

REGULATORY ARBITRAGE AND HEDGE FUND REGULATION: THE NEED FOR A TRANSNATIONAL RESPONSE

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Regulatory arbitrage is an indispensable element of regulatory competition as it provides regulatory substitutes for firms, and allows those firms to optimally benefit from such competition. This also increases the elasticity of demand for regulators and engenders accountability among them. Hedge funds, as paragons of exploiting regulatory discrepancies, are heavily criticized for thwarting efforts to address systemic risk. This Article investigates the arbitrage-seeking behavior of hedge funds in a globally-fragmented financial regulatory framework.

Despite its benefits, regulatory arbitrage involves certain costs. Although market discipline can constrain these negative externalities, due to certain idiosyncratic features of the hedge fund industry, such as the sophistication of investor base, operational mobility, higher attrition rate, and lack of transparency, market discipline by itself cannot fully limit the potential externalities of regulatory arbitrage by hedge funds. These features weaken market signals and reduce the reputational benefits of being subject to greater regulatory oversight. The lower reputational costs and broad private investor exemptions in turn reduce the overall costs of regulatory arbitrage for hedge funds in comparison to other financial services providers and mainstream financial institutions, and make it more likely for hedge funds to engage in regulatory arbitrage.

In a departure from mainstream research, which recommends regulatory coordination, cooperation, harmonization, and consolidation as legal remedies to address problems originating from regulatory arbitrage by hedge funds, this Article argues that such proposals are at best misguided and at worst systemic risk amplifiers.

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Instead, this Article suggests that to reduce the likelihood of regulatory arbitrage, instead of regulating hedge funds directly, the strategies for regulation should focus on indirect regulation of the funds through their counterparties, creditors, and investors for whom reputational costs of regulatory arbitrage tend to be significantly high.

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INTRODUCTION

In regulation of economic activities, the alternatives are no longer between the two polar extremes of laissez-faire capitalism and government-central planning.¹ The complexity of the modern financial

1. SANFORD IKEDA, *DYNAMICS OF THE MIXED ECONOMY: TOWARD A THEORY OF INTERVENTIONISM* (2003).

system offers no viable solution other than a mixed economy within which private enterprises and the government must cooperate in order to shape economic incentives meaningfully. One of the challenging problems arising from having a mixed economy in place is determining where to draw the line between regulated markets and unregulated markets, and between lightly-regulated and heavily-regulated markets.² The discussion around hedge funds cannot be separated from their traditional development as private investment companies that have been granted special exemptions by regulatory systems due to their private status and high tolerance for risk.

In addition, the globalization of financial markets poses serious challenges to regulatory regimes and their responses to address potential systemic effects of investment funds. Hedge funds are one of the global players of the investment world. However, their regulatory framework remains local. The cross-border reach of the modern trading infrastructure and the existing patchwork of financial regulatory regimes enables circumvention of the specific mandates of individual regimes in a globally-fragmented financial regulatory system. The regulatory arbitrage opportunities arising in this fragmented regulatory framework coupled with economic firms' desire to maximize their profits by reducing their regulatory costs incentivize exploitation of discrepancies. Hence, fragmented regulatory systems not only lead to the comingling of regulated economic activities with unregulated ones,³ but also result in regulatory arbitrage.

Regulatory arbitrage has as long a history as regulation itself and is as ubiquitous as economic regulation. The first instances of regulatory

2. See generally Charles Goodhart, *The Boundary Problem in Financial Regulation*, 206 NAT'L INST. ECON. REV. 48 (2008).

3. James W. McKie, *Regulation and the Free Market: The Problem of Boundaries*, 1 BELL J. ECON. & MGMT. SCI. 66 (1970).

arbitrage are documented in the context of medical ethics⁴ and taxation.⁵ In financial markets, the well-known example of religious prohibitions on interest sparked huge regulatory arbitrage activities. The advent of instruments such as *murabaha* transactions and *ijara wa iqtina* (leasing and promise to gift) in Islamic finance,⁶ and of mechanisms such as dry exchanges (*cambio secco*) and discretionary deposits⁷ was to circumvent the ban on *riba*⁸ in Islamic finance and interest in Christianity.⁹ Regulatory

4. Durant reports about the widespread presence of tax evasion in ancient Greece. WILL DURANT, *THE LIFE OF GREECE: THE STORY OF CIVILIZATION*, VOL. 2 (2011). The great lawgiver of ancient Athens, Solon, was criticized on the account that the strong and the clever could escape his laws by twisting those laws to their advantage. *Id.* It is also well-documented that the Hippocratic code of medical ethics regarding abortion was systematically circumvented by physicians outsourcing the practice to midwives. *Id.* The modern equivalence of midwives in finance are the special purpose vehicles (SPVs) designed to enjoy the exceptions from certain bankruptcy requirements (bankruptcy-proof financing).

5. Not so far from Greece, Bartlett illustrates how differential tax treatment of citizens (especially small landowners) and slaves in the Roman Empire induced regulatory arbitrage. Bruce Bartlett, *How Excessive Government Killed Ancient Rome*, 14 CATO J. 287, 300–01 (1994). Since landowner citizens were heavily taxed and slaves were tax exempt, the citizens used to change their civil status from citizen to slave to avoid excessive taxation. *Id.* He notes how, despite increases in tax rates, the tax revenues decreased, which in turn contributed to the further decline of the Roman Empire. *Id.*

6. Michael S. Knoll, *The Ancient Roots of Modern Financial Innovation: The Early History of Regulatory Arbitrage*, 87 OR. L. REV. 93, 103-04 (2008). It is also argued that most Islamic finance instruments were invented to circumvent the restrictions that Sharia law places on *riba* (interest) and *gharar* (excessive uncertainty) in financial contracts. See MAHMOUD A. EL-GAMAL, *ISLAMIC FINANCE: LAW, ECONOMICS, AND PRACTICE* (2006).

7. See generally TIM PARKS, *MEDICI MONEY: BANKING, METAPHYSICS AND ART IN FIFTEENTH-CENTURY FLORENCE* (2013).

8. In Islamic finance, it is believed *riba* is different from interest. See generally ABD AL-RAHMAN AL-JAZIRI, *AL-FIQH 'ALA AL-MADHAHIB AL-ARBA'AH* (1986); TIMUR KURAN, *THE LONG DIVERGENCE: HOW ISLAMIC LAW HELD BACK THE MIDDLE EAST* (2011).

9. Ferguson demonstrates how Jews dominated the financial markets of medieval Europe by interpreting the Bible in a certain way to circumvent its ban on interest. See NIALL FERGUSON, *CIVILIZATION: THE WEST AND THE REST* (2011). Kuran illustrates how indigenous Christians and Jews of the Middle East dominated the most profitable economic sectors in the region, especially in banking and insurance, through the choice of law. Timur Kuran, *Why the Middle East Is Economically Underdeveloped: Historical Mechanisms of Institutional Stagnation*, 18 J. ECON. PERSP. 71, 72 (2004). Such a freedom to choose to be subject to their own laws enabled them to escape the restrictions posed by Islamic economic institutions while Muslims themselves lacked such an option.

arbitrage reached its zenith in the globalization and information age.¹⁰ In modern times, the globalization of trade and finance gave traders more informational advantages. Coupled with the absence of global coordination, such a trend amplified the likelihood, magnitude, and frequency of regulatory arbitrage.¹¹

A hedge fund can be defined as a privately organized investment vehicle “with a specific fee structure not widely available to the public, aimed at generating absolute returns irrespective of market movements (alpha)¹² through active trading and other strategies.”¹³ Hedge funds are

Id. Indeed, it was impossible for Muslims to convert (punishable by death sentence) to another religion (restructure the business entity) and take advantage of other regulatory jurisdictions. *Id.* However, such a reorganization or change in civil status was allowed in the Roman Empire. *Id.*

10. Indeed, globalization decreased regulators’ power by harnessing more regulatory arbitrage opportunities for firms that did not prefer the regulatory policies of their jurisdiction. Jonathan R. Macey, *Regulatory Globalization as a Response to Regulatory Competition*, 52 EMORY L.J. 1353, 1357 (2003).

11. More recently, it was argued that regulatory arbitrage was one of the main reasons for the fall of the Glass-Steagall wall in 1999. Viral V. Acharya, Paul Wachtel & Ingo Walter, *International Alignment of Financial Sector Regulation*, in RESTORING FINANCIAL STABILITY: HOW TO REPAIR A FAILED SYSTEM 368 (Viral V. Acharya & Matthew Richardson eds., 2009). In China, since there have been strict restrictions on lending within the country (China’s benchmark interest rate being 6%, while the same rate in Hong Kong being 0.5%), Chinese companies use trade finance instruments to borrow money offshore at much lower interest rates. *See* Wei Shen, *Competing for Renminbi: Financial Centers in the Context of Renminbi Globalization*, in RECONCEPTUALISING GLOBAL FINANCE AND ITS REGULATION 198, 198-99 (Ross P. Buckley, Emiliós Avgouleas & Douglas W. Arner eds., 2016). The regulatory arbitrage activities are not limited to the prohibitions or caps on interest rates; it would happen in any other context. For example, the recent tightening and enforcement actions against banking secrecy laws might result in the rise of organizations offering alternative unreported channels for funds. Such restrictions on banking might even create incentives for firms to relocate the deposits to the least compliant bank havens.. *See* Ruth Plato-Shinar, *Cross-Border Banking: Reconceptualising Bank Secrecy*, in RECONCEPTUALISING GLOBAL FINANCE AND ITS REGULATION 249 (2014); *see also* Niels Johannesen & Gabriel Zucman, *The End of Bank Secrecy? An Evaluation of the G-20 Tax Haven Crackdown*, 6 AM. ECON. J. 65, 65 (2014).

12. The alpha measures the excess return of a fund relative to a benchmark index. Simply put, the alpha shows by how much a hedge fund outperforms the markets, which can serve as a measurement of managerial skill. *See* William A. Roach Jr., *Hedge Fund Regulation: “What Side of the Hedges Are You on?”*, 40 U. MEM. L. REV. 165, 166 (2009) (arguing that generation of returns is one of the significant features of hedge funds).

13. For a definition of hedge funds, see Hossein Nabilou, *The Conundrum of Hedge Fund Definition*, 14 EUR. COMPANY & FIN. L. REV. 149 (2017).

historically viewed as paragons of exploiting regulatory discrepancies. Moreover, the recent global financial crisis triggered a debate about their contribution to the event. Thus far, there is plenty of literature on the potential systemic externalities of hedge funds. The debate about hedge funds and their role in the financial crisis easily lent itself to political abuse on both sides of the Atlantic.¹⁴ Although different explanations are presented for such an unprecedented regulatory animosity towards hedge funds,¹⁵ the post-crisis anti-hedge fund sentiment can partly be understood against a background of hedge funds gaming regulatory regimes by engaging in regulatory arbitrage.

This Article proceeds as follows. Part I defines and analyzes the concept and dynamics of regulatory arbitrage. Part II explains regulatory arbitrage in the context of regulatory competition, and discusses its virtues—in terms of delivering the benefits of regulatory competition—and its social costs (or negative externalities). Part III elucidates the role of market discipline and government regulation in reducing the social costs of regulatory arbitrage, and evaluates the reasons for the failure of market mechanisms to address the social costs of regulatory arbitrage by hedge funds. Part IV discusses the role of public policy responses in constraining the negative externalities of regulatory arbitrage and highlights the role of indirect regulation in addressing such problems. Finally, the Article concludes by noting that indirect regulation can better address the potential externalities of regulatory arbitrage by hedge funds.

I. REGULATORY ARBITRAGE: CONCEPT AND DYNAMICS

Arbitrage is “the exploitation of a price difference between two goods that are essentially the same.”¹⁶ Arbitrage often takes place where

14. Politicians demonized hedge funds as being “crazy” and “hellish” which “fall like a plague of locusts over [the] companies, devour everything, then fly on to the next one.” Sebastian Mallaby, *Hands off Hedge Funds*, 86 FOREIGN AFF. 91, 92 (2007) (quoting Franz Müntefering, Germany’s former deputy chancellor); Lex Column, *The Italian Locust*, FIN. TIMES (London), Oct. 16, 2008.

15. Romano argues that such a move toward regulating hedge funds is understandable in the traditional wariness toward short-selling activities. See Roberta Romano, *Against Financial Regulation Harmonization: A Comment* (Yale L. & Econ. Research Paper No. 414, 2010), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1697348 [<https://perma.cc/SRJ9-7MK6>].

16. Andreas Engert, *Transnational Hedge Fund Regulation*, 11 EUR. BUS. ORG. L. REV. 329, 357 (2010).

the prices of identical goods are different in two markets. In addition to the price differentials stemming from market inefficiencies, some of these differences arise from different regulatory schemes. To understand regulatory arbitrage, regulatory requirements should be viewed as the price of conducting certain business activities in a particular jurisdiction. In this context, differential regulatory treatment of homogenous activities in different jurisdictions imposes differential costs on identical economic activities. Accordingly, the goods and services produced within two different jurisdictions will have different fixed costs. This difference in fixed costs will affect the price of final products and services.

A firm, which is free to choose between two jurisdictions with differential regulatory costs will engage in business at lower regulatory costs.¹⁷ Therefore, regulatory arbitrage, broadly defined, refers to shifting activities from a heavily regulated financial sector to an unregulated or lightly regulated financial sector with the aim of maximizing profits by taking advantage of regulatory differentials. In essence, “regulatory arbitrage exploits the gap between the economic substance of a transaction and its legal or regulatory treatment.”¹⁸

Regulatory arbitrage can also be seen as an unintended consequence of effective regulation. Effective regulation is costly and “is likely to penalize those within the regulated sector, relative to those just outside, causing substitution flows towards the unregulated.”¹⁹ Firms engaged in regulatory arbitrage often do so to avoid taxes, strict accounting standards, disclosure requirements, and regulatory burdens.²⁰ Although there are different mechanisms to engage in regulatory arbitrage, the most popular and apparently the least costly mechanism involves restructuring a deal.²¹ For instance, most financial derivatives were designed to take advantage of arbitrage opportunities.²² Derivatives and strategies exploiting such market discrepancies enable market participants to avoid financial regulations and tax burdens.²³

17. *Id.*

18. Victor Fleischer, *Regulatory Arbitrage*, 89 TEX. L. REV. 227, 229.

19. Goodhart, *supra* note 2, at 48.

20. Fleischer, *supra* note 18, at 229.

21. *Id.* at 230.

22. *Id.*

23. Lynn A. Stout, *Betting the Bank: How Derivatives Trading Under Conditions of Uncertainty Can Increase Risks and Erode Returns in Financial Markets*, 21 J. CORP. L. 53, 57 (1995).

Opportunities for regulatory arbitrage may arise within one single jurisdiction or between two or more jurisdictions. “Intra-jurisdiction regulatory arbitrage”²⁴ arises where one jurisdiction treats some financial activities differently from other similar activities, thereby subjecting the same financial activities or methods to governance under different rules. In the presence of such differential regulation, if there are two methods of achieving the same outcome within one jurisdiction and one method costs less than the other, *ceteris paribus*, a profit-maximizing firm will choose the method involving lower costs either by restructuring its legal entity (institutional engineering) or by shifting the business activities towards the lower cost method using legal and financial engineering. The latter form is achieved either by specifically tailoring the features of a financial product or by choosing the markets in which trades will take place. Needless to say, both methods involve legal and financial engineering, which mainly involve the use of derivatives.

It is well-acknowledged that one of the driving forces behind financial innovation has been financial regulation.²⁵ Indeed, some financial innovations are “designed to keep regulators in the dark.”²⁶ Financial regulation follows the logic and dynamics of influence and change in the behavior of regulated industries. From this perspective, most financial innovations were strategic responses to regulations. Financial institutions have created an array of innovative derivative instruments to circumvent regulation or decrease the costs of compliance. For example, Gorton and Metrick identify regulatory changes as one of the major factors giving rise to shadow banks, the other being private innovation.²⁷ In their work, the rise of shadow banking is mainly attributed to the regulatory developments within the past four decades that benefited certain categories of financial institutions and instruments to the detriment of their close substitutes. The main beneficiaries of these regulatory changes were money market mutual funds (“MMMFs”) substituting bank deposits, securitization used for off-balance-sheet

24. It seems that what Charles Goodhart dubs a “boundary problem” is the same as intra-jurisdictional regulatory arbitrage. See Goodhart, *supra* note 2.

25. Merton Miller, *Financial Innovation: The Last Twenty Years and the Next*, 21 J. FIN. & QUANTITATIVE ANALYSIS 459, 459 (1986); see also Frank Partnoy, *Financial Derivatives and the Costs of Regulatory Arbitrage*, 22 J. CORP. L. 211, 227 (1996).

26. Jean Tirole, *Lessons from the Crisis*, in BALANCING THE BANKS: GLOBAL LESSONS FROM THE FINANCIAL CRISIS 29 (Mathias Dewatripont et al. eds., 2010).

27. Gary B. Gorton & Andrew Metrick, *Regulating the Shadow Banking System*, BROOKINGS PAPERS ON ECON. ACTIVITY, Fall 2010, at 261, 269.

financing, and repurchase agreements (“repos”) which made it possible to use securitized bonds as money.²⁸

Needless to say, not only does shadow banking include MMMFs, but it also includes hedge funds, private equity funds, proprietary trading desks of traditional banks and other similar institutions essentially engaging in maturity transformation.²⁹

On the other hand, “inter-jurisdiction regulatory arbitrage”³⁰ arises from differential regulatory treatment of identical business activities in different jurisdictions.³¹ In this case, absent international financial coordination, regulatory arbitrage may arise across various national jurisdictions. The principle of sovereignty in international law, which entitles states to independently manage their internal economic affairs and exclude other nation-states from interfering with their domestic affairs, is the main reason for the differential regulatory treatment of homogenous activities in different jurisdictions.³² Regardless of its form, regulatory arbitrage is heavily criticized for neutralizing efforts to address systemic risks.³³

28. *Id.* at 261.

29. See Nicola Gennaioli, Andrei Shleifer & Robert W. Vishny, *A Model of Shadow Banking* (Nat’l. Bureau of Econ. Research, Working Paper No. 1711, 2011).

30. In Charles Goodhart’s terminology, this would correspond to the “border problem.” See Charles A. E. Goodhart & Rosa M. Lastra, *Border Problems*, 13 J. INT’L ECON. L. 705, 714-15 (2010).

31. Engert, *supra* note 16, at 357-58.

32. Such an independent approach to domestic markets came under immense pressure with rising forces of globalization. In addition to the above considerations for differential regulatory treatment, the role of exogenous factors should not be overlooked. Factors, such as lobbying, are a permanent feature of financial regulation. For example, Partnoy argues that the securities industry itself has played a major role in shaping the structure of the existing regulation. See Frank Partnoy, *Financial Derivatives and the Costs of Regulatory Arbitrage*, 22 J. CORP. L. 211, 225 (1997). He attributes the existence of regulatory exemptions mostly to industry lobbying. See *id.*

33. For example, Acharya and Richardson believe that regulatory capital arbitrage was at the heart of the recent financial crisis. See Viral V. Acharya & Matthew Richardson, *Implications of the Dodd-Frank Act*, 4 ANN. REV. FIN. ECON. 1, 10 (2012); see also INT’L MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT: RISK TAKING, LIQUIDITY, AND SHADOW BANKING: CURBING EXCESS WHILE PROMOTING GROWTH 89 (2014). In Stein’s view, there are two driving forces behind securitizations: risk-sharing and regulatory arbitrage. See Jeremy C. Stein, *Securitization, Shadow Banking & Financial Fragility*, 139 DAEDALUS 41, 45 (2010). The collapse of the securitized markets in turn played a major role in causing the financial crisis. See *id.*

II. CAUSES OF REGULATORY ARBITRAGE

There are two major causes of regulatory arbitrage. The first is the differential regulatory treatment of homogenous business activities, and the second is the ambiguity in the interpretation of the applicable laws. Differential regulatory treatment arises from financial market compartmentalization, regulatory competition, and partial industry regulatory strategies.

A. DIFFERENTIAL REGULATORY TREATMENT OF HOMOGENOUS FINANCIAL ACTIVITIES

It is often argued that similar institutions undertaking similar functions should be regulated similarly.³⁴ Otherwise, regulatory loopholes may be abused by financial institutions as an unintended consequence of a regulation that treats identical activities differently, or a regulation that involves institutional regulation and treats homogenous institutions heterogeneously. Therefore, the main reason for regulatory arbitrage is the fragmentation of the regulatory structure throughout the globe and within a particular jurisdiction.

Regarding the intra-jurisdictional regulatory arbitrage, the need for differentiated regulation creates regulatory bifurcation. Although there are obvious benefits of subjecting identical firms and financial products to a single regulator, resulting in better coordination and a level playing field, unequal and differential treatment of the identical components or subsets of an industry has its own proponents who advocate for regulatory competition and underscore its efficiency-enhancing features. Needless to say, such a system can lead to fragmentation, which can provide potential opportunities for intra-jurisdictional regulatory arbitrage.³⁵

Differential regulatory treatment of homogenous financial activities has three major explanations: financial market compartmentalization, which provides the grounds for differential regulatory treatment;³⁶ the benefits of regulatory competition, which lead to the subjection of

34. Acharya & Richardson, *supra* note 33.

35. Romano, *supra* note 15, at 19.

36. In financial markets, institutional financial regulation tends to segment financial markets and institutions. For example, in most jurisdictions, deposit taking and lending are regulated activities in which only banks (depository institutions, or credit institutions) can engage. This by itself can result in market segmentation and can make banks special. See E. GERALD CORRIGAN, ARE BANKS SPECIAL? (1983).

different firms to governance under different rules;³⁷ and the partial industry regulation theory, which supports differential regulation to enhance competition among regulated firms.³⁸ This Article focuses on regulatory competition and its role in encouraging hedge funds to engage in regulatory arbitrage.

B. FINANCIAL MARKET COMPARTMENTALIZATION

Financial regulation is a function of the financial system itself, and regulatory fragmentation is a product of financial market compartmentalization. Around three decades ago, Corrigan, among others, argued that banks are special, and hence require special regulatory treatment. In his view, offering transaction accounts, providing backup liquidity for all other financial and non-financial institutions, and serving as a transmission belt for monetary policy were three features that distinguished banks from other financial and non-financial institutions.³⁹ Almost two decades later, accounting for the development of close substitutes for banks' services,⁴⁰ he repeated the same arguments with slight differences.⁴¹ This "specialness" argument presupposes that even after accounting for dynamic behavior of different classes of institutions, the financial services industry can be compartmentalized.⁴²

This argument reasons that the nature and function of financial institutions differentiate them from one another. Therefore, based on their

37. For more information regarding the arguments for regulatory competition by implementing a competitive federalism approach, see Roberta Romano, *Empowering Investors: A Market Approach to Securities Regulation*, 107 YALE L.J. 2359, 2366 (1998). See also Damien Geradin & Joseph A. McCahery, *Regulatory Co-opetition: Transcending the Regulatory Competition Debate* (Amsterdam Ctr. for Law & Econ., Working Paper No. 2005-06).

38. This phenomenon is sometimes called regulatory bifurcation. See Erich Schanze, *Hare and Hedgehog Revisited: The Regulation of Markets That Have Escaped Regulated Markets*, 151 J. INST. & THEORETICAL ECON. 162, 162 (1995).

39. CORRIGAN, *supra* note 36, at 7.

40. See, e.g., Alan J. Marcus, *Deregulation and Bank Financial Policy*, 8 J. BANKING & FIN. 557, 577 (1984).

41. CORRIGAN, *supra* note 36, at 1-2; E. GERALD CORRIGAN, ARE BANKS SPECIAL?: A REVISITATION (2000). However, other scholars do not agree with the "specialness" argument for banks. See, e.g., ANAT R. ADMATI & MARTIN HELLWIG, THE BANKERS' NEW CLOTHES: WHAT'S WRONG WITH BANKING AND WHAT TO DO ABOUT IT (2013).

42. RICHARD S. CARNELL ET AL., THE LAW OF BANKING AND FINANCIAL INSTITUTIONS (4th ed. 2009).

specialization in certain instruments and strategies, different financial institutions yield heterogeneous benefits, become subject to idiosyncratic risks, and pose different risks to the financial system.

Contemporary history of financial regulation is abound with examples of fragmented regulation. For instance, the U.S. Glass-Steagall Act separated commercial banking from investment banking and subjected commercial and investment banks to two different regulatory regimes and agencies (the Comptroller of the Currency and the Federal Reserve, and the Securities and Exchange Commission (“SEC”) respectively). The primary rationale behind the Glass-Steagall Act was to prevent the conflicts of interest and risk taking behavior that typically resulted from comingling commercial and investment banking activities. In other words, it was argued that since investment banking is different from commercial banking in terms of its functions and potential risks, consolidation of these two activities together in one financial firm can create severe conflicts of interests.

Likewise, the compartmentalization argument can be offered for differential regulatory treatment of hedge funds. For this purpose, differential treatment of hedge funds can best be understood in light of hedge funds’ specific functions in the overall financial system and their potential costs and benefits. Hedge funds occupy a relatively *sui generis* position in the financial system and provide “special” and idiosyncratic benefits that other financial institutions, given their nature and function, are unable to provide.⁴³

Hedge funds provide diversification benefits.⁴⁴ This means that investing in hedge funds can improve the risk-return relationship for investors.⁴⁵ In addition, during periods of negative equity returns, investing in hedge funds can decrease the volatility of a portfolio by offsetting market movements.⁴⁶ For example, an allocation of ten to twenty percent of a portfolio to alternative investments, including hedge

43. Needless to say, these *sui generis* functions are made possible first and foremost by the special regulatory treatment of hedge funds by the financial regulators.

44. Wouter Van Eechoud et al., *Future Regulation of Hedge Funds—A Systemic Risk Perspective*, 19 FIN. MKTS., INSTITUTIONS & INSTRUMENTS 269, 275-78 (2010).

45. Thomas Schneeweis, Vassilios N. Karavas & Georgi Georgiev, *Alternative Investments in the Institutional Portfolio* 5 (Ctr. for Int’l. Sec. & Derivatives Mkts. Working Paper Series, 2002).

46. *Id.*

funds, is recommended for pension funds that strive for a long-term strategy of low risk and low returns.⁴⁷

Moreover, hedge funds are sources of liquidity.⁴⁸ This is especially notable in niche markets and during liquidity crises.⁴⁹ By investing in sub-markets that are “less liquid, more complex and hard-to-value,” such as convertible bonds, distressed debt, and credit default swaps, hedge funds can complete and deepen financial markets.⁵⁰ In fact, in recent years the growth and development of some niche markets, such as those for unsecured and subordinated debt, is attributed to or correlated with the growth of hedge funds willing to take risks that other traditional financial institutions, such as banks, are unwilling to take.⁵¹

In addition, hedge funds’ aim of generating alpha by outperforming markets is mostly achieved through exploiting market imperfections and discrepancies.⁵² This function of hedge funds is beneficial to financial markets because it facilitates and accelerates price discovery by eroding arbitrage opportunities.⁵³ Furthermore, the legal protections for hedge funds’ proprietary information induce them to invest in the acquisition of private information on which almost no disclosure requirement is imposed. This enables hedge funds to discover and exploit mispriced assets and securities, which, in turn, can result in more efficient markets by pushing the securities prices to their true or fundamental values.⁵⁴ Moreover, such proprietary investment in information acquisition can significantly increase the role of hedge funds in disciplining the underperforming firms and, in some cases, uncovering fraudulent

47. *Id.*; see also William F. Sharpe, *Asset Allocation: Management Style and Performance Measurement*, 18 J. PORTFOLIO MGMT. 7 (1992).

48. See Robert J. Bianchi & Michael E. Drew, *Hedge Fund Regulation and Systemic Risk*, 19 GRIFFITH L. REV. 13, 13-15 (2010). See generally Francesco Franzoni & Alberto Plazzi, *Hedge Funds’ Liquidity Provision and Trading Activity* (2012).

49. The provision of liquidity by hedge funds in niche markets became mostly possible because of the differential regulatory treatment applied to them in terms of the lack of limits on the amount of leverage, investment concentration, short selling, and use of structured products and derivatives.

50. Van Echoud et al., *supra* note 44, 275-278.

51. Bianchi & Drew, *supra* note 48, 13-15.

52. In fact, the lack of legal restrictions on hedge funds’ use of financial instruments and strategies along with their investment concentrations enables them to use a wide range of techniques to exploit market imperfections.

53. Andrew Crockett, *The Evolution and Regulation of Hedge Funds*, 10 FIN. STABILITY REV. 19, 22 (2007).

54. Roach Jr., *supra* note 12, at 173.

activities.⁵⁵ Therefore, some argue that having larger and greater number of hedge funds can contribute to the efficiency of markets.⁵⁶

It is also easier for hedge funds to take contrarian positions in financial markets. Again, the unlimited use of leverage, short selling,⁵⁷ limited investor liquidity (i.e., through limited redemption rights or longer lock-ups), unlimited possibilities to invest in derivatives, and unrestrained investment concentration potentially enable hedge funds to take positions that other financial institutions cannot due to the regulatory capital requirements imposed on the latter. This can smooth and reduce market volatility and reduce the number and volume of asset price bubbles.⁵⁸ Not surprisingly, empirical evidence suggests that the leverage of hedge funds is countercyclical to that of listed financial intermediaries, meaning that given the pro-cyclicality of leverage in other financial institutions, hedge funds' leverage has an inverse relationship with the leverage of other major financial market participants.⁵⁹ In other words, when the leverage of the mainstream financial institutions increases during a financial boom, the leverage of hedge funds tends to decrease; in a financial downturn or credit crunch, the leverage of mainstream financial institutions decreases while hedge fund leverage tends to increase. This feature, coupled with the unlimited capability of hedge funds to leverage their contrarian positions, amplifies the effects of such positions. As a result, the contrarian position taken by hedge funds can smooth the volatility of financial markets. Indeed, their contrarian strategies enable them to be active traders during financial crises. This feature of hedge funds can

55. Lucian A. Bebchuk, Alon Brav & Wei Jiang, *The Long-Term Effects of Hedge Fund Activism* 1093 (Harv., John M. Olin Ctr. for Law, Econ. & Bus., Discussion Paper No. 802, 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2291577 [<https://perma.cc/PW9Y-VZHC>].

56. Crockett, *supra* note 53, at 22-23.

57. In order to take a short position, the trader usually borrows the securities from a dealer and sells them to the market with the expectation that the price of the securities will be lower at a certain point in the future at which the trader will again buy them back and return them to the dealer. By doing so, the short seller pockets the difference between the higher sale price and the lower purchase price at which he bought them back and returned them to the dealer.

58. Van Echoud et al., *supra* note 44, at 275-78.

59. This means that hedge funds can be liquidity providers in times of a liquidity crunch. See Andrew Ang, Sergiy Gorovyy & Gregory B. van Inwegen, *Hedge Fund Leverage*, 102 J. FIN. ECON. 102 (2011). Their empirical study suggests that, unlike other financial institutions such as banks, hedge funds' leverage decreased prior to the start of the financial crisis. *Id.*

potentially form a price floor in distressed markets. Financial institutions, such as banks, cannot play such a role, especially because of the Basel-like capital adequacy requirements which apply to all depository institutions.⁶⁰ Therefore, hedge funds contribute to the stability of financial markets through liquidity provision and significant risk diversification.⁶¹ More importantly, the composition of hedge funds' investors and the mechanisms used to lock up capital for longer periods make it possible for hedge funds to maintain their positions, which are against the conventional market perceptions and price movements, for longer periods of time.⁶² Unlike mutual funds and banks, hedge funds are not required to provide cash redemption on short notice. The right to redeem alternative investments is often governed by private contracts which may impose longer lock-up periods on investors' capital.⁶³ In particular, gates and side-pocket arrangements within the purview of private ordering can provide another tool for hedge funds to restrict investor exits.⁶⁴ This freedom from liquidity constraints gives hedge funds additional tools and techniques to better manage liquidity risks, and enables them to strive for their long-term goals in their investment strategies.⁶⁵

All in all, hedge funds can “contribute substantially to capital formation, market efficiency, price discovery, and liquidity.”⁶⁶ Regulatory agencies have also long acknowledged the benefits of hedge

60. Jón Daniélson & Jean-Pierre Zigrand, *Regulating Hedge Funds*, 10 FIN. STABILITY REV. 30 (2007).

61. Jean-Pierre Mustier & Alain Dubois, *Risks and Return of Banking Activities Related to Hedge Funds*, 10 FIN. STABILITY REV. 85, 88-89 (2007).

62. Crockett, *supra* note 53, at 22.

63. See Van Eechoud et al., *supra* note 44, at 277.

64. See Van Eechoud et al., *supra* note 44.

65. In terms of maturity transformation, hedge funds stand in between banks and mutual funds (with higher maturity transformation) on the one hand, and the pension funds, private equity funds and venture capital funds on the other hand. Despite arguments to the contrary, it seems that hedge funds play a limited role in liquidity transformation. See Van Eechoud et al., *supra* note 44, at 275-78. However, it is suggested that recently hedge funds are engaging more and more in liquidity transformation. Jennifer Payne, *Private Equity and its Regulation in Europe*, 12 EUR. BUS. ORG. L. REV. 573 (2011).

66. Roach Jr., *supra* note 12, at 173 (quoting *Concerning the Regulation of Hedge Funds: Hearing Before the S. Comm. on Banking, Hous. and Urban Affairs*, 109th Cong. (July 25, 2006) (statement of Christopher Cox, Chairman, Sec. & Exch. Comm'n)).

funds to the financial system.⁶⁷ Even after the financial crisis, the International Organization of Securities Commissions suggested that hedge funds should be compensated for their intermediary functions and willingness to take risks that other financial market participants are unwilling to take.⁶⁸

The private investor exemptions that require hedge funds to have limits on the number and qualifications of their investors generally rules out further regulation on the grounds of investor protection, while such an argument does not hold for banks, mutual funds, pension funds, and insurance companies as their investors and depositors are generally unsophisticated.

On the other hand, the choice of organizational form (LLP or LLC) for hedge funds may automatically trigger certain mandatory rules such as general partners' (managers') co-investment in hedge funds and their potential joint liability.⁶⁹ These features substantially align managers' incentives with the interest of the investors and to a large extent eliminate the need for imposing corporate governance standards on hedge funds that are required for banks and mutual funds.

Needless to say, sustaining such benefits and addressing potential risks of hedge funds to financial markets call for their special regulatory treatment.⁷⁰ In addition to compartmentalization, two other factors contribute to the regulatory bifurcation of hedge funds around the globe: regulatory competition and partial industry regulation.

67. See U.S. SEC. & EXCH. COMM'N, DIV. OF INV. MGMT., IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS: STAFF REPORT TO THE UNITED STATES SECURITIES AND EXCHANGE COMMISSION 4-5 (2003), <http://www.sec.gov/news/studies/hedgelfunds0903.pdf> [<https://perma.cc/4K8N-PPJC>].

68. See Bianchi & Drew, *supra* note 48, at 13-15. From this perspective, the special regulatory treatment of hedge funds can be considered to be a compensation package for the benefits they provide, such as contributing to liquidity in illiquid markets, helping the price discovery mechanism become more efficient, distributing risk, contributing to financial integration, and aiding in diversification.

69. FRANCOIS-SERGE LHABITANT, HANDBOOK OF HEDGE FUNDS 85-87 (2006).

70. Needless to say, this differentiation requires different regulatory treatment for different financial institutions. Differentiation breeds tailor-made regulation, and tailor-made regulation amplifies differentiation. On the other hand, the special regulatory privileges (subsidies) offered to banks justified a separate set of regulations for them. Therefore, differences in function, regulatory framework (such as tax treatments, subsidies, and deposit insurance), and organization breed more differential regulatory treatments, which makes financial markets more compartmentalized.

C. REGULATORY COMPETITION

Prior to the information age and globalization, competition among regulators to attract more businesses was not as fierce.⁷¹ As globalization intensified, the excess capital in international markets resembled the scenario of “water run[ning] to find its level”⁷² with an unprecedented pace. It is in this context that the race to attract more businesses started among turf-seeking regulators.

Regulatory competition was further accelerated by technological advancements such as the internet and increasingly diminished transaction costs, which in turn reduced transaction processing and clearing times. In such hyper-connected⁷³ global markets, investors become an “economic herd”⁷⁴ capable of instantaneously shifting business across regulatory borders. This allowed firms to take advantage of regulatory arbitrage opportunities at an unprecedented pace. In the United States, competition for businesses occurs among the states, which may explain why the theory of regulatory competition is so inextricably intertwined with debates about federalism. Against this background, regulatory competition emerged as an “economic theory of government organization.”⁷⁵

While a unitary or consolidated regulator can more consistently regulate business activities, competition among regulators creates exploitable gaps and fractures that can undermine their objectives. In the regulatory competition literature, the original theory explaining government output of regulation was predicated on a model that accepts

71. Regulatory competition has a long history, perhaps longer than regulatory arbitrage. The historian Will Durant reports that in Ancient Athens, to stimulate commerce and industry, Solon started granting citizenship to skillful foreign businessmen and their families. *See* WILL DURANT, *THE LIFE OF GREECE: THE STORY OF CIVILIZATION* (2011). Niall Ferguson demonstrates how unitary government and uniformity led to stagnation in ancient China, whereas competition between national jurisdictions in divided Europe contributed to the long-term development and subsequent domination of Europe. *See* NIALL FERGUSON, *CIVILIZATION: THE WEST AND THE REST* (2011).

72. *See generally* WALTER BAGEHOT, *LOMBARD STREET* (1873).

73. *See generally* THOMAS L. FRIEDMAN & MICHAEL MANDELBAUM, *THAT USED TO BE US: HOW AMERICA FELL BEHIND IN THE WORLD IT INVENTED AND HOW WE CAN COME BACK, VOL I* (2011).

74. *See generally* THOMAS L. FRIEDMAN, *THE LEXUS AND THE OLIVE TREE: UNDERSTANDING GLOBALIZATION* (2000).

75. *See* Geradin & McCahery, *supra* note 37.

regulation as a *public good*.⁷⁶ The literature on regulatory competition suggests that the provision of laws and regulations is similar to the provision of goods and services by economic firms: governments are suppliers of regulation just as firms are suppliers of products and services in the marketplace, and thus, should be disciplined by the same forces.⁷⁷

Advocates of localism argue that localities and states provide economic efficiency by generating plurality and extending opportunities for citizens to move into localities that provide a better allocation of services and taxes.⁷⁸ Local jurisdictions are supposed to compete for scarce economic resources, equivalent to excess capital found in financial markets. In their quest to attract investment and serve the best interests of their constituents (or to extend their regulatory turf), local regulators should offer the best quality of regulation to attract more customers (i.e., regulated entities). Charles Tiebout's seminal work advocated the idea of "voting with the feet" for citizens who are dissatisfied with the provision of local public goods in a specific state or locality.⁷⁹ Under this model, the local governments within a federal framework that provide the optimal level of regulation should attract more mobile economic resources.⁸⁰

Under this theory, a unitary regulator would serve as a monopolist, and regulatory harmonization would be regarded as anticompetitive cartelization, which would result in inefficiencies. In contrast, a system

76. The need for regulation arises from market failure. The aim of such regulation should be correcting market failures and imperfections. Regulation itself has a public goods feature and in the absence of third party action, it will not be provided or it will be underprovided. The public goods nature of provision of regulation suggests that the government having monopoly over "the legitimate use of force within the given territory" has to take action to provide it. As the public goods nature of regulation suggests, its rise and the method of its study can be investigated similarly to the other systems of provision of public goods. As the government has the monopoly on the provision of such public goods which requires taking certain actions which private parties cannot, it seems very counterintuitive to speak of the regulatory competition, especially within the unitary states. See Tyler Cowen, *Law as a Public Good: The Economics of Anarchy*, 8 *ECON. & PHIL.* 249, 249 (1992).

77. One of the first systematic studies of provision of public goods is conducted in the American local government context focusing on the debate about localism vs. regionalism and the state vs. federal government dichotomy context.

78. See Sheryll D. Cashin, *Middle-Class Black Suburbs and the State of Integration: A Post-Integrationist Vision for Metropolitan America*, 86 *CORNELL L. REV.* 729, 753 (2000).

79. See Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 *J. POL. ECON.* 416, 416 (1956).

80. *Id.*

of multiple decentralized regulatory agencies competing for customers, i.e., economic firms, is supposed to result in more efficient results, namely enhanced quality of regulation with competitive prices.⁸¹ For example, it is argued that “the incessant turf battles” among American financial regulatory authorities are equivalent to competition among private businesses.⁸² This disciplines regulators by the threat of loss of their market share or regulatory clientele to other agencies, thereby promoting diligence and competence among regulators.⁸³

Advocates of regulatory competition often appeal to arguments in favor of decentralization.⁸⁴ Decentralization mitigates information asymmetries, decreases the likelihood of regulatory capture, and encourages more experimentation which allows for alternative solutions.⁸⁵ It also induces more innovation, and results in differentiated and customized services adapted to local circumstances and the needs of the constituency. The decentralized model of provision of public goods increases economic efficiency by satisfying the differential preferences in the locally needed public goods.⁸⁶ Therefore, since the optimal level of local public goods in different localities is varied, governments can provide a better allocation of local services in a decentralized structure.⁸⁷

In the same vein, regulatory arbitrage plays an important role in delivering the benefits of regulatory competition. In contrast to unitary regulatory systems or regulatory monopolies in which the demand for regulation is inelastic, regulatory arbitrage provides alternatives or regulatory substitutes for regulated firms and thereby makes the demand for regulation elastic.⁸⁸ In the harmonized regulatory system, the demand for regulatory services will be constant, while in the regulatory

81. See Geradin & McCahery, *supra* note 37, at 3.

82. See CARNELL ET AL., *supra* note 42, at 75.

83. See CARNELL ET AL., *supra* note 42, at 65.

84. See Geradin & McCahery, *supra* note 37, at 2.

85. *Id.*

86. See Richard Briffault, *Our Localism: Part I—The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 5 (1990).

87. See Wallace E. Oates, *An Essay On Fiscal Federalism*, 37 J. ECON. LITERATURE 1120, 1121-22 (1999). Although devolution and decentralization which can encourage competition are more likely to generate efficient results, just as markets, there are two conditions for the achievement of goals in such a model of regulatory competition. First, there should be no externalities. Secondly, markets should be and remain open for free entry and exit of capital and labor. See Frank H. Easterbrook, *Federalism and European Business Law*, 14 INT'L REV. L. & ECON. 125, 125, 128 (1994).

88. See Macey, *supra* note 10, at 1362.

fragmentation model, *ceteris paribus*, the demand increases with more harmonization and decreases with more fragmentation. Therefore, harmonized regulatory jurisdictions will be less accountable and fragmented jurisdictions will be more accountable to their regulated firms.

Such a dramatic change in the elasticity of demand means that if regulators cannot provide good quality regulations at competitive prices, regulated firms will desert them. Hence, this increased elasticity of demand engenders more accountability towards their clientele. On the other hand, this market or “downward accountability”⁸⁹ will impose constraints on regulators and can serve as a safeguard against regulatory capture.⁹⁰ Since regulators have an incentive to increase, or at least maintain, their market share of regulated entities,⁹¹ competition and the possibility of regulatory arbitrage will operate as a check on regulatory despotism by eliminating inefficient regulators.

In addition, enhanced diversity among regulators can be effective in avoiding conflicts of interest in regulatory functions.⁹² By the same token,

89. Colin Scott, *Accountability in the Regulatory State*, 27 J. L. & SOC'Y 38, 42 (2000).

90. Findings by Grabosky and Braithwaite show that regulatory agencies that regulate “(1) smaller numbers of client companies; (2) a single industry rather than diverse industries; (3) where the same inspectors were in regular contact with the same client companies; and (4) where the proportion of inspectors with a background in the regulated industry was high” are more likely to have a cooperative rather than prosecutorial regulatory practice. See IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE REGULATION DEBATE* 55 (1992). The empirical findings in that regard confirm the theory that “the evolution of cooperation should occur only when regulator and firm are in a multi-period prisoner’s dilemma game. Repeated encounters are required for cooperation to evolve.” *Id.* When an agency regulates a small number of firms in a single industry, the likelihood of the repeated encounters is greater, which can pave the way for cooperation and corruption. *Id.*

91. See Macey, *supra* note 10, at 1362.

92. See Cristie L. Ford, *Principles-Based Securities Regulation in the Wake of the Global Financial Crisis*, 55 MCGILL L. J. 257, 257 (2010). Some scholars raise questions about the regulatory arbitrage argument. For example, Zingales argues that since it is the managers and not the shareholders who choose regulators, such a regulatory regime can potentially suffer from agency problems. See Luigi Zingales, *The Future of Securities Regulation*, 47 J. ACCT. RES. 391, 401 (2009). On the other hand, it is suggested that regulatory competition may give rise to a “beggar thy neighbor” competitive approach to regulation and, absent financial regulatory coordination, create regulatory arbitrage opportunities for the firms inducing a regulatory race to the bottom, which enables financial institutions to circumvent effective financial regulation. See JAMES R. BARTH,

in the context of financial markets and hedge fund regulation, regulatory competition may deter cooperation and corruption between regulators and regulated firms.

Moreover, regulatory competition provides market benchmarks or yardsticks against which the oversight of each regulator can be assessed among different groupings in a regulatory tournament, also known as “yardstick competition.”⁹³ Such an arrangement for monitoring regulators is similar to mechanisms long used in labor contracts. In labor contracts, and especially in franchise agreements, the franchisor (regulator) is not able, or it is not cost-justified for her, to monitor the level of effort (input) of the franchisee, whereas the level of output is readily observable. In such a context, there are several methods to deal with this information asymmetry problem, such as “cost-of-service” regulation and “lagged price adjustment” mechanisms.⁹⁴ However, both mechanisms can be equally inefficient; in such a setting, yardstick competition can achieve a more efficient outcome than the alternatives.⁹⁵

Where competition involves political agents, the tournament can be adopted in regulatory competition scenarios with the focus on competition among governments or regulators. Such an application rests on the assumption that the voters (regulated firms) lack full information about the quality of the input of politicians (regulators) and that they use

GERARD CAPRIO, JR & ROSS LEVINE, *RETHINKING BANK REGULATION: TILL ANGELS GOVERN* 68 (2006); *see also* Acharya et al., *supra* note 11. In addition, there is a trade-off between regulatory capture and regulatory harmonization. Features of regulatory competition that induce regulatory arbitrage decrease the likelihood of regulatory capture. But the regulatory harmonization can decrease the likelihood of regulatory arbitrage while increasing the likelihood of regulatory capture.

93. Andrei Shleifer, *A Theory of Yardstick Competition*, 16 *RAND J. ECON.* 319, 319–20 (1985).

94. *Id.* The equivalent of the “cost-of-service” regulation for regulating regulators is making their pay dependent on performance (by estimating the costs of performance and paying them accordingly), while the equivalent of the “lagged price adjustment” is the deferred compensation schemes for regulators. *Id.*

95. *Id.* Recent studies show that incentive-based pay schemes outperform fixed pay and that tournament theory is less effective than piece rate in certain settings. *See generally* M. ALI CHOUDHARY, VASCO J. GABRIEL & NEIL RICKMAN, *INDIVIDUAL INCENTIVES AND WORKERS’ CONTRACTS: EVIDENCE FROM A FIELD EXPERIMENT* (2012).

other politicians' performance as a yardstick or benchmark to evaluate the performance of their own politicians.⁹⁶

There are several studies emphasizing the welfare-enhancing features of regulatory competition in financial regulation.⁹⁷ For example, regulatory competition among accounting standards and the ability to choose the regulators and corporate structures within and across international boundaries would improve the efficiency of corporate governance and accounting standards, and eventually lead to a lower cost of capital. Thus, competitive accounting regimes are more efficient than monopolistic ones, even internationally.⁹⁸ Moreover, within this cross-jurisdictional regulatory competition, financial institutions can sidestep costly and stifling regulations leading to a higher allocative efficiency in capital markets.⁹⁹

Despite the benefits of regulatory competition and regulatory arbitrage, they impose social costs or externalities. Most importantly, regulatory arbitrage imposes systemic externalities on financial markets. After the recent global financial crisis, skeptics question whether regulatory competition leads firms to migrate to poorly-regulated jurisdictions or whether it curbs a regulatory race to the bottom.¹⁰⁰

D. PARTIAL INDUSTRY REGULATION

An additional explanation for differential treatment of homogenous economic activities is predicated on the partial-industry regulation ("PIR") model.¹⁰¹ The PIR model is built on an understanding that the "government regulates only a part of the industry, leaving another part unregulated. Under partial-industry regulatory schemes, government

96. See William W. Bratton & Joseph A. McCahery, *The New Economics of Jurisdictional Competition: Devolutionary Federalism In A Second-Best World*, 86 GEO. L.J. 201, 256-58 (1997).

97. For more information regarding the reasons for the regulatory competition by implementing the competitive federalism approach, see Romano, *supra* note 37.

98. Shyam Sunder, *Regulatory Competition Among Accounting Standards Within and Across International Boundaries*, 21 J. ACCT. & PUB. POL'Y 219 (2002).

99. Joel F. Houston, Chen Lin & Yue Ma, *Regulatory Arbitrage and International Bank Flows*, 67 J. FIN. 1845, 1846 (2012).

100. Joel P. Trachtman, *The International Law of Financial Crisis: Spillovers, Subsidiarity, Fragmentation and Cooperation*, 13 J. INT'L ECON. L. 719, 719 (2010).

101. See Ian Ayres & John Braithwaite, *Partial-Industry Regulation: A Monopsony Standard for Consumer Protection*, 80 CALIF. L. REV. 13 (1992); see also AYRES & BRAITHWAITE, *supra* note 90, at 6.

purposefully treats firms in an industry differently.”¹⁰² This regulatory strategy is a middle path between full-industry regulation and laissez-faire policies, as it attempts to balance the virtues of both. The proponents of this approach argue that, in certain industry and regulatory settings, regulation of an individual firm (or a subset of firms) within a particular industry can be more efficient because it would avoid the costs of opting for either sweeping industry-wide intervention or a complete laissez-faire position.¹⁰³ In contrast to regulatory competition, which aims to enhance competition among regulators, PIR tries to stimulate competition within the regulated industry.¹⁰⁴ In other words, the PIR strategies’ goal is to harness the competitive forces of the market to enhance market discipline.¹⁰⁵ The main advantage of this approach is that it can use regulated firms to effect a behavioral change in other firms within the industry.¹⁰⁶ In addition, this diversified regulatory approach—which is sometimes called “regulatory bifurcation”¹⁰⁷—can provide additional advantages such as mitigating the adverse effects of regulatory errors, furnishing a competitive check on the regulators’ decisions by ensuring that the unregulated firm enjoys higher degrees of independence from the regulator, and inducing monitoring mechanisms among regulated firms.¹⁰⁸

In such a scheme, the regulated and unregulated sections of an industry can check one another’s abuses. Such a regulatory scheme can eventually harness market accountability or downward accountability.¹⁰⁹ Put differently, PIR can be viewed as a form of regulatory delegation or indirect regulation in which regulated firms can ensure that the unregulated firm will comply.¹¹⁰ The eventual result of a PIR strategy is

102. Ayres & Braithwaite, *Partial-Industry Regulation*, *supra* note 101, at 14-15. Ayres and Braithwaite also argue that the objections to the PIR based on the concerns about fairness of treating firms differently, predicated upon the equal protection clause, are unfounded. *Id.* at 38.

103. See Ayres & Braithwaite, *Partial-Industry Regulation*, *supra* note 101, at 13; see also AYRES & BRAITHWAITE, *supra* note 90, at 6.

104. IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE REGULATION DEBATE*, 137 (1992).

105. *Id.*

106. *Id.*

107. See Schanze, *supra* note 38.

108. See AYRES & BRAITHWAITE, *supra* note 90, at 137.

109. Colin Scott, *Accountability in the Regulatory State*, 27 J. L. & SOC’Y 38 (2000).

110. See *id.* at 142. Ayres and Braithwaite identify three forms of partial industry regulation: dominant-firm strategies, fringe-firm strategies, and tournament competition

a “dual governance of individual markets.”¹¹¹ Therefore, this regulatory bifurcation eventually creates two distinct playing fields governed by different rules.¹¹²

Dual governance, though beneficial, is not without costs. The main problem is that such a system of regulation stimulates strategic responses by the firms to the regulatory fragmentation of the industry. Profit-maximizing firms in such a segmented regulatory system will seek to shift or restructure their business in order to fall under the least costly regulatory regime. By creating opportunities for regulatory arbitrage, regulatory bifurcation and regulatory competition can inhibit cooperation among regulators to effectively address externalities in financial markets.¹¹³ It is argued that absent more coordination between regulators, such regulatory arbitrage may dilute efforts aimed at limiting excessive risk-taking in financial markets.¹¹⁴

E. DEFINITIONAL PROBLEMS: LEGAL INTERPRETATION AND REGULATORY ARBITRAGE

An additional major source of regulatory arbitrage lies in the nature of legal compliance and enforcement. Indeed, the “gap between the economic substance of a transaction and its legal and regulatory

strategies. *See id.* Built on tournament theory, yardstick competition derives some benchmarks from the average industry performance and rewards the firms passing the benchmarks. *See id.* For example, in labor contracts and especially in franchise agreements, the franchisor is not able (or it is not cost-justified for her) to monitor the level of effort of the franchisee; however, she can observe the level of output. Shleifer suggests that under certain assumptions, the yardstick competition can achieve an efficient outcome in this setting. *See Shleifer, supra* note 93, at 319-20. For example, as a cost-cutting strategy, the franchisor, who franchises the activities to several firms, can create a yardstick for the costs of the firms based on the average costs of other similar firms and create a competitive environment by announcing to franchisees that the firms with less costs than the benchmark can win certain prizes. Therefore, such a tournament design can create an environment in which the firm’s profits will depend on its ability to achieve certain output levels with lower costs than its competitors. *See AYRES & BRATHWAITE, supra* note 90, at 142. This kind of intervention ties suppliers’ profits to the performance of their competitors. *Id.* at 144.

111. *Id.* at 143.

112. HELEN A. GARTEN, *US FINANCIAL REGULATION AND THE LEVEL PLAYING FIELD* (2001).

113. Engert, *supra* note 16, at 366-67.

114. Acharya et al., *supra* note 11, at 188; *see also* Houston et al., *supra* note 99, at 1848.

treatment”¹¹⁵ exists because of the “legal system’s intrinsically limited ability to attach formal labels that track the economics of transactions with sufficient precision.”¹¹⁶ This breeds opportunities for technical compliance with the legal rules that undermine the “underlying spirit and the purpose” on which the entire regulatory system or a specific law is built.¹¹⁷ Compliance of this sort, dubbed “creative compliance,” is well-documented in the regulation literature.¹¹⁸ It involves “using the law to escape legal control without actually violating legal rules.”¹¹⁹ Creative compliance is made possible by the nature of legal rules, i.e., the “open texture” of the law. This arises from the limits “inherent in the nature of language, to the guidance which general language can provide,”¹²⁰ stemming partly from the “relative ignorance of fact[s]” and “relative indeterminacy of aims.”¹²¹ The type of regulatory arbitrage stemming from exploitation of gaps and loopholes can often occur within a single jurisdiction.

The choice of a particular method of interpretation in financial regulation, enforcement, and adjudication can also significantly affect the problems facing the financial system. One source of regulatory arbitrage is associated with “legal formalism.” Legal formalism is usually understood as following the literal mandates of a rule, even if it ill serves its purpose. In general, “[f]ormalism implies a narrow approach to legal control—the use of clearly defined, highly administrable rules, an emphasis on uniformity, consistency and predictability, on the legal form of transactions and relationships and on literal interpretation.”¹²² Such an approach usually does not recognize “necessity of choice in penumbral areas of rules.”¹²³

The aim of creative compliance is to avoid legal control by appealing to formalism in legal interpretation, which is a relatively dominant

115. Fleischer, *supra* note 18, at 229.

116. *See id.*

117. *See* KAREN YEUNG, SECURING COMPLIANCE: A PRINCIPLED APPROACH (2004).

118. *See id.*

119. D. McBarnet & C. Whelan, *The Elusive Spirit of the Law: Formalism and the Struggle for Legal Control*, 54 MOD. L. REV. 848, 848 (1991).

120. H. L. A. HART, THE CONCEPT OF LAW 128 (1994).

121. *Id.* It in turn arises from the limited cognitive abilities of human beings because the knowledge of all possible combinations of contingencies could not be achieved by a human being. *See id.* It follows that the rules and regulation devised on this inherently flawed knowledge cannot escape those limits.

122. McBarnet & Whelan, *supra* note 119, at 848-49.

123. *See* HART, *supra* note 120, at 124-30.

approach in legal thinking and jurisprudence.¹²⁴ The emphasis on literal interpretation highlights the role of definitions in legislation and rule making. The emphasis on the definitions constitutes a platform from which many of the intra-jurisdictional regulatory arbitrage opportunities can potentially be launched. Needless to say, rule-based regulation (as opposed to principle-based regulation, which focuses on the broad objective rather than the means) creates vast opportunities for regulatory arbitrage. As McBarnet argues, “[d]efinitions and criteria involving clear rules or thresholds make particularly valuable material for legal engineers to work on.”¹²⁵

In the context of hedge funds, definitional problems can sterilize regulatory attempts to address potential systemic risks posed by hedge funds. In fact, hedge funds define themselves by regulatory exemptions; this means that they do not have a shape of their own, and should mostly be viewed in light of the exogenous effects of regulations affecting their overall shape. This adaptive and dynamic aspect of hedge funds deepens the gap between their economic functions and regulatory categorizations. In addition, the responsive strategies of hedge funds to regulation induce every “otherwise non-hedge fund investment pool” to circumvent the restrictions of regulation by taking refuge under the hedge fund definitional umbrella. This move to acquire hedge fund status and make use of exemptions increases the heterogeneity of the statutorily-defined hedge funds.¹²⁶ Consequently, the term hedge fund applies to many

124. See generally, e.g., *Goldstein v. SEC*, 451 F.3d 873 (D.C. Cir. 2006) (discussing the definition of the word “client”); *Nokes v. Doncaster Amalgamated Collieries*, [1940] AC 1014 (HL) 1022 (“The golden rule is that the words of a statute must *prima facie* be given their ordinary meaning.”). Although creative compliance is present in every area of regulation, it is more likely to be exploited in financial regulation and tax laws. This is because of the traditionally detailed, specific, and rule-based nature of tax and financial laws.

125. Doreen McBarnet, *Financial Engineering or Legal Engineering? Legal Work, Legal Integrity and the Banking Crisis*, in *THE FUTURE OF FINANCIAL REGULATION*, 72 (Iain G. MacNeil & Justin O’Brien eds., 2010).

126. For example, Payne criticizes the Alternative Investment Fund Managers Directive (AIFMD) for failing to adequately differentiate between hedge funds and private equity funds in regulating these two different types of alternative investment funds. See Payne, *supra* note 65, at 21-22; see also Jacob Rothschild, *Europe Is Getting It Wrong on Financial Reform*, *FIN. TIMES* (Apr. 20, 2010), <https://www.ft.com/content/f51bdb9a-4caa-11df-9977-00144feab49a> [<https://perma.cc/JES2-A8E9>] (arguing that the then proposed AIFMD is so broad in scope that it captures other firms as well, such as investment trusts in Britain).

heterogeneous funds with vastly heterogeneous investment strategies that comply with some black-letter rules of statutes and regulations.

III. ADDRESSING REGULATORY ARBITRAGE: MARKET LIMITS VS. PUBLIC POLICY RESPONSES

Policymakers have expressed doubt over the merits of regulatory competition and have characterized regulatory arbitrage as a harmful phenomenon.¹²⁷ They have also expressed concern over market fragmentation and localization resulting from inconsistent policy choices throughout the world (e.g., the U.S. Volcker Rule and the U.K. ring fencing).¹²⁸ Purported gaps between global regulatory institutions and the global nature of finance have instead led to policy recommendations¹²⁹ favoring harmonization, centralization, and consolidation of regulatory regimes.¹³⁰ It is argued that regulatory arbitrage, though beneficial, limits regulators' ability to control systemic risk.¹³¹ Thus, the common concern for such proposals is the mitigation of systemic risks posed by hedge funds.

On the other side of the spectrum, it is suggested that such a move toward regulatory harmonization is misguided because hedge funds did not significantly contribute to the financial crisis, nor are they likely to do so in the near future.¹³²

Instead, regulatory consolidation and global harmonization may result in heightened systemic risk because in such a regime, regulators tend to adopt similar strategies and thereby push financial institutions to

127. Douglas W. Arner & Michael W. Taylor, *The Financial Stability Board and the Future of International Financial Regulation*, in RECONCEPTUALISING GLOBAL FINANCE AND ITS REGULATION, *supra* note 11, at 64.

128. *See id.* For more on the concept of ring fencing, see Steven L. Schwarcz, *Ring-Fencing*, 87 S.CAL. L. REV. 69 (2013).

129. Lawrence G. Baxter, *Understanding the Global in Global Finance and Regulation*, in RECONCEPTUALISING GLOBAL FINANCE AND ITS REGULATION, *supra* note 11, at 28-29.

130. Regarding hedge fund regulation, see generally Engert, *supra* note 16 (supporting regulatory cartelization to curb regulatory arbitrage) and Wulf A. Kaal, *Hedge Fund Regulation via Basel III*, 44 VAND. J. TRANSNAT'L L. 389, 389 (2011) (proposing measures to minimize opportunities for regulatory arbitrage by hedge funds).

131. Acharya & Richardson, *supra* note 33.

132. *See* Roberta Romano, *supra* note 15. Romano sees the post-crisis regulatory response to hedge funds in the shadow of the historical hostility towards short-sellers. *See id.*

adopt similar business strategies. Deprived of the benefits of diversification, such regulatory systems, in which the risks of regulatory errors can easily be amplified, could be more prone to systemic risk than a decentralized regulatory regime.¹³³ Regulatory arbitrage can thus be seen as a buffer against systemic regulatory and market failures.¹³⁴

More generally, empirical findings confirm the intuition that regulatory competition among legal systems can enhance the quality of corporate and securities laws by embracing bottom-up legal innovations and experimentation.¹³⁵ Given the benefits of regulatory competition, increased harmonization is not the best solution, and it might produce unintended consequences. Instead, the mitigation of potential risks of regulatory arbitrage requires a shift in focus from regulatory harmonization to the quality of regulation within each and every individual regime. Such a balanced approach can deliver the benefits of regulatory competition, and in the meantime, can limit regulatory arbitrage of a kind that may result in a race to the bottom.

The rest of this Article studies the ability of market forces in addressing the potential negative externalities of regulatory arbitrage. This Article will further elaborate how legal placebo effects, higher attrition rates among hedge funds, and the opaqueness of the hedge fund industry prevent markets from addressing potential risks and externalities of regulatory arbitrage on their own.

A. DO MARKETS LIMIT REGULATORY ARBITRAGE?

The demand for regulatory services is ultimately a function of the demand by financial institutions' creditors and investors for safety and soundness of their counterparties. For example, if investors demand more protection, firms will try to meet that demand by registering with a well-known regulator that provides reputation-enhancing regulation. Hedge funds will similarly demand high quality regulation that offers more protections for investors. Therefore, there are limits to a race to the bottom

133. See Nabilou, *supra* note 13.

134. *Id.*

135. See Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1529 (2005). On the other hand, there is a third view on the unitary vs. diversified regulatory mechanisms, called "regulatory co-competition." This view sides with the approach that "optimal governance requires a flexible mix of competition and cooperation between governmental actors, as well as between governmental and non-governmental actors." See Geradin & McCahery, *supra* note 37.

arising from regulatory arbitrage, and market forces can, to some extent, mitigate its effects. The firms' ability to arbitrage between regulatory regimes is constrained by their willingness to be subjected to the least credible regulatory regime. In turn, financial institutions' willingness to do so is a function of, among other things, their investors' and counterparties' willingness to engage in transactions with stable financial institutions within reliably stable and credible financial infrastructure.¹³⁶ Therefore, if quality of regulation matters for financial institutions because of reputational concerns, race to the bottom concerns from regulatory arbitrage will be largely unfounded.

Recent empirical studies on regulatory arbitrage by banks find strong evidence of fund transfers by banks to less regulated markets. This finding holds even after controlling for the reverse causality, i.e., the endogenous regulatory responsiveness to capital market flows.¹³⁷ In addition, strong evidence of arbitrage opportunities is documented in the form of banks' foreign expansion decisions due to the "regulatory gaps in activity restriction, capital regulation, supervisory independence and strength, external audit, disclosure transparency, and loan classification."¹³⁸ However, these studies suggest that in the absence of strong institutional infrastructure and legal environment that includes protections for property and creditor rights, lax regulation by itself is not sufficient to give rise to massive capital flows from heavily-regulated to lightly-regulated jurisdictions because "strong regulations . . . may serve as a signal of quality and stability."¹³⁹ Indeed, these findings demonstrate that "cross-country differences in regulations have a much more pronounced effect on bank flows if the recipient country has an advanced economy, strong creditor rights, strong property rights, and a high degree of information sharing among investors."¹⁴⁰

Therefore, the importance of the quality of regulation and its effect on regulatory arbitrage mitigates the concerns for a potential race to the bottom, which is the main concern about regulatory arbitrage. Indeed, empirical works confirm the theory that regulatory competition separates countries based on their financial and securities regulatory systems

136. KERN ALEXANDER, RAHUL DHUMALE & JOHN EATWELL, *GLOBAL GOVERNANCE OF FINANCIAL SYSTEMS: THE INTERNATIONAL REGULATION OF SYSTEMIC RISK* 131 (2006).

137. *See generally* Houston, Lin & Ma, *supra* note 99.

138. *Id.* at 1847.

139. *Id.* at 1848.

140. *Id.*

between jurisdictions catering to opportunistic managers and jurisdictions attracting managers or issuers seeking to signal credibility and quality. Investors and companies identify themselves accordingly by registering with those regulators.¹⁴¹ In turn, a rational investor will discount investments in poor-quality issuers, offsetting the risk of opportunistic behavior by managers.¹⁴²

In addition, a regulatory jurisdiction's established reputation and credibility can be translated into financial premiums for financial institutions regulated by the authorities of that jurisdiction. For example, banks can build their reputation by registering with a jurisdiction whose regulatory regime offers a credible deposit insurance scheme or stricter prudential regulation.¹⁴³ By the same token, competitive threats to the U.S. banking system from offshore financial centers in the U.S. dollar deposit market are limited by reputational considerations.¹⁴⁴ Therefore, the quality of regulation is of crucial importance; reputation-enhancing regulation is less prone to regulatory arbitrage than anti-competitive regulation.¹⁴⁵

B. SHORTCOMINGS OF MARKET FORCES IN ADDRESSING REGULATORY ARBITRAGE BY HEDGE FUNDS

Notwithstanding the extensive literature on the impact of reputation-enhancing regulation on regulatory arbitrage by banking entities, less research has been conducted on the importance of reputation-enhancing regulation on regulatory arbitrage by hedge funds. Therefore, it is apt to ask how much a reputation for being regulated by credible regulators matters for hedge funds. This Article accepts the proposition that a firm's appetite regarding reputational benefits will vary depending on the nature

141. Stephen J. Choi & Andrew T. Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulation*, 71 S. CAL. L. REV. 903, 950 (1997).

142. *Id.* They further argue that regulatory competition is a check on the performance of self-regulatory organizations (such as rating agencies). Regulatory competition in these areas can provide the investors and market participants with alternatives for poor regulatory performance. Therefore, such a regulatory design in fact complements private regulatory mechanisms.

143. ALEXANDER, DHUMALE & EATWELL, *supra* note 126, at 136.

144. Richard J. Herring & Robert E. Litan, *Financial Regulation in the Global Economy* (1995).

145. ALEXANDER, DHUMALE & EATWELL, *supra* note 126, at 136.

of the firm. Consequently, the arguments for regulation as a signal of quality may matter more to some firms than others.

This section argues that because of legal “placebo effects,” higher attrition rates in the hedge fund industry, and the inherent opaqueness of hedge funds, reputational concerns that may arise from regulation are of less importance for hedge funds compared to mainstream financial institutions. These relatively lower reputational costs usually fail to outweigh the economic benefits of regulatory arbitrage for hedge funds, and thus make regulatory arbitrage economically more attractive for hedge funds than for banks, mutual funds, and pension funds.

1. Legal Placebo Effects and Hedge Fund Reputational Concerns

Introduction of new laws and regulations can change investors’ risk perception of the regulated activity or entity. In other words, laws have placebo effects, which “manipulate[] individuals’ expectations regarding a risk that the law addresses.”¹⁴⁶ Such an effect alters the welfare of regulated individuals and firms separate from the effects arising from the actual enforcement of the law.¹⁴⁷ Legal placebo effects can cause a convergence or divergence of the individuals’ perception of the probability and magnitude of risks with regard to the objective risk. “Positive placebo effect” of a law entails the mitigation of an overestimated risk by individuals as they perceive the legislation as a risk mitigating factor.¹⁴⁸ In other words, in some cases the law’s effect is to reduce the level of perceived risks in individuals who overestimate the risks had no legislation been passed.

The law’s effect on the risk perception of individuals and institutions will vary based on their level of sophistication. Put differently, legal placebo effects are of asymmetric nature for different categories of investors. Therefore, positive placebo effects of laws (the ones which reduce the overestimated perception of risk)¹⁴⁹ depend on the level of sophistication of regulated entities. For institutional, accredited, and

146. Amitai Aviram, *The Placebo Effect of Law: Law’s Role in Manipulating Perceptions*, 75 GEO. WASH. L. REV. 54, 57 (2006).

147. *Id.*

148. *See id.* at 60-61 (describing positive placebo effect, negative placebo effect, positive anti-placebo effect and negative anti-placebo effect of law). For the implications of the placebo effect theory for the allocation of regulatory resources, see Amitai Aviram, *Allocating Regulatory Resources*, 37 J. CORP. L. 739, 739 (2012).

149. Aviram, *supra* note 146, at 57.

qualified investors, such an effect is less than that for unsophisticated investors whose perception of risk is more prone to cognitive biases. Based on this analysis, positive placebo effects of laws have disproportionate effects on hedge funds and banks. This is mostly due to the fact that the investor base, counterparties, and creditors of hedge funds are more sophisticated than those of banks, mutual funds, and pension funds.¹⁵⁰

Therefore, compared to hedge funds, the reputational effects of being subject to regulation by a credible regulator are amplified for banks whose clients are unsophisticated investors and do not have adequate resources at their disposal to assess the true risks of these institutions. This implies that there is a heightened incentive for mainstream financial institutions such as banks, mutual funds, and pension funds, which deal with unsophisticated investors on a daily basis, to signal to their investors and depositors about their safety and soundness by registering with credible regulators. However, there are no such amplified incentives for hedge funds because such a registration with a credible regulator cannot dramatically manipulate the risk perception of hedge funds' sophisticated investors, creditors, and counterparties. This means that regulation-induced reputation matters less for hedge funds, and hence they can relatively easily engage in regulatory arbitrage.

2. Attrition Rate in the Hedge Fund Industry and Reputational Concerns

Repeated interactions are seen as a prerequisite for the emergence of evolutionary cooperation based on reputation. On the other hand, limited future interactions breed opportunistic behavior. Hedge funds display an extraordinarily high level of attrition compared to mainstream financial institutions such as banks, mutual funds, and pension funds.¹⁵¹ Because of

150. In some European countries such as Luxembourg and Germany, hedge funds can be marketed to non-professional investors. However, these jurisdictions are exceptions to the rule, which requires that investors in a hedge funds should be sophisticated. See Hossein Nabilou & Alessio M. Paces, *The Hedge Fund Regulation Dilemma: Direct vs. Indirect Regulation*, 6 WM. & MARY BUS. L. REV. 183, 185-235 (2015)

151. See Michael R. King & Philip Maier, *Hedge Funds and Financial Stability: Regulating Prime Brokers Will Mitigate Systemic Risks*, 5 J. FIN. STABILITY 283, 286 (2009) ("One estimate suggests hedge fund attrition rates ranged between 3.8% and 5.1% per year between 1999 and 2007 (ISFL, 2008). Other studies use the number of funds that stop reporting to the Lipper TASS database. According to this proxy, the average life span of a hedge fund is 40 months, with a median life of 31 months. Fewer than 15% of

high attrition rates among hedge funds, they have relatively shorter time horizons and one-dimensional relationships with their counterparties and regulators. Such limited future interactions mitigate the effects of reputational concerns and market discipline, and increase the likelihood of their opportunistic behavior.

There is a widespread concern in the literature on corporate governance with regard to hedge fund short-termism.¹⁵² Short-termism occurs in inter-temporal choices. These choices are usually made by “decisions in which the timing of costs and benefits are spread out over time.”¹⁵³ The dispersion of costs and benefits over time accompanied by the conflicts of interest of the principals and agents in an economic firm highlight the importance of the short- and long-term horizons, which might result in compromising greater long-term benefits for fewer short-term benefits.¹⁵⁴ Even in the absence of conflicts of interest, managers or economic agents might be prone to myopia, making it difficult for them

hedge funds last longer than 6 years, while 60% disappear with 3 years. . . . Directional hedge funds have the highest attrition rates, followed by multi-strategy funds. According to Hedge Fund Research, 2005 was a record year for hedge fund liquidations, with nearly 850 hedge funds closing down. By comparison, 563 hedge funds closed in 2007, with another 350 hedge funds closing over the first 6 months of 2008. At this pace, the total closures for 2008 will represent around 7% of the industry. A number of the highest profile victims of the credit crisis have been hedge funds owned or managed by regulated LCFIs, such as two Bear Stearns hedge funds (\$1.6 billion) and Dillon Read Capital Management (\$3.5 billion). The proprietary trading desks at LCFIs have also reported large losses, with Morgan Stanley’s loss of \$7.8 billion providing one example among many. Lastly, Cole et al. (2007) point out that these frequent failures of hedge funds have not resulted in a financial crisis.”); *see also* Stephen J. Brown, William N. Goetzmann & Roger G. Ibbotson, *Offshore Hedge Funds: Survival and Performance, 1989–95*, 72 J. BUS. 91, 92 (1999); Burton G. Malkiel & Atanu Saha, *Hedge Funds: Risk and Return*, 61 FIN. ANALYSTS J. 80, 80 (2005).

152. *See* William W. Bratton & Michael L. Wachter, *The Case Against Shareholder Empowerment*, 158 U. PA. L. REV. 653 (2010); *see also* Lucian A. Bebchuk, et al., *The Long-Term Effects of Hedge Fund Activism*, 115 COLUM. L. REV. 1085 (2015) (suggesting that claims that hedge fund activism adversely impacts firms are not empirically tenable).

153. George Loewenstein & Richard H. Thaler, *Anomalies: Intertemporal Choice*, 3 J. ECON. PERSP. 181, 181 (1989).

154. GREGORY JACKSON & ANASTASIA PETRAKI, UNDERSTANDING SHORT-TERMISM: THE ROLE OF CORPORATE GOVERNANCE, http://www.sofi-goettingen.de/fileadmin/Textarchiv/WIP2/Praesentationen/jackson-petraki_short-termism.pdf [<https://perma.cc/6276-FKET>].

to accurately weigh the long-term consequences of their decisions.¹⁵⁵ Increased hedge fund activism, though beneficial for corporate governance and performance of firms,¹⁵⁶ gave rise to concerns about hedge funds' short-termism with regard to the corporate governance of the firms they acquire.¹⁵⁷ Though a concrete and fully-entrenched case for hedge fund short-termism is yet to be made,¹⁵⁸ concerns have been raised about the harms that hedge funds might cause while pursuing their own self-interest.¹⁵⁹

The high attrition rate among hedge funds can contribute to a tendency to be short-sighted and hence create incentives for opportunistic behavior in hedge funds as they approach the end-game, a stage in repeated interactions that undermines the reputational effects. Hence, due to this higher attrition rate, hedge funds will not be as strongly subject to market discipline as their counterparties and creditors. Commercial and investment banks, mutual funds, and other financial institutions with lower attrition rate often have multi-dimensional financial relationships with other market participants and regulators. This long-term relationship often creates much stronger reputational effects for these institutions, reducing their incentives to behave opportunistically and misuse the standard market conventions to their advantage. On the contrary:

155. *Id.* (citing David Marginson & Laurie McAulay, *Exploring the Debate on Short-termism: A Theoretical and Empirical Analysis*, 29 STRATEGIC MGMT. J. 273 (2008)).

156. See Stefano Gatti & Chiara Battistini, *Hedge Funds' Activism: A New Trend of Convergence Toward Private Equity in Public Firms?*, in PRIVATE EQUITY: FUND TYPES, RISKS AND RETURNS, AND REGULATION 183 (Douglas Cumming ed., 2010) ("Empirical evidence has clearly shown that post hedge funds' intervention firm performance is better than before the activists' action. Positive market reactions are also associated with interventions on CEO compensation and turnover and to subsequent changes in the dividend distribution policy. Overall, this definitely confirms a positive role played by hedge funds in the interest of all the other shareholders of the firm."); Alon Brav et al., *Hedge Fund Activism, Corporate Governance and Firm Performance*, 63 J. FIN. 1729 (2008).

157. For the role of hedge funds in corporate governance, see Thomas W. Briggs, *Corporate Governance and the New Hedge Fund Activism: An Empirical Analysis*, 32 J. CORP. L. 681 (2007).

158. Indeed, studies suggest that the concerns about hedge fund short termism in unfounded. See, e.g., Lucian A. Bebchuk, Alon Brav & Wei Jiang, *The Long-Term Effects of Hedge Fund Activism*, 115 COLUM. L. REV. 1085 (2015).

159. Marcel Kahan & Edward B. Rock, *Hedge Funds in Corporate Governance and Corporate Control*, 155 U. PA. L. REV. 1021 (2007). Kahan and Rock conclude that the "[s]hort-termism thus presents the potentially most important, most controversial, most ambiguous, and most complex problem associated with hedge fund activism." *Id.* at 1087.

hedge funds typically have a single-product business with the sole focus of maximising returns from trading in financial markets, and as such are subject to fewer constraints than other institutions. Hedge funds are also able to have more concentrated portfolios than other institutions, so that for a given portfolio size, they are able to obtain larger positions in individual markets, and to change those positions more quickly. The result is that they can be completely opportunistic when it suits them.¹⁶⁰

Higher attrition rates among hedge funds and their shorter time horizons undermine the importance of reputation for hedge funds. Therefore, it seems that regulation-induced reputational concerns in the decision to engage in regulatory arbitrage are of less importance to hedge funds than to well-established and reputation-sensitive financial institutions such as banks and mutual funds.

3. Transparency and Reputational Concerns in the Hedge Fund Industry

Reputation matters more in transparent markets than in opaque ones. Information disclosure can enhance or damage the reputation of firms in transparent markets faster than it does in opaque markets. Therefore, transparency enhances the importance of reputation, and the importance of regulation-induced reputational costs decreases the likelihood of regulatory arbitrage to less-reputable jurisdictions. However, due to lower reputational costs of regulatory arbitrage for hedge funds (because of the absence of mandatory disclosure to markets), it is less costly for hedge funds to engage in regulatory arbitrage compared to other mainstream financial institutions, which are subject to mandatory disclosure.

It has been well established how information asymmetry can result in market failure.¹⁶¹ The transparency deficit and asymmetric information are especially problematic in financial markets because of the nature of financial products and the inter-temporal nature of financial transactions. Financial services are generally viewed as “credence goods,” the quality of which is not ascertainable even after their purchase and use.¹⁶² In

160. RESERVE BANK OF AUSTRALIA, HEDGE FUNDS, FINANCIAL STABILITY, AND MARKET INTEGRITY 5 (1999).

161. George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970).

162. Alessio M. Paces & Heremans Dirk, *Regulation of Banking and Financial Markets*, in ENCYCLOPEDIA OF LAW AND ECONOMICS, VOL 2, at 9-10 (Alessio M. Paces & R. J. Van den Bergh eds., 2011).

credence goods, which have the highest level of information asymmetry, mandatory information disclosure requirements can significantly mitigate the likelihood of market failure. In addition, the importance of trust and reputation in inter-temporal financial transactions usually exacerbates the negative effects of information asymmetries. For example, banks are less willing to lend for longer periods of time and depositors are less willing to deposit their money in a financial institution from which they cannot withdraw on short notice (i.e., longer lock-ups).¹⁶³ Since the level of lending will be far lower than its socially optimal level in this setting, transparency and information disclosure can help mitigate information asymmetry and help reduce funding costs of financial institutions. Being a well-known, reputable, and trustworthy borrower is essential for attracting, concentrating, and channeling investors' scattered savings into economically productive activities.¹⁶⁴

Market benefits of information disclosure include enhanced liquidity, lower cost of capital, and better firm valuation.¹⁶⁵ In the absence of a reliable information disclosure system in financial markets, the uninformed investors cannot tell the "lemons" from the "peaches." Therefore, to hedge against possible losses as a result of trading with informed investors, market participants will discount the purchase price of the stock and inflate its selling price, reflecting the probability of trading with an informed counterparty multiplied by the potential information surplus of the counterparty.¹⁶⁶ This increased bid-ask spread will decrease liquidity for a particular stock.¹⁶⁷ As Akerlof predicts, such

163. By the same token, short-term demandable deposits are considered a source of market discipline that curtail excessive risk-taking by banks. See C. W. Calomiris & C. M. Kahn, *The Role of Demandable Debt in Structuring Optimal Banking Arrangements*, AM. ECON. REV. 497, 497 (1991).

164. This in turn translates into the maturity transformation function at the heart of financial intermediation.

165. Robert E. Verrecchia, *Essays on Disclosure*, 32 J. ACCT. & ECON. 97, 97 (2001) (arguing that corporate disclosure can mitigate the adverse selection problem and increase market liquidity by leveling the playing field among investors); see C. Leuz & P. Wysocki, *Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research* (Mar. 2008) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1105398 [<https://perma.cc/GX6Y-5D2Y>].

166. Leuz & Wysocki, *supra* note 165.

167. See Verrecchia, *supra* note 165; Leuz & Wysocki, *supra* note 165.

an instance of asymmetric information may lead to the collapse of the entire market for that product.¹⁶⁸

Even in unregulated markets, high-performing firms have disclosure incentives to signal their quality and distinguish themselves from poorly performing firms.¹⁶⁹ However, the main reason for market failure in providing the optimal level of information is the problem of externalities. Despite being socially optimal, information disclosure might not be privately optimal for a specific firm.¹⁷⁰ Similar to the problem of commons or the “impure public goods” nature of information, this problem exists due to the externalities arising from non-excludability of information when it is out at large in the market.¹⁷¹ In the context of information disclosure, such externalities drive a wedge between privately and socially optimal levels of disclosure.¹⁷² As an example, Admati and Pfleiderer show that in a model of voluntary disclosure by firms in financial markets, externalities arise when firm values are correlated.¹⁷³ In such a setting, the costly disclosure of one firm can be used in the valuation of other firms, and hence can generate a free-rider problem.¹⁷⁴ Such disclosure can help the competitors of a disclosing firm while hurting the issuer.¹⁷⁵ In this case, the amount of disclosure is often suboptimal and regulation can improve social welfare.¹⁷⁶ In addition, Fishman and Hagerty argue that *mandatory* disclosure is necessary in markets in which the information about the product is relatively difficult to understand.¹⁷⁷ As mentioned above, since financial products and services are credence goods, this argument can be readily applied to financial services.

On the other hand, trust in inter-temporal transactions can be considered a public good, and leaving it to the forces of markets can result

168. See Akerlof, *supra* note 161, at 490.

169. *Id.*

170. See Leuz & Wysocki, *supra* note 165.

171. ANTHONY OGUS, REGULATION: LEGAL FORM AND ECONOMIC THEORY 34 (2004).

172. *Id.*

173. Anat R. Admati & Paul Pfleiderer, *Forcing Firms to Talk: Financial Disclosure Regulation and Externalities*, 13 REV. FIN. STUD. 479 (2010).

174. *Id.* at 512.

175. Merritt B. Fox, *Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment*, 85 VA. L. REV. 1335, 1345 (1999).

176. Admati & Pfleiderer, *supra* note 173, at 482.

177. Michael J. Fishman & Kathleen M. Hagerty, *Mandatory Versus Voluntary Disclosure in Markets with Informed and Uninformed Customers*, 19 J.L. ECON. & ORG. 45 (2003).

in its under-provision. The trust deficit in financial markets calls for government intervention, as do other sectors of the economy.¹⁷⁸ Aghion et al. demonstrate that in a cross-section of countries, the lack of trust breeds higher levels of government intervention even though the corruption in government itself is a public knowledge.¹⁷⁹ Among financial institutions, hedge funds and hedge fund products have an established reputation for complexity and opaqueness. Such opaqueness intensifies the trust deficit and amplifies information asymmetry in hedge fund products. Therefore, notwithstanding the theories arguing that voluntary disclosure itself is a separating equilibrium,¹⁸⁰ such a signaling mechanism by firms might become too costly because of the externalities involved in the voluntary disclosure setting. The proprietary nature of hedge funds' information exacerbates this problem and hinders more information disclosure.

There are additional reasons for hedge funds' non-disclosure, which can convolute the signaling effect of disclosure and further dissuade hedge funds from voluntary disclosure. Some hedge funds might be saturated with investors' money and cannot take on additional investments. Accordingly, they may stop disclosing information. Other hedge funds might not disclose information because of the regulatory limits on the number of their investors. In addition, the prohibition on public solicitation by hedge funds further decreases their incentives to disclose information. Since disclosure, to a certain extent, might be considered public solicitation, it may trigger the automatic application of otherwise dormant rules to hedge funds. Therefore, not only do hedge funds have no incentive to disclose, but certain statutory provisions also prohibit or discourage them from doing so, thereby refuting the optimality of voluntary disclosure in the context of hedge fund regulation. Moreover, under the voluntary disclosure mechanism, there is a likelihood that some hedge funds might disclose information opportunistically (i.e., by disclosing less valuable information) or they may cherry pick the information to be disclosed. Since all these factors will discourage the

178. After all, this was the same reason for most of the bank runs and systemic risks in the history of finance.

179. Philippe Aghion et al., *Regulation and Distrust*, 125 Q. J. ECON. 1015 (2010).

180. The argument is that even in the absence of mandatory disclosure, outperforming firms will disclose and underperforming firms will not, hence disclosure itself will be a separating equilibrium that will distinguish highly-performing firms from poorly performing ones.

disclosure of information, it will lose its signaling effect. Therefore, disclosing firms will not be rewarded with more money from investors.

To summarize the argument, the main market mechanism that can inhibit regulatory arbitrage is the reputational effect arising from the regulatory infrastructure, such as regulation offering adequate protections for property rights, creditor rights, and reliable disclosure mechanisms. Indeed, reputation, which is induced by regulation, is a compensation for the costs of regulation for regulated firms and will keep regulated firms where they are, instead of encouraging them to migrate to other jurisdictions. However, in the absence of mandatory disclosure systems for hedge funds, no regulatory scheme and jurisdiction can be credible enough to justify its costs and hence cannot inhibit a race to the bottom. Therefore, the firms registered in those jurisdictions will not enjoy a premium because the regulation cannot sufficiently enhance reputational benefits. A regulatory regime that generates no reputational benefit for the regulated industry to compensate the costs of regulation is especially prone to regulatory arbitrage. Since the lack of transparency lowers the reputational costs of regulatory arbitrage for hedge funds, hedge funds will be more likely to engage in regulatory arbitrage than their mainstream counterparts.

IV. PUBLIC POLICY RESPONSES TO REGULATORY ARBITRAGE BY HEDGE FUNDS

To address the problems associated with regulatory arbitrage, several proposals have been put forward. These proposals range from equivalence requirements,¹⁸¹ strengthening regulatory coordination,¹⁸² cooperation, regulatory co-opetition,¹⁸³ and regulatory harmonization, to regulatory

181. Dirk A. Zetsche, *Competitiveness of Financial Centers in Light of Financial and Tax Law Equivalence Requirements*, in RECONCEPTUALISING GLOBAL FINANCE AND ITS REGULATION, *supra* note 11, at 391 (arguing that equivalence requirements are likely to result in heightened competitiveness in the financial sector and in the meantime prevent regulatory arbitrage by requiring convergence of objectives and allowing diversity in details).

182. Van Eechoud et al., *supra* note 44, at 309; *see also* James Chapman, Stéphane Lavoie & Lawrence Schembri, *Emerging from the Shadows: Market-Based Financing in Canada*, FIN. SYS. REV., June 2011, at 29, 37 (arguing for “a coordinated global response . . . to establish clear principles for the monitoring, assessment and regulation of [the shadow banking sectors] that . . . limits unintended consequences and opportunities for cross-country regulatory arbitrage”).

183. Geradin & McCahery, *supra* note 37.

consolidation,¹⁸⁴ and unification,¹⁸⁵ perhaps leading to the creation of a World Financial Organization akin to the World Trade Organization¹⁸⁶ or a Global Economic Council for overseeing the stability of the international financial system.¹⁸⁷ Although regulatory globalization can address cross-jurisdictional regulatory arbitrage, it will fall short of addressing intra-jurisdictional regulatory arbitrage arising from definitional problems.¹⁸⁸ Based on the idiosyncratic features of the hedge fund industry, this Article proposes an approach that can mitigate the negative externalities of regulatory arbitrage regardless of whether the arbitrage opportunity is intra-jurisdictional or inter-jurisdictional.

Given the benefits of regulatory competition, which presupposes some degree of regulatory arbitrage, the optimal amount of regulatory arbitrage is not zero. The aim is to maximize the benefits of regulatory arbitrage, while minimizing its externalities. As discussed earlier in the debate about regulatory competition, regulatory arbitrage facilitates the formation of a meta-market for legal and regulatory regimes within which it is possible to trade governance under one regime for another. In such a market, regulation itself is a commodity, and hedge funds will shop for the regulatory regime that most benefits them. They will buy into the system when they are satisfied that the marginal cost of the regime equals or is less than the corresponding marginal benefit. Therefore, while the initial intention of regulation is to monitor markets, regulatory arbitrage provides opportunities for firms to themselves regulate and affect behavioral changes in regulators. It follows that addressing the problems of regulatory arbitrage does not necessarily call for its total elimination, for it would be neither possible nor optimal.

To address regulatory arbitrage, special attention should be paid to incentives-related effects of regulation, i.e., a regulation that imposes

184. See, e.g., RAGHURAM G. RAJAN, *FAULT LINES: HOW HIDDEN FRACTURES STILL THREATEN THE WORLD ECONOMY* (2010).

185. Geradin & McCahery, *supra* note 37.

186. See Barry Eichengreen, *Not a New Bretton Woods but a New Bretton Woods Process*, in *WHAT G20 LEADERS MUST DO TO STABILISE OUR ECONOMY AND FIX THE FINANCIAL SYSTEM* (Barry Eichengreen and Richard Baldwin eds, 2008); see also Baxter, *supra* note 129, at 29.

187. Timothy Adams & Arrigo Sadun, *Global Economic Council Should Oversee All*, *FIN. TIMES* (Aug. 16, 2009), <https://www.ft.com/content/f253db24-8a8b-11de-ad08-00144feabdc0> [<https://perma.cc/4WQU-UJNE>].

188. For a discussion of definitional problems affecting the regulation of hedge funds, see Nabilou, *supra* note 13.

additional costs on the regulated industry should offset those costs by offering the industry benefits of being subject to a specific regulator. *Ceteris paribus*, the regulatory system in which the marginal benefits of regulation equal its marginal costs will be arbitrage-proof.¹⁸⁹ Therefore, the design of a financial regulatory regime should result in an equilibrium from which hedge funds have no incentive to deviate without making themselves worse off.

The immediate conceivable benefit of regulation is the reputational benefit that registering with certain regulators can create for financial institutions. However, such reputational benefits will not be sufficient to hinder hedge funds from regulatory arbitrage, as the benefits are not sufficient to off-set the costs of regulation, thereby inducing hedge funds to arbitrage between different regimes. Thus, the regulation should be designed to not only provide benefits, but also impose as minimal a cost as possible on hedge funds.

Following the underlying efficiency criterion and incentive compatibility of hedge fund regulation, regulators should provide the sector negatively affected by regulation with incentives to stay within the limits of its rules. One of the examples of such an exclusive advantage offered for regulated entities is illustrated in the banking industry.¹⁹⁰ Traditionally, the banking sector is heavily-regulated. To off-set the burden of such heavy regulations, regulators have granted the banks monopolies on certain financial transactions by offering them valuable bank charters.¹⁹¹ This protects the banking industry from outside competition, hence giving it sufficient countervailing benefits (subsidies) vis-à-vis the costs of heavier regulation.¹⁹²

189. This is conditional upon the comparative benefits of regulation; this does not necessarily mean that such a regulatory system should adhere to the least restrictive regulation to prevent a race to the bottom.

190. See Rebecca S. Demsetz, Marc R. Saldenberg & Philip E. Strahan, *Banks with Something to Lose: The Disciplinary Role of Franchise Value*, 2 *ECON. POL'Y REV.* 1 (1996).

191. See *id.*

192. The effect of such a monopoly was that prior to the emergence of the nonbank financial institutions, bank loans did not have appropriate substitutes; therefore, the demand for bank loans was fairly inelastic. See Sean Beckett & Charles Morris, *Are Bank Loans Still Special?*, 77 *ECON. REV.* 71, 71 (1992). The inelasticity of demand for bank loans was because of the charter value of the banks that limited the entry into the banking industry. The philosophy behind creating charter value for banks was to keep them within the banking regulatory scheme, which was more burdensome for banks than for similar financial institutions.

The history of banking shows that the advent of the shadow banking sector and the accompanying loss of bank charter value posed a major challenge to banks. For example, a decrease in bank charter value induced more risk-taking behavior by banks.¹⁹³ Prior to the loss of charter value, the charter by itself was considered a valuable asset for banks and losing the charter in the event of insolvency was one of the factors that incentivized banks to take less risk.¹⁹⁴ However, with decreasing charter value, this incentive was diluted and banks began to take more risks.¹⁹⁵

A more recent example of such off-setting benefits can be found in the Alternative Investment Fund Managers Directive (“AIFMD”). This Directive introduces the passport mechanism for hedge funds, which enables them to market their products throughout the European Union (“EU”) after registration with an EU Member State.¹⁹⁶ Introduction of such a mechanism is best understood as an off-setting mechanism for heavier regulation of hedge funds under the AIFMD with the aim of preventing European hedge funds from relocating to other loosely-regulated jurisdictions.¹⁹⁷ However, it remains to be seen how effective this strategy will be in preventing regulatory arbitrage by hedge funds or even in attracting new hedge funds to Europe. To be sure, such benefits will be measured against regulatory costs which are imposed on hedge funds by such strict regulations. It seems that it is only by creating a competitive edge or providing subsidies to firms that regulators can discourage regulatory arbitrage. Otherwise, the competitive pressure from the lightly-regulated financial institutions will generate positional externalities¹⁹⁸ and will incentivize more and more financial institutions to shift their business to such jurisdictions.

193. See Demsetz et al., *supra* note 190.

194. See *id.*

195. Alan J. Marcus, *Deregulation and Bank Financial Policy*, 8 J. BANKING & FIN. 557 (1984).

196. Directive 2011/61 of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and Amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010, art. 32(1), 2011 O.J. (L 174) 40.

197. See Hossein Nabilou, *A Tale of Regulatory Divergence: Contrasting Transatlantic Policy Responses to the Alleged Role of Alternative Investment Funds in Financial Instability*, 12 CAP. MKT. L. J. 94 (2017).

198. For the concept of positional externalities, see Robert H. Frank, *Positional Externalities Cause Large and Preventable Welfare Losses*, 95 AM. ECON. REV. 137, 137-41 (2005).

This Article argues that the indirect regulation of hedge funds through banking entities, which are already heavily regulated, will impose the lowest possible cost on the hedge fund industry. This is especially important to curtail regulatory arbitrage. As already suggested, a regulatory framework that only imposes costs without offering countervailing benefits is prone to regularly arbitrage. Indirect regulation of hedge funds through banks will make it redundant for regulators to devise regulations, which would create additional countervailing benefits for the hedge fund industry to create an equilibrium from which hedge funds do not have any incentives to deviate. The main rationale for shifting the focus from hedge funds to banks for the purpose of regulating hedge funds is that the banking entities are already heavily subsidized; the cost of indirect regulation of hedge funds by banking entities would be off-set by the already existing subsidies within the banking industry.

One of the controversial debates fueled by the recent crisis was the debate on whether to regulate hedge funds directly or indirectly.¹⁹⁹ On the one hand, U.S. and U.K. regulators and the hedge fund industry itself supported the indirect regulation of hedge funds through regulated banks. On the other hand, the EU supported a direct regulatory framework for hedge funds. This divergence of opinion was deepened by the events of the global financial crisis, including accusations of hedge funds' abusive short-selling practices. In the end, the clash of the two opposing views resulted in a compromise. It seems that one of the factors giving rise to such a compromise was an increasingly stringent attitude in the U.S. toward hedge fund regulation after the change of administration.²⁰⁰ This change of policy paved the way for the realization of European views on hedge fund regulation. The efforts to rein in hedge funds culminated in the G20 London Summit in April 2009, in which all parties agreed that hedge funds and their advisers should be subject to mandatory registration and disclosure requirements.²⁰¹ Nevertheless, this Article argues that indirect regulation can better address the problems of regulatory arbitrage by hedge funds.

The commands of law directed at creating behavioral changes in its subjects can be applied directly or indirectly. Direct or entity regulation

199. For the definition of direct and indirect regulation of hedge funds, see Nabilou & Paccès, *supra* note 150.

200. For more details, see Eilis Ferran, *After the Crisis: The Regulation of Hedge Funds and Private Equity in the EU*, 12 EUR. BUS. ORG. L. REV. 379, 390 (2011).

201. *Id.*

includes “regulatory measures focusing on the regulation of the industry *itself* (as a discrete activity or as part of the broader, regulated investment services universe).”²⁰² Thus, direct regulation implies that regulation is directed at the hedge fund entity itself or at the activities directly or immediately conducted by the funds. In contrast, indirect regulation is a type of regulation the imperatives or commands of which are mediated by or transmitted through an intermediary to the primarily intended regulated entity or activity. Indeed, in indirect regulation of hedge funds, regulators directly regulate financial institutions that provide financial services to hedge funds or their counterparties.²⁰³ This involves “market discipline-inspired regulatory measures targeting the creditors and counterparties of hedge funds (mainly, but not exclusively, their prime brokers and securities brokers).”²⁰⁴ Therefore, a key element in the indirect approach is the regulator’s reliance on market participants, namely to reward well-managed firms and to punish poorly-managed ones.²⁰⁵

There are several reasons why direct regulation of hedge funds cannot effectively address potential hedge fund externalities.²⁰⁶ The regulatory arbitrage-generating effect of direct regulation is one of the repeatedly-pronounced arguments against direct regulation.²⁰⁷ Indeed,

202. PHOEBUS ATHANASSIOU, HEDGE FUND REGULATION IN THE EUROPEAN UNION: CURRENT TRENDS AND FUTURE PROSPECTS 227 (Joseph J. Norton et al. eds., 2009).

203. LLOYD DIXON ET AL., HEDGE FUNDS AND SYSTEMIC RISK 34 (2012), http://www.rand.org/content/dam/rand/pubs/monographs/2012/RAND_MG1236.pdf [<https://perma.cc/YT46-GWNA>].

204. Athanassiou, *supra* note 202, at 227. Athanassiou adds that:

The aim of such measures would be to enhance the counterparty risk management practices that financial institutions apply in their dealings with hedge funds and/or to impose disclosure duties on prime brokers and other crucial hedge fund counterparties in respect of their hedge fund exposures. An indirect approach could be complemented by the obligatory ‘registration’ of managers of hedge funds in conjunction with the (voluntary) improvement, by the hedge fund industry itself, of its transparency, risk management and asset valuations standards and practices.

Id.

205. Roger T. Cole et al., *Hedge Funds, Credit Risk Transfer and Financial Stability*, 10 FIN. STABILITY REV. 7, 11 (Apr. 2007).

206. Nabilou & Paccès, *supra* note 150, at 192-96 (2015).

207. For example, Kaal argues that not only will direct regulation induce relocation of hedge funds, but it also will result in their restructuring. WULF ALEXANDER KAAL,

one of the primary concerns discouraging targeted regulation of hedge funds is that not only will the imposition of such regulation result in competitive disadvantages for the jurisdiction imposing the rule, but that it will also lead to the offshore relocation of hedge funds. This is largely because hedge funds, similar to other corporate entities, have an exit option and will “vote with their feet.”²⁰⁸ This relocation has adverse consequences for regulators and the jurisdiction involved. It can deprive the rule-imposing jurisdiction of tax revenues generated from hedge funds as well as of the job opportunities created by them. Indeed, the fear of hedge fund relocation was one of the factors that played a role in the regulatory forbearance in imposing stricter rules on the funds prior to the financial crisis.²⁰⁹

Therefore, since regulation cannot offer substantial reputational benefits (subsidies) for hedge funds, those benefits are unlikely to off-set the costs of direct regulation. In order to effectively address the potential systemic risks of hedge funds while minimizing the opportunities for regulatory arbitrage, the funds should be indirectly regulated through their prime brokers, executing brokers, investment managers and advisers, and

HEDGE FUND REGULATION BY BANKING SUPERVISION: A COMPARATIVE INSTITUTIONAL ANALYSIS (2005). For instance, Garbaravicius supports the idea that indirect regulation can be more effective than direct regulation in regulating hedge funds because it can avoid the problem of regulatory arbitrage by hedge funds. See TOMAS GARBARAVICIUS & FRANK DIERICK, HEDGE FUNDS AND THEIR IMPLICATIONS FOR FINANCIAL STABILITY 49 (2005). Danielsson and Zigrand argue that “there always remains some risk that localized regulation causes hedge fund advisors to relocate to more favorable jurisdictions, removing regulatory oversight further” and making it counterproductive. See Jon Danielsson & Jean-Pierre Zigrand, *Regulating Hedge Funds*, 10 FIN. STABILITY REV. 29, 30 (2007).

208. Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416, 416 (1956). On the other hand, Hirschman explains how such a rapid exit can exacerbate the deterioration of a firm because “those customers who care *most* about the quality of the product and who, therefore, are those who would be the most active, reliable, and creative agents of voice are for that very reason also those who are apparently likely to exit first in case of deterioration.” Albert O. Hirschman, EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES (1970). As a result, “the rapid exit of the highly quality-conscious customers—a situation which paralyzes voice by depriving it of its principal agents—is tied to the availability of better-quality substitutes at higher prices.” See *id.*; see also Joel P. Trachtman, *Regulatory Competition and Regulatory Jurisdiction*, 3 J. INT’L ECON. L. 331, 337 (2000).

209. Wulf A. Kaal, *Hedge Fund Regulation via Basel*, 44 VAND. J. TRANSNAT’L L. 389, 391, 400, 438 (2011).

subject to certain regulatory qualifications on their investors and investments.²¹⁰

In addition, because of the value of the proprietary information, it seems implausible to suggest the imposition of mandatory disclosure as a means of direct regulation. Furthermore, voluntary disclosure involves externalities, which can inhibit hedge funds from optimally sourcing the information. Thus, indirect regulation of hedge funds can better address these problems, as banks and prime brokers are already subject to mandatory disclosure requirements.

Delegation of hedge fund regulation to the counterparties of hedge funds not only decreases the chances of regulatory capture, but also increases efficiency by providing incentives to regulators to compete with each other. Furthermore, since indirect regulation of hedge funds will be implemented by multiple prime brokers, it provides for the possibility of decentralized enforcement of the rules that are initially applied to the banking sector.

It might be argued that such an indirect regulation will impose additional restrictions on hedge funds' counterparties and thereby cause certain regulatory arbitrage opportunities for hedge funds' prime brokers and other counterparties. However, banks—the only depository institutions—are much more sensitive to reputational considerations than hedge funds, especially when it comes to enhancing their reputation by registering with a regulator that provides strong and credible deposit insurance. Accordingly, the costs of regulatory arbitrage for banks are more significant than those for hedge funds. Also, given the relatively more harmonized international regulatory framework for banks,²¹¹ which are the main counterparties of hedge funds, regulatory arbitrage by banks would be of less systemic significance than regulatory arbitrage by hedge funds.

CONCLUSION

The interplay and dynamics of financial regulation and hedge funds' responses to such regulation can culminate in regulatory arbitrage in the global financial markets. This Article argues that the differential regulation of homogenous financial activities giving rise to regulatory

210. J. S. AIKMAN, *WHEN PRIME BROKERS FAIL: THE UNHEEDED RISK TO HEDGE FUNDS, BANKS, AND THE FINANCIAL INDUSTRY* (2010).

211. Such as the provisions of Basel I, II, and III.

fragmentation is the main source of regulatory arbitrage. However, the differential regulatory treatment should not be considered a necessary evil; instead, it may often yield more efficient outcomes than its alternatives (i.e., consolidated regulatory regimes) do in certain market settings. This Article focuses on regulatory competition as a driving force for differential regulatory treatment of homogenous financial activities, which can result in fragmented regulatory schemes and a dual system of governance.

There are market limits to regulatory arbitrage. For example, empirical studies suggest that regulatory arbitrage is limited by reputational effects. Legal infrastructure, which signals quality, plays an important role in the relocation decisions of financial firms preventing a race to the bottom. Nevertheless, such an argument cannot plausibly be applied to hedge funds. The level of sophistication in the investor base of the hedge fund industry inhibits legal placebo effects that could otherwise amplify the impact of regulation-enhanced reputation. Furthermore, hedge funds' high attrition rate and limited transparency can also diminish the reputational and credibility costs for hedge funds. Such indiscernible reputational costs facilitate hedge fund regulatory arbitrage and do not disincentivize hedge funds from engaging in regulatory arbitrage. Therefore, this Article suggests that to reduce the likelihood of regulatory arbitrage, instead of regulating hedge funds directly, the strategy should focus on regulating hedge funds indirectly through their counterparties, creditors, and investors for whom reputational costs are significantly higher. The theoretical framework and recommendations put forward in this Article can easily lend themselves to empirical tests, especially in an era in which hedge funds are coming out of the shadows due to the information disclosure obligations imposed on them by the post-crisis financial reforms on both sides of the Atlantic.