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Regulatory Arbitrage and Hedge Fund Regulation: A Need for a Transnational Response?

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Abstract

Hedge funds, as paragons of exploiting regulatory discrepancies, are heavily criticized for thwarting regulatory efforts to address systemic risk. This paper investigates arbitrage seeking behavior of hedge funds in the globally-fragmented financial regulatory framework. Regulatory arbitrage is viewed as an indispensible element of regulatory competition, which plays a significant role in delivering the benefits of regulatory competition by providing regulatory substitutes for regulated firms, thereby increasing the elasticity of demand for regulators and engendering regulatory accountability.

Despite its benefits, regulatory arbitrage involve costs. Market discipline can constrain the negative externalities of regulatory arbitrage, however, this paper argues that due to certain idiosyncratic features of the hedge fund industry, such as sophistication of investor base, higher attrition rate, and lack of transparency, market discipline by itself cannot fully address the potential externalities of regulatory arbitrage by hedge funds. These features weaken market signals and reduce the reputational advantages of being subject to high-quality regulation. The lower reputational costs in turn reduce the overall costs of regulatory arbitrage for hedge funds compared with mainstream financial institutions, which makes it more likely for hedge funds to engage in regulatory arbitrage than other mainstream financial institutions do.

In a departure from the mainstream research, which recommends regulatory coordination, cooperation, harmonization, and consolidation as legal remedies to address problems originating from regulatory arbitrage by hedge funds, this paper argues that such proposals are at best misguided and at worst systemic risk amplifier. Instead, this paper suggests that to reduce the likelihood of regulatory arbitrage, instead of regulating hedge funds directly, the strategies for regulating hedge funds should focus on indirect regulation of hedge funds through their counterparties, creditors and investors for which reputational costs of regulatory arbitrage tend to be significantly high.

Keywords: Hedge fund, regulatory arbitrage, regulatory harmonization, systemic risk

JEL Classification: F3, G1, G2, G3, K2, N2

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Introduction

In regulation of economic activities,[1] the alternatives are no longer between the two polar extremes of *laissez-faire* capitalism and government central planning.[2] The complexity of modern economies automatically boils down the alternatives to no more than one, i.e., a mixed economy within which free economic activities are intermingling with government intervention; together playing a major role in shaping economic incentives. Although, based on the dynamics of different economic systems, the level of government intervention ebbs and flows, the consequences of such interventions are not to be underestimated. One of the challenging problems arising from having a mixed economy in place is drawing the boundaries between regulated and unregulated markets on the one hand, and lightly regulated and heavily regulated markets on the other hand.[3]

In addition, financial market globalization and the global reach of investment funds pose serious challenges to regulatory regimes and their responses to address potential systemic externalities of investment funds. Hedge funds are one of the global players of investment world, however, their regulatory framework remains local. The existing patchwork of financial regulatory regimes is particularly prone to regulatory arbitrage, which leads to circumvention of the specific mandates of individual regulatory regimes in the globally-fragmented financial regulatory system. Therefore, multinational firms have to operate their business in a patchwork of fragmented regulatory regimes at the global level. It is in such a context that regulatory arbitrage opportunities arise due to economic firms' desire to maximize their profits by reducing their regulatory costs through exploiting the regulatory discrepancies which such a fragmented regulatory context creates. Hence, in addition to comingling regulated economic activities with unregulated ones,[4] regulatory arbitrage is a by-product of fragmented regulatory systems.

Regulatory arbitrage has as long a history as regulation itself and is as ubiquitous as economic regulation. The first instances of regulatory arbitrage are documented in the context of medical ethics[5] and taxation.[6] In financial markets, the well-known example of religious prohibitions on interest

[1] *See* Tobias Berg, Bernhard Gehra and Michael Kunisch, 'A Certification Model for Regulatory Arbitrage: Will Regulatory Arbitrage Persist under Basel III?' (2011) 21 The Journal of Fixed Income 39; Larissa Roxanna Smith and Víctor M Muñiz-Fraticelli, 'Strategic shortcomings of the Dodd-Frank Act' (2013) 58 The Antitrust Bulletin 617

[2] Sanford Ikeda, *Dynamics of the Mixed Economy: Toward a Theory of Interventionism* (Routledge 2003)

[3] Charles Goodhart, 'The Boundary Problem in Financial Regulation' (2008) 206 National Institute Economic Review 48

[4] James W. McKie, 'Regulation and the free Market: The Problem of Boundaries' (1970) 1 The Bell Journal of Economics and Management Science 6 6

[5] Durant reports about the widespread presence of tax evasion in ancient Greece. 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. It is also well documented how Hippocratic code of medical ethics regarding abortion was systematically circumvented by physicians outsourcing the practice to midwives. (Modern equivalence of midwives in finance are the special purpose vehicles (SPV) designed to enjoy the exceptions from certain bankruptcy requirements (bankruptcy-proof financing)) Will Durant, *The life of Greece: The story of Civilization*, vol 2 (Simon & Schuster 2011)

[6] 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. Since small 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. He notes how despite increases in tax rates, the tax revenues decreased that in turn contributed to further decline of the Roman Empire. Bruce Bartlett, 'How excessive government killed Ancient Rome' (1994) 14 Cato Journal 287 300

sparked huge regulatory arbitrage activities. The advent of instruments such as *Murabaha* transactions and *ijara wa iqtina* (leasing and promise to gift) mechanism in Islamic finance,[7] and of mechanisms such as dry exchanges (combio secco) and discretionary deposits[8] were to circumvent the ban on Riba[9] in Islamic finance and interest in Christianity.[10] Regulatory arbitrage reached its zenith in the globalization and information age.[11] In modern times, the globalization of trade and finance, gave traders more informational advantage. Coupled with the absence of global coordination, such a trend amplified the likelihood, magnitude, and frequency of regulatory arbitrage.[12]

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)[13] through active trading, and making use of a variety of trading strategies.[14] Hedge

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[7] Michael S. Knoll, 'The Ancient Roots of Modern Financial Innovation: The Early History of Regulatory Arbitrage' (2008) 87 Oregon Law Review 93 103

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* (Cambridge University Press 2006)

[8] Tim Parks, *Medici Money: banking, metaphysics and art in fifteenth-century Florence* (Profile books 2013)

[9] In Islamic finance, it is believed Riba is different from the interest. *See* Abd al-Rahman Al-Jaziri, *Al-Fiqh 'ala Al-madhahib Al-arba'a* (Dar Ihya' Al-Turath Al-'Arabi 1986) See also Timur Kuran, *The long divergence: How Islamic law held back the Middle East* (Princeton University Press 2011)

[10] Ferguson demonstrates how Jews dominated the financial markets of the 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* (Penguin Books 2011)

Kuran illustrates how the Middle East's indigenous Christians and Jews came to dominate the most profitable and lucrative sectors of the local economy, especially in banking and insurance, through the choice of law. 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. Timur Kuran, 'Why the Middle East Is Economically Underdeveloped: Historical Mechanisms of Institutional Stagnation' (2004) 18 The Journal of Economic Perspectives 71 72

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

[11] Indeed, globalization reduced regulators' powers by harnessing more regulatory arbitrage opportunities for firms, which disapprove of their regulatory policies of their jurisdiction. Jonathan R. Macey, 'Regulatory Globalization as a Response to Regulatory Competition' (2003) 52 Emory Law Journal 1353 1357

[12] More recently, it is 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 and Ingo Walter, 'International alignment of financial sector regulation' in Viral V. Acharya and Matthew Richardson (eds), *Restoring Financial Stability: How to Repair a Failed System* (Restoring Financial Stability: How to Repair a Failed System, John Wiley & Sons, Inc. 2009) 368 More recently in China, since there have been strict restrictions on lending within China (China's benchmark interest rate being 6%, the same rate in Hong Kong being 0.5%), Chinese companies use trade finance instruments to borrow money offshore in a much lower interest rates. *See* Wei Shen, 'Competing for Renminbi: Financial Centers in the Context of Renminbi Globalization' in Ross P. Buckley, Emilios Avgouleas and Douglas W. Arner (eds), *Reconceptualising Global Finance and Its Regulation* (Reconceptualising Global Finance and Its Regulation, Cambridge University Press 2016) 198

The regulatory arbitrage activities are not limited to the prohibitions or caps on interest rates, it would happen in any other context. For example, in response to the recent tightening and enforcement actions against banking secrecy laws, it is argued that such policies might result in the rise of underground organizations that offer alternative unreported channels for funds which want to go unreported. Such restrictions on banking secrecy might even create incentive for the relocation of deposits to the least compliant heavens. *See* Ruth Plato-Shinar, 'Cross-Border Banking: Reconceptualising Bank Secrecy' in Ross P. Buckley, Emilios Avgouleas and Douglas W. Arner (eds), *Reconceptualising Global Finance and Its Regulation* (Reconceptualising Global Finance and Its Regulation, Cambridge University Press 2016) 249 See also Niels Johannesen and Gabriel Zucman, 'The end of bank secrecy? An evaluation of the G20 tax haven crackdown' (2014) 6 American Economic Journal: Economic Policy 65

[13] 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?' (2009) 40 The University of Memphis Law Review 165 166 (arguing that generation of alpha is one of the significant features of hedge funds).

[14] For the definition of hedge funds, *see* Hossein Nabilou, 'The Conundrum of Hedge Fund Definition' (Forthcoming 2016) European Company and Financial Law Review

funds are historically viewed as paragons of exploiting regulatory discrepancies. Moreover, the recent global financial crisis triggered a debate about their contribution to the financial crisis. Thus far, there is an immense literature studying 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.[15] Although different explanations are presented for such an unprecedented regulatory animosity towards hedge funds,[16] the post-crisis anti-hedge fund sentiment can partly be understood against a background of gaming regulatory regimes by hedge funds through engaging in regulatory arbitrage.

This article proceeds as follows. First, the concept and dynamics of regulatory arbitrage is defined and analyzed. Second, regulatory arbitrage is explained in the context of regulatory competition, its virtues, in terms of delivering the benefits of regulatory competition, and it social costs or negative externalities is discussed. Third, the role of market discipline and government regulation in reducing the social costs of regulatory arbitrage is elucidated, and the reasons for the failure of market mechanisms to address the social costs of regulatory arbitrage by hedge funds are evaluated. Fourth, the role of public policy responses in constraining the negative externalities of regulatory arbitrage is discussed and the role of the indirect regulation in addressing such problems is highlighted. Fifth, it is concluded that the indirect regulation can better address the potential externalities of regulatory arbitrage by hedge funds.

1. Regulatory arbitrage: the concept and dynamics

The term arbitrage refers to "the exploitation of price differences between two goods that are essentially the same".[17] Arbitrage often takes place where the prices of identical goods are different in two different 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 doing 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.

[15] Politicians demonized hedge funds as being 'crazy' and 'hellish'[4] which "fall like a plague of locusts" over the companies, "devour everything, then fly on to the next one." (A statement quoted from Franz Müntefering, Germany's deputy chancellor, Sebastian Mallaby, 'Hands off hedge funds' (2007) 86 Foreign Affairs 91 92

[16] Romano argues that such a move toward regulating hedge funds is understandable in the traditional hostility against the short-selling activities. See: Roberta Romano, 'Against Financial Regulation Harmonization: A Comment' (2010) Working Paper No. 414 Yale Law & Econ

[17] Andreas Engert, 'Transnational Hedge Fund Regulation' (2010) 11 European Business Organization Law Review 329 357

A firm, which is free to choose between two jurisdictions with differential regulatory costs, will engage in doing business at lower regulatory costs (price). This practice is called regulatory arbitrage.[18] 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".[19]

Regulatory arbitrage is one of the unintended consequences of effective regulation. Effective regulation is costly and "it is likely to penalise those within the regulated sector, relative to those just outside, causing substitution flows towards the unregulated."[20] Firms engaged in regulatory arbitrage are often doing so to avoid taxes, accounting standards, securities disclosure requirements, and other regulatory burdens.[21] Although there are different mechanisms to engage in regulatory arbitrage, the most popular and apparently the least costly mechanism involves the manipulation of the structure of a deal.[22] For instance, most financial derivatives were designed to take advantage of arbitrage opportunities. Derivatives and strategies exploiting such market discrepancies allow market participant to circumvent financial regulations and tax burdens.[23]

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 similar financial activities differently from other similar activities, thereby subjecting the same financial activities or methods to the governance of 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 method involving the least costs using legal and financial engineering. The latter form is achieved either by manipulating the design of the financial product or by changing the markets in which trades 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]

[18] Ibid
[19] Victor Fleischer, 'Regulatory arbitrage' (2010) 89 Texas Law Review 227 229
[20] Goodhart, 'The Boundary Problem in Financial Regulation'
[21] Fleischer, 'Regulatory arbitrage'
[22] Ibid
[23] Lynn A. Stout, 'Betting the bank: How derivatives trading under conditions of uncertainty can increase risks and erode returns in financial markets' (1995) 21 Journal of Corporation Law 53 57
[24] It seems that what Charles Goodhart dubs 'boundary problem' is the same as 'intra-jurisdictional regulatory arbitrage'.
[25] Merton Miller, 'Financial Innovation: The Last Twenty Years and the Next' (1986) 21 Journal of Financial and Quantitative Analysis 459 459

Financial regulation follows the logic and dynamics of influence and change in influencing the behavior of regulated industries. In 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 the private innovation.[27] They attribute the rise of the shadow banking system to the regulatory and legal changes within the past four decades which gave advantage to three main categories of financial institutions; money-market mutual funds (MMMFs) which captured retail deposits from traditional banks, securitization which helped traditional banks to move assets off their balance sheets, and repurchase agreements (repos) which facilitated the use of securitized bonds as money. Needless to say, not only does shadow banking include MMMFs, but also it includes hedge funds, private equity funds, proprietary trading desks of traditional banks and other similar institutions essentially engaging in maturity transformation.[28]

On the other hand, 'inter-jurisdiction regulatory arbitrage'[29] arises from differential regulatory treatment of identical business activities in different jurisdictions.[30] In this case, absent international financial coordination, regulatory arbitrage may arise across national jurisdictions. The principle of sovereignty in international law, which entitles states to independently manage their internal economic affairs and excludes other nation-states from interfering in their domestic affairs, is the main reason for differential regulatory treatment of homogenous activities in different jurisdictions.[31] Regardless of its form, regulatory arbitrage is heavily criticized for neutralizing regulatory efforts to address systemic risks.[32]

See also Frank Partnoy, 'Financial Derivatives and the Costs of Regulatory Arbitrage' (1996) 22 Journal of Corporation Law 211 227

[26] Jean Tirole, 'Lessons from the Crisis ' in Mathias Dewatripont, Jean-Charles Rochet and Jean Tirole (eds), *Balancing the Banks: Global Lessons from the Financial Crisis* (Balancing the Banks: Global Lessons from the Financial Crisis, Princeton University Press 2010) 29

[27] Gary B. Gorton and Andrew Metrick, 'Regulating the Shadow Banking System' (2010) Brookings Papers on Economic Activity 261 261

[28] Nicola Gennaioli, Andrei Shleifer and Robert W. Vishny, 'A Model of Shadow Banking' (2011) NBER Working Paper No 1711

[29] In Charles Goodhart terminology, this would correspond to the 'border problem'. See Charles A. E. Goodhart and Rosa M. Lastra, 'Border Problems' (2010) 13 Journal of International Economic Law 705

[30] Engert, 'Transnational Hedge Fund Regulation'

[31] 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 structure of existing financial regulation is, in major part determined by the securities industry itself. He attributes the existence of regulatory exemptions mostly to the industry lobbying. See Partnoy, 'Financial Derivatives and the Costs of Regulatory Arbitrage'

[32] For example, Acharya and Richardson, believe that the regulatory capital arbitrage was at the heart of the recent financial crisis. See: Viral V. Acharya and Matthew Richardson, 'Implications of the Dodd-Frank Act' (2012) 4 Annual Review of Financial Economics 1 10. *See also* International Monetary Fund, *Global Financial Stability Report: Risk Taking, Liquidity, and Shadow Banking: Curbing Excess While Promoting Growth*, October 2014) 89

Stein identifies two economic driving forced for securitizations: risk-sharing and regulatory arbitrage. The collapse of the securitized markets in turn played a major role in financial crisis. See Jeremy C. Stein, 'Securitization, shadow banking & financial fragility' (2010) 139 Daedalus 41

2. Causes of regulatory arbitrage

In this section, the causes of regulatory arbitrage are discussed. There are two major causes for regulatory arbitrage, the first is the differential regulatory treatment of homogenous business activities and the second is the problems arising from legal interpretation. Differential regulatory treatment arises from financial market compartmentalization, regulatory competition and partial industry regulatory strategies.

2.1. Differential regulatory treatment of homogenous financial activities

It is often argued that similar institutions undertaking similar functions should be regulated similarly.[33] Otherwise, a regulatory design, which treats identical activities differently, risks regulatory arbitrage. In other words, the abuse of regulatory loopholes by financial institutions is an unintended consequence of a regulation which 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/or within a particular jurisdiction.

Regarding the intra-jurisdictional regulatory arbitrage, the need for differentiated regulation creates regulatory bifurcation. Although there are benefits for subjecting identical firms and financial products to a single regulator such as coordination and 'level playing field' advantages, unequal and differential treatment of the identical components or subsets of an industry has its own proponents. For example, theories advocating regulatory competition and underscoring its efficiency-enhancing features[34] can eventually lead to regulatory fragmentation. Needless to say, such a fragmentation can provide potential grounds for intra-jurisdictional regulatory arbitrage.

Differential regulatory treatment of homogenous financial activities has three major reasons; financial market compartmentalization which provides the ground for differential regulatory treatment,[35] the benefits of regulatory competition which leads to the subjection of different firms to the governance of different rules,[36] and the partial industry regulation theory which supports the differential regulation

[33] Acharya and Richardson, 'Implications of the Dodd-Frank Act'
[34] Romano, 'Against Financial Regulation Harmonization: A Comment'
[35] In financial markets, institutional financial regulation tends to segment financial markets and institutions. For example, in most jurisdiction deposit taking and lending is a regulated activity 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?*, 1982)
[36] For more information regarding the arguments for the regulatory competition by implementing competitive federalism approach, *See Roberta Romano, 'Empowering Investors: A Market Approach to Securities Regulation' (1998) 107 The Yale*

to enhance competition among regulated firms.[37] However, this paper focuses on regulatory competition and its role in encouraging hedge funds to engage in regulatory arbitrage.

2.1 Financial market compartmentalization

Financial regulation is a function of 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 there is a need for special regulatory treatment for banks. In his view, offering transaction accounts, providing backup liquidity for all other financial and non-financial institutions, and banks' role as a transmission belt for monetary policy were three features which distinguished them from other financial and non-financial institutions.[38] Almost two decades later, accounting for the development of close substitutes for bank's services,[39] he repeated the same arguments with slight differences.[40] Such an argument for bank 'specialness' presupposes that even accounting for dynamic behavior of different classes of financial institutions, the financial services industry can be compartmentalized.[41]

This argument is based on the underlying reasoning that the nature and function of financial institutions differentiate one financial institution from the other. Therefore, due to their specialization in certain financial instruments and strategies, different financial institutions yield heterogeneous benefits, become subject to idiosyncratic risks, and impose different risks to the financial system.

Contemporary history of financial regulation abounds with examples of fragmented regulation. For example, 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). Although the rationale behind such a separation was manifold, the most important reason was to prevent the conflicts of interest and inhibit the growing risk taking behavior stemming from the amalgamation of commercial and investment banking activities. In other words, it was argued that since investment banking is different from commercial banking in terms of its

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Law Journal 2359 See also Damien Geradin and Joseph A. McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate' in Jacint Jordana and David Levi-Faur (eds), *The Politics of Regulation: Institutions and Regulatory Reforms for the Age of Governance* (The Politics of Regulation: Institutions and Regulatory Reforms for the Age of Governance, Edward Elgar Publishing, Inc. 2004) pp. 90

[37] This phenomenon is sometimes called regulatory bifurcation, *See* Erich Schanze, 'Hare and Hedgehog Revisited: The Regulation of Markets That Have Escaped Regulated Markets' (1995) 151 Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift für die gesamte Staatswissenschaft 162 162

[38] E. Gerald Corrigan, *Are Banks Special?*Federal Reserve Bank of Minneapolis,[1982]), http://www.jura.uni-augsburg.de/en/curriculum/summer_program/materials/material_2010/Corrigan_Are_Banks_Special.pdf

[39] See for example: Alan J. Marcus, *Deregulation and Bank Financial Policy*, 8 Journal of Banking & Finance 557 (1984)

[40] E. Gerald Corrigan, *Are Banks Special?: A Revisitation* , 2000, , http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3527, However, other scholars do not agree with the 'specialness' argument for banks. See for example: Anat R. Admati & Martin Hellwig, The Bankers' New Clothes: What's Wrong with Banking and what to do about It (2013)

[41] Richard S. Carnell et al., The Law of Banking and Financial Institutions (4th ed. 2009)

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 for the financial systems. Hedge funds occupy a relatively *sui generis* position in the financial system and provide financial systems with 'special' and idiosyncratic benefits that given the nature and function of other financial institutions they are unable to provide such benefits.[42]

Hedge funds provide diversification benefits for financial markets.[43] This means that investing in hedge funds can improve the risk-return relationship for investors. In addition, during periods of negative equity returns, investing in hedge funds can decrease the volatility of a portfolio by offsetting market movements.[44] For example, an allocation of 10 to 20 percent of portfolio to alternative investments, which include hedge funds, is recommended as an ideal allocation of investments for pension funds that strive for a long-term strategy of low risk and low returns.[45]

Moreover, hedge funds are sources of liquidity.[46] This function of hedge funds is especially notable in niche markets and in times of liquidity crises.[47] 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 markets, hedge funds can complete and deepen financial markets.[48] In fact, the growth and development of some niche markets such as unsecured and subordinated debt in recent years 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.[49]

In addition, hedge funds' focus on generating alpha, which comes from outperforming markets, is mostly achieved through exploiting market imperfections and discrepancies.[50] This function of hedge

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[42] 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.
[43] Wouter Van Eechoud et al., *Future Regulation of Hedge Funds—A Systemic Risk Perspective,* 19 Financial Markets, Institutions & Instruments , pp. 275-278(2010)
[44] Thomas Schneeweis, Vassilios N. Karavas & Georgi Georgiev, *Alternative Investments in the Institutional Portfolio,* CISDM Working Paper Series (2002), available at http://www.intercontilimited.com/mfutsarchive/alternativesforinstitutions.pdf
[45] William F. Sharpe, *Asset Allocation: Management Style and Performance Measurement,* 18 Journal of Portfolio Management 7 (1992)
[46] *See* Robert J. Bianchi & Michael E. Drew, *Hedge Fund Regulation and Systemic Risk,* 19 Griffith Law Review , pp. 13-15(2010). *See also* Francesco Franzoni & Alberto Plazzi, *Hedge Funds' Liquidity Provision and Trading Activity,* (2012), available at http://www.people.lu.unisi.ch/franzonf/paper_27Nov2012_subm.pdf
[47] 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.
[48] Eechoud et al., *Future Regulation of Hedge Funds—A Systemic Risk Perspective,* , pp. 275-278
[49] Bianchi & Drew, *Hedge Fund Regulation and Systemic Risk,* , pp. 13-15
[50] In fact, the lack of legal restrictions on hedge funds' use of financial instruments, strategies, and their investment concentration enables them to use a wide range of techniques to exploit market imperfections.

funds is beneficial to financial markets, because it facilitates and accelerates the price discovery mechanism in financial markets by eroding arbitrage opportunities.[51] 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. Such an investment enables hedge funds to spot and exploit mispriced assets and securities that in turn can lead to more efficient markets by pushing the securities prices to their true or fundamental values.[52] Moreover, such proprietary investment in information acquisition can significantly increase the role of hedge funds in disciplining the underperforming firms[53] and in some cases uncovering fraudulent activities. Therefore, it is argued that the larger the number and the size of hedge funds, the more efficient the financial markets.[54]

In addition, it is relatively easier for hedge funds to take contrarian positions in financial markets. Again, the unlimited use of leverage, short selling,[55] limited investor liquidity (limited redemption rights or longer lock-ups), unlimited possibility of investment in derivatives, and unrestraint investment concentration potentially enable hedge funds to take positions in financial markets that other financial institutions cannot take due to their regulatory capital requirements. This contrarian function of hedge funds can smooth and reduce market volatility and reduce the number and volume of asset price bubbles.[56] Not surprisingly, empirical evidence suggests that the leverage of hedge funds is countercyclical to the leverage 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.[57] In other words, when the leverage of the mainstream financial institutions increase during a financial boom, the leverage of hedge funds tend to decrease, while in the financial bust or credit crunch, the leverage of mainstream financial institutions decrease while hedge fund leverage tend 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, contrarian position taking by hedge funds can smooth the volatility of financial markets. Indeed, the nature of hedge funds' contrarian strategies enables them to be active traders during financial crises. This feature of hedge funds can potentially form a price floor in distressed

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[51] Andrew Crockett, *The Evolution and Regulation of Hedge Funds, in* Financial Stability Review; Special Issue, Hedge Funds , p. 22Anonymous Banque de France ed., 2007)

[52] William A. Roach Jr., *Hedge Fund Regulation- "What Side of the Hedges are You on?* 40 The University of Memphis Law Review , p. 173(2009-2010)

[53] Lucian A. Bebchuk, Alon Brav & Wei Jiang, *The Long-Term Effects of Hedge Fund Activism,* SSRN Working Paper Series (2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2291577

[54] Crockett, *The Evolution and Regulation of Hedge Funds,* , pp. 22-23

[55] 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 price of the securities will be lower at 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 higher sale price and lower purchase price at which he has bought them back and returned them to the dealer.

[56] Eechoud et al., *Future Regulation of Hedge Funds—A Systemic Risk Perspective,* , pp. 275-278

[57] This means that hedge funds can be liquidity providers in times of liquidity crunch. *See* Andrew Ang, Sergiy Gorovyy & Gregory B. van Inwegen, *Hedge Fund Leverage,* 102 Journal of Financial Economics 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.

markets. Financial institutions such as banks cannot play such a role especially because of the Basel-like capital adequacy requirements (CARs) to which all depositary institutions are subject.[58] Therefore, hedge funds provide a significant stabilizing influence by providing liquidity and spreading risks across a broad range of investors.[59]

More importantly, hedge funds' investor base and the mechanisms used to lock-up capital for longer periods enable hedge funds to sustain their contrarian positions against market perceptions and movements.[60] Unlike mutual funds and banks, hedge funds are not required to redeem the investment on investor demand or within a very short period of time. The right to redeem in alternative investments is often governed by private contracts which may impose a longer lock-up periods on investors' capital. In particular, gates and side-pocket arrangements within the purview of private ordering provide an additional tool for hedge funds to restrict investor liquidity. This freedom from liquidity constraints gives hedge funds additional tools and techniques to better manage liquidity risk, and enables them to have long-term horizons in their investment strategies.[61]

All in all, hedge funds can substantially contribute to "capital formation, market efficiency, price discovery, and liquidity".[62] Regulatory agencies have consistently acknowledged the benefits of hedge funds to financial system.[63] Even after the financial crisis, the International Organization of Securities Commissions (IOSCO) suggested that hedge funds should be compensated for their intermediary functions and willingness to take such risks that other financial market participants are unwilling to take.[64]

Not only do hedge funds' special functions and benefits make them special in financial systems, thereby requiring special regulatory treatment, but also design-based *ex-ante* regulation of hedge funds justifies their differential regulatory treatment. By design, hedge funds have limits on the number and qualifications of their investor base. For example, regulatory requirements for hedge fund investor base rules out any further regulation on the grounds of investor protection, while such an

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[58] Jón Daníelson & Jean-Pierre Zigrand, *Regulating Hedge Funds, in Financial Stability Review*; Special Issue, Hedge Funds , p. 30Anonymous Banque de France ed., 2007)

[59] Jean-Pierre Mustier & Alain Dubois, *Risks and Return of Banking Activities Related to Hedge Funds,* Banque De France, Financial Stability Review; Special Issue, Hedge Funds , pp. 88-89(April 2007)

[60] Crockett, *The Evolution and Regulation of Hedge Funds,* , p. 22

[61] In terms of maturity transformation, hedge funds stand in between banks, 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* Eechoud et al., *Future Regulation of Hedge Funds—A Systemic Risk Perspective,* , pp. 275-278

However, it is suggested that recently hedge fund are engaging more and more in liquidity transformation. Jennifer Payne, *Private Equity and its Regulation in Europe,* 12 European Business Organization Law Review , p. 573(2011)

[62] Roach Jr., *Hedge Fund Regulation- "What Side of the Hedges are You on?* , p. 173

[63] United States Securities and Exchange Commission, *Implications of the Growth of Hedge Funds: Staff Report to the United States Securities and Exchange Commission* (Washington, D.C.: U.S. Securities and Exchange Commission,[September 2003]), http://www.sec.gov/news/studies/hedgefunds0903.pdf

[64] Bianchi & Drew, *Hedge Fund Regulation and Systemic Risk,* , pp. 13-15 In this perspective, the special regulatory treatment of hedge funds can be considered as a compensation package for hedge funds' benefits to the financial system such as liquidity provision in illiquid markets, helping the price discovery mechanism to become more efficient, risk distribution, contribution to financial integration, and diversification benefits.

argument does not hold for banks, mutual funds, pension funds, and insurance companies. This is mainly because the investors in these financial institutions are unsophisticated.

On the other hand, the choice of organizational form (LLP or LLC) automatically triggers certain mandatory rules such as general partners' (managers') co-investment in hedge funds and their potential liability. These features substantially align managers' incentives with the interest of the investors in hedge funds. If not circumvented one way or another, such an organizational form automatically rules out the need for imposing corporate governance standards on hedge funds that are required for banks and mutual funds.

To summarize, hedge funds play a *sui generis* role in financial markets. Needless to say, sustaining such benefits and addressing potential risks of hedge funds to financial markets call for their special regulatory treatment.[65] In addition to compartmentalization, two other factors contribute to the regulatory bifurcation of hedge funds around the globe, i.e., regulatory competition and partial industry regulation that will be discussed below.

2.2 Regulatory competition

Prior to the information age and globalization, competition among regulators to attract more businesses was not as fierce as it is in the globalization era.[66] With increased waves of globalization, flow of information, and emphasis on the free movement of goods, services, labor and capital, the capital like "water runs to find its level"[67] with an unprecedented pace. It is in this context that the race to attract more businesses started among turf-seeking regulators.

Regulatory competition is further accelerated by greater technological improvements, use of the internet, globalization of finance, and increasingly diminishing transaction costs which make the financial transactions being processed in a matter of a second. In such 'hyper-connected'[68] global markets, investors become an 'economic herd'[69] capable of shifting their business across the regulatory borders instantaneously. Such an opportunity for taking advantage of regulatory arbitrage

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[65] Needless to say, this differentiation requires different regulatory treatment for different financial institutions (positive feedback loop or positive reinforcing loop-- 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. (Deposit insurance, and having the access to Fed's discount window (LOLR)). Therefore differences in functions, regulatory framework (such as tax treatments, subsidies (deposit insurance), organization breeds more differential regulatory treatments and more differential regulatory treatments makes financial markets more compartmentalized. (positive feedback loop)

[66] 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. Durant, *The life of Greece: The story of Civilization* 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. Ferguson, *Civilization: The West and the Rest*

[67] Walter Bagehot, *Lombard Street* (H.S. King 1873)

[68] Thomas L. Friedman and Michael Mandelbaum, *That used to be us: How America fell behind in the world it invented and how we can come back*, vol First (Farrar, Straus and Giroux 2011)

[69] Thomas L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (Random House INC. 2000)

opportunities in an unprecedented pace increased regulatory competition. First instances of such competition for businesses are reported across states boundaries in federal jurisdictions in the U.S. This might very well explain why the theory of regulatory competition is so inextricably intertwined with the debate about federalism. It was against such a background that regulatory competition emerged as an 'economic theory of government organization'.[70]

The question is that while a unitary or a consolidated regulator can more consistently regulate business activities, why there is a need for regulatory competition creating gaps and fractures in the system which can be exploited to the detriment of regulators? Given the public goods nature of regulation,[71] in the regulatory competition literature, the original model of provision of public goods has been adapted to explain government output of regulation. Indeed, in the theory of regulatory competition, the provision of laws and regulations is similar to the provision of goods and services by economic firms. These models assume that governments are suppliers of regulation similar to suppliers of products and services in the marketplace, and they should be disciplined by the same forces.[72]

As an analogy to local governments, local jurisdictions are supposed to compete for scarce economic resources the financial market equivalent of which is capital. In the quest for more capital and serving the best interest of their constituents (or extending their regulatory turf), local regulators are supposed to offer the best quality of regulation to attract more customers (regulated entities). Advocates of localism argue that the very existence of localities and states generates plurality and extends the choices and opportunities of citizens to move into better localities that provide a better allocation of services and taxes, and eventually serves the economic efficiency.[73] Charles Tiebout's seminal work was the prototype of the argument for localism elaborating 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.[74] In this model, the national or state governments (within a federal framework), which provide the optimal level of regulation, are supposed to attract more mobile economic resources.

[70] Geradin and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'

[71] 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' (1992) 8 Economics and Philosophy 249 249

[72] 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.

[73] Sheryll D. Cashin, 'Middle-Class Black Suburbs and the State of Integration: A Post-Integrationist Vision for Metropolitan America' (2000) 86 Cornell Law Review 729 753

[74] Charles M. Tiebout, 'A Pure Theory of Local Expenditures' (1956) 64 Journal of Political Economy 416 416

In such a context, a unitary regulator is a monopolist and regulatory harmonization or consolidation of regulatory regimes is regarded as regulatory cartelization which should result in stifling competition and leading to inefficiencies. In contrast, a system consisting of multiple decentralized regulatory agencies competing for customers (economic firms) is supposed to result in more efficient results, namely enhanced quality of regulation with competitive prices.[75] For example, it is argued that 'the incessant turf battles' between American financial regulatory authorities is an equivalent of the competition among private businesses which disciplines regulators by the threat of loss of their market share (regulatory clientele) to other agencies, thereby promoting regulatory diligence and competence among regulators.[76]

Advocates of regulatory competition often appeal to the arguments in favor of decentralization. Decentralization mitigates information asymmetries, reduces the likelihood of regulatory capture, and encourages more experimentation which allows for alternative solutions for similar problems.[77] It also induces more innovation, 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.[78] Therefore, since the efficient level of output in local public goods is varied in different local jurisdictions, governments can provide a better allocation of local services in a decentralized structure.[79]

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 regulatory substitutes for regulated firms and thereby makes the demand for regulation elastic. The elasticity of demand for regulatory services from the regulated firms is a function of the alternative regulatory systems available to them.[80] In the harmonized regulatory system, the demand for regulatory services will be constant (high), while in the regulatory 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.

[75] Geradin and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'
[76] Richard S. Carnell, Jonathan R. Macey and Geoffrey P. Miller, *The Law of Banking and Financial Institutions* (4 edn, Aspen Publishers 2009) 65
[77] Geradin and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'
[78] Richard Briffault, 'Our Localism: Part I--The Structure of Local Government Law' (1990) 90 Columbia Law Review 1 5
[79] Wallace E. Oates, 'An essay on fiscal federalism' (1999) 37 Journal of economic literature 1120 1121 Although devolution and decentralization which can encourage competition is 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. And 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' (1994) 14 International Review of Law and Economics 125 125
[80] Macey, 'Regulatory Globalization as a Response to Regulatory Competition'

Such a dramatic change in the elasticity of demand means that if regulators cannot provide good quality regulations in competitive prices, they will be deserted by regulated firms. Hence, this increased elasticity of demand engenders more regulatory accountability towards their clientele. On the other hand, this market or 'downward accountability'[81] will impose constraints on regulators and can guard against corruption in regulatory systems. That is why regulatory competition is proposed as a safeguard against regulatory capture.[82] Since regulators have an incentive to increase their market share of regulated entities,[83] and their response to regulatory arbitrage will tend to at least maintain their existing regulatory turf, regulatory competition and the possibility of regulatory arbitrage will operate as a check on the regulatory despotism by enabling the regulated firms to rid themselves of inefficient regulators.

In addition, enhanced diversity among regulators can be effective in avoiding the conflicts of interest in regulatory functions.[84] By the same token, in the context of financial markets and hedge fund regulation, regulatory competition may create a less-friendly environment for the evolution of cooperation and corruption between regulators and regulated firms. This may be attributed to the peer pressure among regulators that can decrease the likelihood of the evolution of corruption.

Additionally, regulatory competition provides market benchmarks or yardsticks against which the regulatory oversight of each regulator can be assessed among different groupings in a regulatory tournament (yardstick competition).[85] Such an arrangement for monitoring regulators is similar to mechanisms long used in the 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,

[81] Colin Scott, 'Accountability in the Regulatory State' (2000) 27 Journal of Law and Society 38 38

[82] Ian Ayres and John Braithwaite, *Responsive Regulation: Transcending the Regulation Debate* (Oxford University Press 1992) Findings by Grabosky and Braithwaite's (1986) 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. The empirical findings in that regard confirm the theory that "the evolution of cooperation should occur only when regulator and the regulated firm are in a multi-period prisoner's [sic] dilemma game. Repeated encounters are required for cooperation to evolve."

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. Ibid

[83] Macey, 'Regulatory Globalization as a Response to Regulatory Competition'

[84] Cristie L. Ford, 'Principles-based securities regulation in the wake of the global financial crisis' (2010) 55 McGill Law Journal 257 257

Some scholars raise questions about regulatory arbitrage argument. For example, Zingales argues that since managers, rather than the shareholders are to choose regulators, such a regulatory regime based on choice of regulators made by managers can potentially suffer from severe agency problems. *See* Luigi Zingales, 'The Future of Securities Regulation' (2009) 47 Journal of Accounting Research 391 400

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 'regulatory race to the bottom' which enables financial institutions to circumvent effective financial regulation. *See* James R. Barth, Gerard Caprio Jr and Ross Levine, *Rethinking Bank Regulation: Till Angels Govern* (Cambridge University Press 2006) *See also* Acharya, Wachtel and Walter, 'International alignment of financial sector regulation'

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. On the other hand, the regulatory harmonization can decrease the likelihood of regulatory arbitrage while inducing the likelihood of regulatory capture.

[85] Andrei Shleifer, 'A theory of yardstick competition' (1985) 16 The Rand journal of economics 319

there are several methods to deal with this information asymmetry problem, such as 'cost-of-service' regulation and 'lagged price adjustment' mechanisms. However, both of these mechanisms can be equally inefficient.[86] Shleifer suggests that in such a setting, yardstick competition, can achieve a more efficient outcome than the alternatives.[87]

Where competition involves political agents, the tournament can be adopted in the regulatory competition with the focus on competition between 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 other politicians' performance as a yardstick or benchmark to evaluate the performance of their own politicians.[88]

Likewise, there are several studies emphasizing the welfare-enhancing feature of regulatory competition in financial regulation.[89] For example, regulatory competition among accounting standards and the availability of the choice of regulators and different formats for corporations within and across international boundaries would improve the efficiency of the corporate governance and accounting standard setting and practices, and would eventually lead to lower cost of capital. Thus, competitive accounting regimes are more efficient than monopolistic accounting regimes both domestically and internationally.[90] Moreover, such a cross-country regulatory competition can provide alternatives for financial institutions to evade costly regulations resulting in improvements in capital markets' allocative efficiency and enhancing global economic growth.[91]

Despite the benefits of regulatory competition and regulatory arbitrage, they also involve (social) costs or externalities. The most important aspect of regulatory arbitrage involving externalities is the systemic externalities that regulatory arbitrage opportunities can impose on financial markets. In the aftermath of the recent global financial crisis, benefits of regulatory competition and the underlying rationale that regulatory competition would result in migration of firms to better regulatory jurisdictions or at least it does not result in regulatory race-to-the-bottom are questioned.[92]

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[86] Ibid The equivalent of the 'cost-of-service' regulation for regulating regulators is pegging regulator's pay to her performance (estimating the costs of performance and paying them accordingly), and the equivalent of the 'lagged price adjustment' is the deferred compensation schemes for regulators.

[87] *See* ibid

Recent studies find how incentive based pay schemes outperform fixed pay and how tournament theory is less effective than piece rate in certain settings. For more details, *See* M. Ali Choudhary, Vasco J. Gabriel and Neil Rickman, 'Individual Incentives and Workers' Contracts: Evidence from a Field Experiment' (2012)

[88] William W. Bratton and Joseph A. McCahery, 'The new economics of jurisdictional competition: Devolutionary federalism in a second-best world' (1997) 86 The Georgetown Law Journal 201 256

[89] For more information regarding the reasons for the regulatory competition by implementing competitive federalism approach, *see* Romano, 'Empowering Investors: A Market Approach to Securities Regulation'

[90] Shyam Sunder, 'Regulatory competition among accounting standards within and across international boundaries' (2002) 21 Journal of Accounting and Public Policy 219 219

[91] Joel F. Houston, Chen Lin and Yue Ma, 'Regulatory arbitrage and international bank flows' (2012) 67 The Journal of Finance 1845 1846

[92] Joel P. Trachtman, 'The International Law of Financial Crisis: Spillovers, Subsidiarity, Fragmentation and Cooperation' (2010) 13 Journal of International Economic Law 719 719

2.3 Partial industry regulation

In addition to the arguments offered for the differential regulation on the grounds of industry compartmentalization and regulatory competition, there is an additional argument for differential treatment of homogenous economic activities. Ayres and Braithwaite advocate 'partial-industry regulation' (PIR).[93] PIR means that "government regulates only a part of the industry, leaving another part unregulated.[94] Under the partial-industry regulatory schemes, government purposefully treats firms in an industry differently."[95] This regulatory strategy is viewed as a middle path between full-industry regulation (FIR) and *laissez-faire* policies seeking to take full advantage of the virtues of both systems. The proponents of this approach argue that in some regulatory settings "regulating only an individual firm (or a subset of the firms) in an industry can promote efficiency by avoiding the costs associated with industry-wide intervention or laissez-faire".[96]

In contrast to regulatory competition that aim of which is to enhance competition among regulators, the aim of PIR is to stimulate competition within the regulated industry. In other words, PIR strategies' goal is to harness the competitive forces of the market in order to enhance market discipline. The main point of this approach is that it can use regulated firms to affect a behavioral change in other firms in that industry. In addition, this diversified regulatory approach (which sometimes is called 'regulatory bifurcation')[97] can provide additional advantages such as mitigating the adverse effects of regulatory errors, providing a competitive check on the decisions of regulatory agencies by preserving the independence of unregulated firms,[98] and inducing the monitoring mechanism among regulated firms. Indeed, 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 the 'market accountability' or 'downward accountability'. 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.[99] However virtuous the PIR strategies are, their eventual result is a 'dual governance of individual markets'.[100]

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93 *See* Ian Ayres & John Braithwaite, *Partial-Industry Regulation: A Monopsony Standard for Consumer Protection,* 80 Calif. Law Rev. 13 (1992a) *See also* Ayres & Braithwaite, *Responsive Regulation: Transcending the Regulation Debate,* , Chapter 5.

94 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. *See Id.*

95 *Id.*

96 Ayres & Braithwaite, *Partial-Industry Regulation: A Monopsony Standard for Consumer Protection,* 13 , *See also* Ayres & Braithwaite, *Responsive Regulation: Transcending the Regulation Debate,* , Chapter 5.

97 *See* Erich Schanze, *Hare and Hedgehog Revisited: The Regulation of Markets that have Escaped Regulated Markets,* 151 Journal of Institutional and Theoretical Economics (JITE)/Zeitschrift Für Die Gesamte Staatswissenschaft 162 (1995)

98 Ayres & Braithwaite, *Responsive Regulation: Transcending the Regulation Debate,* , p. 137

99 Ayres and Braithwaite identify three forms of partial industry regulation: dominant-firm strategies, fringe-firm strategies, and tournament competition strategies. Built on tournament theory, yardstick competition derives some benchmarks from the average industry performance and rewards the firms passing the benchmarks. 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, *A Theory of Yardstick Competition,* , pp. 319-320

Therefore, this regulatory bifurcation results in two separate playing fields which are subject to separate rules of the game.[101] The 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 the cooperation among regulators to effectively address externalities in financial markets.[102] Indeed, it is argued that absent more coordination between regulators, such regulatory arbitrage may undercut the attempts to limit excessive risk taking in financial markets.[103]

2.4 Definitional Problems, Legal Interpretation and Regulatory Arbitrage

An additional major source of regulatory arbitrage lies in the nature of compliance and enforcement of law. Indeed, the exploitation of gap between economic substance of a transaction and its regulatory treatment is made possible because of "legal system's intrinsically limited ability to attach formal labels that track the economics of transactions with sufficient precision".[104] Such a limited ability breeds opportunities for technical compliance with the rules and regulations that can undermine the underlying spirit and the purpose on which the entire regulatory system or a specific law is built. Compliance of this sort, dubbed 'creative compliance', is well documented in the regulation literature.[105] It involves "using the law to escape legal control without actually violating legal rules".[106] What allows firms to engage in creative compliance lies in the nature of legal rules, i.e., the 'open texture' of the law. This feature of law arises from the limits "inherent in the nature of language to the guidance which general language can provide"[107] stemming in turn and partly from the 'relative

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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. This kind of intervention makes suppliers' profits dependent on the conduct of their competitors. *See* Ayres & Braithwaite, *Responsive Regulation: Transcending the Regulation Debate,* , p. 138

100 *Id.*

101 Helen A. Garten, US Financial Regulation and the Level Playing Field (2001)

102 Engert, *Transnational Hedge Fund Regulation,* , pp. 366-367

103 Acharya, Wachtel & Walter, *International Alignment of Financial Sector Regulation,* 365 *See also* Houston, Lin & Ma, *Regulatory Arbitrage and International Bank Flows,* , p. 1848

104 Fleischer, *Regulatory Arbitrage,* , p. 229

105 See: Karen Yeung, *Securing Compliance: A Principled Approach* (2004)

106 D. McBarnet & C. Whelan, *The Elusive Spirit of the Law: Formalism and the Struggle for Legal Control,* 54 Modern Law Review 848 (1991)

107 H. L. A. Hart, *The Concept of Law* (2nd ed. 1994)

ignorance of fact[s]' and 'relative indeterminacy of aims'.[108] The type of regulatory arbitrage stemming from the legal engineering that aims to exploit the gaps and loopholes arising from legal interpretation oftentimes occurs within a single jurisdiction.

Apart from the cognitive and inherent linguistic limitations, the choice of a particular method of interpretation in financial regulation, enforcement, and adjudication can significantly affect the problems arising from boundaries set out in the financial system. One of the sources 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. "Formalism 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."[109] Such an approach usually does not recognize "necessity of choice in penumbral areas of rules".[110]

This paper argues that the appeal to the literal meaning of words in legal interpretation can be used to circumvent the very purpose of law.

The aim of creative compliance is to avoid legal control by appealing to formalism in legal interpretation, which is a relatively dominant approach in legal thinking and jurisprudence.[111] 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, rules-based regulation (as opposed to the principles-based regulation the focus of which is on 'goals' rather than the 'means' of achieving goals) creates vast opportunities for regulatory arbitrage. As McBarnet argues, "definitions and criteria involving clear rules or thresholds make particularly valuable material for legal engineers to work on."[112]

Regarding hedge funds, for example, problems in their legal definition can sterilize regulatory attempts to address their potential systemic risks. Hedge funds have an established notoriety for placing themselves out of regulatory purview and circumventing regulations by relying on legal

[108] It in turn arises from the limited cognitive abilities of human beings. For no such knowledge of all the possible combinations of contingencies would be achieved by human being. It follows that the rules and regulation devised on this inherently flawed knowledge cannot escape those limits.
[109] McBarnet & Whelan, *The Elusive Spirit of the Law: Formalism and the Struggle for Legal Control*, , pp. 848-849
[110] Hart, *The Concept of Law*, , pp. 124-130
[111] As an example, see: *Goldstein v. SEC*, 451 F.3d 873, 884 (D.C. Cir. 2006) and the battle over the word "client". For example, one judge made a point of including this note in a 1940 decision: "The golden rule is that the words of a statute must *prima facie* be given their ordinary meaning." Viscount Simon, in Nokes v. Doncaster Amalgamated Collieries, [1940] A.C. 1014, at 1022.
Although, the creative compliance is present in every area of regulation, it is more likely to be exploited in the financial regulation and tax laws. This is because of the traditionally detailed, specific and rule-based tax and financial laws.
[112] Doreen McBarnet, *Financial Engineering Or Legal Engineering? Legal Work, Legal Integrity and the Banking Crisis, in* The Future of Financial Regulation , p. 72Anonymous Iain G. MacNeil & Justin O'brien eds., 2010)

technicalities and definitions. In fact, hedge funds define themselves by regulatory exemptions by making room for themselves in the hodgepodge of general rules and exemptions thereof. This means that they do not have a shape of their own, and should mostly be defined by the exogenous effects of regulations affecting their overall shape. This dynamic aspect of hedge funds increasingly deepens the gap between the reality of hedge funds and their etymological roots. Therefore, the term 'hedge fund' by itself can provide no clue for its appropriate regulatory definition. 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 hedge fund definitional umbrella. This move to acquire hedge fund status and make use of statutory exemptions increased the heterogeneity of the funds bearing the hedge fund brand name.[113] Therefore, the term hedge fund applies to many heterogeneous funds with vastly heterogeneous investment strategies complying by some black-letter rules of statutes and regulations.

3. Addressing regulatory arbitrage: Market limits vs. public policy responses

Casting doubts on the benefits of regulatory competition, viewing regulatory arbitrage as a potential harmful and sinister phenomenon,[114] raising concerns about issues of market fragmentation and deglobalization because of divergent policy choices throughout the world (e.g., the Volcker Rule and ring fencing),[115] and highlighting the gaps between global regulatory institutions and 'truly global finance'[116] led to new policy recommendations in favor of harmonization, centralization and consolidation of regulatory regimes to reduce cross-border harms.[117] It is argued that regulatory arbitrage, though beneficial, limits the ability of regulators to control systemic risk.[118] The common denominator for such proposals is the mitigation of systemic risks of hedge funds.

[113] 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. Payne, *Private Equity and its Regulation in Europe,* , p. 584 . *See also* Jacob Rothschild, *Europe is Getting it Wrong on Financial Reform* , Financial Times, April 20, 2010 , available at http://www.ft.com/cms/s/0/f51bdb9a-4caa-11df-9977-00144feab49a.html#axzz2JvN8jQ2M (Arguing that the then proposed AIFMD casts its regulatory net so wide that it captures other firms as well, such as investment trusts in Britain.)

[114] Douglas W. Arner and Michael W. Taylor, 'The Financial Stability Board and the Future of International Financial Regulation' in Ross P. Buckley, Emilios Avgouleas and Douglas W. Arner (eds), *Reconceptualising Global Finance and Its Regulation* (Reconceptualising Global Finance and Its Regulation, Cambrigde University Press 2016) 64

[115] Ibid For the concept of ring fencing, *see* Steven L. Schwarcz, 'Ring-fencing' (2013) 87 Southern California Law Review 69

[116] Lawrence G. Baxter, 'Understanding the Global in Global Finance and Regulation' in James Buckley, Emilios Avgouleas and Douglas W. Arner (eds), *Reconceptualising Global Finance and Its Regulation* (Reconceptualising Global Finance and Its Regulation, Cambridge University Press 2016) 29

[117] Ross P. Buckley, Emilios Avgouleas and Douglas W. Arner, *Reconceptualising Global Finance and its Regulation* (Cambridge University Press 2016) 5 (suggesting that a global financial system without a global regulator, a global lender of last resort, or a global sovereign bankruptcy regime will lead to another major financial crisis.) Regarding hedge fund regulation, *see* Engert, 'Transnational Hedge Fund Regulation' (supporting regulatory cartelization to curb regulatory arbitrage). *See also* Wulf A. Kaal, 'Hedge Fund Regulation via Basel III' (2011) 44 Vanderbilt Journal of Transnational Law 389 389 (proposing measures to minimize opportunities for regulatory arbitrage by hedge funds).

[118] Acharya and Richardson, 'Implications of the Dodd-Frank Act'

On the other side of the spectrum, it is suggested that such a move toward regulatory harmonization is misguided on the grounds that hedge funds were neither the cause of the financial crisis, nor is it likely that they cause one in the future.[119] Indeed, regulatory consolidation and harmonization may result in heightened systemic risk, because in a regime of global harmonization, regulators tend to adopt similar regulatory strategies and thereby push financial institutions to 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 the risks embedded in a decentralized regulatory regime. Within this line of argument, regulatory arbitrage can be seen as a buffer against systemic regulatory and market failures.[120]

More generally, empirical findings confirm the intuition that effective corporate and securities laws are the product of regulatory competition or competitive legal systems, embracing bottom-up legal innovations and experimentation, rather than the top-down approach by the regulators who are detached from the day-to-day operations of financial firms.[121] Given the benefits of regulatory competition, to curb regulatory arbitrage, increased harmonization is not the first-best solution and it might produce unintended consequences. On the contrary, mitigating potential risks of regulatory arbitrage requires the shift of focus from regulatory harmonization to the quality of regulation within each and every individual regulatory regime encapsulated in the globally-fragmented regulatory system. 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 regulatory 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 why due to legal placebo effects, higher attrition rates among hedge funds and opaqueness of the hedge fund industry, markets, left to their own devices, cannot address potential risks and externalities arising from regulatory arbitrage by hedge funds.

3.1. Do markets limit regulatory arbitrage?

All being said about potential benefits of regulatory competition, the demand for regulatory services is a function of, among other things, the demand by the financial institutions' counterparties, creditors and investors for safety and soundness of financial institutions they are dealing with. For example, if investors demand more protection, the firms will try to show that they can better provide it with

[119] Romano, 'Against Financial Regulation Harmonization: A Comment' She sees the post-crisis regulatory response to hedge funds in the shadow of the historical pattern of hostility to short-sellers.
[120] Ibid
[121] Roberta Romano, 'The Sarbanes-Oxley Act and the Making of Quack Corporate Governance' (2005) 114 The Yale law journal 1521 1529 On the other hand, there is a third view on the unitary vs. diversified regulatory mechanisms, called 'regulatory co-opetition' 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 and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'

registering with a well-known regulator who provides reputation-enhancing regulation. Hedge funds in turn will demand good quality regulation offering more guarantees for investor protection. This is where the quality of regulation matters. Therefore, there are limits to race-to-the-bottom arising from regulatory arbitrage and market forces can, to some extent, mitigate its effects. In other words, 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.[122] 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 a strong evidence of transfer of funds by banks to less regulated markets. This finding holds in spite of controlling for the reverse causality (endogenous responsiveness of regulation to capital market flows).[123] 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" in the form of establishing branches or subsidiaries in lightly regulated jurisdictions.[124] However, these studies suggest that in the absence of strong institutional infrastructure and legal environment, such as strong 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 prudential regulations "may serve as a signal of quality and stability". 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."[125]

Therefore, the importance of the quality of regulation and its effect on regulatory arbitrage mitigates the concerns for potential race-to-the-bottom, which is the main concern about regulatory arbitrage. Indeed, these empirical works provide confirmation of the theory that regulatory competition will result in a separation between countries based on their securities regulatory system. Some jurisdictions will cater for managers seeking opportunistic behavior, whereas some others will attract managers or issuers seeking to signal credibility and quality. Investors and companies will identify

[122] Kern Alexander, Rahul Dhumale and John Eatwell, *Global Governance of Financial Systems: The International Regulation of Systemic Risk* (Oxford University Press 2006)
[123] Houston, Lin and Ma, 'Regulatory arbitrage and international bank flows'
[124] Ibid
[125] Ibid

themselves accordingly by registering with those regulators. In turn, a rational investor will discount for investing in bad-quality issuers offsetting the risk of opportunistic behavior.[126]

In addition, established reputation and credibility of a regulatory jurisdiction can be translated into financial premium for the financial institutions regulated by the authorities of that jurisdiction. For example, one of the factors that can help banks to build reputation, among other things, is their registration with a jurisdiction offering a credible deposit insurance scheme or jurisdiction with stricter prudential regulation.[127] By the same token, it is argued that competitive threat to U.S. banking system from offshore financial centers in the U.S. dollar deposit market is limited by reputational considerations.[128] Therefore, the quality of regulation is of crucial importance; reputation-enhancing regulation is less prone to regulatory arbitrage than the one that is anti-competitive, such as regulation imposing interest rate ceilings on loans.[129]

3.2. Why are markets ineffective 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 the regulatory arbitrage by hedge funds. Therefore, it is apt to ask how much reputation for being regulated by credible regulators matters for hedge funds. The main thesis of this paper is that the importance of regulation-induced reputation for different financial firms is of asymmetric nature. Therefore, the arguments for regulation as a signal of quality may matter more to some firms than the others. This section argues that regulation-induced reputation does not matter for hedge funds as much as it matters for financial institutions such as banks, mutual funds, and pension funds.

There are variables that matter for the importance of reputation for hedge funds. Three important factors, which contribute to the regulation-induced reputation, will be studied. It will be argued that because of less effective ‘placebo effects of laws’, higher attrition rate in the hedge fund industry and inherent opaqueness of hedge funds, reputation-induced regulation is of less importance for hedge funds compared with mainstream financial institutions. The lower reputational costs of regulation make regulatory arbitrage less costly for hedge funds compared with banks, mutual funds, and

[126] Stephen J. Choi and Andrew T. Guzman, 'Portable Reciprocity: Rethinking the International Reach of Securities Regulation' (1997) 71 Southern California Law Review 903 950 They further argue that regulatory competition is a check on the self-regulatory organizations (such as rating agencies) and enforced self-regulation's poor performance. Regulatory competition in these areas can provide the investors and market participants with alternatives for the poor regulatory performance. Therefore, such a regulatory design in fact complements private regulatory mechanisms.
[127] Alexander, Dhumale and Eatwell, *Global Governance of Financial Systems: The International Regulation of Systemic Risk*
[128] Richard J. Herring and Robert E. Litan, *Financial Regulation in the Global Economy* (Brookings Institution 1995)
[129] Alexander, Dhumale and Eatwell, *Global Governance of Financial Systems: The International Regulation of Systemic Risk*

pension funds. Therefore, it is more likely for hedge funds to engage in regulatory arbitrage than other mainstream financial institutions.

3.2.1. Legal placebo effects and hedge fund reputational concerns

Introduction of new laws and regulations can change people's risk perception about the regulated activity or entity. In other words, laws have placebo effects. The placebo effect of a law "manipulates individuals' expectations regarding a risk that the law addresses".[130] Such an effect changes the welfare of regulated individuals and firms independently of the objective effects of law.[131] Legal placebo effect 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 occurs when prior to the implementation of a law, individuals overestimate a risk and perceive the legislation as mitigating that risk.[132] In other words, 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 has an asymmetric effect on the risk perception of individuals and institutions 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 one which reduces the overestimated perception of the risk)[133] depend on the level of sophistication of regulated entities. For institutional, accredited, and qualified investors such an effect is less than that for unsophisticated investors whose perception of risk is more prone to manipulation. Based on this analysis, positive placebo effects of laws have disproportional 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.[134]

Therefore, compared to hedge funds, being subject to regulation by a credible regulator has more reputational effects 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

[130] Amitai Aviram, 'The Placebo Effect of Law: Law's Role in Manipulating Perceptions' (2006) 75 The George Washington Law Review 54 57

[131] Ibid

[132] For details about positive placebo effect, negative placebo effect, positive anti-placebo effect and negative anti-placebo effect of law, see: ibid For the implications of that theory for the allocation of regulatory resources, See: Amitai Aviram, 'Allocating Regulatory Resources' (2012) 37 Journal of Corporation Law 739 739

[133] Aviram, 'The Placebo Effect of Law: Law's Role in Manipulating Perceptions'

[134] In some European countries such as Luxembourg and Germany, hedge funds can be marketed to non-profesional investors. However, these jurisdictions are exceptions to the rule, which requires that investors in a hedge funds should be professional.

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.

3.2.2. Attrition rate in the hedge fund industry and reputational concerns

Studies in game theory suggest that repeated interactions are prerequisite for the emergence of evolutionary cooperation based on reputation. On the contrary, limited future interactions breed opportunistic behavior. Reputational concerns constitute the most important factor incentivizing hedge funds not to take refuge in less-credible financial jurisdictions signaling bad quality. However, hedge funds display an extraordinarily high level of attrition rate compared to mainstream financial institutions such as banks, mutual funds, and pension funds.[135] Because 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.[136] 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".[137] 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 long-term greater benefits for smaller short-term benefits. Even in the absence of conflicts of interest, managers or economic agents might suffer from myopia making difficult for

[135] "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.6 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 hedge funds last longer than 6 years, while 60% disappear with 3 years. Table 2 reports average attrition rates for different investment strategies. 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.7 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." Michael R. King and Philip Maier, 'Hedge Funds and Financial Stability: Regulating Prime Brokers Will Mitigate Systemic Risks' (2009) 5 Journal of Financial Stability 283 286 see also: ISFL, July 2008. Hedge Funds 2008, International Financial Services, London., for high attrition rate of hedge funds, see also: Burton G. Malkiel and Atanu Saha, 'Hedge funds: Risk and return' (2005) 61 Financial analysts journal 80 80 See also: Stephen J. Brown, William N. Goetzmann and Roger G. Ibbotson, 'Offshore Hedge Funds: Survival and Performance, 1989–95' (1999) 72 The Journal of Business 91 91

[136]

[137] George Loewenstein and Richard H. Thaler, 'Anomalies: Intertemporal Choice' (1989) 3 Journal of Economic Perspectives 181 181

them to accurately assess the long-term consequences of their decisions.[138] Increased hedge fund activism, though beneficial for corporate governance and performance of firms,[139] gave rise to concerns about hedge funds' short termism with regard to the corporate governance of the firms they acquire.[140] Though a concrete and fully-entrenched case for hedge fund short-termism is yet to be made,[141] concerns has been raised about the harms that hedge funds might cause while pursuing their own self-interest.[142]

The high attrition rate among hedge funds can contribute to a tendency of being 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 engenders much stronger reputational effects for these institutions, reduces their incentive to behave opportunistically and misuse the standard market conventions to their advantage. On the contrary, 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."[143]

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

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[138] For more details see: Gregory Jackson and Anastasia Petraki, *Understanding Short-termism: the Role of Corporate Governance*, 2011)

[139] Alon Brav and others, 'Hedge Fund Activism, Corporate Governance and Firm Performance' (2008) 63 The Journal of Finance 1729 1729

[140] For the role of hedge funds in corporate governance, *see* Thomas W. Briggs, 'Corporate governance and the new hedge fund activism: An empirical analysis' (2007) 32 Journal of Corporation Law 681 681
) "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." Stefano Gatti and Chiara Battistini, 'Hedge Funds' Activism: A New Trend of Convergence toward Private Equity in Public Firms?' in Douglas Cumming (ed), *Private Equity: Fund Types, Risks and Returns, and Regulation* (Private Equity: Fund Types, Risks and Returns, and Regulation, John Wiley & Sons, Inc. 2010) 183

[141] Indeed, studies suggest that the concerns about hedge fund short termism in unfounded, see for example: Lucian A. Bebchuk, Alon Brav and Wei Jiang, 'The Long-Term Effects of Hedge Fund Activism' (2013) SSRN Working Paper Series

[142] Marcel Kahan and Edward B. Rock, 'Hedge Funds in Corporate Governance and Corporate Control' (2007) 155 University of Pennsylvania Law Review 1021 1021They conclude that the "Short-termism thus presents the potentially most important, most controversial, most ambiguous, and most complex problem associated with hedge fund activism." Ibid

[143] Australia House of representatives of, *Hedge Funds, Financial Stability and Market Integrity*, 1999) 5

3.2.3. Transparency and reputational concerns in the hedge fund industry

In transparent markets reputation matters more than it does in opaque markets. Information disclosure can enhance or damage the reputation of firms in transparent markets faster than it does in opaque markets.[144] 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 with other mainstream financial institutions, which are subject to mandatory disclosure.

The importance of information in the market has long been discussed in economic literature. It has been well established how information asymmetry can result in market failure.[145] The transparency deficit and asymmetric information is especially problematic in financial markets because of higher information asymmetry stemming from the nature of financial products and the inter-temporal nature of financial transactions.[146] Most financial services, especially those concerning financial and investment advice, are credence goods the quality of which are not ascertainable even after the purchase and use.[147] It is argued that in experience and credence goods, which have the highest level of information asymmetry, mandatory information disclosure requirements can significantly mitigate the likelihood of market failure.[148] In addition, the importance of trust and reputation in inter-temporal financial transactions has long been discussed.[149] The inter-temporal aspects of a transaction exacerbate 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 in a short notice (longer luck-ups).[150] Therefore, 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. Therefore,

[144] There is a positive relationship between transparency and reputation, and a negative relationship between reputational costs and arbitrage behavior of firms.
[145] George A. Akerlof, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism' (1970) 84 The Quarterly Journal of Economics 488 488
[146] Philippe Aghion and others, 'Regulation and Distrust' (2010) 125 The Quarterly Journal of Economics 1015 1015
[147] Alessio M. Pacces and Heremans Dirk, 'Regulation of Banking and Financial Markets"' in Alessio M. Pacces and R. J. Van den Bergh (eds), *Forthcoming in 'Regulation and Economics' in Encyclopedia of Law and Economics*, vol 2 (Forthcoming in 'Regulation and Economics' in Encyclopedia of Law and Economics, Elgar 2011) 9
[148] Philip Nelson, 'Information and Consumer Behavior' (1970) 78 Journal of Political Economy 311 311
[149]
[150] It is argued that short-term demandable deposits are a way of curtailing the excessive risk taking by banks., See: C. W. Calomiris and C. M. Kahn, 'The role of demandable debt in structuring optimal banking arrangements' (1991) The American Economic Review 497 497

being a well-known, reputable, and trustworthy borrower is essential for attracting, concentrating, and channeling dispersed investors' savings into economically productive activities.[151]

The most effective mechanisms for enhancing trust in financial markets are registration and disclosure requirements, which are at the same time the main mechanisms for enhancing transparency. In addition to firm-specific benefits of disclosure in terms of enhanced liquidity for firms' stocks, it benefits markets too. Market benefits of the information disclosure include enhanced liquidity, lower cost of capital, and better firm valuation.[152] One of the firmly acknowledged firm-specific benefits of disclosure is the effect of disclosure on the market liquidity.[153] In the absence of reliable information disclosure system in financial markets, the uninformed investors cannot tell the 'lemons' from the 'peaches'. Therefore, to hedge against possible losses from trading with informed investors, market participants will discount the purchase price of the stock and increase its selling price, reflecting the probability of trading with an informed counterparty multiplied by the potential information surplus of the counterparty. This increased bid-ask spread will decrease liquidity for a particular stock.[154] As Akerlof predicts, such an instance of asymmetric information will even lead to the collapse of the entire market for that product.[155]

However, even in unregulated markets, high-performing firms have incentive to disclose to signal the quality and distinguish themselves from poorly-performing firms.[156] However, the main reason for market failure in providing optimal level of information is the problem of externalities. Despite being socially optimal, information disclosure might not be privately optimal for a specific firm.[157] Similar to the problem of commons or '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. In the context of information disclosure, such externalities drive a wedge between privately and socially-optimal levels of disclosure. 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. In such a setting, the costly disclosure of one firm can be used in valuation of other firms and hence can generate free-rider problem.[158] In other words, such disclosure can help the competitors of disclosing

[151]This in turn translates into the maturity transformation function at the heart of the financial intermediation.

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[153] C. Leuz and P. Wysocki, 'Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research' (2008) And Verrecchia suggests that corporate disclosure can mitigate the adverse selection problem and increase market liquidity by leveling the playing field among investors. See: Robert E. Verrecchia, 'Essays on Disclosure' (2001) 32 Journal of Accounting and Economics 97 97

[154] Leuz and Wysocki, 'Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research' And Verrecchia suggests that corporate disclosure can mitigate the adverse selection problem and increase market liquidity by leveling the playing field among investors. See: Verrecchia, 'Essays on Disclosure'

[155] Akerlof, 'The Market for "Lemons": Quality Uncertainty and the Market Mechanism'

[156] Ibid

[157] Leuz and Wysocki, 'Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research'

[158] Anat R. Admati and Paul Pfleiderer, 'Forcing Firms to Talk: Financial Disclosure Regulation and Externalities' (2000) 13 Review of Financial Studies 479 512

firm while hurting the issuer.[159] In this case, they demonstrate that the amount of disclosure is often suboptimal and there is a scope for disclosure regulation to improve social welfare.[160] 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.[161] As mentioned above, since financial products and services are credence goods, this argument can readily be applied to financial services.

On the other hand, maintaining trust in inter-temporal transactions can be considered as public goods and leaving it to the forces of markets can result in its under-provision. The trust deficit[162] in financial markets calls for government intervention, as it does in other sectors of the economy. Aghion et al. demonstrate that in the cross section of countries, higher distrust breeds higher level of government intervention even though the subjects know that the government itself is corrupt.[163] Among financial institutions, hedge funds and hedge fund products have an established reputation for complexity and opaqueness. Such opaqueness intensifies the trust deficit and the amplified information asymmetry in hedge fund products. Therefore, notwithstanding the theories arguing that voluntary disclosure itself is a separating equilibrium,[164] such a signaling mechanism by firms might become too costly because of the externalities involved in the voluntary disclosure setting. Regarding hedge funds, the proprietary nature of the information exacerbates this problem and hinders more information disclosure.

On the other hand, 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 by investors' money and cannot technically take more investment. Accordingly, they may stop disclosing information. On the other hand, some hedge funds might not disclose information because of the regulatory limits on the number of their investors. In addition, the prohibition on hedge fund public solicitation further decreases hedge funds' incentives to disclose information.[165] Since disclosure to a certain extent, might be considered as 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 also certain statutory provisions prohibit or discourage them from disclosing, thereby refuting the optimality of voluntary disclosure in the hedge funds regulation context. Moreover, under the voluntary disclosure mechanism, there is a likelihood that

[159] M. B. Fox, 'Retaining Mandatory Securities Disclosure: Why Issuer Choice Is Not Investor Empowerment' (1999) 85 Virginia Law Review 1335 1335
[160] Admati and Pfleiderer, 'Forcing Firms to Talk: Financial Disclosure Regulation and Externalities'
[161] Michael J. Fishman and Kathleen M. Hagerty, 'Mandatory Versus Voluntary Disclosure in Markets with Informed and Uninformed Customers' (2003) 19 Journal of Law, Economics, & Organization 45 45
[162] After all, this was the same reason for most of the bank runs and systemic risks in the history of finance.
[163] Aghion and others, 'Regulation and Distrust'
[164] 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 which will distinguish highly-performing firms from poorly performing ones.
[165] The JOBS Act in the US removes the ban on public solicitation by hedge funds subject to certain restrictions.

some hedge funds might disclose information opportunistically (i.e., disclosing less valuable information which already lost its value) or they may cherry pick and disclose the information accordingly. Since all these factors will discourage the disclosure of information, disclosure will lose its signaling effect. Therefore, disclosing firms will not be rewarded by more money from investors.

To summarize the argument, the main market mechanism, which 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 system for hedge funds, no regulatory scheme and jurisdiction can be credible enough to signal quality and hence cannot inhibit the 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, which 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, it will be more likely for hedge funds to engage in regulatory arbitrage than their mainstream counterparts.

4. 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,[166] strengthening regulatory coordination,[167] cooperation, regulatory co-opetition,[168] regulatory harmonization, to regulatory consolidation,[169] and unification,[170] perhaps leading to the creation of a World Financial Organization (WFO) akin to the World Trade Organization (WTO),[171] or a Global Economic Council (Gleco) for overssing the proper

[166] Dirk A. Zetzsche, 'Competitiveness of Financial Centers in Light of Financial and Tax Law Equivalence Requirements' in Ross P. Buckley, Emilios Avgouleas and Douglas W. Arner (eds), *Reconceptualising Global Finance and Its Regulation* (Reconceptualising Global Finance and Its Regulation, Cambridge University Press 2016) 391 (arguing that equivalence requirements is likely to result in heightened competitiveness among financial sector and in the meantime prevent regulatory arbitrage by requiring convergence of objectives and allowing diversity in details).
[167] Wouter Van Eechoud and others, 'Future Regulation of Hedge Funds—A Systemic Risk Perspective' (2010) 19 Financial Markets, Institutions & Instruments 269 309
See also James Chapman, Stéphane Lavoie and Lawrence Schembri, 'Emerging from the Shadows: Market-Based Financing in Canada', *Financial System Review* (Financial System Review, Bank of Canada 2011) 37 Arguing for a coordinated global response to to establish principles for monitoring and regulation of the shadow banking sectors and prevent unintended consequences of cross-country regulatory arbitrage.
[168] Geradin and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'
[169] *See* for example: Raghuram G. Rajan, *Fault lines: How Hidden Fractures Still Threaten the World Economy* (Princeton University Press 2010)
[170] Geradin and McCahery, 'Regulatory co-opetition: Transcending the regulatory competition debate'
[171] See Barry Eichengreen, 'Not a New Bretton Woods but a New Bretton Woods process' in Barry Eichengreen and Richard Baldwin (eds), *What G20 leaders must do to stabilise our economy and fix the financial system* (What G20 leaders must do to stabilise our economy and fix the financial system, VoxEU 2008) *See also* Baxter, 'Understanding the Global in Global Finance and Regulation'

functioning of the gloal economy and the stability of the international financial system.[172] Although regulatory globalization can only address the cross-jurisdictional regulatory arbitrage, it will fall short of addressing intra-jurisdictional regulatory arbitrage arising from definitional problems. Based on the idiosyncratic features of the hedge fund industry, this paper proposes an approach that can mitigate the negative externalities of regulatory arbitrage regardless of the arbitrage opportunity being 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. Therefore, the aim is to maximize the benefits of regulatory arbitrage such as enhancing regulatory competition 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 regulatory regimes. In such a market, regulation itself is a commodity and hedge funds will shop for different regulatory regimes. They will buy into the system when they are satisfied that the marginal cost of a regulatory regime equals or is less than its marginal benefit. Therefore, while the initial intention of regulation is to regulate markets, regulatory arbitrage provides opportunities for firms to regulate and affect behavioral changes in regulators. It follows that addressing the problems of regulatory arbitrage does not necessarily mean its total elimination, for it would be neither possible, not optimal.

To address regulatory arbitrage, special attention should be paid to the incentive effects arising from the costs of regulation; meaning that the regulation, which imposes additional costs to the regulated industry, should off-set those costs by offering the industry benefits of being regulated by a specific regulator. *Ceteris paribus*, the regulatory system in which the marginal benefit of regulation equals its marginal costs will be arbitrage-proof.[173] Therefore, the design of 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 for regulated firms is the reputational benefits that registering with certain regulators can create for financial institutions. However, regulation-induced reputation will not be sufficient to hinder hedge funds from regulatory arbitrage. In other words, reputational benefits from being regulated by credible regulators are not sufficient to offset the costs of regulation, thereby inducing hedge funds to arbitrage between regulatory systems. Since the reputational effects of regulation cannot suffice to offset the costs, the regulation should be designed

[172] Timothy Adams and Arrigo Sadun, 'Global Economic Council Should Oversee All' *Financial Times* (London August 16, 2009) Opinion <https://www.ft.com/content/f253db24-8a8b-11de-ad08-00144feabdc0?nclick_check=1>

[173] This is conditional upon the comparative benefits of regulation offered by its peer jurisdiction. (This does not necessarily mean that such regulatory system should adhere to the least restrictive regulation or will result in the race to the bottom.)

within to impose as minimal costs as possible on hedge funds or otherwise offset the costs by offering countervailing benefits.

Following the underlying efficiency criterion and incentive compatibility of hedge fund regulation, regulators should provide the sector, which is negatively affected by regulation, with incentives to stay within the limits of regulations. One of the examples of such an exclusive advantage offered for regulated entities is illustrated in the banking industry. Traditionally, the banking sector is heavily regulated. To offset the costs of such heavy regulations, regulators granted monopoly on certain financial transactions to banks by offering them valuable bank charters. The logic of granting bank charters is to protect the banking industry from outside competition, hence giving them sufficient countervailing benefits (subsidies) vis-à-vis the costs of heavier regulation.[174]

The banking history shows that the advent of the shadow banking sector and accompanying loss of bank charter value posed several challenges to banks. First, a decrease in bank charter value induced more risk-taking behavior by banks. Prior to the loss of charter value, the charter by itself was considered a valuable asset for banks and the loss of the charter in the incident of insolvency was one of the factors that incentivized banks to take less risk. However, with decreasing charter value, banks tended to take more risks, because the threat of the loss of valuable bank charter was removed altogether.[175] And second, the diminishing value of the bank charter was one of the major reasons for banking disintermediation and the rise of shadow banking.[176]

A more recent example of such offsetting benefits could 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 Europe by registration with a EU Member State. Introduction of such a mechanism is best understood as an offsetting mechanism for heavier regulation of hedge funds under the AIFMD with the aim of preventing relocation of European hedge funds to other loosely regulated jurisdictions. However, it remains to be seen how effective it will be in preventing hedge fund regulatory arbitrage 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 competitive edge or subsidizing regulated entities that regulators can ensure that regulated entities will not engage in regulatory arbitrage. Otherwise, the competitive pressure from the lightly-regulated financial institutions will generate

[174] 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 Becketti and Charles Morris, 'Are bank loans still special?' (1992) 77 Economic Review-Federal Reserve Bank of Kansas City 71 71 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 the banks within the banking regulatory scheme that was more burdensome than the similar financial institutions.

[175] Alan J. Marcus, 'Deregulation and bank financial policy' (1984) 8 Journal of Banking & Finance 557 557

[176] For more details, *See* Gary B. Gorton, *Slapped by the Invisible Hand: The Panic of 2007* (Oxford University Press 2010)

positional externalities[177] and will incentivize more and more financial institutions to shift their business to lightly-regulated financial jurisdictions.

In the next section, this article argues that the indirect regulation of hedge funds through banking entities, which are already heavily regulated, will impose minimum cost possible on the hedge fund industry. This will make it redundant for the regulators to devise regulations, which would create additional benefits for the hedge fund industry to create an equilibrium from which hedge funds do not have incentives to deviate. There are two main rationales for shifting the focus from hedge funds to banks for the purpose of regulating hedge funds. First, since banking entities are already heavily subsidized, the cost of indirect regulation of hedge funds by banking entities would be set-off by the already existing subsidies within the banking industry. Second, taking advantage of the indirect regulatory measures is especially important in a time in which granting even the slightest countervailing benefits to the hedge fund industry might provoke public outrage.

4.1. Indirect regulation and addressing regulatory arbitrage by hedge funds

One of the controversial debates fueled by the recent crisis was the debate about whether to regulate hedge funds directly or indirectly.[178] On the one hand, there were the U.S. and UK regulators, and the hedge fund industry itself supporting the indirect regulation of hedge funds through regulated banks. On the other hand, there was the European Union supporting the direct regulatory framework for hedge funds. This divergence of opinion was deepened by the events at the time of global financial crisis such as the 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 increasingly stringent attitude in the U.S. toward hedge fund regulation after the change of administration.[179] This change of policy in the U.S. paved the way for the realization of the 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 the mandatory registration and disclosure requirements.[180] Nevertheless, this paper argues that indirect regulation can better address the problems from hedge fund regulatory arbitrage.

The commands of law directed to creating behavioral change in its subjects, can be applied directly or indirectly. 'Direct' or 'entity' regulation includes "regulatory measures focusing on the regulation of

[177] For the concept of positional externalities, see: Robert H. Frank, 'Positional Externalities Cause Large and Preventable Welfare Losses' (2005) 95 The American Economic Review 137 137
[178] For the definition of direct and indirect regulation of hedge funds, see Hossein Nabilou and Alessio M. Pacces, 'The Hedge Fund Regulation Dilemma: Direct vs. Indirect Regulation' (2015) 6 William & Mary Business Law Review
[179] For more details see: Eilís Ferran, 'After the Crisis: The Regulation of Hedge Funds and Private Equity in the EU' (2011) 12 European Business Organization Law Review 379 390
[180] Ibid

industry itself (as a discrete activity or as part of the broader, regulated investment services universe.)"[181] In contrast, indirect regulation is a type of regulation the imperatives or commands of which is mediated by or transmitted through an intermediary to the (primarily intended) regulated entity or activity. Indeed, as referred to hedge funds, indirect regulation involves the situation in which regulators directly regulate the financial institutions, which provide financial services to hedge funds or hedge fund counterparties, and in turn those institutions oversee hedge funds.[182] In other words, direct regulation means that regulation is directed to the hedge fund entity itself or to the activities directly or immediately conducted by hedge funds. In contrast, 'indirect regulation' is "market discipline-inspired regulatory measures targeting the creditors and counterparties of hedge funds (mainly, but not exclusively, their prime brokers and securities brokers)."[183] Therefore, a key element in indirect approach is the regulator's reliance on market participants, namely the investors, creditors, and counterparties to reward well-managed firms and to punish poorly-managed ones.[184]

There are several reasons why hedge funds direct regulation cannot effectively address potential hedge fund externalities.[185] The regulatory arbitrage generating effect of direct regulation is one of the repeatedly-pronounced arguments against hedge fund direct regulation.[186] Indeed, one of the primary concerns discouraging direct regulation of hedge funds is the concern that not only will the imposition of direct regulation result in competitive disadvantage for the jurisdiction imposing the rule, but also it will 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'.[187] This relocation has its

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181 Phoebus Athanassiou, *Hedge Fund Regulation in the European Union: Current Trends and Future Prospects* (Kluwer Law International 2009)
182 Dixon Lloyd, Noreen Clancy and Krishna B. Kumar, *Hedge Funds and Systemic Risk* (RAND Corporation 2012) 34
183 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." Athanassiou, *Hedge Fund Regulation in the European Union: Current Trends and Future Prospects*
184 Roger T. Cole, Greg Feldberg and David Lynch, 'Hedge Funds, Credit Risk Transfer and Financial Stability' in France Banque de (ed), *Financial Stability Review; Special Issue, Hedge Funds* (Financial Stability Review; Special Issue, Hedge Funds, 2007) 11
185 Nabilou and Pacces, 'The Hedge Fund Regulation Dilemma: Direct vs. Indirect Regulation'
186 For example, Kaal, in Hedge Fund Regulation by Banking Supervision: A Comparative Institutional Analysis", argues that not only will direct regulation induce relocation of hedge funds to off-shore, but also will result in their restructuring.
For instance, Grabaravicius supports the idea that indirect regulation is more effective than direct regulation in regulating hedge funds because hedge funds can easily engage in regulatory arbitrage. See Tomas Garbaravicius and Frank Dierick, 'Hedge Funds and Their Implication for Financial Stability' (2005) 34 European Central Bank Occasional Paper Series 49
Daníelson 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 Jón Daníelson and Jean-Pierre Zigrand, 'Regulating Hedge Funds' in France Banque de (ed), *Financial Stability Review; Special Issue, Hedge Funds* (Financial Stability Review; Special Issue, Hedge Funds, 2007) 30
187 Tiebout, 'A Pure Theory of Local Expenditures'
For the assumptions and limitations of Tiebout's Model see: Bratton and McCahery, 'The new economics of jurisdictional competition: Devolutionary federalism in a second-best world' On the other hand, Hirshman 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* (Harvard University Press 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

adverse consequences for regulators and the jurisdiction involved. It can deprive the rule-imposing jurisdiction from the tax revenues coming from hedge funds and 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 hedge funds prior to the financial crisis.[188]

Therefore, since regulation cannot offer substantial reputational benefits (subsidies) for hedge funds, those benefits are unlikely to offset the costs of direct regulation. In order to effectively address the potential systemic risks of hedge funds, with an eye to minimizing the opportunities for regulatory arbitrage, the optimal method is to indirectly regulate them through their prime brokers, executing brokers, investment managers and advisers, and imposing certain regulatory qualifications on hedge fund investors and their investments.[189]

In addition, because of the value of the proprietary information for hedge funds, it seems implausible to suggest the imposition of mandatory disclosure as a means of direct regulation. Furthermore, voluntary disclosure involves externalities and such externalities inhibit the optimal provision of information by hedge funds. Thus, indirect regulation of hedge funds can better address these problems due to the fact that banks and prime brokers are already subject to mandatory disclosure requirements.

Furthermore, the implications of the discussions on regulatory capture, theory of tournament and the efficiency of regulatory competition for hedge fund regulation is that delegating hedge fund regulation to the counterparties of hedge funds not only decreases the chances of regulatory capture, but also increases the efficiency of regulation by providing incentives to regulators to compete with each other. Furthermore, since indirect regulation of hedge funds will be implemented by different multiple prime brokers, it provides for the possibility of decentralized implementation and enforcement of rules which are initially applied to the banking sector.[190]

It might be argued that such an indirect regulation will impose additional restrictions on hedge funds counterparties and thereby causing certain regulatory arbitrage opportunities for hedge funds' prime brokers and other counterparties. However, banks as the only deposit-taking institutions are heavily sensitive to reputational considerations (especially the reputation enhanced by registering with a regulator providing strong and credible deposit insurance) than hedge funds. Accordingly, the costs of regulatory arbitrage for them is more than its costs for hedge funds. On the other hand, given the

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availability of better- quality substitutes at higher prices.." See: ibid See also: Joel P Trachtman, 'Regulatory competition and regulatory jurisdiction' (2000) 3 Journal of International Economic Law 331 337

[188] Kaal, 'Hedge Fund Regulation via Basel III'

[189] J. S. Aikman, *When Prime Brokers Fail: The Unheeded Risk to Hedge Funds, Banks, and the Financial Industry* (Bloomberg Press 2010)

[190] The application of the direct rule-based form of regulation which affects hedge funds' prime broker, the rules they will be transformed to the standards which are enforced by prime brokers; it will provide the flexibility and decentralized learning in the enforcement phase of regulation.

relatively more harmonized international regulatory framework for banks[191] 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 and its fragmented regulatory regime. This paper argues that the differential regulation of homogenous financial activities giving rise to regulatory fragmentation is the main source of regulatory arbitrage. However, the differential regulatory treatment is not a necessary evil; instead, it may often yield more efficient outcomes than its alternatives (i.e., consolidated regulatory regime) do in certain market settings. This paper focuses on regulatory competition as a driving force for differential regulatory treatment of homogenous financial activities, which can lead to regulatory arbitrage by creating a fragmented regulatory scheme and 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' higher 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 does not disincentives hedge funds from engaging regulatory arbitrage. Therefore, this paper argued that to reduce the likelihood of regulatory arbitrage, instead of regulating hedge funds directly, the strategies for regulating hedge funds should focus on regulating hedge funds indirectly through their counterparties, creditors and investors for whom reputational costs are significantly higher than hedge funds. The theoretical framework and recommendations put forward in this study can easily lend themselves to empirical tests, especially in an era in which hedge funds are coming out of the shadow due to the information discourse obligations imposed by the post-crisis financial reforms on both sides of the Atlantic.

[191] Such as the provisions of Basel I, II, and III.