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THE VALUE OF CROSS-BORDER BANKING AND THE COST OF FRAGMENTATION

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INTRODUCTION

This Institute of International Finance (IIF) staff paper evaluates the benefits as well as the associated risks of cross-border banking, with a focus on its implications for the macroeconomy and financial stability.[2] In previous research, the IIF has shown that financial markets are experiencing increasing levels of fragmentation.[3] Fragmentation undermines some of the progress that has been made in strengthening the resilience of the global financial system and reduces economic growth and job creation. It is therefore important and timely to re-examine the benefits and risks of cross-border banking.

Some regulators are concerned that international banking may be inherently more complex and harder to regulate than domestic banking, and a potential source of systemic risk. This view was particularly strong in the wake of the global financial crisis.[4] The complexity and risks of cross-border banking need to be understood and managed effectively. However, if these are properly managed, there is ample evidence over a long time period that the efficiency, resilience, economic and financial stability implications of cross-border banking provide significant net benefits in host and home jurisdictions alike.

The G20 has repeatedly supported this approach, including at the Pittsburgh Summit of 2009 and the Fukuoka Summit of 2019: *"an open and resilient financial system, grounded in agreed international standards, is crucial to*

BENEFITS OF CROSS-BORDER BANKING

SUPPORTS INTERNATIONAL ACTIVITY AND CAPITAL FLOWS: Supports the flow of capital to investment opportunities and serves as a critical enabler of cross-border real activity

DIVERSIFIES THE COMPETITIVE LANDSCAPE: Improves competition and helps to transmit best practices and expertise

STRENGTHENS RESILIENCE OF BANKING GROUPS: Improves the safety of banks through asset and liability diversification

INCREASES ECONOMIC RESILIENCE: Helps to absorb macroeconomic shocks in a local region; also improves monetary policy functioning within a currency area

EXPANDS OPTIONS FOR RECOVERY & RESOLUTION: Provides important options (cross-border mergers or divestitures) to pre-empt bank failure or facilitate recovery or resolution

[1] With thanks for excellent research assistance to Scott Knewitz of American University and Kristina Haberson of the Vienna University of Economics and Business.

[2] In this paper the scope of "cross-border" banking refers both to bank transactions and services that cross borders, as well as activities undertaken by banks operating in third countries either through a branch or subsidiary.

[3] IIF 2019. "Addressing Market Fragmentation: The need for Enhanced Global Regulatory Cooperation" (January). Hereafter referred to as "IIF 2019 (January)".

[4] Cross-border activity is often used a measure of risk. For example, see the Basel Committee on Banking Supervision's GSIB assessment and scoring methodology (2014, 2018) as well as the risk-based indicators used by the U.S. Federal Reserve Board in the recently finalized rules on tailoring requirements for large banks.

support sustainable growth". At the Fukuoka Summit, G20 Finance Ministers and Central Bank Governors committed to *"address unintended, negative effects of market fragmentation, including through regulatory and supervisory cooperation."*[5]

In this paper, market fragmentation is defined as the inhibition or restriction of cross-border activities, which reduces their associated economic and resilience benefits. There are many factors that can lead to fragmentation in global financial markets; the focus of this paper are factors related to regulatory and supervisory policies such as divergence and inconsistencies in regulatory and supervisory frameworks and national policies that have extraterritorial effects.[6] Regulatory- and supervisory-driven market fragmentation can inhibit the benefits of cross-border banking, and can hinder effective supervision of banks with cross-border activities.

ORGANIZATIONAL APPROACH

The paper is organized as follows:

- Section A: Sets out the theoretical and empirical case for cross-border banking, considering both benefits and concerns
- Section B: Provides an overview of how banks operate internationally and recent trends in cross-border banking
- Section C: Discusses the impact of recent trends on the provision of financial services, the real economy and financial stability
- Section D: Suggests policy proposals to reduce fragmentation and maximize the net benefits of cross-border banking.

While this paper discusses evidence and general trends related to foreign banks and international banks, as opposed to domestic banks, it is important to acknowledge that foreign banks in any given country or at any given time are not a homogeneous group and treating them as such can obscure important differences. This paper touches on some business model and structural differences between foreign banking groups which may be relevant to policymakers and supervisors. In general, taking a holistic view of an international bank is beneficial from a supervisory perspective.

SECTION A: THEORETICAL AND EMPIRICIAL BENEFITS OF CROSS-BORDER BANKING

1. Supporting International Activity and Capital Flows

As noted by Andrew Bailey, Chief Executive of the UK Financial Conduct Authority: *"The lesson of history is that global capital flows are growth enhancing."*[7] Economic growth is strengthened when capital can flow to where it is most needed or best utilized, and where it can generate sustainable returns.[8] The history of international banking is closely linked to the expansion of international trade and the financing of economic development where local capital was insufficient. In the modern era, the first major wave of international banking was in the 19th century when European capital was invested in the emerging markets of the time such as the United States. International banks helped to finance U.S. railroads, states and municipalities by underwriting and selling securities to European investors in London.[9]

More recently, research shows that the growth in international finance has been an important channel for growth in international trade and increasing access to credit. For example, a 2016 Federal Reserve Bank of San Francisco research paper found that when banks in two countries become more closely connected through the syndicated loan market, trade between those countries tends to increase in the following year by a statistically and economically significant amount.[10] Research by the Bank of England shows that

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[5] G20 Finance Ministers and Central Bank Governors 2019. "Communiqué" (June 8-9).

[6] For example, see: IIF 2019 (January); FSB 2019, "FSB Report on Market Fragmentation" (June 4); Claessens 2019, "Fragmentation in global financial markets: good or bad for financial stability?" (October), BIS Working Paper No. 815 - hereafter referred to as "Claessens/BIS 2019".

[7] Andrew Bailey 2017. "Free trade in financial services and global regulatory standards: friends not rivals" (January 26).

[8] This includes capital flows from savings rich to savings poor countries and is therefore beneficial to savers and the real economy. Japan is a prime example of a savings-rich country with a low yield curve that is looking to diversify its exposures and improve yields by gathering investments abroad and increasing offshore activities.

[9] BIS Committee on the Global Financial System 2010. "Long-term issues in international banking" (July).

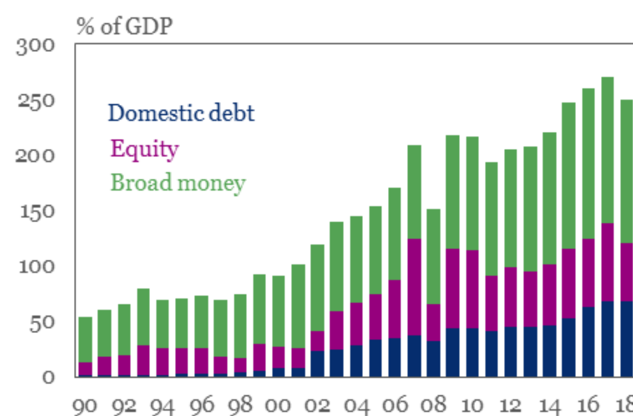
[10] Caballero, Candelaria and Hale 2016. "Bank Linkages and International Trade" (February). FRB of San Francisco Working Paper 2013-14.

foreign banks tend to facilitate trade with emerging markets more than domestic banks.[11] Claessens (2017) concludes that a greater presence of foreign banks and a larger footprint (more branches) results in greater access to external financing, including for small and medium-sized enterprises (SMEs).[12]

Some activities lend themselves strongly to cross-border banking activity. In particular, capital markets and wholesale banking activities – such as international payments, trade and export finance, and global corporate treasury or investment banking services to multinational companies – rely more on efficient cross-border operations than do retail banking activities. In other cases, foreign banks may provide services that the domestic banking system is not yet offering or providing in sufficient quantity. This may be more likely to apply where there are high initial costs to providing a service (expertise, capital, technology) and returns to scale.[13]

There are multiple examples of the valuable role foreign banks play in advanced economies at present. In the U.S., foreign banking organizations (FBOs) are key participants in U.S. primary and secondary capital markets, across multiple asset classes and activities.[14] FBOs also assist the smooth operation of U.S. monetary policy and government debt distribution, as they comprise more than half of the primary broker-dealers of the Federal Reserve Bank of New York.[15] Similarly, in the EU, U.S. investment banks have a significant market share, making them critical to the good functioning of EU capital markets for corporates and sovereigns.[16]

Figure 1: Emerging Market Economy (EME) Financial Deepening as measured by broad money, domestic debt securities and equities outstanding



Sources: BIS, IMF, World Bank and IIF.

Foreign banks often play a slightly different, although similarly important, role in emerging market economies (EMEs) than in advanced economies.[17] The development of EMEs' domestic financial markets, known as "financial deepening", has been a striking feature over the past 30 years (see Figure 1).[18] Financial deepening can be partly attributed to the impact of international banking.[19] For example, the capital and knowledge associated with foreign bank investment in Central, Eastern and Southeastern Europe (CESEE) from the early 1990s were considered tools to strengthen CESEE countries' banking systems and increase financial intermediation from their previously low level.[20] As an example of the direct benefits to

[11] Claessens, Hassib and Van Horen 2017. "The role of foreign banks in trade" (April 10). Bank of England Staff Working Paper No. 656.

[12] Claessens 2017. "Global Banking: Recent Developments and Insights from Research" (September).

[13] Recent literature finds economies of scale for certain banking activities (e.g. related to the costs of compensation, information technology and legal services). See ECB 2017, "Financial integration in Europe" (May); Hereafter referred to as "ECB 2017 (May)". For a brief survey of the literature, see Campbell 2018, "Blog: When Bigger is Beneficial: Scale Economies in the Banking Industry" (August 18).

[14] SIFMA 2019. "SIFMA Insights: The Importance of FBOs to US Capital Market" (April).

[15] U.S. Department of the Treasury 2017. "A Financial System That Creates Economic Opportunities: Banks and Credit Unions" (June). Page 5. Refers to data from Federal Reserve Bank of New York, Primary Dealers, available at: https://www.newyorkfed.org/markets/primarydealers.

[16] Comparing the European market shares of the top five U.S. and European investment banks in 2017, PWC found that the U.S. banks had 71% of the market capitalization and 74% of the deal volume in primary markets. See PWC 2018, "Presentation at the European Banking Summit 2018" (September 27).

[17] Van Horen and Claessens 2012. "Foreign Banks: Trends, Impacts and Financial Stability" (January). IMF Working Paper No. 12/10.

[18] The dip in 2008 can be attributed to reduced capital flows to EMEs in the midst and aftermath of the global financial crisis.

[19] See also IIF 2014. "Financial Globalization: Maximizing Benefits, Containing Risks" (December).

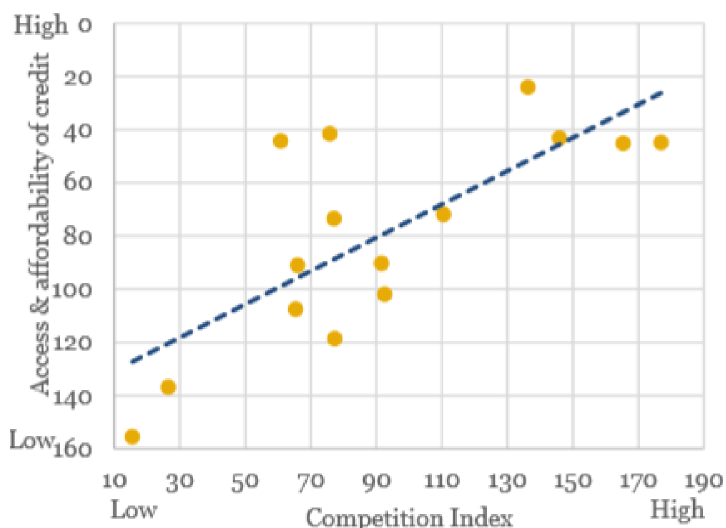
[20] De Haas and Van Lelyveld 2003. "Foreign Banks and Credit Stability in Central and Eastern Europe: Friends or Foes? A Panel Data Analysis" (May). MEB Series No. 2003-04 – Research Series Supervision No. 58 DNB.

EMEs from locally-active global banks today, the Governor of the Central Bank of Kosovo recently publicly commented on the significant contribution that the Austrian bank, Raiffeisen Bank International, makes to economic growth in Kosovo through its product offering, benefitting trade and attracting foreign investment.[21]

2. Diversification of the Competitive Landscape

International banks can significantly increase the diversity and competition in national banking systems, generating improved access to credit at a tighter spread to deposit rates, as well as greater innovation and value across products and providers. Across a range of national economies, credit is consistently more accessible and more efficiently priced when there are more participants bringing meaningful competition to the marketplace (see Figure 2). More generally, cross-border flows of finance to EMEs can support the democratization of financial services and increase financial inclusion.

Figure 2: Ease of access to credit and Net Interest Margins in national economies compared with level of competition



Source: IIF (2017) "International Regulatory Standards: Vital for Economic Growth." Data sources: IBRD, U.S. FRB St Louis, BIS and IIF.
Chart note: The access and affordability of credit index on the Y-axis has an inverted scale so 0 is the highest value.

Foreign banks can provide a conduit for innovation, transferring knowledge and transmitting best practices and corporate governance standards across countries. It is difficult to quantify spillover effects in terms of the spread of innovation and best practices, but there is anecdotal evidence. The development of improved risk systems, both through industry practice and via international regulatory standards, is one example. Another example is the ability of local subsidiaries in EMEs to access group-wide platforms for business processes through their parent.[22] Similarly, some banks have entered foreign retail banking markets using a digital business model, which may have spurred competing local banks to increase investment in digital banking technologies.

3. Strengthening Bank Resilience Through Asset and Liability Diversification

Diversification is a foundation of the success of the banking business model. Diamond (1996) showed that a diversified bank is the most efficient form of financial intermediation, as compared to direct relationships between individual investors and borrowers, when borrowers are small and loans are costly to monitor.[23] As Diamond put it: *"Diversification makes bank deposits much safer than bank loans, and in the limit of fully diversified banks with independently distributed loans, bank deposits become riskless . . . Laws that limit bank diversification remove much of the technological advantage of the banking contract."*

Banks can broaden their asset diversification when they spread their risks geographically and develop successful businesses in different regions and markets. This reduces the correlation of the performance of a bank's assets and reduces its exposure to the economic cycle of a single country and/or region. Less correlation means reduced overall asset risk and an improved solvency profile of the banking group. Diversification can also be very important to reduce liquidity risks and lower the exposure of a banking group to a given funding source.

[21] Governor Fehmi Mehmeti 2019. "Raiffeisen Bank has made a significant contribution to Kosovo's economic growth" (September).
[22] Kiene, Helin and Eckerdt (Accenture) 2011. "Cross-Border Banking: An Accenture Study of Cross-Border Mergers & Acquisitions in Banking".
[23] Diamond 1996. "Financial Intermediation as Delegated Monitoring: A Simple Example" (Summer). Federal Reserve Bank of Richmond Economic Quarterly volume 82/3.

A recent paper shows that well-diversified euro-area loan portfolios would have suffered smaller losses since 2001 than less diversified portfolios.[24] The maximum annual loss from a hypothetically fully-diversified euro area bank loan portfolio was 40% lower than the maximum loss on a country-by-country basis. In the U.S., it has been found that diversification across U.S. states lowers bank risk.[25]

There is evidence that increased bank resilience due to diversification is reflected in market prices. In terms of funding diversification, Levine et al. (2016)[26] analyze data on U.S. banks and find that cross-state diversification of funding materially reduces funding costs. Deng et al. (2007)[27] examine the link between diversification and solvency though the lens of comparative debt costs for U.S. bank holding companies. They find that greater diversification in deposits and loans each lead to lower bond yield spreads. Product diversification can also lead to lower debt cost in certain formulations. Looking at recent data for global systemically important banks (G-SIBs) we do observe a significant negative correlation between a major global bank's cost of debt and its cross-jurisdictional claims and liabilities (See Figure 3, which relates to 2017 data). This relationship does not hold up between these banks' overall G-SIB score and their cost of debt, suggesting that it is related to their cross-jurisdictional diversification in particular rather than being a product of being treated as Too-Big-To Fail (TBTF).[28] This illustrates that asset and liability diversification through cross-border activities can be considered risk reducing by market participants.

The mechanism behind this diversification in an international group is often through group support of local subsidiaries and branches, sometimes referred to as parent "source of strength." Historically, source of strength has been a robust and consistent feature of cross-border banking. For example, in the last crisis there is evidence that local affiliates of healthy international banks helped to stabilize the flow of credit when host markets experience negative shocks by relying on the bank's internal capital market and parent support.[29] Reinhardt & Riddiough (2015)[30] document the markedly different behavior of interbank and intragroup funding flows during periods of high and rising global risk, such as after the collapse of Lehman Brothers in September 2008: intragroup funding increased in the aftermath of Lehman's collapse and was stable for the rest of the crisis. Studies have shown similar patterns in banks' internal capital market flows during other crisis episodes, see for example Pelletier (2018) on the behavior of foreign banks in South Africa during the 1997 East Asian crisis.[31]

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[24] Jokivuolle and Virén 2019. "Loan portfolio diversification in the euro area, capital requirements, and the European Banking Union" (July). SUERF Policy Note, Issue No. 87.

[25] Goetz, Laeven and Levine 2016. "Does the geographic expansion of banks reduce risk?" (May). Journal of Financial Economics, 2016, volume 120, issue 2.

[26] Levine, Lin and Xie 2016. "Geographic diversification and bank's funding costs" (August). NBER Working Paper No. 22544.

[27] Deng, Elyasiani and Mao 2007. "Diversification and the Cost of Debt of Bank Holding Companies." (January 25). Journal of Banking and Finance.

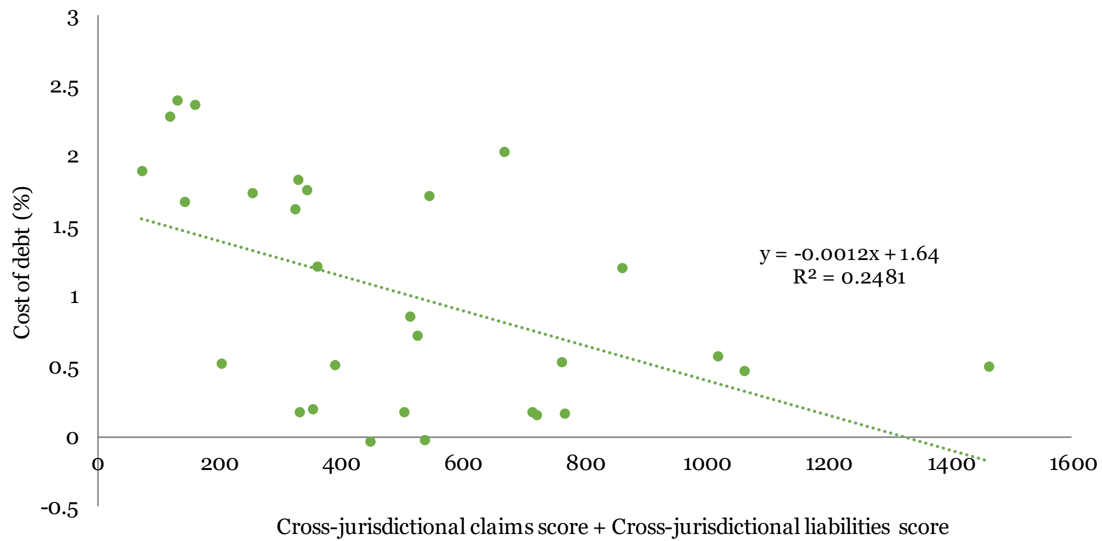
[28] There is evidence that large systemically important banks are broadly no longer treated by investors as TBTF. Specifically, implicit funding subsidies for systemically important banks (SIBs) appear to have been largely removed; credit rating agencies have removed expectations of government support for most SIBs; and banks' TLAC debt is behaving as a normal credit-bearing debt class. For a more detailed discussion of the evidence please see IIF 2019, "Letter to FSB Secretariat Re: Evaluation of too-big-to-fail reforms" (July 5).

[29] For example, see Buch and Goldberg (2015), "International banking and liquidity risk transmission: Lessons from across countries" (November) and Cetorelli and Goldberg (2011), "Global Banks and Their Internal Capital Markets during the Crisis" (July 11).

[30] Reinhardt and Riddiough (2014). "The two faces of cross-border banking flows: An investigation into the links between global risk, arms-length funding, and internal capital markets" (May 7).

[31] Pelletier 2018. "Internal capital market practices of multinational banks: Evidence from South Africa" (May). Journal of Banking and Finance, 2018, volume 90.

Figure 3: Relationship between G-SIB cost of debt and combined BCBS G-SIB score for cross-jurisdictional claims and cross-jurisdictional liabilities



Sources: Office of Financial Research, Bloomberg and IIF.
Chart notes: Sample of 29 G-SIBs. Office of Financial Research (OFR) data on G-SIB scores for cross-jurisdictional claims and cross-jurisdictional liabilities (end-2017, contributed to 2018 G-SIB bucketing). Bloomberg cost of debt data (WACC_COST_DEBT; end-2017).

4. *Increasing Economic Resilience*

Integrated banking and financial markets can help to absorb regional macroeconomic shocks through diversification effects. In a currency area, cross-border financial flows are important to monetary policy transmission and therefore the efficacy of monetary policy to respond to economic shocks.

(a) Cross-border financial flows can help absorb local economic shocks[32]

Wholesale and retail banking integration permit a decoupling of the capitalization and health of banks in a single country and the volume of local credit supply. Geographically diversified domestic banks or the presence of global foreign banks can support the flow of financing to an economy when it is hit by negative domestic shocks. Even in the global financial crisis, which affected several economies simultaneously and caused domestic and foreign banks to contract lending, there is evidence that foreign banks often had higher loan growth compared to domestic banks where they had a significant local presence and/or local deposit funding base.[33]

In addition, integrated financial markets, supported by international banks, help decouple consumption and income in any single country. If labor income falls during a recession but the private sector holds a diversified financial portfolio, people can smooth their consumption with the financial returns they receive on assets in better performing regions.

[32] Maria Draghi has referred to this as 'ex-ante risk sharing'; see Mario Draghi 2018, "Risk-reducing and risk-sharing in our Monetary Union" (May 11). Hereafter referred to as "Draghi 2018 (May)". This is particularly important in monetary unions such as the euro area, but the principles apply more generally.
[33] See McGuire and von Peter 2016 "The resilience of banks' international operations" (March), BIS Quarterly Review; and Claessens and van Horen 2012 "Foreign banks: Trends, Impact and Financial Stability" (January), IMF Working Paper No. 12/10.

There is evidence that economic shocks have been better absorbed in the U.S. than within the euro area, partly due to U.S. interstate banking. See especially Draghi (2018)[34], who notes the development of U.S interstate banking (*aka* U.S. banking union) in the 1990s and the link to a reduction in regional downturns. Buti et al. (2016)[35] compared the degree of cross-border private risk sharing within the EU to that between U.S. states. In the U.S., finance absorbs around 70% of local economic shocks (with capital markets absorbing around 45% and credit markets 25% after interstate banking/U.S. banking union). By contrast, in the euro area – where the establishment of the European Banking Union is so far incomplete – the total figure for risk absorption is just 25%, leading to more severe local economic cycles.

(b) Monetary policy transmission mechanism within a currency union

"Monetary transmission" describes the various channels through which central bank monetary policy is transmitted to the real economy (of which there is an interest rate, a bank lending, and a borrower balance sheet channel).[36] Within a currency union, which relies on common monetary policy, cross-border financial flows are key to effective monetary policy transmission. Market fragmentation can hamper the monetary transmission mechanism, thereby reducing the effectiveness of monetary policy to mitigate economic shocks (see Section C for more details from the global financial crisis).

5. Expanding Options to Prevent Costly Banking Failures or to Facilitate Recovery and Resolution

One route to avoiding costly bank failures or bail-ins is for stronger banks to acquire failing banks through mergers or acquisitions (M&A). This can take place within a country or across countries – allowing for cross-border consolidation increases the set of options and could sometimes result in more efficient outcomes.[37] Cross-border M&A can be particularly advantageous if the local banking system has been hit by a widespread shock or is highly concentrated.

A good example of this is the response of the Mexican authorities to the 1994 banking crisis – the "Peso crisis" triggered by the abrupt devaluation of the Mexican peso in December 1994. One of the authorities' objectives of their subsequent support programs was to enhance competitiveness by promoting the participation of foreign banks. And the lack of domestic resources to recapitalize the Mexican banking industry led to the removal of some prevailing restrictions on foreign bank ownership.[38] Some foreign banks proceeded to acquire Mexican banks that had been subject to government interventions between end-1994 and mid-1997.[39] By 1998, majority-owned foreign banks accounted for 20% of banking system assets, up from 4% before the crisis.[40] Subsequent analysis showed that foreign banks were an important boost to banking system strength and a source of credit during the crisis period.[41]

Gros et al. (2012[42], 2015[43]) show how the combined action of cross-border banking business, cross-border consolidation, and a centralized (i.e. federal) public management of restructuring led to enhanced private shock absorbing capacity in financial distress episodes of U.S. regions such as Nevada or Puerto Rico. Idiosyncratic shocks in comparable European countries, such as Ireland and Greece, could not be equally absorbed by private means partly because of the lack of a functioning cross-border banking network. European Central Bank (ECB) analysis suggests that the euro area would benefit from a greater amount of cross-border consolidation

[34] Draghi 2018 (May).
[35] Buti, Leandro and Nikolov (2016). "Smoothing economic shocks in the eurozone: The untapped potential of the financial union" (August 25).
[36] Bernanke and Gertler 1995. "Inside the Black Box: The Credit Channel of Monetary Policy Transmission". Journal of Economic Perspectives, Volume 9, Number 4, Pages 27-48.
[37] For example, see ECB 2017 (May) and Enria 2019, "Is less more? Profitability and consolidation in the European banking sector" presentation at the at the CIRSF Annual International Conference, Lisbon (July 4).
[38] Although some restrictions remained until 1998-2003.
[39] Graf 1999. "Policy responses to the banking crisis in Mexico." BIS Policy Papers No. 6.
[40] Ibid. Page 181.
[41] See for example Dages, Goldberg and Kinney 2000. "Foreign and Domestic Bank Participation in Emerging Markets: Lessons from Mexico and Argentina" (September). FRBNY Economic Policy Review.
[42] Gros 2012. "Banking Union: Ireland vs Nevada, an Illustration of the Importance of an Integrated Banking System" (November 27).
[43] Belke and Gros 2015. "Banking Union as a Shock Absorber" (April).

whereby stronger and more efficient banks acquire weaker and less profitable banks in other euro area countries.[44] However, as discussed in ECB 2017 (May), there are numerous regulatory and supervisory obstacles that deter cross-border mergers and acquisitions in Europe at present, including fragmented local capital and liquidity (see Section C).

Data from the U.S. Federal Deposit Insurance Corporation (FDIC) show how the U.S. framework around interstate banking has improved resolution options in the US.[45] The FDIC resolved about 530 banks in the ten years between 2007 and 2017, with an average size of USD 1.4 billion. Over 90% of these transactions used a mechanism called "purchase and assumption" (P&A), where a strong bidder assumes the assets and deposits of a failed bank. The FDIC has found this to generally be the lowest cost approach. The typical FDIC P&A has around three or four bidders. In about 50% of the cases, at least half of the bidders were from out of state. In one-out-of-six resolutions, *all* of the bidders were from out of state. If not for the approach in the U.S. to interstate banking, the P&A auction would become more expensive or fail in these cases, and the FDIC would need to move to a more complex fallback.[46]

In contrast, the major European banking resolutions of 2017 were local affairs. The problems in Spain (Banco Popular) were solved within Spain (via a P&A transaction with a single bidder). The large troubled Italian banks (Veneto Banca and Monte Dei Paschi Di Siena) were solved within Italy. It could benefit future resolution episodes if the Single Resolution Board were to have a wider range of potential acquirers, including cross-border firms, and received the same number of bids as the U.S. FDIC typically receives.

Section A: Summary of key points

- Cross-border banking activity can benefit the macroeconomy and financial stability through various channels.
- Cross-border banking supports real activity, including international trade, and foreign banks diversify the competitive landscape within an economy or market. This can support lending during host country stress and expands options to pre-empt or manage local bank failure.
- Foreign banks are a diverse set – they provide different services in different economies. International activity can improve the safety of banks through asset and liability diversification. While conducting banking activity across borders can increase the complexity of bank management and supervision, several regulatory and supervisory measures have been taken to manage the potential risks.

[44] ECB 2017 (May).

[45] Ervin 2018. “SRB Conference 2018 - 10 years after the crisis: are banks now resolvable? (October 15). See webcast: https://webcast.ec.europa.eu/single-resolution-board-conference-15-10-2018#.

[46] Ibid.

BOX 1: INTERNATIONAL BANKING – COMMON CONCERNS, EXISTING MITIGANTS AND REGULATORY RESPONSES

Conducting banking activity across borders can increase the complexity of bank management and supervision. Below is a summary of some common concerns about international banking followed by a brief explanation of the risk mitigants and measures that have been taken to address them.

- **New Entrant Risk:** Any firm that expands into a new geography or product market can face challenges from lack of local experience. This common management challenge can be mitigated through governance and strategic growth approaches (e.g. acquiring an existing entity in the target market that has an established local presence). Supervisory authorities can and do monitor this new entrant risk within a firm, especially fast-growing ones, drawing on supervisory colleges that contain expertise in home and host jurisdictions for international banking groups.

- **Level Playing Field:** A traditional concern of the Basel Committee; indeed, one of the motivations for early Basel coordination on capital requirements was to avoid pricing problems from offshore banks in low-capital jurisdictions entering a domestic market. The existing detailed and widely implemented international bank prudential standards help to ensure consistency and avoid a "race to the bottom".

- **Increased Complexity**: Cross-border activities can increase the complexity of management and supervision. Banks operating in multiple jurisdictions are subject to both home and host national requirements simultaneously, which apply differently to subsidiaries and branches (since, unlike subsidiaries, branches are legally part of the parent entity). Different implementations of Basel rules can even mean that concepts like risk-weighted assets (RWA) or liquidity measurement can differ between home and host systems. These issues require effective supervisory architecture: a clear understanding of home and host supervisory priorities and regulatory frameworks, as well as cooperation, data sharing and ongoing communication between supervisors in different jurisdictions. Supervisory colleges and crisis management groups (CMGs) are the appropriate mechanisms to contain risks which might arise from complexity of international banking groups.

- **Contribution to TBTF**: This additional complexity is sometimes seen as contributing to a perception that certain banks are "too-big-to-fail (TBTF)". If a bank is more complex and difficult to resolve, that could introduce moral hazard and other issues. However, regulators have sought to address this concern through the development of Multiple Point of Entry (MPOE) and Single Point of Entry (SPOE) bail-in capability and recovery and resolution planning. Cross-jurisdictional activity is captured within the Basel Committee's G-SIB scoring methodology and therefore contributes to the size of a bank's G-SIB buffer. This ensures that large, cross-border banks have larger equity capital buffers to cushion any shocks. The swathe of post-crisis regulatory reforms applies to the largest internationally active banks and ensure that these institutions are now significantly less likely to fail in a costly way to society. There is evidence that markets and investors no longer perceive them to be TBTF (see IIF 2019, "Re: Evaluation of too-big-to-fail reforms"[July]).

- **Contagion from Other Parts of the Banking Group**: While parent support is generally a source of strength for local operations, the event of severe parent stress increases some risks. The failure of a parent can lead to a collapse of local entities (e.g. the Lehman Brothers episode), especially in the presence of cross-default clauses or if there are runnable liabilities. The careful considerations of the balance between parent and local risk especially in the design of resolution plans and the scale and placement of TLAC can mitigate the contagion risk. In addition, there are a number of cross-jurisdictional assets and liabilities that create either no or immaterial cross-border risks – for example, in instances of asset-liability matching by global banks in a given host jurisdiction.

- **Loss of Local Control:** Some jurisdictions may take a view that an exclusively domestic structure with minimal foreign linkages provides them with the most supervisory and macroeconomic control. For example, it can be complex for hosts to understand and supervise foreign global banks operating in their jurisdiction, including because of limits on information sharing between home and host authorities. Again, supervisory colleges and CMGs, if used effectively, are appropriate mechanisms to enable supervisors to properly understand and monitor international banking groups. Further, the mandated creation of local subsidiaries and legal structures may merely provide false comfort to regulators since it may make the overall financial system less resilient as discussed in Section A.

SECTION B: TRENDS IN CROSS-BORDER BANKING

How Banks Operate Across Borders

A clear understanding of group structure is an important precondition for effective management and supervision of a banking group. The different approaches to cross-border banking have implications for banking business, risk management, and supervision. By understanding these issues properly, it is possible to maximize the economic and resilience benefits of cross-border banking.

Banks can engage in business with foreign counterparties through cross-border claims (i.e. lending from an office outside of the country where the borrower resides, such as the bank's home country) or through foreign office claims – local lending conducted through a foreign affiliate in a host country.[47] Foreign affiliates take the form of branches or subsidiaries, which have different legal and economic implications. Large banks typically establish overseas branches or subsidiaries in order to conduct business from a host jurisdiction. While a branch is legally part of the parent banking organization, a subsidiary is a separate legal entity that is locally incorporated but majority owned by a foreign parent bank.[48] Some firms have chosen to organize themselves as a network of independent subsidiaries (*aka* Multiple Point of Entry or "MPOE" groups from the perspective of their resolution plan if a G-SIB), which aims to eliminate many cross-border issues (except for common ownership). However, most G-SIB's are constituted as Single Point of Entry (SPOE) groups. SPOE groups consider the economic and reputational integration of their operations to be an important priority. At one extreme, there are a few SPOE groups that are organized almost entirely as branch networks, adding a legal reflection to this unitary approach. But most G-SIBs have a mix of branches and subsidiaries, sometimes due to economic or strategic choice, sometimes due to regulatory requirements and sometimes due to corporate evolution.

Branches can be a useful and efficient way for a bank to organically increase participation in foreign markets. While the nature of bank branches can differ across countries, branches are generally used for wholesale rather than retail activity. As discussed in IMF (2018),[49] the branch model is particularly beneficial for activities that need direct access to the parent entity for funding or require few barriers to intra-banking group exposures, involve cross-border business between different entities of the same banking group, and activities that are credit-intensive for the client. Examples include bank treasury functions that help raise and deploy funding in different currencies, and the management of wholesale payments.[50] Subsidiaries are more likely to be used to engage in local retail activity and are often largely funded through local deposits, although the average funding mix varies across banks and countries.[51] This reflects factors such as the scale and local knowledge often required to profitably engage in retail activities and access to local deposit protection schemes, which are important to clients and typically limited to locally incorporated banks and not branches.

Trends in Global Banking Flows Since the Financial Crisis

There is relatively little publicly available data on banks' cross-border activities that distinguishes between branches and subsidiaries. But ECB analysis offers some insights for the euro area, UK and U.S. banking systems between 2003 and 2015 (see Figure 4).[52] These data indicate the relative importance of branches in the provision of banking services by foreign banks in jurisdictions such as the U.S. and UK, where foreign branches have represented a larger share of banking assets than subsidiaries pre- and post-crisis. In the euro area (EA), subsidiaries – specifically those from other EA countries – are relatively more important in terms of external banking sector penetration.

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[47] Another route is to establish a correspondent banking relationship with a bank in the foreign jurisdiction of interest. The correspondent bank is authorized to provide services for a foreign bank in the correspondent bank's jurisdiction. Correspondent banking is commonly used to facilitate services such as international money transfers, trading transactions and currency exchanges.

[48] From a legal perspective, a branch's liabilities extend to the parent company, while a subsidiary's liabilities are limited to the subsidiary. However, parent source of strength generally extends to its subsidiaries, especially for "single-point of entry" (SPOE) firms, who see the economic and reputational links among their entities as critically important.

[49] IMF 2018. "Global Financial Stability Report – Special Feature: International Banking Groups – Centralized versus Decentralized Business Models" (October). Hereafter referred to as IMF 2018 (October).

[50] Ibid.

[51] Ibid, Figure 1.SF.2 'Foreign Bank Branches and Subsidiaries: Balance Sheet Structures (end-2017).'

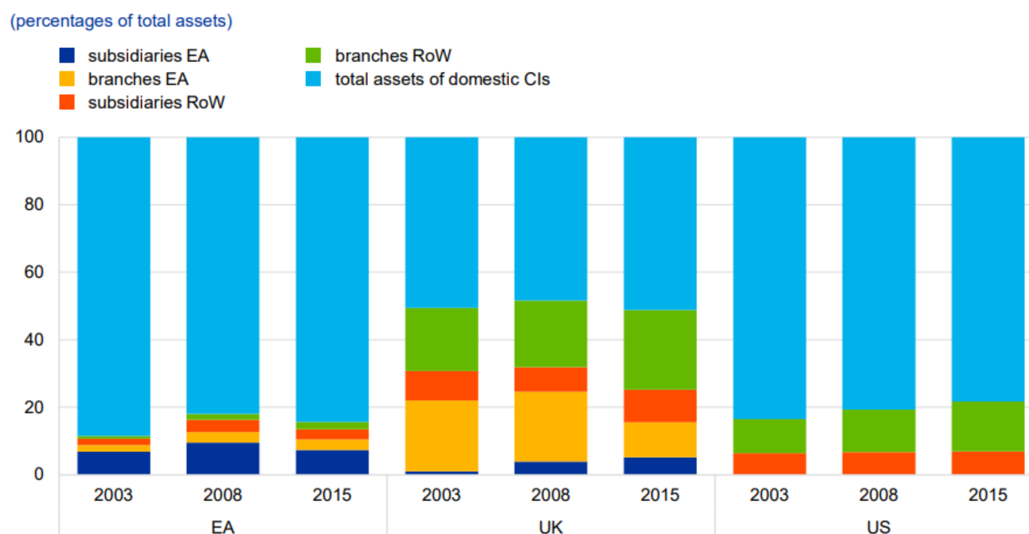
[52] ECB 2017 (May).

When considering overall banking sector 'openness' – in the sense of external banking sector branch or subsidiary presence as a proportion of total banking assets – the ECB data indicate that the UK and EA countries were less 'open' in 2015 than in 2008. This could be a result of many factors, including responses to the global financial crisis, market fragmentation and the stresses of the 2012 European debt crisis.

Drawing from U.S. Federal Reserve reports, a steep decline in U.S. FBO broker-dealers (subsidiaries) can be observed from around 2011, amounting to a reduction of USD 761 billion between 2012 and 2018. While branch/agency assets of foreign banks with Intermediate Holding Companies (IHCs) increased somewhat, the offset was about USD 118 billion for those firms, implying a net reduction in FBO assets of approximately USD 643 billion.[53] This decline represents around 4-5% of total assets of commercial banks in the U.S., and therefore would be a significant break in the trend indicated in Figure 4.[54] It would suggest that the U.S. has also become less open, and that branches have increased in relative importance compared to subsidiaries (further discussed in Section C).

From a macro perspective, global cross-border banking activity contracted after the global financial crisis. The so-called 'locational international banking statistics' produced by the Bank for International Settlements (BIS), which measure international banking activity from a residence perspective focusing on the location of the banking office,[55] show that cross-border claims fell from 60% of GDP in 2007 to less than 40% in 2017.[56] However, viewing the statistics on a 'consolidated basis' – focussing on the country in which the banking group's parent is headquartered – shows that cross-border activity by banks outside of Europe (including the U.S., Canada

Figure 4: The composition of banking sector assets in the euro area, the United Kingdom and the United States by geographical origin of credit institutions in 2003, 2008 and 2015



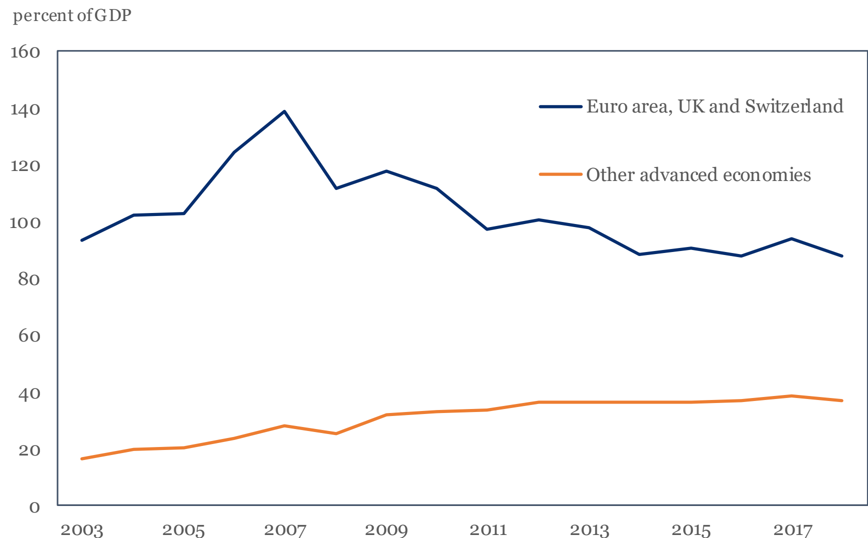
Source: ECB report on Financial Integration in Europe (May 2017) - see Chart 6 on Page 46.
Copy of original chart notes from source - *Sources: ECB and Federal Reserve System. Notes: EA stands for "euro area", RoW for "rest on the world" and CIs for "credit institutions". Euro area data refer to 14 euro area countries. The breakdown of foreign subsidiaries and branches by geographical region is not available for the United States. The share of foreign subsidiaries and branches for the United States in 2003 and 2008 is estimated based on Goulding, W. and Nolle, D.E., "Foreign Banks in the U.S.: A primer", International Finance Discussion Papers, No. 1064, Board of Governors of the Federal Reserve System, 2012. N.B. The share for 2015 in the United States is projected from the third quarter of 2011, the last available observation reported by Goulding and Nolle (2012) and does not reflect the significant decline in FBO-owned broker dealers described by more recent data.*

[53] For more details, see pages 4 to 6 of IIF 2019. "Re: Proposals Revising the Applicability of Enhanced Prudential Standards for the U.S. Operations of Foreign Banking Organizations" (June 21). Letter to U.S. FRB, OCC and FDIC.
[54] The authors of ECB 2017 (May) were constrained by missing data, which required them to project the 2003-08 trend into 2015. This projection would be inaccurate if there was a structural break in the U.S. after the crisis.
[55] For more on the BIS international banking statistics visit https://www.bis.org/statistics/about_banking_stats.htm.
[56] Jaime Caruana 2017. "Have we passed 'peak finance'?" (February 28). Hereafter referred to as Caruana 2017 (February).

and Japan) only suffered a temporary contraction in 2008-09 (see Figure 5, orange line). It has increased somewhat since then, although the growth of cross-border assets has levelled off in recent years. In addition, cross-border lending to certain economies – for example, certain EMEs – has stagnated or become more concentrated to lending from particular creditor banking systems.

The picture has been dramatically different for banking systems in Europe – the euro area, UK and Switzerland – where there has been a protracted contraction in cross-border activity, albeit from a higher starting point as a percentage of GDP (see Figure 5, blue line). Specifically, European bank credit to the U.S. reduced after 2008 and northern European bank credit to southern European economies fell considerably after 2011.[57] McCauley et al. (2017)[58] attribute this to cyclical balance sheet deleveraging and a preference to lending to the home market. The reduction in European bank credit to the U.S. could also capture the impact of U.S. regulatory requirements on FBOs, which were first proposed in 2012 (see Section C). The failure for flows within the EU to recover may also reflect insufficient banking integration within the EU since the start of the Banking Union project in 2012.

Figure 5: Consolidated bank-related foreign assets as percentage of GDP



Sources: BIS consolidated banking statistics, IMF and IIF.
Chart notes: Series are based on IIF updates to Graph 3 in Caruana 2017 (February), plotted here one axis. Consolidated bank-related assets are all foreign assets of banks headquartered in the respective jurisdictions, wherever they are booked. Euro area includes Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. Other advanced economies include Australia, Canada, Denmark, Japan, Sweden, and U.S.

Section B: Summary of key points

- Large banks typically establish overseas branches or subsidiaries to conduct business in a host jurisdiction. While a branch is legally part of the parent banking organization, a subsidiary is a separate legal entity that is locally incorporated but majority owned by a foreign parent bank.
- International banking is conducted through a mix of branch and subsidiary activity reflecting economic or strategic choice, response to regulatory requirements and corporate evolution.
- Global cross-border activity contracted in the wake of the global financial crisis and some major economies now have a lower foreign subsidiary and branch presence. This reflects several macroeconomic factors and could also be a response to increased market fragmentation.

[57] Caruana 2017 (February). Page 5.
[58] McCauley, Bénétrix, McGuire and Von Peter 2017. “Financial deglobalisation in banking?” (June). BIS Working Paper No. 650.

SECTION C: HOW MARKET FRAGMENTATION CAN IMPACT CROSS-BORDER BANKING

Regulatory and supervisory policies that fragment markets can inhibit or restrict cross-border banking activities, thereby reducing the variety of economic and resilience benefits that were outlined in Section A. To highlight two types of impact:

- ➔ *Competitive landscape:* Fragmentation can deter foreign entry into local markets leading to less competition and a contraction in credit supply under normal business conditions, as well as during stress events.
- ➔ *Resilience of banking groups:* Jurisdictional ring-fencing of international banks' financial resources effectively creates an operational barrier to realizing the benefit of group diversification. Ring-fenced resources are difficult or impossible to redeploy to other group entities, especially under stress. The loss of flexibility within a group gives rise to 'misallocation risk', with material negative implications for group resilience. Statistical modelling has shown how restrictions on geographical diversity can increase bank solvency risk.[59] This was acknowledged in a recent speech by Agustín Carstens, General Manager of the Bank for International Settlements (BIS).[60]

It is very challenging to directly observe or model how market fragmentation impacts the real economy or financial stability, often until the impacts are readily apparent and potentially harder to address. There are three significant challenges:

- **Time scale:** longer-term effects can take many years to fully materialize.
- **Complicating factors:** there are a host of other economic and financial variables driving real economic activity and influencing financial stability at any moment.
- **Unobservable impacts:** the impact of some decisions cannot be observed (i.e. if banks decide not to enter a new market or offer a new product due to the impact of market fragmentation) and the counterfactual cannot be observed if banks modify their current behavior (i.e. decide to reduce growth in an existing business line).

Nevertheless, this section presents some cases where there is evidence that market fragmentation has or is likely to influence bank or market behavior and therefore impact real economic outcomes and stability. It is important to take a forward-looking approach to identifying and responding to evidence to avoid significant unintended consequences in the medium term.

Case 1: Insufficient banking integration within the euro area hindered post-crisis monetary policy transmission and distorted lending rates

Cross-border banking exposures in the euro area dropped significantly after the global financial crisis.[61] The bank lending channel of monetary transmission was hindered by the unequal distribution of liquidity across Europe. ECB statistics show that after the crisis excess liquidity mounted in countries such as Germany, Finland and the Netherlands, while there was little excess liquidity in countries including Spain, Italy and Greece. With the advent of ECB Quantitative Easing excess liquidity started to build again and is held unevenly in the euro area to this date. At the same time, a divergence of bank lending rates between countries could be observed (together with a divergence of sovereign bond rates) after 2012. While some of this certainly reflects diverging risk perceptions, the bank lending channel of monetary transmission has also played a role (see IMF 2013[62]). Figure 6 shows the dispersion of SME borrowing rates across euro area countries: a clear increase in dispersion is visible after 2008 and persists today.

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[59] In the limit case, the effect can increase solvency risk by a significant multiple, especially if the failure of one subsidiary increases pressure on other entities in the group. For an analysis, see Ervin (Credit Suisse) 2017. "The Risky Business of Ring-Fencing" (December 12). For a short-form summary of intuition and outcomes, see Ervin 2018. "Understanding 'ring-fencing' and how it could make banking riskier" (February 7), Brookings report.

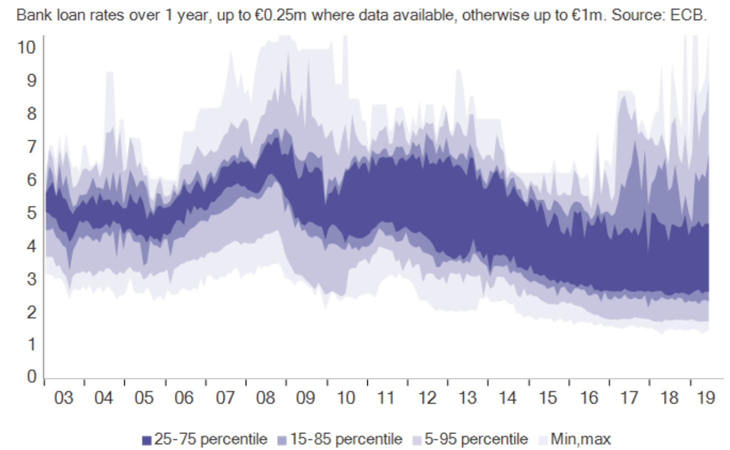
[60] Carstens 2019. "The Quest for Financial Integration in Europe and Globally" (September 12). Hereafter referred to "Carstens 2019 (September 12)". *"Stringent local loss absorption requirements are partly the consequence of a non-cooperative framework that resembles a prisoner's dilemma type of situation. No matter what foreign authorities do, domestic authorities prefer to require the pre-positioning of sufficiently large volumes of resources at the subsidiary level. But if all host authorities do the same, they risk creating rigidities in the location of resources that could ultimately affect the stability of the group as a whole."*

[61] Enria 2018 (September).

[62] Al-Eyd and Berkmen 2013. "Fragmentation and Monetary Policy in the Euro Area" (October). IMF Working Paper No. 13/208.

Loan losses and non-performing loans were also to a large extent borne domestically, which meant that some national economies and local banking systems took much longer to recover than others. This dynamic was reinforced by the domestic bank-sovereign nexus from 2012 onwards. More broadly, the volume of cross-border loans or deposits within the euro area, the penetration of foreign banks in domestic jurisdictions and the number of cross-border M&A operations in the banking industry have not increased much since the creation of the Banking Union.[63] Carstens (2019)[64] suggests that one reason that fuller banking integration has not been achieved is due to limited financial integration within the euro area, insufficient risk-sharing mechanisms (e.g. through a common European Deposit Insurance Scheme) and consequential policies such as the ability to ring fence local subsidiaries of European banks.

Figure 6: Distribution of borrowing costs for SMEs within the euro area



Sources: ECB and IIF.

Case 2: Reduced competition, liquidity and resilience in U.S. financial markets

Since the U.S. Federal Reserve proposed enhanced prudential requirements for FBOs in 2012, the activities of FBOs have been constrained and, in some sectors, have declined precipitously. As demonstrated in Figure 7, since 2010 the assets of large broker-dealer operations of FBOs' IHCs have declined sharply, by some 56%, with most of that decline (54 percentage points, or USD 761 billion) occurring since the FRB proposed the FBO Rule in late 2012. While there has been some increase in the branch/agency assets of FBOs since 2012, the data demonstrate that the magnitude of that increase is overwhelmed by the decline in broker-dealer assets over the same period. This has occurred while FBOs broker-dealers have become significantly less leveraged.

Overall, there has been a very significant net decline in U.S. FBOs' assets and activity since the FBO Rule was first proposed. This result means that overall credit provision has been negatively affected, there is less liquidity in U.S. capital markets and the marketplace for financial services in the US has become less competitive. This could be particularly striking in any future financial market stress episode, particularly if some domestic broker-dealers were to fail. As discussed in the *Wall Street Journal*'s analysis of recent turmoil in U.S. repo markets, the volatility owed in large part to the reduced liquidity in repo markets. That reduction, in turn, has been partly attributed to the broader impact on banks of post-crisis regulation and the decline in assets of the U.S. broker-dealer subsidiaries of FBOs.[65]

In general, national pre-positioning requirements such as FBO rules in the U.S. and the EU's Intermediate Parent Undertaking (IPU) requirements deter foreign banks from establishing or growing their presence in foreign markets, which is ultimately likely to reduce competition in those markets and could reduce market resilience to stresses. This is an additional market effect on top of the likely reduction in resilience, due to misallocation risk, of individual banking groups that are subject to ring-fencing.

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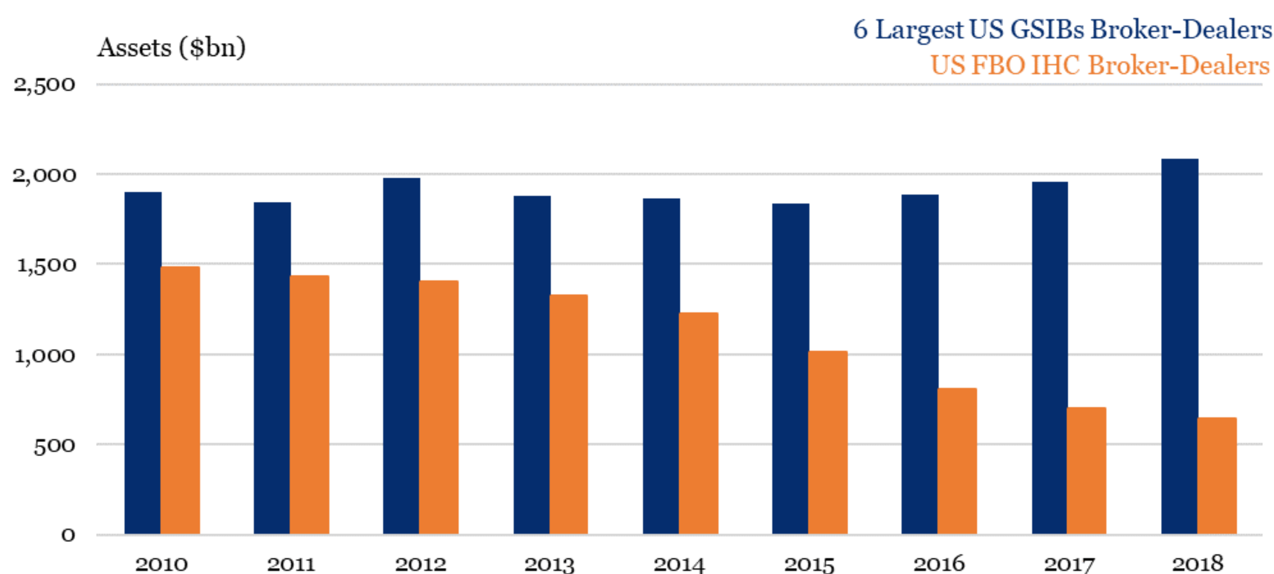
[63] Restoy 2019, "The European banking union: achievements and challenges". EURO Yearbook 2018 - completing monetary union. to forge a different world. (February). Pages 215-233.
[64] Carstens 2019 (September 12).
[65] Greg Ip 2019. "Reforms have made banks safer but market more brittle," Wall Street Journal article (September 25). See also Covas and Nelson 2019. "Bank regulations and turmoil in repo markets" (September 26) for analysis of the September episode.

Figure 7: Evolution of assets at U.S. FBO IHC broker-dealers versus the largest domestic G-SIB broker-dealers



Sources: SEC FOCUS reports (Form X-17A-5) and IIF.

Case 3: Segmentation along geographic lines of OTC derivatives' trading and clearing

After the global financial crisis, the G20 agreed to a comprehensive reform agenda for over-the-counter (OTC) derivatives markets including the following core elements: trade reporting; central clearing; trading on exchanges or electronic trading platforms; and margining of non-centrally cleared derivatives. Implementation of these reforms is mostly complete across the largest global derivatives markets including the U.S., EU, and Japan. However, in some cases the extraterritorial application of rules, and insufficient deference between home-country and third-country regimes, has resulted in a system which is operationally complex, costly, and has caused certain markets to fragment along geographical lines.[66] Christopher Giancarlo, former Chairman of the U.S. Commodity Futures Trading Commission (CFTC) noted that the CFTC's approach to cross-border derivatives rulemaking has *"fragmented what were once global markets into a series of separate liquidity pools"* which are *"shallow, more brittle, and less resilient to market shocks."*[67] The International Swaps and Derivatives Association (ISDA) has identified instances where the extraterritorial application of the CFTC's 2013 trade execution rules has led to a tangible and significant reduction in cross-border trading activity.[68] Similar concerns have been expressed about aspects of the EU's proposed revisions to the European Market Infrastructure Regulation (EMIR), in particular those relating to the oversight of systemically important financial market infrastructure.[69] In their recent reports, the FSB and IOSCO also discussed the impact of Central Counterparty (CCP) location policies on market fragmentation and the beneficial impact that increased use of deference processes between authorities has had on reducing fragmentation.[70] IOSCO recommended continued and further use of deference processes and offered to serve as a forum to help identify *"any good or sound practices that can be identified regarding deference tools."*[71]

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[66] Giancarlo 2018. "Cross-Border Swaps Regulation Version 2.0" (October 1). U.S. CFTC White Paper.
[67] CFTC 2018. "Cross-Border Swaps Regulation Version 2.0" (October).
[68] ISDA 2015. "Cross-Border Fragmentation of Global Derivatives: End-Year 2014 Update" (April).
[69] ISDA 2018. "The Case for CCP Supervisory Cooperation" (April).
[70] FSB 2019 (June) and IOSCO 2019, "Market fragmentation and cross-border regulation" (June). Hereafter referred to as "IOSCO 2019 (June)".
[71] IOSCO 2019 (June). Page 2.

Section C: Summary of key points

- Regulatory and supervisory policies that fragment markets can inhibit or restrict cross-border banking activities, thereby reducing the variety of associated economic and resilience benefits.
- There are significant challenges to directly observing the impact of market fragmentation on the real economy or financial stability, often until the effects are readily apparent and harder to address. Thus, it is important to take a forward-looking approach to identifying and responding to evidence to avoid significant unintended consequences in the medium term.
- There is indicative evidence that market fragmentation has influenced economic or financial stability resilience in both the euro area and U.S. financial markets, and has fragmented the trading and clearing of OTC derivatives markets.

SECTION D: POLICY PROPOSALS

This paper demonstrates the value of international banking and the cost of market fragmentation. In order to maximize the net economic and financial stability benefits of international banking, proposed here are several concrete policy measures that the FSB and/or individual G20 members could take. The policy proposals are grouped into six broad categories. These proposals align with the themes in the FSB's recent update on the FSB/IOSCO work on market fragmentation.[72]

1. Take stock of current market fragmentation and develop an international framework to monitor it over time

As the IIF has previously suggested, including in a letter to the G20, FSB and IOSCO,[73] the **FSB could develop a monitoring framework that seeks to identify and measure the extent of market fragmentation across the financial system** including the most affected markets and services. Measurement by the FSB could help support a proper diagnostic and an identification of the root causes behind fragmentation. The FSB should regularly report on this monitoring, with potential oversight by the G20 to provide guidance and political priorities. As a starting point, a recent BIS working paper on fragmentation in global financial markets suggested several simple price and quantity-related measures of market fragmentation such as asset price differences between jurisdictions, degree of movement of capital and measures of non-tariff measures hindering market access by foreign banks.[74]

With regards the status of requirements that trap resources in parts of global banking groups, a first step could be for the FSB to survey member jurisdictions to take stock of the regulatory requirements on subsidiaries and branches across jurisdictions. The OECD conducted a survey of the "Conditions for establishment of subsidiaries and branches in the provision of banking services by non-resident institutions" in 2015,[75] the results of which were circulated to the FSB. That documented an increase in financial and governance requirements on branches since the global financial crisis, especially branch liquidity requirements. It could be helpful for the FSB to undertake a similar exercise, with a view to understanding different authorities' motivations for the requirements and the impact on international banking groups.

Further, **we would encourage the FSB to continue its direct engagement with financial industry participants to understand how regulatory fragmentation is affecting them.** This was one suggested next step in the aforementioned recent BIS working paper (Claessens/BIS 2019): *"A starting point might be to determine what individual financial institutions and the market want. While not uniform, financial institutions and the market will have views on what the more and less desirable forms of fragmentation are."*

2. Enhance, and increase accountability for, regulatory and supervisory cooperation and information-sharing

Expand and promote the role of supervisory colleges and crisis management groups (CMGs) to help facilitate increased trust among supervisors and resolution authorities. Colleges and CMGs, while valuable as forums for information sharing, could also be used more

[72] FSB 2019. "Updates on the Work on Market Fragmentation" (October 14).
[73] IIF 2019, "Letter to G20, FSB and IOSCO Re: Next steps on Addressing Market Fragmentation" (July 8).
[74] Claessens/BIS 2019.
[75] OECD 2017 (January).

widely to address cross-border supervisory inefficiencies. For example, the Japanese Financial Service Agency has proposed that in cases of conflicting national regulations and supervisory actions, where a bank might face conflicting requests from two regulators, it could be useful to create a structural mechanism to accumulate evidence of fragmentation and potential remedies.[76]

The FSB could coordinate CMG exercises to evaluate their effectiveness. For example, the FSB could coordinate a wide-ranging "hypothetical cross-border crisis exercise" in which a common stress scenario is posed to the CMGs of all the G-SIBs.[77] The FSB could analyze how different authorities respond, common challenges faced and overall effectiveness of the CMG responses. The purpose would be to draw general lessons and potentially also identify any outliers (the latter need not be disclosed, but the regulatory community could draw lessons from it). Many firms already run such simulations on a large scale to test their own crisis management frameworks.[78] We would suggest involving key personnel from firms in some tests to help tease out issues with their help as expert practitioners. **The FSB could disclose the results and findings from hypothetical cross-border crisis exercises to the fullest extent possible** in its regular monitoring reports on the implementation of resolution reforms, including the general trend in CMG readiness and any challenges.[79]

Increase regulatory and supervisory communication and information sharing, including increased data standardization. Communication and information sharing are necessary precursors to increased coordination and trust among supervisors. International regulators should define and implement a more cooperative approach to financial data collection and sharing. Regulators have traditionally shared some information within colleges of supervisors and in other multilateral and bilateral settings. But greater and faster-paced information and data sharing have become even more critical in recent years since many banks across multiple jurisdictions are facing similar risks and adversaries, especially when it comes to financial crime and cyber security. To cooperate successfully in these areas often requires constant and real-time collaboration.

Coordinate between home and host to provide *ex ante* certainty around arrangements to provide Lender of Last Resort (LOLR) and temporary liquidity support during resolution.[80] There should be more *ex ante* central bank arrangements and clarity in terms of LOLR cooperation. For example, central bank currency swap lines could be used more widely so that home central banks are able to provide LOLR assistance to parent banks should the parent need to support its foreign entities. Also, there could be benefits to increased use of correspondent collateral arrangements between central banks and greater information sharing between home and host central banks (e.g. about the financial condition of banks in their jurisdictions) to make it easier for host central banks to lend to foreign institutions directly.[81]

To cement jurisdictions' commitment to enhanced cooperation, the global financial system might benefit from increased accountability for it at the international level – for example, via the FSB or IMF. This would further incentivize authorities to invest in measures that deliver better outcomes and less fragmentation in the long term.

3. *Encourage greater understanding and comparability of regulatory regimes*

The FSB should encourage **fair and proportionate regulatory and supervisory treatment of foreign subsidiaries** of financial groups, to enable them to compete on a level playing field with local competitors. Such a level playing field should be **achieved preferably through recognition of equivalence of the home regulatory and supervisory regime and regulatory deference, whenever deemed prudentially justified, rather than imposing burdensome overlapping host regulations.** Streamlining should also include licensing requirements, where a host supervisor should avoid unnecessarily burdensome processes whenever a home regulatory framework is adequate.

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[76] Himino (Japanese FSA) 2018. "Remedies for Conflicting Regulatory Demands" (September 5).
[77] This suggestion was also made in the IIF's response to the FSB's Call for Feedback on the Evaluation of the Too-Big-To-Fail reforms. See IIF 2019. "Letter to Mr. Dietrich Domanski re: Evaluation of too-big-to-fail reforms" (July 5).
[78] Deloitte 2015. Aiming at Resolvability: The Single Resolution Board (December). Page 14.
[79] The latest of which was published in 2018, "FSB 2018 Resolution Report: Keeping the Pressure Up" (November).
[80] The FSB discusses temporary funding in resolution in its 2018 guidance on "Funding Strategy Elements of an Implementable Resolution Plan" (June 21, 2018).
[81] This is one of the recommendations in IMF 2018 (October).

Regulators should develop mechanisms to better understand comparable capital and liquidity requirements in home and host jurisdictions.[82] Home regulations should consider ways to allow host regulators to better appreciate robust home country requirements and supervision. This would enable jurisdictions to make greater use of mutual recognition and equivalence between home and host supervisors in jurisdictions where regulation has a comparable outcome. This type of cooperation exists in the E.U. in the form of "equivalence" and in the U.S. there is the concept of "substituted compliance", which allows foreign firms an exemption from some U.S. requirements if they are based in jurisdictions that impose comparable regulatory requirements. But, on the whole, mutual recognition and equivalence could be used more often by home and host supervisors to recognize the oversight in jurisdictions where regulation has a comparable outcome. In making equivalency decisions, the FSB should encourage jurisdictions to consider existing FSB, BCBS, or other compliance assessments to achieve a greater level of accountability and stability of outcomes.

4. Reconsider and avoid jurisdictional ring-fencing and required pre-positioning of financial resources by international banks

The above-mentioned policy proposals could help move the international regulatory community towards a new paradigm of understanding and cooperation. This would build trust and reduce the need for as much prepositioning of financial resources in the first place. This would not only free up more resources for productive economic and social uses but would likely also strengthen the ability of banks to deploy resources more effectively in a crisis, therefore improving resilience of the system.

It is also important that the regulatory community reviews the impact of regulation on the overall allocation of loss-absorbing capacity (capital and bail-in debt) and liquidity within banking groups. This relates to the calibration of internal total loss-absorbing capacity (TLAC) and requirements that apply at levels of consolidation below group consolidation and to branches. Randal Quarles, Vice Chair for Supervision of the U.S. FRB and Chairman of the FSB, set out a framework for maximizing the net benefit of cross-border banking, arguing that a balanced perspective between home and host was the key to a balanced outcome:

> *"To enable cooperation and avoid a destabilizing seizure of assets by host regulators, I would submit that all jurisdictions must find a balance of flexibility for the parent bank and certainty for local stakeholders. Flexibility, or the ability to allocate capital and liquidity to different parts of the group on an as-needed basis, helps to meet unexpected demands on resources and reduces the risk of misallocation and inefficient use of resources. Certainty, or the local prepositioning of capital and liquidity to ensure a firm can satisfy local claimants under stressful conditions, helps to promote cooperation in the context of a cross-border resolution and avoid incentives for more drastic action by host authorities."*[83]

The FSB final TLAC Principles and Term Sheet was perhaps the first international document to tackle this theme in designing a regulatory requirement.[84] A precondition for maintaining any net resources for flexibility at the parent bank is that the sum of subsidiary requirements must be less than the amount required at the group level. Accordingly, the Term Sheet set a range of 75% - 90% for internal TLAC, a discounted ratio compared to the consolidated requirement for external TLAC. However, the top end of this ratio reduces group flexibility considerably, potentially to zero when certain technical effects are considered.[85]

As each relevant home and host jurisdiction translates the provisions of the TLAC Term Sheet into local regulation, it is worth noting how the calibration of internal TLAC can contribute to fragmentation. While some jurisdictions, such as Hong Kong, have proposed

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[82] This was also a suggestion in Claessens/BIS 2019 (page 22): *"At any event, the two likeliest ways to facilitate improvements at the lowest cost are: greater cross-border communication and information-sharing among authorities, including via existing forums such as supervisory colleges and crisis management groups; and enhancing the capacity of authorities to compare regulatory regimes across jurisdictions."*

[83] Randal K. Quarles 2018. "Trust everyone, but brand your cattle: finding the right balance in cross border resolution" (May 16).

[84] FSB 2015. "Total Loss-Absorbing Capacity (TLAC) Principles and Term Sheet" (November).

[85] The net size of a consolidated group balance sheet will generally be less than the sum of its subsidiaries, since intra-group positions show up on the solo balance sheet of a subsidiary but are eliminated in consolidation. This "sum of the parts" will therefore be greater than then netted-down whole. One other way of addressing this could be to discount intra-group positions for the solo requirements at the subsidiary level, for firms with well-resourced and effective group resolution plans. Other effects, driven by the multiplicity of post-crisis constraints, can also have a significant effect.

calibrating internal TLAC generally at the low end of the range (75%), others have issued rules that go to the high end of the range (i.e. 90%, or even 100% within the EU).[86] This calibration can have significant consequences. If jurisdictions default to the most stringent calibration, this lowers the flexibility of the parent to allocate resources – increasing misallocation risk and therefore the risk of bank failure. Excessive pre-positioning resources also mean that financial institutions lose the ability to let capital flow freely to its most productive use.[87]

The balance between home and host preferences also plays out more generally in the allocation of capital and liquidity resources. To date, going-concern capital and liquidity allocation have not been discussed by the regulatory community as explicitly as internal TLAC, but the balancing issues noted by Vice Chair Quarles are identical. Indeed, the expansion of liquidity requirements at the level of individual branches potentially makes the forward challenge for liquidity allocation even more problematic. The direction for increased host requirements contrasts sharply with the need for balance.[88]

This suggests that there is a need to develop an improved global consensus between the FSB and regulators on internal TLAC and other critical resources; this can be achieved through various mechanisms. As well as the trust-building policy proposals discussed above, the regulatory community can explore other ways to achieve a better balance of home flexibility and host certainty. For example, clarifying home and host roles and resource distribution playbooks as a bank enters a zone of high stress could be productive. Separately, the FSB and national authorities should explore the use of contractual mechanisms like collateralized guarantees provided by a parent on borrowing by its subsidiaries, such as Secured Support Arrangements which are already used in the U.S. These would allow for the contractual "positioning" of dedicated assets without *ex ante* pre-positioning of resources and the related costly market fragmentation.

5. Promote fuller impact assessments that account for the allocation of resources within banking groups

In evaluating the effects of the reforms, it is important for the FSB, BCBS and other standard setters to consider the costs incurred by the lack of international consistency (e.g., gold-plating, relief or additional new requirements). Where possible, these assessments would be both *ex* ante and *ex post*, and include stakeholder involvement.[89]

The issues discussed in this paper indicate that within-group distributional aspects of regulation are very important to global banking groups, as well as the impact of regulation on the considered group. **We would recommend that the BCBS and FSB take account of this when designing standards and conducting impact assessments.** Within national regulation, the treatment of intra-company risk could be re-evaluated to account for evidence on the value of group support, for example within supervisory frameworks and stress tests.

6. Within the euro area, complete the European Banking Union to provide hosts with a solid financial backstop

The European Banking Union is an ambitious project initiated in 2012 that seeks to integrate the European banking market and thereby break the link between domestic economic developments and financial stability in each member jurisdiction. The first pillar, the Single Supervisory Mechanism (SSM), aims to ensure the soundness of the banking system, increase financial integration and ensure consistent supervision throughout the euro area. In its first few years, the SSM has already made big strides in streamlining supervisory practices and increasing comparability and transparency across the sector. The second pillar, the Single Resolution Board

[86] FSB 2019. "Review of the Technical Implementation of the Total Loss-Absorbing Capacity (TLAC) Standard" (July). Pages 24-25.
[87] As recently observed by Randal K. Quarles in "Government of Union: Achieving Certainty in Cross-Border Finance" (September 26, 2019). Remarks at FSB Workshop on Pre-Positioning, Ring-Fencing, and Market Fragmentation.
[88] We note the U.S. Federal Reserve Board request for comment in April 2019 on whether to impose standardized liquidity requirements on US branches and agencies, and the FRB's decision in its final rules (issued on October 10) to discuss the matter at the international level before taking unilateral action.
[89] Claessens/BIS (2019) also recommended careful consideration of the benefits and costs of fragmentation and the benefits and costs of further global harmonization and integration (see page 22).

(SRB), created a common resolution authority that is responsible for common rules and managing the European Single Resolution Fund.

While the first two pillars are in place and operational, the remaining pillar – the European Deposit Insurance Scheme (EDIS) – is still missing despite intense political negotiations. **By truly completing the Banking Union, and introducing a common insurance scheme, host jurisdictions within the euro area might feel less inclined to make use of prudential safeguards in their own jurisdictions.** By completing the Banking Union, as recently noted by Mario Draghi, former President of the ECB, there would be less need for public risk sharing in the future because there would be instruments in place to stabilize crises more quickly and for private sector risk sharing to develop more sustainably: *"Without public insurance, in a crisis markets typically panic and begin fire sales, which propagate risk. Appropriate backstops, on the other hand, help stabilise market expectations and reduce risks."*[90]

We therefore support the indications from the new President of the European Commission, Ursula von der Leyen, that she intends to focus on completing the Banking Union and creating an EDIS.[91] Alongside this, we encourage EU policymakers to consider ways of further reducing market fragmentation within the European Banking Union and to reconsider the amount of capital, TLAC and liquidity that needs to be pre-positioned between member states. Measures to harmonize insolvency laws within the EU could also benefit the Banking Union project.

Section D: Summary of key points

- There are several concrete policy measures that the FSB and/or members of the G20 could take to maximize the net economic and financial stability benefits of international banking.
- It is necessary to take stock and measure the degree and impact of market fragmentation over time. Further enhancing regulatory and supervisory cooperation will be key to many solutions; this paper suggests some specific ways of doing so in a credible and transparent way.

[90] Draghi 2019. "Stabilisation Policies in a Monetary Union" (October 1).

[91] Von Der Leyen 2019. "A Union that Strives for More: My Agenda for Europe". Made as a candidate for President of the European Commission: https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf.