larger institutional creditors.

There is a pervasive sense in which the handling of the LTCM debacle seems indicative of the inconsistency of U.S. regulators' treatment of the wider hedge-fund problem (de Brouwer, 2001: 197). If the collective interest of the international community is concerned, the American approach could be interpreted as being manifestly self-interested. With regard to the hedge-fund question, U.S. officials have openly expressed satisfaction with the existing arrangement. Their apparent disinterest in the matter is difficult to explain in light of the regulations and proposals for reform in other major markets. The U.S.'s complacency can be best explained by the ever present

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[104] The U.S. position on the matter is best reflected in the April 1999 findings of the President's Working Group on Financial Markets. An interagency task force, the Working Group consisted of senior staff from the Treasury, Federal Reserve, SEC, and Commodity Futures Trading Commission (CFTC), that emphasized voluntary disclosure and counterparty risk-management as the best methods of enforcing market discipline on financial participants.

demands of the political marketplace and its interest in preserving a lax international regulatory structure for firms and institutions that generate tremendous wealth for its domestic financial market. Any regulations that would constrain the hedge-fund industry would likely transfer the income and financial power the U.S. market currently enjoys as the domicile-of-choice for hedge-fund operators.

VI. CONCLUDING THOUGHTS

The unmistakable lesson learned from the last decade of financial activity is that national economies (both those of hosts and providers of liquidity) are insufficiently insulated from shocks developing in global financial markets and ill-equipped to deal with them on a unilateral basis after they have occurred. Regulatory provisions clearly need to be implemented as preventative measures that would buttress the underpinnings of the international financial architecture and make contagion a remote, if not impossible, phenomenon. As some argue, it is indeed a realistic possibility at the present juncture, "based on the understanding of what causes contagion and what does not, for countries to take steps to reduce their vulnerability to international contagion" (Kaminsky, Reinhart & Végh, 2003: 17). However, in order to prevent future crises, nations must foster greater inter-market coordination. Moreover, they must institute provisions that better assess if not curtail, highly leveraged speculative financial activity, thereby mitigating some of the risks associated with liberalized global finance by going after the bigger and more volatile participants. An undertaking of this sort would require significant policy coordination and perhaps also the formation of a comprehensive international regime with enough political suasion to be able to promote cooperation and deter non-compliance. Currently, there is little initiative among public authorities to create such provisions.

At a minimum, the analysis above hoped to show that there is a prima facie need for closer exploration of how hedge funds may exacerbate existing weaknesses in the structure of international financial and securities markets. Anecdotal evidence supports the notion that concentrated hedge-fund positions can adversely affect asset-price

dynamics and specifically, the efficient-value discovery process, thereby inhibiting on the proper, organic functioning of financial markets. Added to this is the dilemma that funds yield certain liquidity and operation-based risks that national regulators simply cannot satisfactorily address on their own. Greater regulation of HLIs may also soften the destabilizing effects of OTC derivatives (the instruments of choice among many hedge-fund operators) and other sophisticated off-balance-sheet investment products that have been the bane of regulatory authorities for the past few decades. By supervising the activities of hedge funds more closely, existing institutional frameworks can be strengthened to cope with the challenges of more sophisticated financial instruments and practices without drastically overhauling the existing architecture. Regulatory standards can be implemented to guard against systemic risk without necessarily distorting market-mediated decisions, economic fundamentals or general asset-price equilibrium. That is to say, Smith's invisible hand could continue its masterful orchestration, only no longer in an unchecked manner.

My intention in this paper was to shed light on the inability of liberal approaches to international cooperation to account for the shortage of progress to collectively address questions of systemic risk and the role of hedge funds with respect to it. The fact that OECD countries have not taken appropriate steps to reduce the prospect of contagion so as to eliminate the risk of systemic failure is a mystery to theories of international cooperation, particularly those stressing the logic of functional and demand-driven explanations. Liberal-institutionalist theories would predict that on functional grounds, a regime created for the purposes of managing risk would have already been formed on the converging vectors of national interest for preserving a stable international financial system. States have failed however to harmonize their domestic policies and have likewise failed to build welfare-improving institutions, despite the joint gains that could be accrued from greater cooperation. Their inability to do so may be explained by the prevailing interest of dominant markets to protect their discretionary powers and the competitive advantages of their domestic regulatory structures. So long as these interests remain fervent, the national political process will continue to trump the imperative of a robust global financial system. Waning hegemony ought not to imply the irrelevance of power-oriented theories of cooperation which, in certain cases, may provide a more

compelling explanatory model for the absence of cooperation than demand-driven analyses. A "complete analysis" of international regulatory harmonization may therefore require, as David Singer contends, a more "integrative approach" of the various models of cooperation and the plurality of actors and preferences involved in negotiation (2004: 535).

Scholars should be wary of employing teleological explanations of regime formation at the exclusion of more mechanistic frameworks. Regimes do not always and invariably emerge out of the need to serve a particular purpose or mutual interest in realizing joint gains. Proposed regimes, on occasion, in spite of the compelling logic that may exist in their favour, will not be created due to the underlying dynamics of the political bargaining process. Even the pressing need to abate systemic fragility may be offset by the inherent tendency of states to act as agents on behalf of their individual, strategic interests. The collective interest is occasionally circumscribed to the politics of redistribution and calculations of relative gains and losses.[105] At the core of every state's set of interests is self-preservation and its individual welfare, systemic considerations come a distant second. It is no different for the more powerful states. Hegemonic responsibility is more often (and arguably always) guided by calculations of self-interest rather than an altruistic imperative to alleviate the prospect of universal misery. Although in the case of systemic risk, it seems puzzling that hegemony is oblivious to the intrinsic connection between its welfare and that of the global financial system. Power however, is sometimes asserted by shrinking from what appears to be its unwritten duty. Dominance can be at times aggrandized as much through inaction and preservation of the status quo as through overt projection. The political economy of international policy harmonization therefore requires a more penetrating inspection of the interests, identities and relative capabilities of the actors involved.[106] The content of successfully created regimes, that is,

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[105] For a synopsis of the redistributive logic behind recent international cooperative undertakings, see Oatley and Nabors' (1998) account of the 1987 Basle Accord.

[106] Looking at these indicators may perhaps serve to "explain why governments propose international institutions in one issue area rather than another, why they create international institutions at one time rather than earlier or later, and why, when they do propose an international institution, they propose one set of rules rather than another" — the very questions that recent literature in international organization and cooperation has begun to ask and has urged a closer inspection of domestic politics to find answers for (Oatley & Nabors, 1998: 2). Keohane also emphasized the importance of being cognizant of these factors: "we have to be continually sensitive to the structural context within which agreements are made" (1984: 72). Keohane was clever to support his contractualist theory of regimes with hegemonic, power-based,

the principles and norms that guide their objectives, reflects a "backdrop of a particular constellation of interests and power" (Hasenclever, Mayer & Rittberger, 1997: 38; Keohane, 1984: 70-3). Regimes thus ought to be understood not as entities that exist solely for the purpose of increasing the utility of the collective but as out-growths of complex bargaining processes. They can eventually take on an autonomous dimension but regimes are first and foremost shaped by and evolve over the negotiations leading to their formation. Their role is not, as some would believe, rigidly circumscribed to their initial raison d'être.

In his seminal work, *After Hegemony,* Robert Keohane writes that every act of cooperation "affects the beliefs, rules, and practices that form the context for future actions" and thus ought to be "interpreted as embedded within a chain of such acts and their successive cognitive and institutional residues" (1984: 56). The same framework, he urges, ought to be applied to understanding the persistence of discord. The failure to achieve mutually-advantageous, pareto-improving coordination in the presence of converging incentives may in some instances, suggest that there is an insurmountable continuity of entrenched political opposition or other barrier to cooperation. It is the job of scholars to flesh out and examine the sources of such opposition. The "deficiencies of the self-help system" have not led to the emergence of greater institutional cooperation as functional theory would predict, even though the presence of systemic risk has arguably created the "need" that Keohane speaks of as a constitutive requirement for the creation of an international regime (Ibid.: 88).[107] Scholarship leading to a richer understanding of the failures of state cooperation on this matter may in turn help reveal some of the

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underpinnings. For him, hegemony made cooperation "possible" though not "inevitable"; yet in a different passage, he states that a concentration of preponderance is neither a "necessary" nor "sufficient condition for the emergence of cooperative relationships"; and in another: "cooperation may be fostered by hegemony, and hegemons *require* cooperation to make and enforce rules"; and later, "complementary interests are necessary but not sufficient conditions" for the formation of regimes, the "construction of international regimes may *require* active efforts by a hegemonic state" [emphasis added] (Ibid: 31, 43, 46, 100). Keohane's ambiguity on this matter makes his views on the relationship between hegemony and cooperation somewhat unclear. In one section, he pronounces that hegemony and cooperation "are not alternatives; on the contrary, they are often found in symbiotic relationships with one another," yet the general tone of his analysis suggests that the robustness of some regimes is derived in part from the waning of hegemony and the difficulties of creating regimes in its absence (Ibid: 46; Hasenclever, Mayer & Rittberger, 1997: 87).

[107] It should be noted that Keohane's definition of cooperation as "the mutual adjustment of state policies to one another" does not effectively differentiate between cooperation as a phenomenon emerging organically through a natural convergence of policies and cooperation as something that is purposefully cultivated through a systematic harmonization of behavior (1984: 31).

conditions under which policy harmonization can be fostered in an increasingly interdependent world economy. An analysis of both the existing as well as newly-emerging challenges to stable international economic relations as fertile areas where greater cooperation could be achieved may be a good place to begin inquiry. As one scholar in the field notes, "international efforts to respond to the hedge-fund problem" may indeed "provide an illuminating window onto the challenge of governing global financial markets" (Eichengreen, 2003: 196).

Bertrand Russell once wrote that "We are surely right in being more concerned about future misfortunes, which may possibly be averted, than about past calamities about which we can do nothing" (1946 [1996]: 525). Contemporary scholarship international political economy has a long way to go before refining the art of prognostication. More attention, as Russell wisely insists, ought to be devoted to the catastrophes that may materialize in the future from the seemingly remote dangers of today. Systemic risk is an ever-present threat which in a growing global economy simply cannot be ignored by regulators and agencies interested in preserving the policy-making discretion of their national institutions. The anarchic condition of both the international system and global marketplace allows national regulators to shrink from the responsibility of fostering a stable international financial system. It may indeed be true, as some have argued, that systemic issues, even in a domain as ostensibly harmonic as economic relations, continue to take a backseat to domestic politics and national considerations.[108]

The presence of systemic fragility and the potential threat of global fallout from a regional financial crisis constitute a shared interest among states to protect the integrity of international capital markets and the core of a highly integrated global financial system. In spite of the overwhelming volume and protracted volatility associated with cross-border financial transactions, there has been little success in creating multilateral institutions that would regulate global finance.[109] The policy response from states both individually and collectively has been relatively mute save for sporadic and temporary instances. A regulatory regime has not crystallized as one would anticipate it would,

[108] The work of Oatley and Nabors (1998) and Singer (2004) come to mind here.
[109] These features, Simmons observes, ought to make international financial regulation "a good candidate for institutionalization" (2001: 590).

given the compelling logic in its favor. Notwithstanding the absence of any extensive multilateral oversight of hedge-fund activity, there has nevertheless been significant regulatory coordination achieved in other policy areas, illustrating perhaps the need for more nuanced inspections of the politics of international policy harmonization.[110] The relative absence of cooperation in this issue-area exposes some of the obstacles to establishing a more robust international financial order and in arriving at a richer understanding of the conditions under which international cooperation arises.

[110] I am alluding here to the cases of capital-adequacy harmonization under the 1988 Basel Accord and the emergence of a comprehensive anti-money laundering regime that were discussed in the previous section.

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