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Abstract

In September 2015, the European Commission announced the first actions of its plan to build a Capital Markets Union in Europe. We describe the key features of the Commission's plan and discuss the economic rationale behind it. The plan has many strengths but also some weaknesses, such as limited ambition in the supervision and enforcement of securities regulations. Other challenges to the development of European capital markets include the financial transactions tax, the low-interest-rate environment, cultural reasons, and potential political opposition.

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February 21, 2018

Abstract

In September 2015, the European Commission announced the first actions of its plan to build a Capital Markets Union in Europe. We describe the key features of the Commission's plan and discuss the economic rationale behind it. The plan has many strengths but also some weaknesses, such as limited ambition in the supervision and enforcement of securities regulations. Other challenges to the development of European capital markets include the financial transactions tax, the low-interest-rate environment, cultural reasons, and potential political opposition.

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1. Introduction

As of early 2018, the Capital Markets Union (CMU) is the likely next milestone in the ongoing process of European economic integration. The plan to develop the CMU was first announced by the European Commission in November 2014 as part of the Commission's Investment Plan for Europe (the "Juncker plan"). While the CMU is still work in progress, various details of the plan have already emerged. The objective of this paper is to discuss the rationale behind the CMU, opine on the plan's strengths and weaknesses, and identify the key challenges to the development of capital markets in Europe.

To preview our main conclusions, the CMU has the potential to bring large benefits to European firms, households, and the society as a whole. Firms would benefit from an alternative source of financing that would reduce their reliance on banks. Households would benefit from new investment opportunities with an attractive risk-return tradeoff. The society as a whole would benefit from a financial system that is more resilient and more conducive to innovation. The CMU plan also has some drawbacks, such as a possible reduction in the intertemporal smoothing of risk resulting from a stronger emphasis on capital markets. But we believe the benefits of the CMU plan exceed the costs. The plan's first steps, as outlined in the Commission's action plan from September 2015, are small and unlikely to yield large direct benefits. However, future steps could potentially be larger, and so could the indirect benefits of the CMU plan due to its market-driven nature. The plan focuses on harmonization and consumer protection issues. We argue that it needs to focus more on the regulation of securities markets and the enforcement of these regulations at the European level. This could be done, for example, by expanding the powers of the European Securities and Markets Authority (ESMA).

The proposal to create the CMU follows the launches of two other major financial unions in Europe, namely, the monetary union in 1999 and the banking union in 2014. While the two existing unions cover only the 19 Eurozone countries, the CMU is expected to encompass the whole European Union (EU). Unlike the monetary and banking unions, the CMU does not aim to centralize policymaking; instead, it is about development and integration. The CMU is also more nebulous than the monetary and banking unions. While the two unions have been carved firmly into European law, the Commission does not foresee a similar legislative standing for the CMU. At this point, the CMU is best thought of as a vision

accompanied by an evolving plan for how to achieve it.

In this chapter, we briefly outline the plan in Section 2. Section 3 discusses the rationale behind the plan. The plan's strengths and weaknesses are considered in Section 4. Section 5 looks at the challenges to European capital markets. Section 6 concludes. The discussion of the CMU here is limited in length. For an excellent full evaluation, see Valiante (2016).

2. The Plan

The purpose of the CMU plan is to develop and integrate European capital markets with the aim of creating a single market for capital in Europe by 2019. The vision is for all European households and firms to have equal access to markets at equal cost and equal legal treatment regardless of where they are located. The single market should cover all the EU member states and be liquid, transparent, and well-regulated. When proposed it was designed for the 28 member states. Now with Brexit this will be reduced to 27 states in the long run. With Brexit negotiations ongoing, the role of the UK is unclear at this stage.

The Commission plans to build the CMU gradually, following the "bottom-up" approach. There is no intention to introduce any "big bang" legislation or new EU-level institutions, such as a single regulatory body or listing authority. Instead, the Commission plans to work slowly and patiently, identifying the many existing obstacles to the single market and removing them one by one. The hope is that the cumulative effect of many small changes will be large. An important part of the Commission's plan is to harmonize rules and standards across member states to reduce the fragmentation of European capital markets along national lines. This process will inevitably take time.

Several steps have already taken place since the original announcement of the CMU plan in late 2014. On February 18, 2015, the Commission published a Green Paper (European Commission, 2015a) that presents the Commission's view of the principles, objectives, and priorities for the development of the CMU. On September 30, 2015, the Commission released its action plan for building the CMU (European Commission, 2015c). This plan describes the specific steps to be implemented in 2015–2018. Many of these steps have already been carried out, including changes to the Prospectus Directive and new rules for both securitization and infrastructure investments by insurance companies. Regarding the Prospectus Directive, the Commission has introduced a slimmed-

down digital prospectus that should make it easier and less costly for businesses to raise funds publicly. As for securitization, the Commission has created a standard template that should make securitization simpler and more transparent. In addition, the Commission has eased the capital requirements for infrastructure investments by insurance companies in an effort to promote long-term investment in European infrastructure. A new European regulatory framework for insurers, Solvency II, came into effect in January 2016. By increasing capital charges, Solvency II made it more costly for insurance companies to undertake risky investments. Given the importance of infrastructure investments for growth, the Commission has acted to offset this disincentive by creating a distinct infrastructure asset class and reducing the capital charges for investments in that class. The Commission also launched a number of other initiatives, such as a review of venture capital fund regulation. The Commission's First Status Report (European Commission, 2015e), released on April 25, 2016, summarizes the progress achieved on all these fronts.

The Commission's Midterm Review (European Commission, 2017), released on June 8, 2017, reports a successful delivery of 20 of the 33 measures announced in the 2015 CMU Action Plan. The Review also sets the timeline for new actions aimed at improving capital markets supervision, reviewing the prudential treatment of investment firms, and facilitating the cross-border distribution of investment funds, among other actions. The Commission also committed to legislative proposals delivering pan-European personal pensions, an EU framework on covered bonds, and more legal certainty for cross-border security ownership. In September 2017, the Commission proposed strengthening the powers of the European supervisory authorities. In December 2017, the Commission announced new guidelines on withholding taxes in cross-border investing and new prudential rules for investment firms.

Another important regulatory change introduced by the Commission is MIFID II, which at least partially came into effect in January 2018. This covers all asset classes from equities to fixed income, exchange traded funds and foreign exchange. It is designed to strengthen investor protection and improve the functioning of financial markets by making them more competitive, efficient, resilient, and transparent. Its main components involve splitting payments for analyst research and trading commissions, more pricing transparency, volume caps for equity dark pools, and more stringent standards for investment products. As of the implementation date, 3 January 2018, only 11 out of the 28

member states had added the legislation to their national laws.

3. The Rationale

3.1. The Underdevelopment of European Capital Markets

The starting point for understanding the CMU efforts is the fact that European capital markets are underdeveloped. This fact emerges clearly from a comparison to the United States. While Europe's economy is about the same size as the U.S. economy, Europe's equity markets are less than half the size of the U.S. equity market. Europe's corporate debt market is one third, and its venture capital industry only one fifth of the size of its U.S. counterpart.[1] One might argue that U.S. capital markets are particularly well developed. But comparisons with other advanced industrial countries are not especially favorable, either. For example, the EU's ratio of stock market capitalization to GDP, which stands at 65% as of 2013, is small not only compared to the U.S., where the ratio is 138%, but also relative to Japan (94%), Australia (87%), and China (74%). The underdevelopment of European capital markets is due in part to the fragmentation of those markets, mostly along national lines. When restricted to domestic pools of capital, markets in some countries cannot reach a minimum critical size, hampering their development. As a result, some national markets have remained quite small; for example, as of 2013, Cyprus, Latvia, Lithuania, and Slovakia all have equity markets smaller than 10% of their GDP. In contrast, the equity markets of Great Britain and Netherlands are quite large, at 121% and 98% of GDP, respectively. In both of these countries, markets have strong historical traditions; in fact, they had thrived long before the U.S. markets were even born. In contrast, strong markets have been largely absent from the histories of many other European countries. Instead of raising funds directly in markets, European firms have relied primarily on indirect financing provided by banks. While total bank assets in the U.S. amount to 88% of GDP, those in the EU amount to 334% of GDP as of 2013 (Langfield and Pagano, 2016).

3.2. Potential Benefits of More Developed Markets

More developed capital markets would bring benefits to European firms,

[1] See, for example, European Commission (2015b, d) and Véron and Wolff (2015).

households, and the society as a whole.

3.2.1. Benefits to Firms

Firms would benefit from having an alternative source of financing that would complement their traditional reliance on banks. Such an alternative source would be particularly beneficial during banking crises, such as the one that gripped Europe at the outset of the Eurozone debt crisis. During a banking crisis, bank credit tends to be constrained as banks repair their balance sheets, making it difficult for bank-dependent firms to raise financing. In such episodes, it is essential for firms to be able to raise funds elsewhere. Capital markets are a natural alternative source. Had European capital markets been more developed, the recent economic slump in Europe could very well have been shorter-lived. In comparison with Europe, the U.S. rebounded from its 2007–2008 financial crisis much more quickly, with growth resuming in the second half of 2009.

Firms would benefit from more developed markets not only during banking crises. The presence of a strong capital-markets alternative would put competitive pressure on banks to work more efficiently and provide higher-quality services at better terms. This competition would likely result in a lower cost of financing for European firms.

Capital markets tend to be the domain of larger and more mature firms. Smaller and younger firms are more likely to borrow from banks, even in the U.S., in part because banks are in a better position than markets to screen and monitor such firms (see, e.g., Boot, Greenbaum and Thakor, 2015). Nonetheless, smaller and younger firms also have a lot to gain from more developed markets, in at least two ways. First, capital markets can facilitate trading, and therefore also the creation, of securities backed by commercial loans. Promoting securitization is indeed a big part of the Commission's CMU plan, as noted earlier. Second, capital markets, and equity markets in particular, are critical to the development of the venture capital industry in Europe. Venture capitalists need a viable exit option for their early-stage investments, and equity markets offer such an option by enabling initial public offerings (IPOs).

The last point is particularly important. Allen and Gale (1999, 2000 – Chapter 13) show that capital markets are better suited to financing innovation and new technologies than banks because they deal with diversity of opinion better. One of the EU's main problems is a lack of innovative firms comparable

to Apple, Google or Facebook in the U.S. or Alibaba, Baidu or Tencent in China. Developing capital markets that allow IPOs should help the development of new technologies in Europe. Currently the EU is lagging behind in this regard.

As the EU emerges from the recession associated with the crisis, firms in the European periphery, mostly in southern Europe, would benefit more from developed markets than northern European firms. The latter firms do not seem to face major financing constraints at present. Those firms, along with northern European banks, are awash in cash. There is an enormous amount of excess liquidity in the Eurosystem, coming mostly from northern European banks. This excess liquidity is sitting idle in central banks, earning a negative rate of return. Given these large cash balances, many northern European firms do not need to borrow, and those that do can do it at unusually advantageous terms. In contrast, many firms in the southern European countries with weaker banks, such as Greece, Spain, and Italy, do face significant financing constraints. In a 2014 survey, 34% of small and medium enterprises in Greece identified access to finance as their most important problem, whereas only 7% of German and Austrian firms did the same (European Commission, 2015d).

3.2.2. Benefits to Households

Households would benefit from having a more diverse set of investment opportunities. European households have traditionally preferred to keep their financial wealth deposited in banks. Over 96% of euro-area households have bank deposits but only 11% of them own mutual funds, 10% have direct stock investments, and 5% have direct bond investments.[2] About 43% of the households' financial assets are held in currency and deposits. Mutual funds, stocks, and bonds each account for less than 10% of household financial assets, and their combined share is less than one quarter (European Central Bank, 2013). In contrast, U.S. households hold only 13% of their financial wealth in bank deposits, and their combined holdings of mutual funds, stocks, and bonds account for about half of their financial wealth (Véron and Wolff, 2015).

Given the security of bank deposits and the cost of bank intermediation, the rate of return earned by deposit holders is generally significantly lower, on average, than the returns obtained by holders of corporate bonds and especially

[2] See European Central Bank (2013). In Greece, Portugal, and Slovakia, more than 90% of households report no holdings of mutual funds, stocks, or bonds.

stocks. The historical equity risk premium, which approximates the difference between the average returns on stocks and bank deposits, in Europe has been 3.4% per year between 1900 and 2014 (Dimson et al., 2015). This figure is lower than the 4.3% world-wide equity premium over the same period, perhaps due to the destruction caused by the world wars, but it is substantial. By moving some of their savings into capital markets, households could expect to earn significantly higher rates of return. Of course, there is no free lunch—in exchange for the higher return, households would have to take on some risk. But given their high levels of wealth, job security, and social welfare, Europeans are in a relatively good position to bear this risk. Many more European households should find it desirable to take on the risk associated with capital market investments.

While European households bear too little risk in one way, they bear too much risk in another. Their limited investments in capital markets exhibit a strong "home bias." For example, 64% of EU equity holdings are of domestic origin (Véron and Wolff, 2015).[3] The home bias likely results in part from people's preference for familiarity (e.g., Huberman, 2001), but in part also from various barriers to cross-border investments, such as the uncertainty about legal rules associated with such investments. As a result of this home bias, household portfolios are under-diversified and over-exposed to local economic shocks. Since households are already exposed to local shocks though their labor income and real estate holdings, it would make sense for them to be biased away from home rather than toward home (Baxter and Jermann, 1997). Given its objective to remove the fragmentation of the national markets, CMU aims to reduce home bias and thereby improve the risk-return position of European household portfolios.

Ensuring households have access to a unified capital market would allow better diversification and thus more cross-sectional risk sharing. The current segmentation of markets combined with home bias make holding equities very risky. This could be one reason behind the conservative investment behavior of European households.

Market segmentation combined with home bias also helps us understand why European mutual funds are more numerous, and smaller on average, than

[3] For early empirical evidence of home bias, see French and Poterba (1991). For an optimal portfolio choice perspective on home bias, see Pástor (2000). For recent evidence on home bias in European portfolios, see Schoenmaker and Soeter (2014).

their U.S. counterparts. Valiante (2016) reports 32,868 mutual funds in the EU compared to 7,673 funds in the U.S. in 2010-2014. He also reports the average size of European mutual funds to be 186 million euros, far below the 1.344 billion euro average size of US funds. The smaller sizes of European mutual funds translate into higher average management fees paid by European households. The tradeoff between fund size and fee emerges from the equilibrium setting of Pástor, Stambaugh, and Taylor (2017), in which the product of fund size and fee—fee revenue—is determined by the fund's investment skill. The same study finds strong evidence of a negative relation between fund size and fee in U.S. data on active equity mutual funds. A transition from segmentation to a unified European capital market would benefit households by enabling funds to get larger and thus less expensive.

3.2.3. Benefits to Society as a Whole

The society as a whole would benefit from having a more resilient financial system. History shows that financial crises tend to be banking crises (e.g., Reinhart and Rogoff, 2009). By reducing firms' and households' reliance on banks, more developed capital markets would make the economy more resilient to banking crises. With more developed markets, the European financial system would essentially be flying on two engines instead of one, resulting in more financial stability.

More developed and less fragmented capital markets could significantly increase the shock absorption capacity in Europe. Capital markets are excellent shock absorbers because they encourage broad ownership of securities, thereby improving risk sharing in the economy.[4] The impact of any given shock is spread out across many different security holders, mitigating its negative effect on the economy. This is another example of the benefits of cross-sectional risk sharing.

This simple idea applies not only to corporate securities, such as stocks and bonds, but also to sovereign debt. The debt of European sovereigns is held to a large extent by local banks—with French banks holding French government bonds, Greek banks holding Greek government bonds, etc.—creating the infamous "doom loop" between banks and sovereigns. Given the concentrated

[4] For recent evidence on imperfect risk sharing in Europe, see Furceri and Zdzienicka (2015). The authors show that risk sharing in the euro area is significantly less effective than in the U.S., and that its effectiveness falls sharply during severe downturns. For a broader discussion of the implications of the CMU for financial stability, see Anderson et al. (2015).

debt holdings, a potential default by a sovereign threatens to take down the country's banking system, which cannot be bailed out by the bankrupt sovereign. If sovereign debt were held more broadly, by a large disperse group of market participants, the impact of a potential sovereign default would be diversified and thus smaller. A poignant example is Greece, which has teetered on the brink of default several times, most recently in 2015. European finance ministers and heads of state spent long weekends negotiating to prevent Greek default, which would have bankrupted the Greek banking system (and also caused losses to public creditors who acquired a large amount of Greek sovereign debt in the earlier stages of the crisis). Those working weekends could have been avoided if Greek debt had been held more broadly because the impact of Greek sovereign default would then have been much smaller. In the presence of developed capital markets and broad ownership of sovereign debt, sovereign default is simply less of an issue.

An efficient single capital market would improve the allocation of capital in Europe. A removal of constraints would bring the economy closer to the first-best solution that would be favored by the social planner. In an unconstrained efficient market, price signals guide the movement of capital in real time. Capital migrates from less efficient to more efficient users, resulting in faster economic growth.

Last but not least, the CMU has the potential to encourage innovation in Europe, as noted earlier. Innovation is often conducted by startup companies that cannot easily borrow from a bank due to their significant risk and the lack of tangible collateral. A more natural financing vehicle for startups is a venture capital fund. However, the European venture capital industry is quite underdeveloped. By promoting its development, the CMU plan promotes the most effective financial backers of innovation. Unlike various government-sponsored initiatives, such as subsidies and R&D tax credit, this market-based support for innovation should not cost European taxpayers a single cent.

4. The Plan's Strengths and Weaknesses

The purpose of the CMU plan is to develop and integrate capital markets in Europe. The plan has many strengths. As explained in the previous section, the CMU plan is likely to bring numerous benefits to firms, households, and the society as a whole. However, the plan is not without its drawbacks. These

include a possible reduction of intertemporal risk sharing and limited ambition in the supervision and enforcement of securities regulations.

4.1. The Dark Side of Capital Markets

As discussed in Section 3.1, compared to U.S. households, European households hold a significantly smaller share of their portfolios in equities. As a result, U.S. households' wealth is more exposed to stock market fluctuations. For example, the 1970's oil shock, which was associated with roughly a halving of stock markets in real terms, greatly affected U.S. households but not European ones whose equity exposures were much smaller. The reverse was true in the 1980s when stock markets boomed: U.S. households did much better than European ones. Since financial markets are supposed to provide risk-sharing benefits, this observation is something of a paradox. How can it be understood?

Traditional financial theory has little to say about hedging non-diversifiable risks. It assumes that the set of assets is given and focuses on the efficient sharing of the associated risks through exchange. For example, the standard diversification argument requires individuals to exchange assets until each individual holds a relatively small amount of any one risk. Risks are also traded so that more risk-averse people bear less risk, and vice versa. Such trading does not eliminate macroeconomic shocks, which affect all assets in a similar way. This kind of risk sharing is *cross-sectional*, because it is achieved through exchanges of risk across individuals at a given point in time.

A different type of risk sharing is based on *intertemporal smoothing* of risk. Risks that cannot be diversified at a given point in time can nevertheless be averaged over time in a way that reduces their impact on individual welfare. One hedging strategy for non-diversifiable risks is *intergenerational risk sharing*, which spreads the risks associated with a given stock of assets across generations with heterogeneous experiences. Another strategy involves *asset accumulation* in order to reduce fluctuations in consumption over time. Both strategies are examples of the intertemporal smoothing of asset returns.

In standard financial models with fixed asset supplies and a single time period, non-diversifiable risk is unavoidable and someone has to bear it. Such models implicitly overlook possibilities for intertemporal smoothing. At the other extreme, in an ideal, Arrow-Debreu-Mackenzie (ADM) world, cross-sectional risk sharing and intertemporal smoothing are undertaken

automatically because markets are complete and there is complete participation in them. Neither the standard financial models, which assume a fixed set of assets, nor the idealized ADM model, which does not explicitly deal with institutions, provide much insight into the relationship between the structure of a country's financial system and the stock of assets accumulated. In particular, they don't tell us how a country's reliance on financial markets or intermediaries affects its ability to smooth asset returns by changing its dynamic accumulation path. The opportunities for engaging in intertemporal smoothing may be very different in market-based and bank-based financial systems. Allen and Gale (1997, 2000 – Chapter 6) argue that incomplete markets do not provide for effective intertemporal smoothing, but that long-lived financial institutions such as banks and insurance companies can do so, *as long as they are not subject to competition from financial markets*. Competition from financial markets can lead to the unraveling of intertemporal smoothing provided by long-lived institutions: in good times individuals would rather opt out of the banking system and invest in the market. Therefore, in the long run, intertemporal smoothing by banks is not viable in the presence of competition from markets. This is the dark side of capital markets and an argument against them.

How does intertemporal smoothing operate? In practice, markets may not be complete in the ADM sense for a variety of reasons, including moral hazard, adverse selection, transaction costs, and incomplete participation. For simplicity, Allen and Gale consider an economy with an overlapping-generation structure, which results in incomplete participation by future generations. This is a tractable paradigm for the analysis of intertemporal smoothing and captures many of the features common to a wide range of models of market incompleteness. In the Allen and Gale model there are two assets: a risky asset in fixed supply and a safe asset that can be accumulated over time. Under certain conditions, the safe asset is never held in the market equilibrium as it is dominated by the risky asset. It is next shown that intertemporal smoothing can lead to a higher level of average expected utility than is possible in the market equilibrium because the safe asset is accumulated to hedge against fluctuations in the returns of the risky asset. The market equilibrium is not ex ante Pareto efficient: there exist allocations with intertemporal smoothing that make all generations better off ex ante compared to the market equilibrium. This inefficiency is used to suggest that intertemporal smoothing could be implemented by long-lived intermediaries. One interpretation of the bank-dominated financial system in most of the EU is that it has the advantages of

intertemporal smoothing. These will be lost when the CMU is implemented.

4.2. The Enforcement of Securities Regulations

The second major issue with the CMU plan is that it does not properly address the important issue of securities regulations and their enforcement. In the 1930's the U.S. passed a series of securities regulation acts that set up the Securities and Exchange Commission (SEC) and prohibited many market abuses. These included insider trading, market manipulation, the provision of misleading accounting statements, and so forth. These changes in the law underlay the significant expansion in the securities markets that occurred after the Second World War. Much of Europe only adopted these kinds of regulations in the 1980s and 1990s and their enforcement remains limited. This is one possible reason why capital markets are smaller than in the U.S.

An interesting example is Germany. The largest economy in the EU, it is very much a bank-based economy whose securities markets are much smaller than in the U.S. Allen et al. (2018) document the development of securities law in Germany and point to the Volkswagen short squeeze in 2008 as an example of the problems that lack of enforcement can lead to.

U.S.-style securities law to protect investors did not exist in Germany until the mid-1990s. Before then, the rules and regulations concerning the issuance and trading of securities were scattered across various parts of the law, particularly in stock corporation law, securities exchange law, and banking law. Market manipulation is now part of the Securities Trading Act and the Market Manipulation Definition Regulation (WpHG (or WertpapierHandelsGesetz) and MakonV (or Verordnung zur Konkretisierung des Verbotes der Marktmanipulation)). According to Section 20a of German securities law, an intentional false statement about a fact significant to the valuation of a security, as well as any other deliberate deceptive measure that influences the valuation, is punishable as a criminal act.

La Porta et al. (1997) (LLSV) gave Germany a score of only one out of five possible points on an aggregated index of shareholder protection. This was less than the score for the US (5.0) and the UK (5.0), less than the average score of the 49 countries considered (3.0), and less even than the scores for Thailand (2.0), Greece (2.0), or Ecuador (2.0). In 2015, the Doing Business report of the World Bank's International Finance Corporation, which follows the revised LLSV methodology of Djankov et al. (2008), ranked Germany as 103rd of 189 countries

for investor protection, between the Dominican Republic and Kenya.[5] So the level of investor protection has been poor and does not seem to have improved much in the last 20 years.

Enforcement of securities laws is carried out by the German equivalent of the SEC known as "Bundesanstalt für Finanzdienstleistungsaufsicht" (BaFin). BaFin is a federal institution governed by public law, and is affiliated with the Federal Ministry of Finance. Under the Securities Trading Act, BaFin investigates all possible cases of market manipulation and monitors the collection and evaluation of all securities and derivatives transactions. If a case of market abuse or manipulation is suspected, BaFin has to pass the case on to a public prosecutor, who may (or may not) conduct further investigations and criminal prosecution. The lack of enforcement powers on the part of BaFin has long been criticized, and it is cited by Nowak (2004) as the reason why there have been so few insider trading prosecutions to date. For market manipulation cases, from 2013 to 2015, BaFin started 698 investigations, and passed on 458 cases to public prosecutors (Annual Report 2015). Of those, only 14 final judgements were made with a conviction following a full public trial. The prosecutors turned all the other cases down or settled them with down payments or administrative fines, so the risk of being convicted of market manipulation in Germany - conditional on having been investigated by BaFin - is only two percent. BaFin does not mention any incidents of short squeezes or corners as special cases of market abuse in their annual reports.

On Friday, October 24, 2008 Volkswagen's (VW) stock price closed at EUR 210 per share. On Sunday, October 26 Porsche made a press release concerning their holdings of VW stock. On Monday, the share price rose dramatically. This continued on Tuesday, October 28 when the price rose above EUR 1,005 per share. As a result, VW briefly became the most valuable company in the world by market capitalization. Allen et al. (2018) argue Porsche had an incentive to create a short squeeze to drive up the price to save Porsche from bankruptcy because they were attempting to take over VW and the financial crisis had caused prices to move against them. Moreover, Allen et al. argue that the release did in fact lead to a short squeeze that benefited Porsche. The evidence consists of the movement of the price and its volatility in the two trading days following the announcement. Also, the fact that a Porsche press release on Wednesday, October 29, that they would increase liquidity in the market by making available

[5] http://www.doingbusiness.org/methodology/protecting-minority-investors

5 percent of Volkswagen shares was followed by a fall in the price is also evidence of a short squeeze in the previous two days. In the case of the Porsche announcement of October 26, 2008, BaFin first started investigations of market manipulation, then dropped those charges, only to later pass on the case to the public prosecution office in Stuttgart where Porsche is headquartered. The CEO and CFO were acquitted in this criminal trial as the standard of proof required in these cases is very high. A civil suit is still under way.

The overall effect of the short squeeze was that Porsche benefitted by several billion euros, while arbitrageurs lost much more. The long-term impact of incidents of this kind is to make potential market participants wary of entering markets that may be manipulated when there is little chance of the manipulators being punished.

This example is only one illustration. Christiansen, Hail and Leuz (2016) examine the enforcement of securities regulations in EU countries. They find that stricter implementation leads to larger increases in market liquidity. However, countries with initially weaker regulation do not converge to stronger countries. The effect of harmonizing regulation is that weak and strong countries diverge. All this suggests that securities regulation enforcement needs to be done at the EU level if an effective CMU is to be implemented.

A closely related issue is fragmented supervision. The original CMU plan does not envision an EU-level supervisory body for the single capital market. This intention is in marked contrast to the recent developments on the banking side of the financial sector. As a part of the creation of the banking union, the Single Supervisory Mechanism was launched in November 2014 to supervise all large banks in the euro area. Without a similar arrangement on the capital market side, the single market will never be truly single. Even if all rules were perfectly harmonized across member states, national supervisors could take different attitudes toward enforcement. For example, some local supervisors could face political pressure to take a relaxed approach in an effort to promote national champions. The resulting non-level playing field could undermine the future of the single market.

To mitigate concerns about regulatory arbitrage and political entrenchment, some policy centralization would be useful. Such centralization would also facilitate policy integration with the highly centralized banking union in areas of common interest such as accounting and auditing (Véron, 2014). The simplest

way to achieve more centralization would be to expand the powers of ESMA. In a significant step along these lines, in September 2017, the Commission proposed extending ESMA's modest supervisory powers to several additional areas of capital markets, such as capital market data and market abuse cases. A more ambitious approach would establish ESMA as the single supervisor enforcing a single rule book covering all areas of capital markets. Among other potential advantages, a single rule book would be able to respond to financial innovation faster than 28 national regulators. The absence of a single supervisor from the CMU plan seems motivated by the Commission's desire to find the path of least political resistance. It remains to be seen whether this issue will be addressed in the future.

4.3. Bottom-Up vs. Top-Down Approach

The institution of a single supervisor would be an example of top-down policy centralization that is not envisioned by the Commission in its original plan. As noted earlier, the Commission plans to follow a bottom-up approach, working patiently to identify and remove obstacles to the single market. The implementation of this approach is likely to take a long time. Moreover, the first steps of this approach, as revealed in the Commission's 2015 action plan, were not very ambitious. Those steps included simplifying the prospectus, standardizing securitization, and reversing a small part of new restrictive regulations (Solvency II). These are three steps in the right direction, but they are quite small. For comparison, imagine North Korea trying to promote tourism by simplifying the tourist visa application, standardizing tourist visits, and canceling future plans to double the visa fee. While these steps would be helpful, they would make little difference if few people wanted to visit North Korea in the first place. We believe that the Commission's approach would benefit from adding some top-down elements.

The strong preference for a bottom-up approach in the Commission's plan is a legacy of the British influence. Until the Brexit vote in June 2016, Britain had been the driving force behind the CMU project. But the day after the vote, Jonathan Hill, Britain's EU commissioner in charge of the financial services portfolio, resigned. While the British departure is a major loss for the CMU project, there is also a silver lining in the form of an opportunity to make the project more ambitious by adding some top-down elements.

4.4. Pan-European Private Pensions

A top-down approach will certainly be necessary to push through one of the Commission's ideas that we find particularly valuable—that of pan-European portable private pensions. The introduction of such pensions would have at least four major benefits. First, it would promote the growth of private pension funds and pension savings more generally. Since pension funds are key players in capital markets, their growth would contribute to the development of European capital markets. Scharfstein (2018), for example, argues that policies that promote pension savings also promote the development of capital markets. Second, a pan-European portable private pension scheme would educate Europeans about capital markets. There is no better way of educating people about markets than by giving them choices and letting their pension balances fluctuate as a result of their choices and market movements. A population well-versed in markets is a prerequisite for the CMU.

We list these two benefits of private pensions first because they contribute to the achievement of the CMU. While the third and fourth benefits are unrelated to the CMU, they are arguably even more important for Europe's future. Third, pan-European private pensions would help facilitate labor mobility in Europe. The relative rigidity of labor within Europe is one of the main reasons why the European Monetary Union (EMU) does not constitute an optimal currency area (Mundell, 1961). Free labor movement across EMU member states would help smooth out asymmetric shocks hitting the EMU. In theory, people are free to move, yet in practice they move little. This rigidity has many reasons that are beyond the control of policymakers, such as family ties, cultural differences, and language barriers. But another reason, which is under the policymakers' control, is that pension systems in Europe continue to operate on a national basis, complicating the lives of cross-border migrants. With pan-European portable private pensions, any EU citizen would retain the same pension account, with the same rules for access and contributions, after moving from one European country to another. Fourth, private pensions would help solve the demographic problem in Europe. Given the well-known demographic trends, the pay-as-you-go systems of most European countries are not sustainable in the present form. Since pensions are a national competence, the creation of pan-European portable pensions would require top-down legislation at the European level.

4.5. Harmonizing Rules and Standards

The Commission plans to eliminate the fragmentation of European capital markets by harmonizing rules and standards across EU member states. The national rules concerning insolvency, accounting, and taxes vary significantly across countries. This variation hinders cross-border investment by making it hard for investors to fully assess the risks they take on. The creation of a single rulebook would indeed solve the problem, but its implementation will be difficult because it involves areas in which national governments tenaciously guard their own policy-making powers. Harmonizing the rules of 28 countries (27 after Brexit), rules that may have complex connections and interactions with other national rules, could take a long time and potentially even prove infeasible. After all, discussions of rule harmonization have been going on for years with limited success.

While the harmonization of national rules is a worthwhile long-term goal, a useful intermediate step would be to simply clarify which country's rules apply in what situation. If a German buys shares in a Dutch company listed in London, and the company goes bankrupt, which country's rules govern the insolvency proceedings? If investors are uncertain about the answer, they will be reluctant to invest outside their home country. Removing this uncertainty by publishing simple and clear guidelines could achieve a significant part of the benefits of full harmonization in a much shorter period of time. Alternatively, one could create a special Europe-level regime (the "29th regime") for rules that are particularly difficult to harmonize, such as corporate insolvency. The 29th regime could be optional, irrevocably chosen at the time of issuance (Brühl et al., 2015).

4.6. Unequal Levels of Market Development

The discussion of the CMU often highlights the unequal levels of development of capital markets across EU member states. While countries such as Great Britain, Luxembourg, the Netherlands, and Sweden are among the world's leaders in capital market development, others such as Latvia and Slovakia have markets of negligible size, even relative to the size of their economies. However, it is not clear that this unequal development presents a major problem.

Once a true single capital market in Europe is created, it will not matter that capital market institutions in, say, Slovakia are underdeveloped. A Slovakian firm looking to raise funds will be able to list on any European exchange, and a

Slovakian household looking to invest will be able to do so via any European investment fund. Such cross-border access has been possible to some extent for years—after all, free flow of capital is one of the fundamental principles of the EU—but local firms tend to enjoy a cost advantage. Once the single market is built, there will be no a priori reason for capital market institutions to be located in each member state, although there will remain some role for local firms to provide local advice in the local language about how to access the pan-European market.

4.7. Taking Stock

To summarize, while the CMU plan has both strengths and weaknesses, we believe the strengths prevail. The benefits related to cross-sectional risk-sharing and particularly innovation seem very valuable. The possible reduction in intertemporal smoothing is a drawback that is mitigated to some extent by pay-as-y0u-go pension schemes. The lack of implementation and enforcement of securities regulation at the EU level can be addressed in the coming years.

The plan's first steps, as outlined in the Commission's action plan from September 2015, are relatively modest. As a result, the direct benefits from implementing those steps are likely to be modest as well. But future steps might be more ambitious, such as the creation of pan-European private pensions.

In addition to its direct benefits, the CMU plan could also potentially yield a large indirect benefit. By launching the CMU, the Commission is sending a clear pro-market signal, effectively announcing "we are open for business." This is a welcome change of tone in the public discourse. Ever since the eruption of the financial crisis in 2007-2008, the public debate has focused on additional regulation needed to prevent future financial crises. While new regulation may prevent crises, it will not boost growth; in fact, it often has the opposite effect. To restart growth in Europe, we need market-driven solutions. In that sense, the CMU is one of the most enlightened goals of the current European policy.

5. Challenges to European Capital Markets

The CMU plan represents a strong boost to the development of European capital markets. However, these markets currently face several major headwinds whose combined negative effect could potentially outweigh the positive effect of the CMU. These headwinds include, but are not limited to, the proposed financial

transactions tax, the low-interest-rate environment, cultural reasons, and potential political opposition.

5.1. The Financial Transactions Tax

A major threat to the development of European capital markets is the financial transactions tax (FTT) proposed by the European Commission in September 2011. The Commission's proposal calls for a 0.1% tax on transactions in stocks and bonds and a 0.01% tax on derivatives transactions, excluding activities such as raising capital, restructuring operations, and ECB refinancing transactions. According to the Commission, the objectives of the FTT are to make the financial sector pay for the cost of the crisis, disincentivize excessive trading, and avoid the development of an uncoordinated patchwork of national FTTs. The FTT is not yet in place as of this writing. Its introduction, originally planned for January 2014, has been postponed several times due to continuing negotiations on fundamental issues such as what instruments to cover, how to collect the tax revenue, and whether to tax market-making activities. As of January 2018, the FTT is supported in principle by 10 of the 28 EU countries, including Germany, France, Italy, Spain, and six smaller countries. But the progress stalled recently due to the ongoing Brexit negotiations. The big players seem reluctant to move forward with the tax while they are trying to attract financial institutions looking to leave London. The imposition of the tax could undermine these efforts to the benefit of countries such as Ireland and Luxembourg, which are also courting UK-located banks but are not among the 10 countries pursuing the FTT.

The FTT has always been popular among some politicians. The idea of having the financial sector pay appeals to many voters, making the FTT a "perennial populist favorite" (Geithner, 2014). While the broader merits of the FTT are debatable, one of its effects, on market liquidity, seems clear. Imposing the FTT in some European countries would make trading in those countries less attractive. Some trading would inevitably migrate elsewhere, reducing the liquidity of what are already fairly illiquid markets. The lower liquidity would weaken capital markets and raise the cost of capital for European firms.

The FTT proposal highlights an apparent ambivalence of the Commission toward capital markets. On the one hand, the Commission is promoting the CMU whose introduction would clearly strengthen capital markets. On the other hand, it is promoting the FTT whose introduction would weaken the same markets. This approach is akin to saying "We want to promote football. We also

want a new rule that says every time you kick the ball, you pay one euro." This ambivalence is likely to be driven by political considerations.

5.2. Low Interest Rates

The European economic landscape in early 2018 is characterized by exceptionally low interest rates. Since 2015, the sovereign debt of many European countries has been trading at negative yields, especially at short maturities. The potential reasons behind the low rates, such as demographic forces and monetary policy, are the subject of ongoing debates among economists. Whatever the reasons, the ultra-low interest rates have unfavorable implications for European capital markets. They create problems for pension funds and mutual funds, institutions that are central to the development of capital markets.

Defined-benefit pension funds tend to have long-term liabilities with bond-like features. Many pension funds find it prudent to hedge those liabilities by purchasing long-term bonds. Given the ultra-low bond yields, the future returns of pension fund portfolios are likely to be low. Defined-contribution pension funds also hold substantial bond positions so they, too, are likely to deliver low returns going forward. The poor performance of funded pension schemes can make those schemes look unappealing, leading to further entrenchment of the pay-as-you-go pension schemes that are so popular in continental Europe. The low returns of private pension funds make it easy for myopic politicians to tell their voters: "Look, private pensions are not working. We need to stick to pay-as-you-go." The absence of a robust private pension fund sector is a major impediment to the development of European capital markets.

Mutual funds, especially those investing in fixed-income securities, face the same problem. Therefore, European deposit-hoarding households might be reluctant to migrate to mutual funds or other capital market vehicles. Those households can be forgiven for asking: "If I can earn zero return on my insured bank deposit and zero return in a mutual fund, why switch to a mutual fund?"

5.3. Knowledge and Culture

Financial knowledge among Europeans is imperfect, in part due to the lack of experience with financial markets.[6] This fact might play a role in explaining the

[6] For examples of evidence, see the surveys cited by European Commission (2015d), pages 44-45.

reluctance of European firms to access capital markets as well as the preference of European households for insured bank deposits over uninsured stock and bond investments. Europeans' suspicion toward markets could also reflect fundamental values and traditions. For example, the competitive nature of markets could be perceived by some as being at odds with the widely cherished European social model. The strong home bias observed in Europe could have a component related to the continent's troubled history. Culture and the lack of financial knowledge are likely to represent "soft" barriers to the development of European capital markets. Overcoming these deep-rooted barriers will take years of patient education and trust-building. For example, to build up households' appetite for equity investments, it will be necessary to ingrain in the public mind the idea of the equity risk premium. To overcome home bias, it will be necessary to popularize the benefits of international diversification.

Home bias is found not only among the general public but also among relatively sophisticated investors, including institutions.[7] Some of these investors might be discouraged from investing abroad because they are unsure about which country's insolvency, tax, and accounting rules apply to such investments. Clarifying the rules of the game in cross-border investment could help reduce home bias in Europe.[8]

5.4. Political Support

Ever since its launch in early 2015, the CMU project has enjoyed solid political support. This support is most likely due to the inherent quality of the project, and perhaps also due to the non-confrontational bottom-up approach chosen by the Commission. At some point, though, political opposition might emerge.

This opposition could very well come from institutions with vested interests, such as banks or organizations providing local market infrastructure. Like any other reform, the CMU will produce not only winners but also losers, especially in the short run. Even if there are many more winners, the losers tend to

[7] For example, as of 2014, euro-area equity mutual funds hold about 13% of their assets in domestic stocks (Kaya, 2015). This fraction may not seem large, but it is much larger than any euro-area country's share of the global stock market capitalization, often by an order of magnitude. The home bias among European institutional investors has declined since 2000 when the same fraction was 29%, perhaps due to the elimination of the exchange rate risk within the euro area after the introduction of the euro.

[8] Uncertainty about the rules of the game has real effects that include discouraging investment. See, for example, Julio and Yook (2012) and Fernández-Villaverde et al. (2015). This uncertainty also has financial effects, such as higher risk premia (Pástor and Veronesi, 2012, 2013).

organize and speak with a loud voice.

Who will lose from the CMU in the longer term? The creation of a true single capital market, if successful, will result in a more efficient allocation of capital across Europe. The losers will thus be inefficient users of capital, both public and private. These users will lose a long-standing comfortable source of domestic capital, which will now be able to flow elsewhere in pursuit of better investment opportunities. To identify the losers more precisely, we only need to wait and see where the future opposition to the CMU comes from.

Political opposition could also come from other directions. For example, it could arise from national squabbles about supervision. Another important threat is the recent rise of populism in Europe, which questions the whole idea of European integration. If Europe manages to overcome these challenges, it will take another major step forward in its economic development.

6. Concluding Remarks

In this chapter, we have argued that while the CMU features significant trade-offs, overall it is a good policy that deserves to be pursued vigorously. There are large potential benefits from cross-sectional risk sharing and innovation, as well as benefits from diversifying funding sources beyond banks. There are also drawbacks, however. Intertemporal risk sharing may be reduced. This problem can be countered to some extent with appropriate government policies. In addition, the current proposals focus too much on the investor side and too little on effective securities regulation. This drawback can be solved by expanding the powers of ESMA. Finally, a number of other factors, such as the financial transactions tax, act as headwinds to CMU. The Commission and member governments need to think carefully about how to counteract these factors.

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