

SPRING**2018**



# **THE ECONOMIC CONSEQUENCES**

OF REGULATORY PROTECTION  
& EXTRATERRITORIAL REACH

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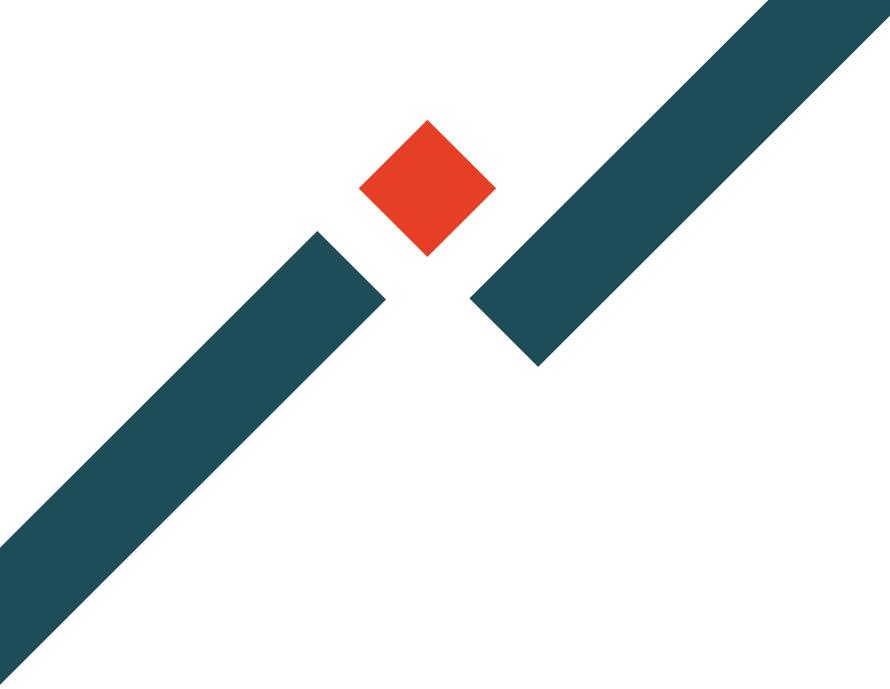
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# INTRODUCTION AND EXECUTIVE SUMMARY

The end of World War II spurred the development of a global economy and corresponding financial ecosystem that reached its apex before the 2007-09 financial crisis. The inability to resolve cross-border issues was an important driver in the crisis. In recognition of these issues, many regulatory initiatives were undertaken to promote financial stability, with the G20 and Financial Stability Board playing a key role. However, troubling trends also emerged. The attempt by the U.S. Commodity Futures Trading Commission (CFTC) to extraterritorially extend derivatives rules was not well received. Similarly, the U.S. Foreign Bank Operations Rule and the European Union (EU) response created a precedent of regulatory protectionism. These twin threats to the global ecosystem—regulatory protectionism, and the extraterritorial application of regulations—place stress on the global financial system. Some of the recent EU developments continue this trend and may provoke a global response that can harm the EU and ultimately the global economy.

This paper analyzes recent legal and regulatory developments in the EU that will potentially significantly affect the landscape of the financial services industry in the EU and elsewhere. It focuses on four specific initiatives, which are briefly discussed below, and evaluates these developments in the context of an overarching economic framework that highlights the consequences of these initiatives from the standpoint of its effect on consumer welfare in the EU, in the U.S., and globally.



**“These twin threats to the global ecosystem—regulatory protectionism, and the extraterritorial application of regulations—place stress on the global financial system.”**

## **INITIATIVE ONE DELEGATION**

The EU is undertaking a wide-ranging review of the authorities of the European Supervisory Authorities (ESAs)—e.g., the European Securities and Markets Authority (ESMA), the European Banking Authority, and the European Insurance and Occupational Pensions Authority. A legislative proposal published on September 20, 2017, created a new *Article 31a*, requiring the ESAs to coordinate and monitor the national competent authorities regarding delegation, which is EU27 national regulators’ practice of allowing market participants to outsource business functions to third countries. This initiative would therefore impose new restrictions on institutions operating in multiple jurisdictions—e.g., a U.S. asset manager with a fund listed in Luxembourg that is managed from the U.K. Thus, many firms from the U.S. and other countries will be adversely affected, with negative consequences for the global economy.

## **INITIATIVE TWO COMMON OWNERSHIP**

*Common ownership* refers to the hypothesis that simultaneous ownership of shares in competing firms by institutional investors has an anti-competitive effect because the investors can increase their wealth by having these firms behave oligopolistically in pricing products and services. Discussions of common ownership, and potential policy responses, in Europe and the U.S. have led to calls for possibly limiting common ownership of firms by institutional investors.

## **INITIATIVE THREE**

### **MiFID II**

On January 3, 2018, the EU's updated *Markets in Financial Instruments Directive* (MiFID) II went live. The goal of MiFID is to make financial markets in Europe more resilient, transparent, and investor friendly. MiFID II is an attempt by the EU to create a single rulebook covering financial market activities and services. It replaces the decades-old MiFID I. MiFID II seeks to move derivatives trading to electronics platforms, with more robust requirements for market probity and investor protection.<sup>1</sup> Although the regulation does not directly affect firms domiciled outside the EU, the global nature of financial markets means that non-EU financial firms will also be affected.

## **INITIATIVE FOUR**

### **EMIR AND ITS IMPLICATIONS FOR THE SUPERVISION AND REGULATION OF NON-EU CCPs**

On June 13, 2017, the European Commission prepared amendments to the *European Market Infrastructure Regulation* (EMIR) that would significantly overhaul supervision and regulation of non-EU central counterparty clearinghouses (CCPs). The proposal builds on the existing third-country provisions in EMIR and will make more robust the process to recognize and supervise third-country CCPs that are of systemic importance to the EU.

The proposal introduces a new two-tiered system for classifying third-country CCPs. One tier will be unsystemically important CCPs that will operate under the existing EMIR equivalence framework, but with enhanced supervisory oversight. The other will be the so-called "Tier 2" CCPs that are systemically important. These CCPs will be subject to much stricter requirements.

## KEY FINDINGS:

- The effect on stability is predicted to be mixed.
- Many of the proposed initiatives will lead to more fragmentation and less competition among financial service firms, which will eventually hurt consumers in the EU. Moreover, because the initiatives reach into the U.S. and other countries, they will hurt consumers and businesses globally.
- While economic efficiency will improve in some cases, it will worsen for firms globally.
- The effects on market participants are likely to be mixed, but the extraterritorial reach of these regulations may profoundly affect U.S. firms and consumers.
- Innovation incentives are likely to be retarded, and the initiatives are likely to be inimical to global economic growth.
- A global response to these proposals can harm the EU and its citizens, destabilize the global system, and further harm the development of cross-border resolution mechanisms.

In summary, the increased regulatory divergence that will result from these initiatives will have numerous unintended negative consequences, in addition to increasing the costs that firms face in coping with a multiplicity of regulatory jurisdiction-specific requirements. An Organisation for Economic Co-operation and Development (OECD) and International Federation of Accountants (IFAC) study found that financial institutions spend between 5% and 10% of revenue in dealing with global regulatory divergence—a staggering \$780 billion annually.<sup>2</sup> The biggest cost impacts of divergence were in the capital markets sector and banking. The most material costs are due to divergence in competition law, market-based regulation, and product regulation/consumer protection. The biggest differences are in supervisory interpretations and practices, fundamentally different regulatory frameworks, and different regulatory and data definitions.<sup>3</sup> These findings are complementary to the conclusions reached in this study.

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<sup>1</sup> See Regan (2017).

<sup>2</sup> See International Federation of Accountants and Business at OECD (2018).

<sup>3</sup> The costs for firms arise from the use of senior management time and capital to deal with these forms of divergence.

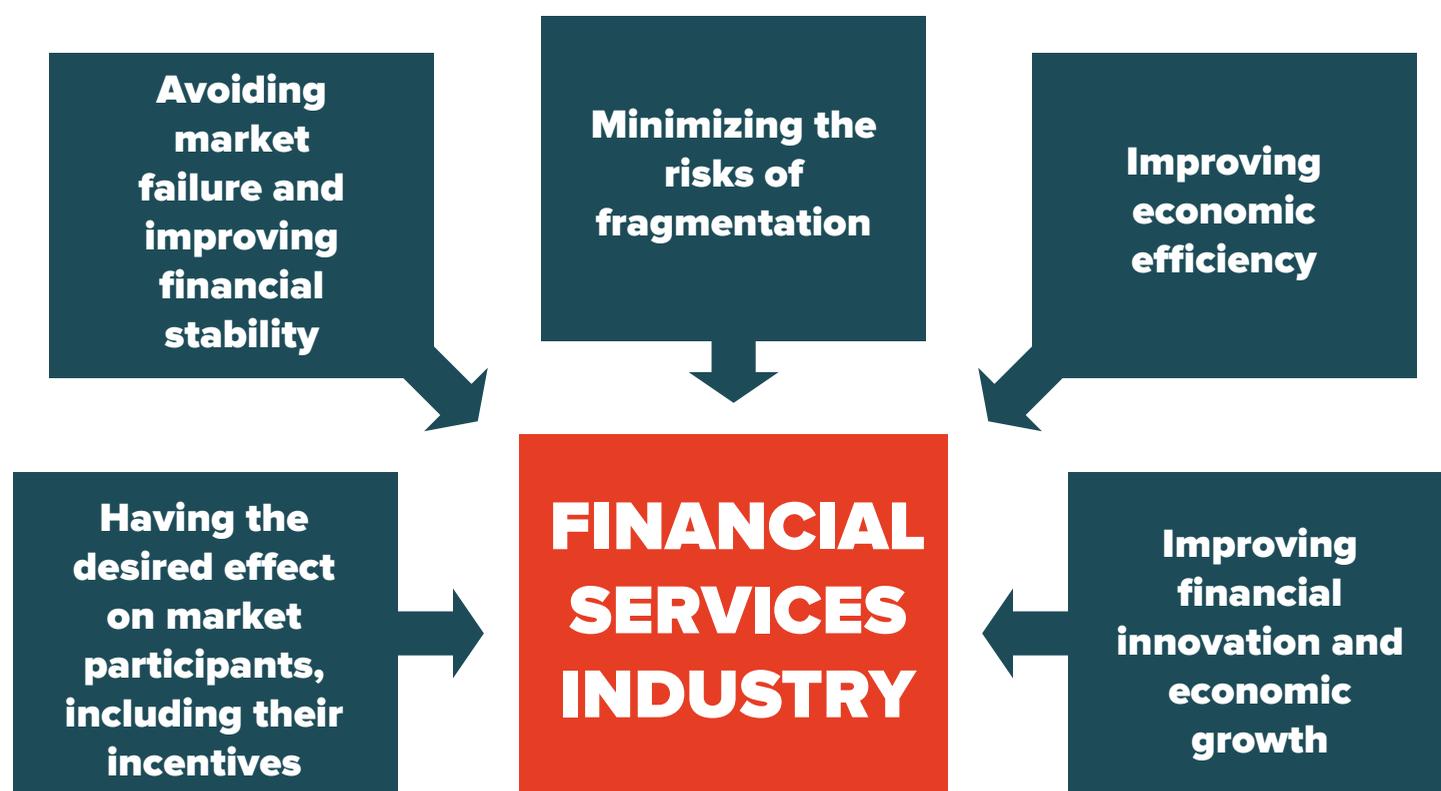
# AN ECONOMIC FRAMEWORK FOR THE GOALS OF REGULATION OF FINANCIAL SERVICE FIRMS.

Economists have long been interested in examining the conditions under which government regulation of the financial services industry makes economic sense.<sup>4</sup> The voluminous research on this topic can be distilled into five main factors that are important in determining the nature and scope of regulation. These factors are (i) avoiding market failure and improving financial stability in general; (ii) minimizing the risks of fragmentation; (iii) improving economic efficiency; (iv) having the desired effect on market participants, including their incentives; (v) and improving financial innovation to facilitate economic growth. These factors are depicted in *Figure 1*.

Thus, the EU regulatory initiatives discussed should be examined against these factors in order to determine their comprehensive economic impact.

## **Figure 1:**

The Objectives That Affect the Nature and Scope of Regulation in Financial Services.



## **FACTOR ONE** **AVOIDING MARKET FAILURE AND IMPROVING FINANCIAL STABILITY**

Perhaps the principal justification for regulating financial services is that the industry is innately susceptible to the failure of not only individual institutions but also the markets. This then leads to a financial crisis and upends financial stability. For example, in the 2007-09 financial crisis, there was a market failure in the sense that access to short-term liquidity dried up for the vast majority of institutions because of the failure of the repo market.<sup>5</sup> The collapse of the savings and loan industry in the U.S. in the 1980s is another example of a market failure.

Market failures have two features that are economically important. One is that when the market fails, it adversely affects the ability of even solvent institutions to function normally. Second, a market that has failed typically has difficulty rebounding to normalcy on its own without some external stimulus or assistance.

These features imply that a market failure can be very costly to society and typically requires some form of regulatory intervention. For example, in the 2007-09 crisis, the U.S. government took equity positions in banks to infuse capital into them, which in the end helped to revive these banks sufficiently to end the crisis.<sup>6</sup>

However, ex post regulatory interventions to end a crisis that involves market failure are costly to taxpayers. Thus, there is interest in adopting regulations that reduce the probability of a market failure in the first place and improve financial stability. For example, deposit insurance is typically justified on the grounds that it prevents bank runs and enhances financial stability. This means that one criterion that should be used to assess any regulatory initiative is to examine whether the initiative increases financial stability.

## **FACTOR TWO** **MINIMIZING THE RISKS OF FRAGMENTATION**

In an increasingly integrated global financial system, regulation should not be fragmented along national lines or across different blocks of countries. If it is fragmented, it tends to increase global systemic risks. Fragmentation can occur in many ways. For example, prior to the Basel I capital accord, there was a great deal of heterogeneity in capital requirements in different countries. For banks seeking to minimize the capital they operated with, this created incentives to engage in “regulatory arbitrage”—going to the jurisdiction with the least burdensome regulation.

Another way in which fragmentation occurs is *within* the same regulatory jurisdiction, but across different parts of the financial services industry subjected to different regulatory standards. This took place in the U.S. prior to the crisis, with shadow banks being regulated by a different set of rules relative to depository institutions, even when they were performing the same economic functions,<sup>7</sup> which caused many activities to migrate to shadow banking.

A third way in which fragmentation occurs is through regulatory “ring-fencing.”<sup>8</sup> In order to ensure that the banks operating in their jurisdictions are sufficiently safe and do not “import” risks from other geographies, regulators sometimes ask banks to separate their assets and activities into distinct geographic subsidiaries. This entails dividing up capital and liquidity reserves and not allowing them to move freely across the boundaries of the different countries in which the bank operates. For example, some have proposed segregating certain products into separate units, such as the U.K. ring-fencing to protect retail activities. Others, especially in the EU and the U.S., have proposed geographic ring-fencing.

While at first glance ring-fencing may appear to offer benefits by limiting risk spillovers across national boundaries—so as to limit global contagion, for instance—research shows that it actually has the opposite effect. Ring-fencing and the resulting regulatory fragmentation does not make banking safer. Rather, extensive ring-fencing can increase banking risk by making banks more prone to failure and thereby have adverse consequences for the very jurisdictions that impose these restrictions.<sup>9</sup>



**“In an increasing integrated global financial system, regulation should not be fragmented along national lines or across different blocks of countries.”**

It is not difficult to see why ring-fencing and other forms of regulatory fragmentation typically do not work. First, by limiting the free movement of capital and liquidity within a bank holding company, efficiency is sacrificed. For example, a unit within the holding company may be sitting on excess capital, but it would be unable to transfer it to a deficit unit, forcing the deficit unit to raise capital that the holding company as a whole does not need. The providers of debt financing to the deficit unit know that with ring-fencing they do not have access to the assets and capital of other units in the holding company. The resulting lack of “internal diversification” increases the risk faced by these creditors, which raises the cost of capital for the holding company. Thus, not only does ring-fencing subject the holding company to more risk, but ring-fencing also raises its cost of capital, potentially making it more averse to adding more equity capital to its balance sheet. A similar argument applies to liquidity reserves. If the bank cannot move liquidity freely across units, the cost of holding liquid assets goes up.

### **FACTOR THREE** **IMPROVING ECONOMIC EFFICIENCY**

Even in the absence of a financial crisis, informational frictions and regulatory barriers can impede the economic efficiency of the market.<sup>10</sup> As an example of informational frictions, an institution may have an opaque balance sheet because of portfolio complexity and proprietary information about borrowers that it cannot disclose to the market. This can impede its access to capital, raising its cost of financing and limiting the amount of financing available.<sup>11</sup> An example of regulatory barriers causing inefficiency is U.S. banking prior to the interstate banking deregulation of 1994. Since banks were unable to branch across state lines, excess branch capacity built up and the industry had an inefficiently large number of banks. The 1994 dismantling of this regulatory restriction allowed banks to buy banks in other states and shut down some branches, allowing the industry to shed excess capacity and improve efficiency.

Economic efficiency can sometimes be improved by introducing a new regulation—such as requiring airlines that overbook flights to offer customers whatever financial compensation is needed to induce enough of them to voluntarily give up their seats—or by eliminating an existing regulation, as in the case of the pre-1994 restriction in interstate banking in the U.S. So, every regulation should be viewed from the perspective of whether it enhances economic efficiency or removing it would enhance efficiency.

## **FACTOR FOUR**

# **HAVING THE DESIRED EFFECT ON MARKET PARTICIPANTS, INCLUDING THEIR INCENTIVES**

Regulation changes the incentives of market participants. A common mistake in analyzing the potential effects of any regulation is overlooking the unintended consequences of the regulation. These unintended consequences often arise from “second-order” effects—those generated by the altered incentives of market participants due to the introduction of the new regulation.

Examples of this abound. When health care is offered with deductible-free health insurance, individuals tend to overuse medical services. Emission control regulations encourages some car manufacturers to cheat on the measurement of emissions. The degree of competition also affects the incentives of market participants, and is a key aspect of regulation. Research has found that more-competitive markets promote financial stability and involve more-efficient firms.<sup>12</sup>

Moreover, “national champions”—regulators who advocate for territorial regulation that protects institutions in the country—distort competition, dissipating the potential benefits.

Research has also found that higher competition leads to enhanced innovation incentives, greater efficiency, more consumer choice, and lower prices.<sup>13</sup> Further, competition affects the allocative, productive, and dynamic efficiency of the market.<sup>14</sup> Competition increases in importance as the institutions that are competing become more complex.

These research findings indicate that in assessing any regulation, the question that should be asked is whether it makes the market more or less competitive. In general, regulations that enhance competition are better for consumer welfare.

**“Innovation is key to both economic growth and consumer welfare.”**

**FACTOR FIVE**

**IMPROVING FINANCIAL INNOVATION INCENTIVES AND ECONOMIC GROWTH**

It is now well known that competition affects the innovation incentives of market participants, making these incentives stronger.<sup>15</sup> Since regulation affects competition, it follows that regulation also influences the innovation incentives of market participants.

Innovation is key to both economic growth and consumer welfare.<sup>16</sup> In financial services, innovations like options, futures, swaps, and securitization have greatly improved risk management and reduced the cost of capital for a variety of market participants. Consequently, through innovation in financial services, economic growth has been elevated.

The finding that competition strengthens innovation incentives is significant because it indicates that by assessing whether a contemplated regulation enhances competition, we can also determine whether it will lead to more innovation.

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<sup>4</sup> See Greenbaum, Thakor, and Boot (2015).

<sup>5</sup> There is not agreement on this conclusion. Some believe this was a counterparty risk crisis and not an illiquidity crisis. See, for example, Thakor (2015b).

<sup>6</sup> See, for example, Greenbaum, Thakor, and Boot (2015), and Thakor (2015b).

<sup>7</sup> Merton (1993, 1995) calls this “regulation by labels” rather than “regulation by functions.” He advocates functional regulation. Merton and Thakor (forthcoming) examine the implications of functional regulation for the design of regulation and risk management.

<sup>8</sup> See Swiss Finance Council (2018).

<sup>9</sup> See Wilson (2017).

<sup>10</sup> Informational frictions arise when one party to a transaction knows more than the other, which leads to an increase in information processing and transaction costs.

<sup>11</sup> See, for example, Thakor (2015a).

<sup>12</sup> See OECD (2009).

<sup>13</sup> See Wilcox (2005).

<sup>14</sup> Claessens (2009).

<sup>15</sup> See Aghion, Bloom, Blundell, Griffith, and Howitt (2005) and Thakor and Lo (2018).

<sup>16</sup> See Arrow (1962).

# DELEGATION

## SECTION A BRIEF OVERVIEW

On September 20, 2017, the European Commission published a legislative proposal <sup>17</sup> of:

*“... reforms to pave the way for further financial integration and a full Capital Markets Union, to promote jobs, growth and investments in Europe and to strengthen the Economic and Monetary Union. ...*

*When the EU overhauled its financial system in the wake of the financial crisis, it introduced a single rulebook for financial regulation in Europe and created the European Supervisory Authorities (ESAs) and the European Systemic Risk Board (ESRM). These bodies are pivotal in ensuring that financial markets across the EU are well regulated, strong and stable. However, more needs to be done to enhance regulatory and supervisory convergence within the Single Market to help our financial markets work more effectively and to address new challenges. ...*

*The reforms will promote further capital market integration following the UK’s departure from the EU. They will also introduce changes to the supervisory relations with non-EU countries so as to ensure proper management of all financial-sector risks.”*

This proposal has many aspects, which are depicted in *Figure 2*. This section focuses on the proposal’s call for stronger coordination of supervision across the EU. The proposal states:

*“The ESAs will set EU-wide supervisory priorities, check the consistency of the work programs of individual supervisory authorities with EU priorities and review their implementation. They will monitor authorities’ practices in allowing market players—such as banks, fund managers and investment firms—to delegate and outsource business functions to non-EU countries, to ensure that risks are properly managed and to prevent circumventions of the rules.”*

This is a particularly critical issue for asset managers, particularly U.S. asset managers operating in Europe, which overwhelmingly have funds that are listed in Luxembourg and managed from the U.K.

**Figure 2:**

Key Features of the September 2017 European Commission Proposal



The proposal (including the new article 31a) imposes numerous obligations and restrictions on EU national regulators that permit applicant firms to outsource or “delegate” to third countries.

## SECTION B

# EVALUATING RESTRICTIONS ON DELEGATION BASED ON THE ECONOMIC FRAMEWORK

The fund management business is highly competitive. Funds compete aggressively to offer the best risk-return combinations to their clients at the lowest cost, while still satisfying their own minimum profitability objectives. This means that, left to their own devices, fund management firms will pick the most efficient way to run their businesses, and in the end this will deliver the most value for their customers in Europe. If firms choose to outsource by managing funds listed in Luxembourg from a location in the U.K., it is because that provides the most efficient business model.

Curtailing such activities will generate inefficiencies. Therefore, to make sense, the benefits of tolerating such inefficiencies in the context of better achieving one or more of the five objectives in the economic framework outlined in *Figure 1* must exceed the costs of the inefficiencies. Let us consider each objective in turn.

### IMPROVING FINANCIAL STABILITY

It is difficult to see how restricting the business model of fund managers in this way can improve financial stability. The portfolio decisions of these fund managers are evidently unaffected by the locations from which the funds are managed, so from this standpoint, the effect on financial stability should be minimal. However, one of the goals of the delegation regulation is “*to ensure that risks are properly managed and to prevent circumventions of the rules.*” So one concern may be that when certain activities are outsourced to offshore entities, it would be difficult to monitor the risks that may be lurking in those entities. However, this concern can be dealt with by asking the firms operating in the EU to provide some reporting on the entities that they have outsourced to, rather than banning or restricting delegation, and encouraging cross-border consultation among EU regulators and home regulators to ensure an information flow sufficient to deal with any cross-border issues.

### MINIMIZING THE RISKS OF FRAGMENTATION

Restricting delegation is likely to increase the kinds of risks that fragmentation produces. Regulation that prohibits management firms from outsourcing impedes their ability to deliver the best product at the lowest (execution) risk and (operating) cost. It is essentially a geographical ring-fencing operation. While the first-order effect may appear to be a form of quality control, the second-order effect is a diminished ability to move resources across national boundaries, thereby potentially increasing operating costs and even operational risk.



**“Restricting delegation is likely to increase the kinds of risks that fragmentation produces.”**

#### **IMPROVING ECONOMIC EFFICIENCY**

As discussed above, this proposal, if implemented, will lead to a *decline* in economic efficiency, *not* an improvement. In the end, this will hurt consumers in the EU. Moreover, it will increase the cost of doing business for non-EU firms operating there, without any discernable offsetting benefit.

#### **HAVING THE DESIRED IMPACT ON MARKET PARTICIPANTS INCLUDING THEIR INCENTIVES**

It is expected that restrictions on fund managers contemplated under delegation will primarily have the effect of increasing costs for European consumers and hence their net returns from investing their funds. Such restrictions may also make the fund management industry in the EU less competitive as some funds may choose to scale back their activities or exit. Moreover, fund management is a global business, so it would not be surprising if some customers, especially some institutional investors, simply take their business elsewhere—the U.S. and the U.K., for example. But the effects will not be limited to the EU. The global nature of the fund management business means that the global efficiency of non-EU fund managers will be diminished, and this will adversely affect customers, especially those in the EU.

## IMPROVING FINANCIAL INNOVATION AND ECONOMIC GROWTH

If the delegation restriction reduces competition, then it will adversely impact innovation.<sup>18</sup> Whether it will have some indirect effect on economic growth is difficult to say.

### **Key Findings:** Potential Effects of Delegation

REGULATORY GOAL	EFFECT OF RESTRICTING DELEGATION ON REGULATORY GOAL
Improving financial stability	No effect
Minimizing the risk of fragmentation	Will increase it
Improving economic efficiency	Will reduce economic efficiency
Impact on market participants	Will increase costs and reduce net returns for customers
Improving financial innovation and economic growth	No effect

## SECTION C CONCLUSION

In the end, delegation does *not* serve the purpose of protecting consumers, either in the EU or globally. As has been noted elsewhere, financial consumers in Europe suffer from mis-selling and other abuses.<sup>19</sup> This potentially explains the poor ranking of financial services among consumer markets in European Commission Consumer scoreboards. If anything, delegation ultimately works against the welfare of EU consumers, without achieving progress on any of the five objectives outlined in the overarching economic framework developed in this paper. Moreover, due to the global nature of financial services, U.S. fund managers will be adversely impacted in terms of their global efficiency, and this will have negative repercussions for U.S. firms and consumers.

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<sup>17</sup> See European Commission (2017a).

<sup>18</sup> See Thakor (2012), who shows that higher competition among financial service firms will lead to more innovation.

<sup>19</sup> See Goyens (2018).



## COMMON OWNERSHIP

The issue of common ownership of competing forms by institutional investors has attracted considerable attention because it is claimed to have anti-competitive effects. It has been suggested that these anti-competitive effects exist even when the common ownership involves only minority shareholders. Although the research on this issue is still at an early stage, authorities in the U.S. as well as Europe have expressed a great deal of interest in this topic. In fact, in a Statement of Objections to a merger, the European Commission even presented a *modified* Herfindahl-Hirschman index analysis that takes into account the effects of common ownership by institutional investors.<sup>20</sup>

## SECTION A BRIEF OVERVIEW

Schmalz (2017) has provided an extensive discussion promoting the idea that the anti-competitive effects of common ownership are real and significant, while acknowledging the need for more research. *Table 2* highlights his example from the U.S. airline industry to illustrate this point:

**Table 2:** Largest Beneficial Owners of Virgin America

OWNER	PERCENTAGE OWNED
Richard Branson	30.99
Cyrus Capital Partners	23.69
Vanguard	2.91
Blackrock	2.27
Alpine Associates Advisors	2.12
Hutchin Hill Capital	2.10
Societe Generale	1.85

In contrast to Virgin America, consider the top five beneficial owners in the four largest airlines in the U.S., as depicted in *Table 3*.

Delta		Southwest		American		United	
OWNER	% OWNED	OWNER	% OWNED	OWNER	% OWNED	OWNER	% OWNED
Berkshire Hathaway	7.25%	Berkshire Hathaway	15.03%	TRowe Price	12.89%	Berkshire Hathaway	9.11%
Vanguard	6.13%	Primecap	11.87%	Primecap	10.48%	Vanguard	7.33%
Blackrock	5.84%	Vanguard	6.28%	Berkshire Hathaway	9.54%	Primecap	7.19%
Lansdown Partners Limited	3.90%	Fidelity	5.41%	Vanguard	6.15%	Blackrock	6.72%
Primecap	3.75%	Blackrock	5.04%	Blackrock	5.20%	PAR Capital Management	5.26%

As is evident from *Table 3*, Berkshire Hathaway, Vanguard, and Blackrock are among the top five beneficial owners of all the four biggest U.S. airlines. Several other papers have documented that the level of common ownership in U.S. publicly listed firms has increased significantly, especially in airlines, pharmaceuticals, banks, breakfast cereals, and soft drinks.<sup>21</sup> The fraction of publicly listed U.S. firms held by institutional investors that simultaneously hold at least 5% of the common equity of other same-industry firms has increased from below 10% in 1990 to about 60% in 2014.<sup>22</sup> Moreover, the density of the network of U.S. companies with owners in common more than tripled between 2000 and 2010, going from 4% to 14%, and the percentage of companies having a top five fund as an investor increased from approximately 30% to almost 50%.<sup>23</sup>

Common ownership is not a phenomenon that is limited to the U.S. There is a high level of common ownership in European banking and the German chemical industry.<sup>24</sup> For example, among European banks, as of 2016, Blackrock was the largest shareholder of HSBC, Deutsche Bank, Banco Popolare, and Banco Bilbao. In Iceland, common ownership increased significantly after the financial crisis, with pension funds having acquired majority ownership in most Icelandic companies.<sup>25</sup>

Why should we care if common ownership is on the rise? Some are concerned that, as a consequence of having common ownership in many firms within the same industry, these common owners have little interest in seeing the firms they own compete aggressively for market share, since such competition is a zero-sum game that would lower profits for all commonly owned firms and reduce the wealth of their shareholders. Any gain by one firm would be at the expense of the other, so the market share gains from competing more aggressively would not matter much to these common owners. But common owners would care about the fact that more intense competition would lower profits for all competing firms. So, in the case of airlines, one may conclude that the top U.S. carriers would be disinclined to compete with each other, whereas Virgin America—which does not have common ownership—would be interested in competing. In a sense, common ownership induces *tacit* collusion, and that is why it is bad for consumers.

Banning or restricting common ownership, on the other hand, would inhibit the ability of investors to achieve the desired degree of *within-industry* diversification. This would have potentially adverse consequences for both institutional investors and their clients as well as for the firms in the industry that would have less institutional demand for their shares.



## SECTION B

### WHAT DOES THE RESEARCH SAY?

Given the costs and benefits of common ownership, much of the debate has revolved around the theoretical foundations of the cost argument and the empirical evidence for the anti-competitive effects of common ownership.

#### THEORETICAL RESEARCH

On the theoretical front, we have already noted the argument for why common ownership could potentially have anti-competitive effects. A number of theoretical papers have fleshed out this argument, focusing on the incentives commonly owned firms have to engage in (coordinated) joint profit maximization in making decisions about Research & Development, takeovers, strategy, capital budgeting, and so on.<sup>26</sup> The idea is that the managers of firms would take into account the interests of their institutional owners (who may express these interests privately) in making key decisions.

Arrayed against this theoretical argument are numerous theoretical objections.

First, managers have a legally enforceable fiduciary duty to maximize the wealth of all their shareholders. Thus, it would be a violation of fiduciary duty to maximize the wealth of (within-industry) diversified common owners at the expense of shareholders that are undiversified and own only one firm in that industry—i.e., shareholders who may want the company to act in a manner that increases its profits even if doing so reduces the profits of its competitors.

Second, the interests of even the diversified institutional investors may not be fully aligned.<sup>27</sup> For example, some institutional investors may not have the holdings in the industry that other investors have, so they may not approve of the decisions of other common owners. For instance, *Table 3* shows that T. Rowe Price is the top institutional owner of American Airlines but does not appear on the top five ownership list of any of the other three airlines. Its interests may therefore diverge from those of, say, Berkshire Hathaway, which shows up on every top five list.

Third, if we are considering diversified institutional owners, why stop at the ownership in only a particular industry? Why not consider upstream and downstream effects? That is, these institutional investors may also have ownership in the suppliers and customers of the companies of the industry in question. In this case, anti-competitive behavior by the firms in a given industry would hurt the suppliers and customers of those firms, which would be bad news for the institutional investors who own shares in those companies,

Fourth, when management makes recommendations, it is rare for institutional investors to dissent.<sup>28</sup>

Fifth, much of the discussion about anti-competitive effects relates to competitive strategy, and this is typically not something shareholders vote on. Competitive strategy is entirely within the purview of management and most of the time not subject to any kind of public disclosure or debate. So how can common owners influence it?

Sixth, the other shareholders (not common owners) would clearly have an incentive to defeat any anti-competitive strategies that benefit investors with shares in the firm's competitors.

Finally, there are theoretical models in which it is possible to derive *pro-competitive* effects of common ownership.<sup>29</sup>

Those who believe, on theoretical grounds, that anti-competitive effects of common ownership exist respond to these objections by pointing out that institutional investors would not engage in explicit and detectable behavior that would violate antitrust laws, and neither would management behave in a way that transparently reflects a violation of fiduciary responsibilities. Rather, the institutional investors would facilitate tacit and subtle coordination among portfolio firms, with an investor holding shares in multiple firms in an industry acting as a “cartel ringmaster.”<sup>30</sup> Such an investor can express the wishes of the common owners to the firms concerned in subtle, hard-to-detect ways. In other words, common ownership can reduce incentives to compete without a need for firms or their managers to collude explicitly.<sup>31</sup>

*Figure 3* summarizes these theoretical arguments. Since the issue is not settled theoretically, we need the data to arbitrate.

**Figure 3:** Arguments For and Against the Anti-Competitive Effects of Common Ownership

# COMMON OWNERSHIP

**Produces Anti-Competitive Behavior by Firms in the Industry Because ...**

**... the wealth of the common owners can be increased by having the firms in the industry not engage in competition and acting like an oligopoly.**

**... such collusion is achieved through subtle coordination among common owners and firms' managers.**

**Does Not Produce Anti-Competitive Behavior by Firms in the Industry Because ...**

**... managers have a legally enforceable fiduciary duty to maximize the wealth of only their shareholders, even at the expense of competitors.**

**... interests of common owners may not be aligned.**

**... common owners may also own shares in customers and suppliers that would be hurt by anti-competitive behavior.**

**... institutional investors rarely disagree with management proposals.**

**... competitive strategy is rarely voted on, so common owners cannot influence it.**

**... non-common-ownership shareholders would defeat anti-competitive measures.**

**... theory can also produce pro-competitive effects.**

## EMPIRICAL RESEARCH

Carefully conducted empirical research has sought to settle the theoretical debate on the anti-competitive effects of common ownership. There have been, broadly speaking, two different approaches to examining whether common ownership actually produces anti-competitive effects. One is to examine how the emergence of common ownership affects prices charged by the firms in the industry and their profitability. A study of the airline industry by Azar, Schmalz, and Tecu (forthcoming) documents that route-level airline ticket price changes can be predicted by changes in common ownership among the airlines flying a particular route. Similar results for U.S. banking deposit markets are documented by Azar, Raina, and Schmalz (2016). Other studies have shown that commonly owned firms seem to be investing less than their profitability suggests they should, which is usually a tell-tale sign of noncompetitive (oligopolistic) behavior.<sup>32</sup>

The conclusions reached by these empirical studies have been contested by O'Brien and Waehrer (2018) and Kennedy, O'Brien, Song, and Waehrer (2017). These authors argue that the panel regression results of the previous studies are not valid because existing theoretical models do not yield the reduced-form relationships used for the regression-based estimations. They thus conduct empirical analyses that differ in two important respects. First, they use different measures of common ownership from those used by Azar, Schmalz, and Tecu (forthcoming).<sup>33</sup> Second, they develop a structural oligopoly model to address the shortcomings of the reduced-form model.<sup>34</sup> They find that common ownership leads to lower prices, not higher prices as predicted by the theory of anti-competitive effects.

There has been considerable back and forth in the debate between Azar, Schmalz, and Tecu (2017) and Kennedy, O'Brien, Song, and Waehrer (2017). Without going into all of the nuances of this debate, both sides seem to agree that more research is needed before definite conclusions can be reached.<sup>35</sup>

Then there is the issue of whether coordination among common owners, even if it exists, is always a bad thing. An empirical study analyzed a sample of publicly held firms in the U.S. during 1980-2014 to examine how common ownership affects a host of decisions.<sup>36</sup> Specifically, it found that firms with common ownership are (i) more likely to engage in joint ventures, alliances, and other *explicit* coordination; and (ii) have higher innovation productivity and operating margins, suggesting coordinated R&D efforts and knowledge sharing. This kind of cooperation was associated with higher relative market share growth rates, higher profits, and higher stock prices.

## **POLICY IMPLICATIONS**

It is difficult to arrive at definite policy prescriptions based on research that is still ongoing and at a somewhat early stage. On the one hand, related to the issue of anti-competitive behavior and its cost to consumers, it is possible that such behavior exists in some industries and it is also possible that it does not. On the other hand, in terms of the costs of putting restrictions on common ownership, the consequent loss of opportunities for institutional investors to diversify their holdings freely would have negative implications for retail investors because it would entail significant changes in the size or composition of many investment funds.<sup>37</sup>

So, what is the policy answer? To address this question, it should be acknowledged that the hypothesis that common ownership produces anti-competitive pricing by firms in the industry is not yet settled either theoretically or empirically. So imposing costly restrictions on common ownership by institutional investors seems premature. More research is needed before we can extract sound policy prescriptions.

## **SECTION C** **EVALUATING RESTRICTIONS ON COMMON OWNERSHIP BASED ON THE ECONOMIC FRAMEWORK**

### **IMPROVING FINANCIAL STABILITY**

Making industries more competitive actually makes each firm in the industry more fragile—think of the airline industry in the U.S. in the 1980s and 1990s. So, from this perspective, limiting common ownership will work against financial stability, if the anti-competitive effects exist.

### **MINIMIZING THE RISKS OF FRAGMENTATION**

No first-order effect on the risk of fragmentation is likely.

### **IMPROVING ECONOMIC EFFICIENCY**

The effect on economic efficiency of imposing restrictions on common ownership is ambiguous since the purported efficiency gains from reducing anti-competitive behavior may be offset by the lower efficiency in the investment management of institutional investors. Furthermore, it is not even clear that significant anti-competitive effects exist.

## **HAVING THE DESIRED IMPACT ON MARKET PARTICIPANTS, INCLUDING THEIR INCENTIVES**

Given the unsettled nature of the research on the anti-competitive effects of common ownership, it is difficult to say if limiting common ownership will have the desired impact.

## **IMPROVING FINANCIAL INNOVATION AND ECONOMIC GROWTH**

To the extent that common ownership has the anti-competitive effect of reducing R&D and other types of investments, restricting it will improve financial innovation incentives and economic growth. But this is dubious since the anti-competitive effects have not been clearly and unambiguously established.

### **Key Findings:** Potential Effects of Limiting Common Ownership

<b>REGULATORY GOAL</b>	<b>EFFECT OF LIMITING COMMON OWNERSHIP ON REGULATORY GOAL</b>
Improving Financial Stability	Will potentially reduce it
Minimizing risks of fragmentation	No effect
Improving economic efficiency	Ambiguous but could reduce efficiency
Impact on market participants	May reduce anti-competitive behavior, if such behavior exists, but research has not settled this issue
Improving financial innovation and growth	Ambiguous but may increase it

## SECTION D

# CONCLUSION

In summary, the issue of common ownership is challenging and the research on it is at an early stage. This means the issues and differences of opinion have not been settled yet and the debate continues. Thus, it appears that rushing to restrict ownership of firms by institutional investors would be premature and rash. Rather, more research needs to be conducted on the potential anti-competitive effects of common ownership.

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<sup>20</sup> See O'Brien and Waehrer (2018).

<sup>21</sup> See Capobianco (2017) and Posner, Morton, and Weyl (forthcoming).

<sup>22</sup> See He and Huang (forthcoming)

<sup>23</sup> See Azar (2011) and Capobianco (2017).

<sup>24</sup> See Posner, Morton, and Weyl (forthcoming) and Seldeslachts, Newham, and Banal-Estanol (2017).

<sup>25</sup> See Óladóttir, Friðriksson, Magnússon, and Þráinsson (2017).

<sup>26</sup> See Hansen and Lott (1996) and Rubin (2006).

<sup>27</sup> See Rock and Rubinfeld (2017).

<sup>28</sup> Rock and Rubinfeld (2017) document that shareholders approve management compensation proposals 92% of the time.

<sup>29</sup> See López and Vives (2017).

<sup>30</sup> See Rock and Rubinfeld (2017) and Capobianco (2017).

<sup>31</sup> See Rotemberg (1984), Rubinstein and Yaari (1983), and Schmalz (2018).

<sup>32</sup> See Gutierrez and Philippon (2016).

<sup>33</sup> Unlike Azar, Schmalz, and Tecu (forthcoming), Kennedy, O'Brien, Song, and Waehrer (2017) use common ownership indices that do not rely on market shares. See Azar, Schmalz, and Tecu (2017).

<sup>34</sup> The argument against the reduced-form model is that it does not account for interactions between common ownership and other market variables predicted by the theory.

<sup>35</sup> For example, Schmalz (2017) writes, "There are many questions to which common ownership research has not provided answers yet ... the literature also lacks credible structural estimates regarding how large anti-competitive effects are in various industries and geographies in which substantial levels of common ownership are present." O'Brien and Waehrer (2018) write: "more research is warranted that (1) employs empirical specifications consistent with the underlying economics of common ownership; and (2) identifies whether or how common ownership translates into control over managers in ways that affect competition."

<sup>36</sup> See He and Huang (forthcoming).

<sup>37</sup> See O'Brien and Waehrer (2018)



# MiFID II

## SECTION A BRIEF OVERVIEW

In April 2004, the EU's MiFID I came into effect. The directive applied to investment firms and regulated markets (RMs) in Europe. A goal of MiFID I was to facilitate the ability of investors to “trade securities at maximum efficiency and at minimum cost.” It was commonly understood that achieving this goal would require greater investor access to more-transparent markets, better investor protection, harmonized European regulation, and more-effective competition among different trading venues.<sup>38</sup> MiFID I also introduced multilateral trading facilities (MTFs), which had the effect of increasing competition among trading venues.

This increased competition among trading venues had an undesirable consequence, however, at least in context of the previously discussed overarching economic framework. This consequence was an increase in equity market fragmentation in Europe. By June 2017, new competitors on national exchanges had collectively garnered a market share that exceeded 28% of total European electronic order book trading in equities.<sup>39</sup> But the fragmentation was also accompanied by the desired effects of increased competition, namely lower trading costs for investors. It is reported that costs per transaction decreased by approximately 82% for trading platforms, by 85% for CCPs, and by 65% on a central securities depository level during 2006-09.<sup>40</sup>

The goal of MiFID II and the accompanying regulation called *Markets in Financial Instruments Regulation* (MiFIR) is twofold. The first goal is to extend the purported benefits of MiFID I to other asset classes. The second goal is to address problems caused by market fragmentation, dark trading, and over-the-counter (OTC) trading.<sup>41</sup>

An important implication of MiFID II/MiFIR, which became effective January 2018, is that OTC trading will have to take place on RMs, MTFs, or systematic internalizers (SIs). How will this affect trading volume and liquidity, especially on “lit venues”—transparent open-order book markets that play an important role in the price discovery process? This section will use the research on this question to provide an assessment.

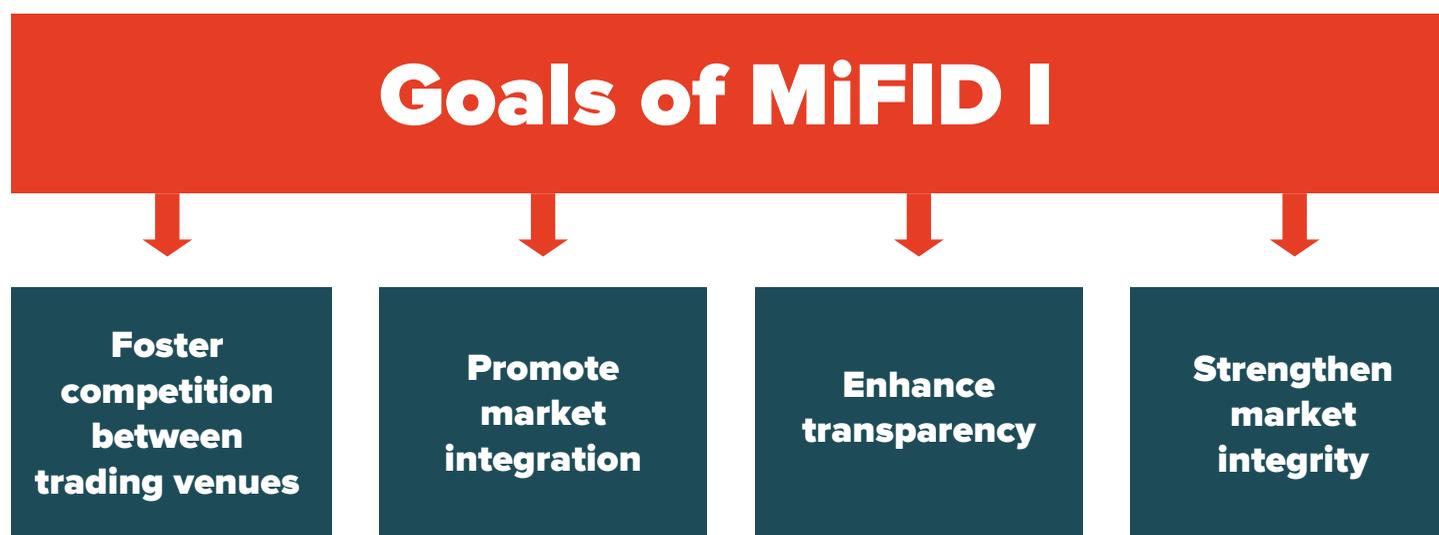
## SECTION B

# THE BACKDROP FOR MiFID II: HOW WELL DID MiFID I ACHIEVE ITS GOALS?

Since MiFID II seeks to extend the purported benefits of MiFID I, it is useful to begin by examining how well MiFID I achieved its goals, in some detail. *Figure 4* provides a summary of the four main goals of MiFID I. Considerable research has been conducted on this topic. The discussion here is based on a meta-study of this research.<sup>42</sup> The findings of the research can be summarized as follows:

- MiFID I achieved its first two goals and lowered transaction costs of trading by fostering competition and promoting integration.
- There is no evidence of any positive effect of MiFID I on transparency and integrity of European financial markets.<sup>43</sup>
- MiFID I also had a dark side in terms of its impact on liquidity as measured by market depth. A study of Dutch blue-chip stocks found evidence of increased liquidity in the consolidated order book and found that market depth declines with an increasing level of lit fragmentation.<sup>44</sup> This means that market participants that lack access to smart order routing technology and integrated market data feeds did not benefit from fragmentation and the increased liquidity of the consolidated market.

**Figure 4:** The Main Goals of MiFID I



## SECTION C

# PREDICTING THE EFFECTS OF MiFID II

A key concept of MiFID II/MiFIR is that it requires all organized trading to occur on organized venues that are “properly” regulated to ensure a high level of transparency. To achieve this, the new market framework introduces (i) a new category of trading venues, called organized trading facility (OTF), for non-equity instruments to be traded on a multilateral platform; (ii) a new trading obligation for derivatives (MiFIR, Article 28); and (iii) a new trading obligation for equities.

OTFs broadly refer to organized exchanges for securities trading. The new trading obligation for derivatives requires financial and nonfinancial counterparties to conduct trading on RMs, MTFs, or OTFs.<sup>45</sup> The trading obligation for equities restricts OTC trading to ensure that more trading occurs on regulated trading venues and on platforms of SIs, with the goal of increasing transparency and improving price discovery and liquidity.<sup>46</sup>

Predicting the future effects of any regulation is always a hazardous task and innately more difficult than looking retrospectively at the effects of a regulation. However, in an interesting study, Gomber, Clapham, Lausen, and Panz (2014) use *scenario analysis*—a qualitative forecasting technique used typically in strategic planning—to conduct a prospective analysis. Consistent with Huss (1988), the authors describe scenarios as “a narrative description of a consistent set of factors which define in a probabilistic sense alternative sets of future business conditions.” An analysis of this sort enables researchers to capture a range of possible future outcomes so as to better understand how different assumptions interact with different realizations of uncertainties.<sup>47</sup>

In their analysis, the authors consider three scenarios and examine the possible impact of MiFID II on liquidity in each scenario. They also conducted a survey to identify which scenario participants viewed as the most realistic. In the most realistic scenario, it is assumed that OTC volumes migrate to the main market but SIs gain a competitive advantage. In this scenario, the market share of SIs rises to a level equivalent to the U.S. share of “internalization” (adjusted to the European context).<sup>48</sup>

The findings of the analysis are striking. Rather than improving liquidity, the new regulation will decrease it. The estimates are that relative spread in the main market will increase by 0.25%, and the spread in the XLM50k increases by 92%, where XLM50k is defined as the round-trip costs for trading €50,000.<sup>49</sup> The adverse impact on order book depth is even greater—it declines by 1.951%. The analysis thus reveals that MiFID II might lead to diminished liquidity in the main markets due to increased trading via the platforms of SIs.

## **SECTION D**

# **UNINTENDED CONSEQUENCES FOR U.S. ASSET MANAGERS**

The above analysis does not include the potentially adverse consequences for U.S. asset managers and the spillover effects in the EU. Although MiFID II initially impacts firms based in Europe, U.S.-based asset managers competing against European investment firms could face competitive pressures to comply with MiFID II rules. This concern is perhaps the most pertinent for global asset managers based in the U.S. but that serve European clients.<sup>50</sup>

### **TRANSACTION AND TRADE REPORTING**

U.S. managers will be affected at many different levels from the standpoint of transaction and trade reporting. For example, unless the U.S. is recognized as a MiFID-equivalent market, an EU-based client of a U.S. asset manager can trade only in stocks with international securities identification numbers on an EU trading venue. Thus, EU-based customers will not be able to send such orders to a U.S. asset manager for execution. Moreover, when an EU firm invests in a U.S. asset manager, the investor protection and best execution rules of MiFID II should lead the EU firm to monitor the quality of the execution policy, describing the manner in which the policy takes “all sufficient steps” (as defined by the European Securities and Markets Authority) to obtain the best possible results for its clients.

### **RESEARCH UNBUNDLING AND CLIENT ACCOUNTABILITY**

The MiFID II regulations splitting research and execution costs also have important implications for U.S. asset managers. The consequence will be that fund managers in Europe will either have to pay for research themselves, or pass that loss on to their clients in separate accounts.

Under the new rules, investment firms will be unable to accept research as a nonmonetary benefit from sell-side firms,<sup>51</sup> which means that sell-side firms will either have to absorb the costs of research themselves or explicitly price it for their buy-side customers. MiFID II imposes several new requirements.

*Sell-side firms* will have to:

- Provide their customers separate prices of execution, research, and advisory services;
- Make sure that research is not provided at below cost; and
- Categorize the content of the research they provide using the research category definitions provided in MiFID II.

*Buy-side firms* receiving the research will have to:

- Pay explicitly for research, and prove that the research allows investors to make better investment decisions and that it is not an inducement to trade;
- Provide better reporting of payments made for research and demonstrate the research is providing value; and
- Establish a budget for research and make sure that the payments for research are quality-justified and reasonable.

The ostensible goal of the above requirements is to mitigate conflicts of interest and make sure that research is not offered as an “inducement.”

To those who believe that free and competitive markets ought not to be micromanaged via intrusive regulation of how components of contracts are priced, this is regulation gone haywire, especially when one considers that the lack of any conclusive research on the potential consequences of this regulation means that there may be many unintended consequences that are highly distortionary. Why is there cause for great concern? Consider that buy-side firms must establish a budget for research that is correlated with the quality and value of the research to their own customers (end-investors). This means buy-side firms must either pay for the research directly from their own account or pay using client commissions. Sell-side firms will need to separate the costs of research and execution. This is akin to airline regulators asking airlines to split the cost of every business class ticket into the cost of what the customer pays for flying, the cost of the airline’s marketing (including advertising), the cost of using the seat reservation system, and the cost of the airline lounge, with the goal of ensuring that airlines are not enticing customers to fly too much by offering excellent lounge services and engaging in enticing advertising.

Or think of restaurants being asked to split the price of every dish on the menu into the cost of the wages of the chef and the server, the cost of the facilities, the cost of the ingredients in the dish, “other costs” like insurance and the restaurant’s profit margin, with the requirement that the profit margin cannot be too high, and all costs must be accurately reported. It is hard to think of more intrusive regulatory overreach.

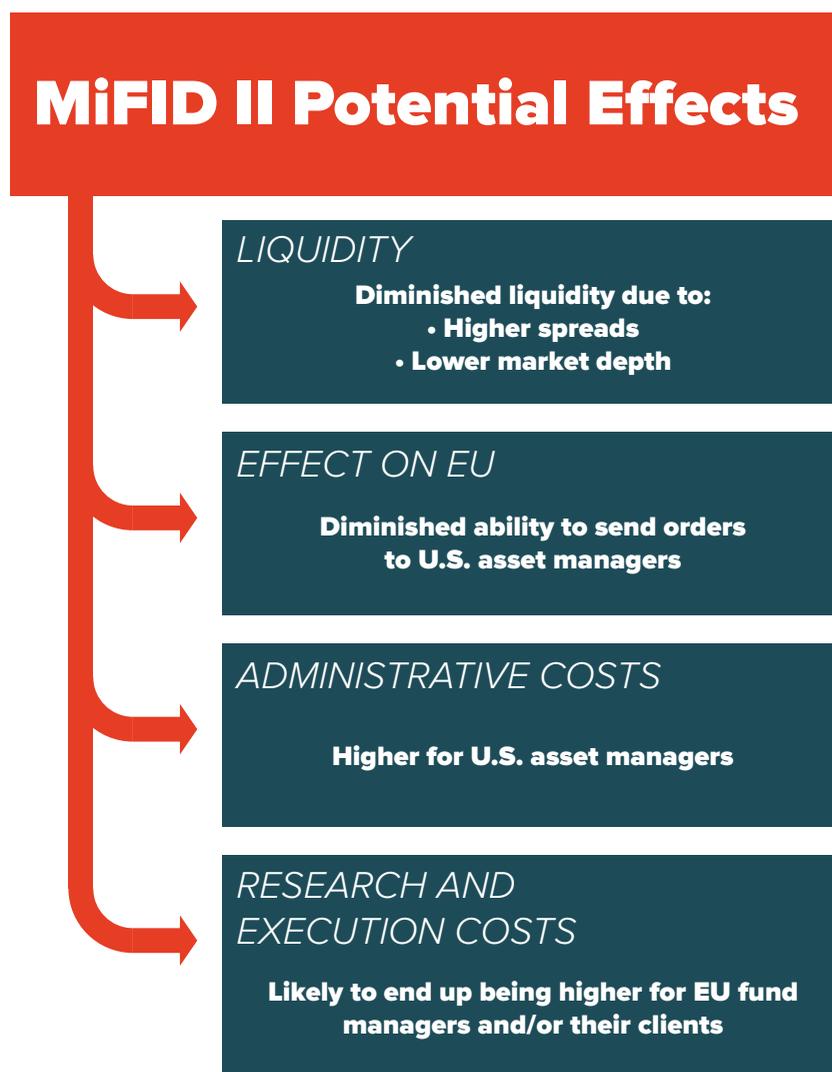
**“If appropriate recognition of home-country regulatory structures is not in place, asset managers could face contradictory and/or duplicative regulatory requirements, which would decrease efficiency and could actually make the process less transparent.”**

There are numerous other drawbacks of this regulation. First, it is inherently difficult to prove that research has some stated value or that the amount a firm spends on research is commensurate with the quality of the output. It may not be difficult to determine the cost of the research, but the value may be very challenging to assess due to its multidimensional (and sometimes subjective) nature and uncertain timing in terms of its realization. Second, even if research is being subsidized by sell-side firms and its cost being partly absorbed by profits on other activities, there is nothing wrong with that from a societal point of view. Research makes markets more efficient and prices more closely tied to fundamentals. That is a good thing. Hence, the goal should be to ensure that markets are competitive and not fragmented, so buy-side firms can make the appropriate decisions of which sell-side firms to deal with, given whatever bundled pricing offers the best deal. In markets, there are often good economic reasons why sellers choose to bundle certain features together and offer a bundled price, and there are countless products and services that are essentially bundles of smaller products and services. Typically, in competitive markets, if such bundling does not make economic sense and is done only to enable the seller to offer some components at a loss in order to induce customers to buy other components at a more-than-offsetting profit, it gets unraveled via cream-skimming by competing firms. Competitive markets work well in this regard. It makes little sense for regulation to micromanage what is naturally a market process. Third, when competitive markets provide the optimal amount of bundling, such intrusive regulatory overreach can produce spurious innovation by firms to counter the harmful effects of the law, thereby putting in motion a set of events that are hard to anticipate but can generate many economic distortions, making the new reality far worse than what was in place before.

Even the rules intended to bring more transparency to the costs of trading will have some adverse consequences. Asset managers that have a global business but are based in the U.S. must adhere to a regulatory regime imposed by U.S. regulators and legislators. If appropriate recognition of home-country regulatory structures is not in place, asset managers could face contradictory and/or duplicative regulatory requirements, which would decrease efficiency and could actually make the process less transparent.

Figure 5 summarizes the potential effects of MiFID II. The broad conclusion emerging from these effects is that this is a replay of the “economics of unintended consequences.” The goals of MiFID II notwithstanding, its potential effects on liquidity and efficiency are likely to end up being less than desirable.

**Figure 5:** Potential Effects of MiFID II



## SECTION E

# EVALUATING MIFID II BASED ON THE ECONOMIC FRAMEWORK

Each of the five aspects of the framework will be considered in turn.

### IMPROVING FINANCIAL STABILITY

Improving transparency will tend to enhance financial stability, but the potentially diminished liquidity due to MiFID II is a concern for financial stability. The overall effect is ambiguous.

### MINIMIZING THE RISKS OF FRAGMENTATION

In some respects, MiFID II will tend to reduce fragmentation, but it may have unintended consequences that may increase fragmentation.

### IMPROVING ECONOMIC EFFICIENCY

The analysis summarized in *Figure 5* suggests a reduction in economic efficiency overall.

### HAVING THE DESIRED IMPACT ON MARKET PARTICIPANTS, INCLUDING THEIR INCENTIVES

This is a mixed bag. While OTC trading will diminish, the reduction in liquidity, higher costs of research, unpredictable consequences of mandating the splitting of the costs of research and execution, and greater administrative burden on asset managers all seem to be undesirable effects on market participants.

### IMPROVING FINANCIAL INNOVATION AND ECONOMIC GROWTH

There is no research to provide any insights on this front, so this will be left as an open question.

### Key Findings:

Potential Effects of MiFID II in the Context of Overarching Economic Framework

REGULATORY GOAL	EFFECT OF MIFID II
Improving financial stability	Ambiguous
Minimizing the risks of fragmentation	Will reduce fragmentation
Improving economic efficiency	Will likely reduce it
Impact on market participants	Mixed with numerous undesirable effects
Improving financial innovation and growth	?

## SECTION F CONCLUSION

Building on the experience of MiFID I, the goal of MiFID II was to improve market liquidity while dealing with some of the fragmentation that resulted from the pro-competitive effects of MiFID I. Prospective research on the potential effects of MiFID II as well as the opinions of industry experts suggest that the effects of MiFID II are likely to represent a mixed bag, with numerous adverse consequences for U.S. firms and consumers. The prospects of reduced market liquidity in the EU, higher costs of research for EU firms and their clients, and the “forced” insertion of MiFID II into markets outside the EU (due to the cost efficiency concerns of global banks) are not attractive prospects.

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<sup>38</sup> See Gomber, Clapham, Lausen, and Panz (2018)

<sup>39</sup> See Federation of European Securities Exchanges (2017a).

<sup>40</sup> See Oxera Consulting Ltd. (2011) and Gomber, Clapham, Lausen, and Panz (2018).

<sup>41</sup> MiFID II and MiFIR seek to (i) ensure a safer, sounder, more transparent, and more responsible financial system; (ii) contribute to the delivery of the G-20 commitment to tackle less-regulated and opaque parts of the financial system; (iii) improve the organization and transparency of markets, especially in those instruments traded over the counter; (iv) improve the oversight and transparency of commodity derivatives markets; (v) take into account new developments in market structures and technology, like dark trading, algorithmic trading, and high-frequency trading; and (vi) minimize the discretion available to member states. See European Commission (2011).

<sup>42</sup> See Gomber and Jäger (2014).

<sup>43</sup> See Gomber and Jäger (2014).

<sup>44</sup> See Degryse, de Jong, and van Kervel (2015).

<sup>45</sup> Article 10(1)(b) of the regulation on OTC derivatives, central counterparties, and trade repositories states that nonfinancial counterparties become subject to the trading obligation for futures contracts under some conditions. See European Parliament and Council (2012) and Gomber, Clapham, Lausen, and Panz (2018).

<sup>46</sup> According to MiFIR Article 23(1), trades can be executed OTC only if they are nonsystematic, ad hoc, irregular, and infrequent, or are conducted between eligible and or professional counterparties and do not contribute to price discovery.

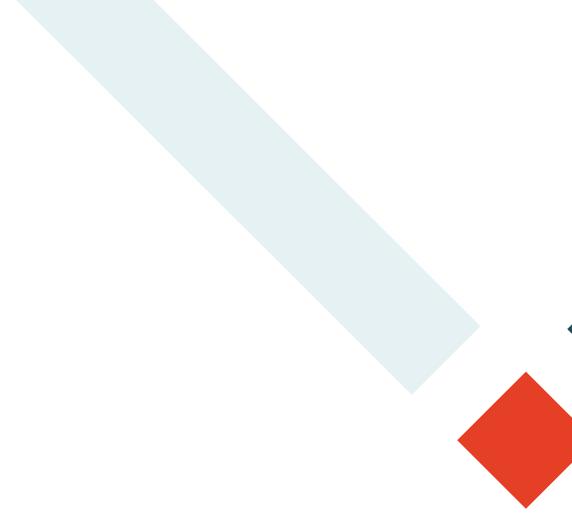
<sup>47</sup> See Schoemaker (1995). Scenario analysis is essentially a simulation.

<sup>48</sup> Internalization involves broker-dealers internally executing client order flow against their own accounts on a systematic basis. Retail internalization is driven by the purchase order flow by wholesale OTC market makers from retail brokerage firms.

<sup>49</sup> See Gomber, Schweichert, and Theissen (2015).

<sup>50</sup> This claim is made by Tom Conigliano, managing director at Markit Brokerage and Research Services. See Schmerken (2017).

<sup>51</sup> Unless the firm can establish that the research passes the “quality enhancement test” and it is classified as a nonmonetary benefit. See Asare (2017). The discussion that follows is based in part on Asare (2017).



# **EMIR AND ITS IMPLICATIONS FOR THE SUPERVISION AND REGULATION OF NON-EU CCPS**

CCPs facilitate trade between counterparties to a derivative contract, becoming the buyer to every seller and the seller to every buyer, guaranteeing the terms of trade and providing extensive protection in the case of counterparty default. In doing so, CCPs become the focal point for derivative transactions. Their contribution is to increase market transparency and reduce risks in derivatives markets.

A variety of financial instruments in addition to derivatives are cleared through CCPs. These include equities, bonds, commodities, and repos. Prior to the financial crisis of 2007-09, derivatives traded outside regulated markets were usually not cleared through CCPs.



## **SECTION A** **BRIEF OVERVIEW**

In 2012 the EU adopted the *European Market Infrastructure Regulation* (EMIR) in order to serve three goals: (i) increase the transparency in the OTC derivatives markets, (ii) mitigate credit risk, and (iii) reduce operational risk.<sup>52</sup>

To achieve each of these goals, EMIR imposes requirements, as summarized in *Figure 6*. To enhance transparency, it imposes derivatives reporting requirements, including obligations for trade repositories to publish aggregate positions.<sup>53</sup> To mitigate credit risk, EMIR introduces rules to reduce the counterparty credit risk of derivatives contracts. To reduce operational risk the regulation requires market participants to monitor and mitigate the operational risks associated with trade in derivatives.

These requirements should be assessed in the context of steps that have already been taken globally, including those by the CFTC, to make derivatives markets more transparent and to mitigate credit and operational risks. These include trade reporting of OTC derivatives, central clearing (and, where appropriate, exchange or electronic platform trading of standardized OTC derivatives), and higher capital and margin requirements for non-centrally cleared derivatives.<sup>54</sup> These steps were fostered by the 2008 G-20 commitment to bring standardized, sufficiently liquid OTC contracts into the centrally cleared space. Alongside this commitment, jurisdictions enhanced the regulatory frameworks for CCPs by adopting the principles for financial market infrastructures (Apr 2012) provided by The Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO). These principles set out best practices in CCP risk management.<sup>55</sup>

**Figure 6:** Requirements Imposed by EMIR

GOALS OF EMIR	REQUIREMENTS TO MEET THE GOAL
<p><b>Enhancing transparency</b></p>	<ul style="list-style-type: none"> <li>» Detailed information on each derivative contract has to be reported to trade repositories and made available to supervisory authorities.</li> <li>» TRs have to publish aggregate positions by class of derivatives, for both OTC and listed derivatives.</li> <li>» The European Securities and Markets Authority is responsible for surveillance of trade repositories and for granting and withdrawing accreditation.</li> </ul>
<p><b>Mitigating credit risk</b></p>	<ul style="list-style-type: none"> <li>» All standardized OTC derivatives must be centrally cleared through CCPs.</li> <li>» Mitigation techniques must be applied for contracts not cleared by CCPs.</li> <li>» CCPs must comply with stringent prudential, organizational, and conduct-of-business requirements.</li> </ul>
<p><b>Reducing operational risk</b></p>	<ul style="list-style-type: none"> <li>» Market participants should monitor and mitigate the operational risks associated with trade in derivatives, such as fraud and human error—e.g., by promptly confirming the terms of OTC derivatives contracts using electronic means.</li> </ul>

## SECTION B EVALUATING KEY FEATURES OF PROPOSED AMENDMENTS TO EMIR

The basic goal of the proposed amendments to EMIR is to enhance the supervision of CCPs in the EU and in the relevant third countries, including cross-border supervisory cooperation, to allow comparable compliance by Tier 2 CCPs as third-country CCPs may already be subject to comparable requirements in their home country that are consistent with the requirements in EMIR.<sup>56</sup>

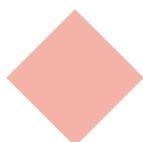
However, the effect of the proposed amendments to EMIR would be the relocation of euro-denominated clearing from outside of the EU27 to the EU27 via the imposition of a “location policy.” This is caused by the proposed legislation change to the EU’s licensing structure for all non-EU CCPs. The legislation establishes a two-tiered system by which non-EU CCPs would be categorized according to their systemic relevance to the EU, which is largely subjective.

There are three tiers: 1, 2, and 2-plus location. Tier 2 “plus” would require the CCP to relocate portions of its business to the EU (i.e., the proposed location policy provision). Tier 2, while not proposing relocation, would impose EU rules and provide EU governmental agencies, including ESMA and the European Central Bank (ECB), with primary oversight over the entirety of the business of non-EU CCPs. However, CCPs, at least in the U.S., are already subject to extensive supervision, as well as equivalence agreements with the EU, including the U.K.

Apart from the increased regulation over CCPs in light of existing supervisory arrangements, EMIR is problematic in other respects.

The feature of the EMIR amendments that would impose EU rules and provide EU government agencies with primary oversight over the entirety of the business of non-EU CCPs could have unintended and adverse consequences for financial stability as well as operational and systemic risk in the EU and globally. The feature that the European Commission could withdraw or deny recognition to third-country CCPs of substantial systemic importance to the EU financial system could also have unintended and adverse consequences for financial stability as well as operational and systemic risk in the EU and globally. This feature can impose costs on banks as well as on the real sector. These proposals have the potential to introduce significant cost and regulatory burdens for global futures and swaps markets, clearinghouses, and market participants, including commodity end-users who trade and take positions in energy and agricultural derivatives. Withdrawal or denial of recognition can cause a schism in market liquidity, with the risk of the emergence of a third-country market that could be more liquid and possibly even more efficient than the EU market. This would make the costs of clearing for an EU client (subject to EMIR) higher because the OTC derivatives contracts subject to the EMIR clearing obligation would need to be cleared in a less liquid EU market. This extra cost would likely be passed on by the CCPs to their clients.

**“These proposals have the potential to introduce significant cost and regulatory burdens for global futures and swaps markets, clearinghouses, and market participants, including commodity end-users who trade and take positions in energy and agricultural derivatives.”**



The creation of two markets for the same asset (one for EU participants and another for non-EU participants) will result in a loss of current netting and compression arrangements and cause more fragmentation. This will distort competition and lead to elevated systemic risk in both the EU and globally. EU counterparties using non-EU markets will not be able to use nonqualifying CCPs because the capital costs of facing such a CCP would be uneconomical. Thus, these EU counterparties will be forced to trade in the less liquid EU market with higher costs. The proposal would create “wrong way risk” within the EU. Specifically, by creating a captive market for euro-denominated products, default risk and credit exposure would increase together.

## **“This will distort competition and lead to elevated systemic risk in both the EU and globally.”**

Depending on the significance of the third-country CCPs’ activities for the EU and member states’ financial stability, some CCPs may be deemed to be of such systemic importance to the EU that the risk mitigation requirements associated with being located outside the EU could be considered inadequate. In this case, the European Commission can decide that the CCP can provide services only if it is established in the EU. This forced relocation—probably applicable only to LCH—is effectively a “third tier.”<sup>57</sup>

Forced relocation has raised two concerns. First, the International Swaps and Derivatives Association has argued that it will split liquidity in markets and reduce the ability of banks to save on margin by offsetting positions in the same liquidity pool. It is estimated that this will result in an increase of 15% to 20% in initial margin or cash set aside against a trade in case of a default. Second, as argued by CFTC Chairman Christopher Giancarlo, markets will be fundamentally disrupted.

Finally, ESMA and ECB would potentially have more power over third-country CCPs. For example, one proposal would empower ESMA to demand on-site inspections of U.S. businesses like the Chicago Mercantile Exchange without notifying the CCP. Another proposal would give ECB additional authority over those same U.S. businesses. Such overlapping and uncoordinated regulation by the EU is a nightmarish example of extraterritorial reach. It would be enormously disruptive and expensive for firms operating in the U.S. and other non-EU jurisdictions, and would risk retaliatory responses by regulators in other countries against EU firms.

**“It would be enormously disruptive and expensive for firms operating in the U.S. and other non-EU jurisdictions, and would risk retaliatory responses by regulators in other countries against EU firms.”**

## **SECTION C**

# **EVALUATING PROPOSED AMENDMENTS TO EMIR BASED ON THE ECONOMIC FRAMEWORK**

### **IMPROVING FINANCIAL STABILITY**

This is a mixed bag. Some of the risk mitigation aspects will help, but the provisions of EMIR critiqued above do not augur well for enhanced financial stability, either in the EU or globally. Moreover, the extraterritorial reach of EMIR along with the proposals to grant ESMA and ECB more authority over third-country CCPs seriously threatens markets in the U.S.

### **MINIMIZING THE RISKS OF FRAGMENTATION**

As discussed above, EMIR will increase fragmentation.

### **IMPROVING ECONOMIC EFFICIENCY**

As discussed above, if there is a bifurcation of liquidity then economic efficiency will decline.

### **HAVING THE DESIRED IMPACT ON MARKET PARTICIPANTS, INCLUDING THEIR INCENTIVES**

Again the potential for overlapping jurisdiction and forced relocation will have undesirable consequences.

### **IMPROVING FINANCIAL INNOVATION AND ECONOMIC GROWTH**

The focus on risk mitigation and potentially reduced liquidity are unlikely to improve financial innovation and economic growth. But this is somewhat of an open question.

## Key Findings:

### Potential Effects of EMIR in the Context of the Overarching Economic Framework

REGULATORY GOAL	EFFECT OF PROPOSED EMIR AMENDMENTS ON REGULATORY GOAL
Improving financial stability	Somewhat mixed, but likely to reduce financial stability, and extraterritorial reach will be highly disruptive to markets in the U.S.
Minimizing the risks of fragmentation	Likely to increase fragmentation
Improving economic efficiency	Will likely reduce it
Impact on market participants	Potentially adverse effects
Improving financial innovation and growth	Ambiguous

## SECTION D CONCLUSION

Most people agree that European markets play a major role in an integrated global financial system. Thus, it is important for European financial markets regulation to not proceed as if it is a tub on its own bottom because doing so risks disruption in financial markets, increased fragmentation of clearing markets, lower liquidity in European markets, disruption of financial markets in countries outside the EU, and the potential for retaliatory regulatory responses from the U.S. and other countries. EMIR has numerous negative aspects to it. The forced-relocations feature of EMIR and the extraterritorial reach by ESMA and ECB that would give them authority over non-EU businesses are regulatory initiatives that not only have the potential to be highly disruptive, but border on the absurd in today's environment in which the focus is on increased cross-border regulatory coordination and cooperation to manage global systemic risks. Thus, EMIR is unlikely to achieve its desired goals, but is likely to have significant unintended negative side effects.

<sup>52</sup> See European Commission (2017b).

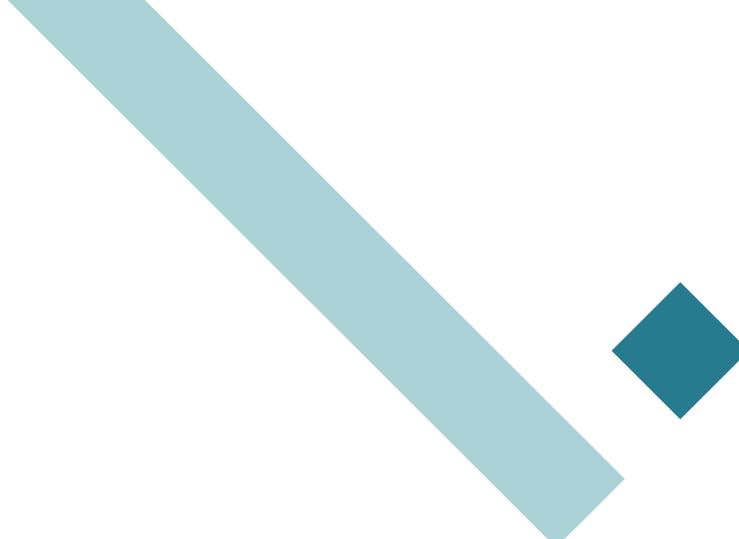
<sup>53</sup> Trade repositories are central data centers that collect and maintain the records of derivatives.

<sup>54</sup> See Perry (2017).

<sup>55</sup> See Bank for International Settlements (2016).

<sup>56</sup> See Association for Financial Markets in Europe (2017).

<sup>57</sup> LCH clears more than 75% of euro-denominated swaps. Danuta Hubner, rapporteur on the file, refers to "forced relocation" as a "denial of recognition." That is because the proposal would deny EU member firms the ability to access non-EU CCPs, not simply forcing euro-denominated products to be moved to the EU27.



# CONCLUDING REMARKS

This paper has developed an overarching economic framework and assessed a variety of new EU regulatory initiatives for financial service firms operating in Europe. A recurring theme in this assessment has been the potential for unintended consequences, some of them adverse, especially for U.S. firms. Moreover, some of these regulations have the distinct potential to disrupt markets in the U.S. and cause market liquidity to decline in the EU.



**“...some of these regulations have the distinct potential to disrupt markets in the U.S. and cause market liquidity to decline in the EU.”**

## **CONCLUSIONS**

- » The effect of these regulations on stability is predicted to be mixed (and in some cases adverse) because many of them involve extraterritorial reach that will force the impact of these regulations to be felt by firms operating outside the EU.
- » Many of the proposed initiatives will lead to more fragmentation and less competition among financial service firms, which will eventually hurt consumers in the EU. Moreover, since they overreach into the U.S. and other countries, they will hurt consumers and businesses globally. This may trigger retaliatory responses by regulators in the U.S. and other countries.
- » While economic efficiency will improve in some cases, it will worsen significantly in others, especially for non-EU firms.
- » The effects on market participants are likely to be mixed.
- » Innovation incentives are likely to be retarded, and the initiatives are likely to be inimical to economic growth.

# KEY FINDINGS

## DELEGATION:

- » Evaluating delegation in the context of the overarching economic framework, it is **unlikely to improve *financial stability***. To the extent that monitoring potential risks in entities to which activities are outsourced is a concern, this issue can be dealt with through better reporting, rather than limiting delegation.
- » **The *risks of fragmentation* are likely to increase.** The ring-fencing resulting from fragmentation will diminish the ability of firms to move resources across national boundaries, increasing operating costs and potentially even increasing risks.
- » ***Economic efficiency* is likely to decline**, which will hurt consumers.
- » In terms of the impact on market participants, the net returns from investing are likely to decline for EU consumers and the **fund management business in the EU may actually become less competitive**. The effect on financial innovation incentives is likely to be negligible.



## COMMON OWNERSHIP:

- » **Banning or restricting common ownership will not improve *financial stability***; it may worsen it.
- » No first-order effect is expected on the *risk of fragmentation*.
- » In terms of the *impact on economic efficiency*, the effects are ambiguous. **Restricting common ownership will hurt the efficiency of investment management**, but proponents of the restriction argue that it will reduce the anti-competitive effects of common ownership. However, research on the anti-competitive effects is early and not yet conclusive.
- » It is also difficult to say whether restricting common ownership will have the *desired impact on market participants*. If anti-competitive effects do exist with common ownership, then restricting it would improve innovation incentives, but this link is not yet unambiguously supported by the existing research.

## MiFID II:

- » While improving transparency may improve *financial stability*, **MiFID II will also diminish liquidity and potentially hurt financial stability**, so this is a cause for concern.
- » In some respects, MiFID II will *reduce the risk of fragmentation*, but it may have unintended consequences that may increase this risk.
- » **Overall economic efficiency is likely to decline.**
- » As for *having the desired impact on market participants*, MiFID II is a mixed bag. While OTC trading will diminish, the reduction in liquidity, higher costs of research, unpredictable consequences of mandating the splitting of the costs of research and execution, and greater administrative burden on asset managers are undesirable effects on market participants.
- » As for *improving financial innovation and economic growth*, there is no research to provide any insights on this front, so it is an open question.

## EMIR AND ITS IMPLICATIONS FOR THE SUPERVISION AND REGULATION OF NON-EU CCPS:

- » In terms of *improving financial stability*, EMIR is a mixed bag. Some of the risk mitigation aspects will help, but some proposed amendments of EMIR do not augur well for enhanced financial stability, either in the EU or globally. Moreover, the extraterritorial reach of EMIR, along with the proposals to grant ESMA and ECB more authority over third-country CCPs, seriously threatens markets in the U.S.
- » As for *minimizing the risks of fragmentation*, **EMIR is likely to have the opposite effect and increase fragmentation.**
- » **Economic efficiency will decline** due to the bifurcation of liquidity that EMIR is likely to result in.
- » As for *having the desired impact on market participants*, the potential for overlapping jurisdiction and forced relocation will have undesirable consequences, including reduced efficiency, lower access to central clearing counterparties, and possibly higher risk.
- » The focus on risk mitigation and potentially reduced liquidity are unlikely to improve *financial innovation and economic growth*. But this is somewhat of an open question.

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Many of the goals of the EU initiatives may be well intentioned. However, specific regulations that have emanated from these goals will have numerous consequences not entirely anticipated and the effects associated with these consequences may be quite the opposite of what the architects of these regulations intended. This would not be a first for financial services regulation either in the EU or in the U.S., but it would behoove us to learn from past experiences of this sort. In this sense, the findings in this paper are in agreement with the Global Financial Markets Association (GFMA) report (2018) that global standards are only as effective as their national implementation, and that “... *duplicative, inconsistent, conflicting cross-border rules have adverse consequences including: (i) market fragmentation; (ii) increased barriers to entry; (iii) a reduction in the products available to end-users; (iv) unlevel playing field; as well as (v) reduced market integrity, liquidity, efficiency, and resilience.*”

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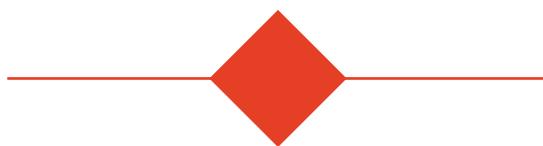
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