
Ring-fencing cross-border banks: an effective supervisory response?



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Abstract

While international policymakers are making good progress on the important work of global resolution and the preparation of recovery and resolution plans, a growing number of supervisors, home as well as hosts, are resorting to territorial approaches. Higher capital ratios, dividend restrictions, restrictions on liquidity flows and even forced subsidiarization are gaining renewed popularity. The objective of these territorial approaches is to protect the interests of the domestic stakeholders of a foreign bank and to limit the effects of cross-border contagion. This type of “ring-fencing” has a negative connotation as it comes at a cost for banks and the efficiency of the overall global financial system. This article addresses the following questions: (1) What makes prudential supervisors more likely to ring-fence?; (2) Do all forms of ring-fencing really deserve this bad reputation?; (3) What are the risks that these measures are addressing and which instruments have been used?; and (4) What are the implications of ring-fencing for the banking group, financial stability in the home and host country, as well as global financial stability?

1. Introduction

“Ring-fencing” has become a fashionable word in regulatory circles. Federal regulators in the US are implementing the so-called Volcker Rule, requiring the ring-fencing of risky assets in the trading book of a bank from its retail banking operations.² It should be noted that the Office of the Comptroller of the Currency (OCC) is currently looking into amending the rule.³ Similarly, proposals for ring-fencing “core” banking activities in the UK have been put in place following the Vickers Commission report.^{4,5} These structural measures primarily address the “too important to fail” problem of systemically important financial institutions (SIFIs) by reducing the risk of failure and minimizing the impact, if they do fail.⁶

But, there is another form of ring-fencing that is quietly gaining renewed popularity among supervisors. It is the geographical separation of part of a cross-border banking group from its parent or other affiliates on a permanent or temporary basis.⁷ This type of ring-fencing can take the form of higher capital and liquidity requirements, dividend restrictions, restrictions on liquidity flows, and even forced subsidiarization to make individual parts of the banking group self-sufficient and to protect the domestic assets of a bank from cross-border contagion. So, while international policymakers are making good progress on the important work of global resolution and the preparation of recovery and resolution plans, a growing number of banking supervisors, home as well as hosts, are resorting to these territorial approaches. Their objectives are to protect the interests of their domestic stakeholders of a foreign bank and to limit the effects of cross-border contagion in the intervening period. These ring-fencing measures are generally described by adverse terms, such as fragmentation, home bias,⁸ territorial approaches, balkanization, financial protection and nationalism, and even moves toward deglobalization.

Of course, ring-fencing is not the optimal outcome and there is broad agreement that it comes at a cost for banking groups and the efficiency of the overall global financial system. But, is doing nothing a better alternative for supervisors, many of whom are still facing the same weaknesses in “global resolvability” as during the global financial crisis? Why do supervisors ring-fence and which supervisors are more likely to do so? Do all forms of ring-fencing really deserve this bad reputation? What are the risks these measures are addressing and which instruments have been used? What are the implications of ring-fencing for the banking group, financial stability in the home and host country, as well as global financial stability? This article focuses on geographical ring-fencing measures, and assesses their potential benefits and costs as an instrument for crisis prevention and management. It also discusses the various motivations for adoption of ring-fencing measures.⁹

2. What is ring-fencing?

Few clear definitions of ring-fencing can be found in the literature. Schwarcz defines ring-fencing, in a general way, as “legally deconstructing a firm in order to more optimally reallocate and reduce risk.”¹⁰ He states that this deconstruction can occur in three ways: (1) by separating risky assets from the firm; (2) by preventing the firm itself from engaging in risky activities or investing in risky assets; or (3) by protecting the firm from affiliate or bankruptcy risks, usually referred to as making a firm “bankruptcy remote”. Building on this third theme, Schwarcz defines two related functions of ring-fencing that play a vital role in the cross-border context. The first is to ensure that a firm is able to operate on a stand-alone basis, even if its affiliated firms fail. The second is to protect a firm from being taken advantage of by its affiliated firms.

The instruments that prudential supervisors use to address these two related functions have been described by Cerruti et al. as “different restrictions on intra-group cross-border transfers imposed by the host or home country regulators.”¹¹

2 Board of Governors of the Federal Reserve System (2013)

3 Jopson (2017) The Financial Choice Act, which is now with the US Senate, also seeks to repeal the Volcker Rule. See Financial Services Committee (2017)

4 Independent Commission on Banking (2011)

5 Prudential Regulation Authority (2014); Prudential Regulation Authority (2017)

6 Chow and Surti (2011)

7 D'Hulster (2012)

8 This article refers to “territorial bias” in home and host countries; it is referred to as “home” bias, regardless of it being exercised by the “home” or the “host” supervisor. In theory, the term “host bias” should be used to refer to home bias exercised by the host supervisor.

9 This article focuses on prudential banking supervision in an international context. Consumer protection, and other aspects of regulation and supervisory arrangements in the EU lie outside of its scope.

10 Schwarcz (2013)

11 Cerruti et al. (2010)

Song describes the objective and the most important tools more broadly: “ring-fencing involves isolating the bank from other companies in the group by taking several actions, for instance, by: (i) prohibiting or placing severe limits on the financial exposure of the bank vis-à-vis other companies in the group (ii) restricting the volume of funding the bank receives from companies in the group (iii) ensuring that directors and management of the bank can operate the bank independently of the group management”.¹²

For the purposes of this article, we will use the term “geographical ring-fencing” or the more general term “territorial approaches.” This type of ring-fencing is imposed unilaterally by prudential supervisors with the objective of protecting a bank’s domestic assets so that they can be seized and liquidated under local law in case of failure of the whole banking group or other entities of the group. By doing this, the interests of domestic stakeholders, such as taxpayers, depositors, shareholders, creditors and deposit insurers, are better protected in times of stress as the effects of cross-border contagion would be limited. The use of territorial approaches thus results in a measured delineation of the local operations from other cross-border affiliates of the banking group on a permanent or temporary basis. We refer to the degree of this separation of the local operations as “territorial bias” or “home bias.”

Applying this definition, the most drastic form of home bias is the Stand Alone Subsidiary Model (SAS model).¹³ Under this model, affiliates of a banking group operate independently from each other and the parent does not consider itself responsible for the rescue of individual entities that form part of the group. Complete separation means no intercompany transactions (hedging, loans, guarantees and outsourcing of critical activities to a group company or transfer of funds). Each entity would hold sufficient capital and liquidity to survive on its own, thus reducing interconnectedness and contagion risk between the entities in the group.

Geographical ring-fencing is usually applied by host supervisors. In recent years, many host supervisors have taken actions to ensure that the operations of foreign banks in their jurisdictions become better insulated and more resilient on a stand-alone basis. Many host supervisors have experienced the speediness and impact of cross-border contagion during the global financial crisis first hand.

That said, territorial bias in prudential regulation and supervision of cross-border banks has also been introduced by home supervisors. Countries with banking systems characterized by considerable asset overhangs abroad are particularly vulnerable to solvency, legal and operational problems in the event of financial stress.¹⁴ The measures introduced by the Austrian supervisory authorities are a clear example. In November 2011, the Austrian National Bank and the Financial Market Authority introduced a measure to make business models of Austrian banks more sustainable. Credit growth was made conditional on the growth of sustainable local refinancing (comprising mainly local deposits, but also local issuance activity and supranational funding by international financial institutions). Foreign subsidiaries that are particularly exposed were required to ensure that the ratio of new loans to local refinancing (i.e., the loan-to-deposit ratio including local refinancing) does not exceed 110%.¹⁵

The business model adopted by Spanish parent banks operating in Latin America and driven by pressures from the home country supervisor is another example of a territorial approach adopted by the home supervisor.^{16,17} This model minimized within group contagion and mitigated the transmission of the financial crisis in the US and Europe to Latin American banks.¹⁸

14 Swiss Federal Market Supervisor Authority (2010)

15 Austrian National Bank (2011)

16 Impavido et al. (2013)

17 Committee on the Global Financial System (2010)

18 Fiechter et al. (2011)

12 Song (2004)

13 Hoelscher et al. (2011)

3. Why authorities ring-fence: policy and structural reasons

Authorities introduce home bias in their prudential regulation and supervision for a variety of reasons. Broadly speaking, these can be split into policy reasons and more structural reasons.

3.1 Overarching policy reasons

Three policy drivers for ring-fencing can be identified: (1) the lack of a globally enforceable resolution mechanism; (2) the existence of information asymmetries; and (3) the desire to protect credit supply.

3.2 Lack of global enforceable resolution mechanism

A key reason for ring-fencing is that “global banking institutions are global in life and national in death.”¹⁹ That is, when a crisis occurs, it is domestic central banks that have to provide lender-of-last-resort facilities to the ailing banks and national governments that have to provide public support. Without a clear understanding of what will happen when a bank fails or is likely to fail, the interests of the home and host supervisors will diverge at the very moment problems start to emerge. Home supervisors will want maximum transferability of liquidity and assets to reduce the probability and impact of group-wide problems, and host supervisors will wish to keep good-quality assets within their borders. In spite of their noble intentions for supervisory cooperation, home and host supervisors will each seek to minimize the losses accruing to their stakeholders in their own jurisdictions. It is, therefore, only natural for national authorities to be forward looking, to plan for the worst, and to try to minimize losses for their local banking system and taxpayers.

After all, that is exactly what prudential banking supervisors are paid to do. When there are uncertainties regarding resolution, ring-fencing brings immediate comfort and is legitimate from the perspective of the national supervisor. It is only when considering the bigger picture that ring-fencing, particularly sudden supervisory ring-fencing during an emerging crisis, has the potential to lead to a “scramble for assets,” put stress on the banking group as a whole and prevent good crisis management.

Policymakers have been working intensively on addressing this lack of enforceable and effective mechanisms for crisis resolution for cross-border banking groups at a global level. The public policy stance on resolution has been to shift the burden to the private sector (bail-in) instead of the public sector (bail-out) and to improve crisis preparedness and early intervention. Bail-in instruments will allow banks’ liabilities to be written off or converted into equity so that the institution can continue as a going concern, while giving the authorities time to reorganize or wind down parts of the business in an orderly manner.

Supervisors will also be better prepared for a crisis, as bank-specific resolution strategies and plans, cooperation agreements and resolvability assessments have been prepared for the Global Systemically Important Banks (G-SIBs). These have given supervisors a better insight into the structure and organizational setup of a banking group, including where liquid and good-quality assets are located, and what the implications of the failure of the banking group might be for each national supervisor. In other words, crisis preparedness makes the structural imbalances²⁰ in the banking group visible before it enters into difficulty.

In practice, however, many obstacles still exist. Bail-in is unlikely to provide absolute protection for host supervisors in the future, for a number of reasons. First, there will always be a risk that public funds may be needed to preserve financial stability, even if only for a short period or only for liquidity reasons. For example, loss-absorbent funding instruments may be exhausted or not available, the instruments may be held by investors that are not fit and proper to become bank shareholders, or they may be located in another jurisdiction and not transferrable to the location where the losses are actually incurred. Thus, there still remains a risk, even though it is smaller than before the global financial crisis, that the taxpayer will end up bearing losses.

19 Mervyn King, Governor of the Bank of England (2009)

20 In the context of this article, supervisors are mainly concerned with structural geographical imbalances. These imbalances can occur in the asset-liability structure (asset quality, asset encumbrance and capital buffers can differ by country, etc.) in the liquidity and in loss absorbency (buffers of loss-absorbent instruments and capital can differ by country, etc.).

Second, these proposed international reform policies are still supported by nonbinding and non-enforceable contracts that are akin to statements of intent. Although the number of participants has been expanded to include resolution agencies and central banks, reliance has, once again, been placed on “soft law” as there are no binding mechanisms to enforce cooperation. In a crisis, there is always the risk that individual authorities make decisions driven by political expediencies and deviate from agreed mechanisms and frameworks. “Pulling the trigger” to allocate losses to the creditor, or to convert a financial instrument into equity, is to be decided by the relevant supervisory authority and thus depends on the ad hoc decision of a jurisdiction. For political or national financial stability reasons, it may well decide not to bail in. This could be the case when the holders of the capital instrument are retail investors, or the public pension fund or a supranational institution where the relevant jurisdiction is the major shareholder or investors that are not deemed politically acceptable to carry the burden. In those instances, the actual resolution may look very different from what was expected and this may leave other national authorities bewildered and the global financial system endangered.

Third, the lack of harmonization of creditor hierarchies between jurisdictions remains an important obstacle to the resolution of branches of international banks. Uninsured depositors of a branch in the host country may, for example, have a higher status in the hierarchy than other creditors, while in the home country, they are at the same level. As a result, the host country will oppose the pooling of assets.

Fourth, it should be kept in mind that these reforms are still work in progress and that they will be raising new implementation challenges for prudential supervisors, central banks and resolution authorities along the way. The proposed reforms are for G-SIBs²¹ only and whether they can be easily implemented for banks that are regional players or banks that are systemic in only a number of countries remains to be seen. Many of the proposed measures also require fundamental legal changes and thus come with long implementation timelines.²²

21 The EU has made bail-in mandatory for all credit institutions and certain investment firms.

22 A 2013 peer-review report by the Financial Stability Board (FSB) found that implementation of the Key Attributes of Effective Resolution Regimes for Financial Institutions by the FSB's membership was at an early stage.

Finally, adequate loss-absorbing capacity is not in itself a sufficient condition for ensuring effective resolution. There are many other legislative reforms that still need to be addressed, such as the full implementation of the key attributes,²³ the removal of obstacles to cross-border resolution, structural changes to ensure resolvability, enhanced cross-border information sharing and the prevention of large-scale termination of financial contracts in resolution. Therefore, at a global level, major international policymakers still assume that resolution regimes and powers are likely to remain national in the longer term.

3.3 Information asymmetries

A second important rationale for ring-fencing measures is information asymmetries in the absence of adequate arrangements for information exchange. As noted by the Basel Committee, actions taken in a crisis can be influenced by uncertainty about the way weak or failing institutions will be handled in a crisis.²⁴ Ring-fencing measures may, therefore, be driven by lack of information, doubts about the reliability and timeliness of information, or uncertainty about how the resolution process will function in the jurisdictions where the financial institution operates and where it is headquartered. For example, at the height of the sovereign debt crisis in Europe, ring-fencing had been applied to protect banks in host jurisdictions from political or sovereign vulnerabilities in home countries of parent banks and risk of redenomination. Doubts about fiscal sustainability, quality of supervision, scope of financial regulation or political stability in the home country can all be grounds for ring-fencing. In these instances, supervisors made conservative assumptions and ring-fenced as a precautionary measure.²⁵

The simple threat of ring-fencing can also be used by host supervisors as a way to persuade home supervisors to enhance supervisory cooperation by stepping up information sharing or addressing particular host concerns.

23 Financial Stability Board (2011)

24 Basel Committee on Banking Supervision (2010)

25 Shortcomings in information sharing may sometimes be associated with difficulties and costs in obtaining, processing and analyzing information in a timely manner, and sometimes be a result of home authorities' reluctance to provide complete information that they perceive as negative to host authorities, with the fear of spreading distress and prompting host authorities to take adverse measures. Host authorities may take action to protect local depositors and creditors and ring-fence assets in the absence of such information. From the host supervisors' perspective, the home supervisor has the most reliable information about the parent's group health and is thus better equipped to assess the consequences of ring-fencing (including obtaining liquidity from the central bank in the home country).

In cases, where the host operation is material to the whole banking group, this instrument may make the home supervisor more cooperative to avoid escalating ring-fencing actions by the host.

3.4 Protection of supply of credit

Finally, ring-fencing may also be applied to protect the supply of credit and prevent excessive deleveraging in the host country resulting from parents pulling out funding and capital from their host operations. The risk of faster bank deleveraging in host countries than in home countries was identified from surveys.²⁶ Host supervisors have thus ring-fenced local liquidity and capital to support local lending, while international banking groups prepare to comply with higher capital and liquidity requirements under Basel III.

3.5 Structural characteristics of the financial system

In addition to these policy factors, there are a number of other factors associated more with structural characteristics of the financial system that can make home or host authorities more or less likely to resort to ring-fencing decisions.

3.6 Location of financial stress

Host supervisors have a strong incentive to ring-fence when problems in the parent bank or in the home country are suspected. The moves by a number of host country authorities to ring-fence the local operations of peripheral Euro Area countries during the escalation of the Euro Area crisis are a case in point. Host supervisors may have legitimate prudential concerns, and protect the safety and soundness of their domestic financial system through effective firewalls between the parent and the local operations. Accordingly, the home supervisor has an incentive to ring-fence when problems are suspected in the host operations.

3.7 Business model of the banking group

There is a wide spectrum of business models in international banking.²⁷ Business models can be positioned along a continuum of increasing self-sufficiency. On one end of the spectrum, we find a typical branch structure, where key functions are centralized. This centralization can occur in various areas, including corporate control functions (setting

of strategy), operational functions (sharing of back-office functions, IT infrastructure, accounting, information and telecommunications infrastructure), treasury functions and brand name. Centralized institutions also use funding surpluses in one entity to fill funding deficits in another. Affiliates are, thus, not independent entities from the parent, but they lend and trade using the capital base of the parent and operate under the jurisdiction of the home country.

On the other end of the spectrum is the typical stand-alone subsidiary structure. These are self-sufficient entities, operating nationally with effective firewalls between other parts of the group. No support from the parent company or other group members is assumed, and each entity has sufficient capital and liquidity to survive on its own. These banks generally rely heavily on local deposits for their funding and their retail-based business models are strongly anchored in the host country. Many institutions fall between these two extremes, with hybrid structures; however, centralized structures are more common.^{28,29}

When dealing with more centralized business models, host supervisors will typically rely on cooperation with the home supervisor for the purposes of ongoing prudential supervision. As a second line of defense, however, host supervisors are likely to take a more territorial stance by imposing some restrictions on these centralized models or requiring additional local liquidity and capital buffers, particularly if the entity in their jurisdiction is allowed to take retail deposits. Indeed, the more one moves to a more centralized business model, the less likely it is that a foreign entity can survive, once funding, operational and managerial connections have been cut as a result of a problem in the global or home financial system. When the source of stress is at the core of the banking group, centralized models increase contagion risk and stand-alone business models help to reduce contagion risk. Conversely, centralized models can dampen contagion risk to the rest of the host's financial system when the source of stress is in the host country or is an external factor, by providing resources locally.

²⁸ Basel Committee on Banking Supervision (2012)

²⁹ The high-level analysis by the Joint Forum of 31 financial institutions headquartered in 31 jurisdictions found that the majority of institutions said that centralized capital and liquidity management systems were in place. Respondents also indicated that the way they managed capital and liquidity within the group are the key drivers in their decisions about intragroup transactions and the support they used.

²⁶ International Monetary Fund (2012)

²⁷ Nguyen (2010)

In addition to centralization, the complexity of organizational structures of big banking groups is often a serious concern for both the host and the home supervisor. A global banking group can consist of thousands of legal entities and branches with complex financial flows and guarantees between them. This complexity makes it more difficult to introduce effective firewalls.

3.8 The geographical risk profile of the banking group

Herring distinguishes three dimensions linked to the geographical risk profile or the systemic dimensions of a banking group:³⁰ (1) whether the parent bank is considered to be of systemic importance in the home country; (2) whether the foreign operations are of significance to the solvency of the parent bank;³¹ and (3) whether the foreign operations are systemically important in the host country.

Foreign operations of a systemic nature in the host country will make the host supervisor more likely to ring-fence as failure of the banking group would have a bigger impact on the domestic financial system and the economy in this jurisdiction. Home supervisors, on the other hand, will be more likely to ring-fence if the bank is systemic in the home country, particularly if the banking group has significant foreign operations.

Tables 1 and 2 summarize the factors discussed for host and home supervisors, respectively.

i.	Location of financial stress	Financial stress in the home country or banking group. Includes safety and soundness concerns directly linked to the parent bank or banking group; political or sovereign vulnerabilities; doubts about quality of supervision; uncertainties related to political stability and fiscal sustainability and home country resolution process for failing institutions.
ii.	Business model of the banking group	Operating with centralized business models.
iii.	Geographical risk profile or systemic dimensions of the banking group	Foreign operations systemic in host country. Foreign operations immaterial to banking group as a whole.

Table 1: Which dimensions make host supervisors likely to ring-fence?

i.	Location of financial stress	Financial stress in host country or foreign operations. Including safety and soundness concerns directly linked to the foreign subsidiary; political or sovereign vulnerabilities of host jurisdiction; doubts about quality of host supervision and regulation; uncertainties related to political stability, fiscal sustainability and local bank resolution process.
ii.	Business model of the banking group	Banking group with significant asset overhang abroad. Operating with centralized business models.
iii.	Geographical risk profile or systemic dimensions of the banking group	Banking group systemic in home country. Foreign operations systemic to the banking group.

Table 2: Which dimensions make home supervisors likely to ring-fence?

³⁰ Herring (2007)

³¹ In this respect, it is important to note that one should consider not only the size of the host operations in terms of assets, but also the contribution of the subsidiary to the profitability of the banking group.

4. Risks addressed and ring-fencing instruments used

Ring-fencing measures vary widely in strictness and form, ranging from a narrow measure targeted at a particular risk category, such as liquidity buffers, to more blanket-type measures to address contagion risk in a more general way, such as forced subsidiarization. An overview of the risks and measures used to address them is provided below, in order of increasing reach.

- ▶ **Market and funding liquidity risk:** Higher liquidity buffers or the requirement to manage liquidity on a self-sufficient basis (i.e., without reliance on other parts of the banking group) and keep liquid funds in the jurisdiction can be used to make the foreign operations more self-sufficient and resilient to market and funding liquidity risks.³²
- ▶ **Market and funding liquidity risk, as well as safety and soundness risks:** Another common and simple geographical ring-fencing instrument is a restriction on upstream³³ liquidity flows, such as dividend restrictions to maintain higher than minimum capital buffers. These measures are intended both to mitigate funding and market liquidity risks, and to enhance the safety and soundness by building a more resilient banking system.
- ▶ **The risk of a shortfall in assets:** These risks are typically addressed by asset maintenance requirements or asset pledges that require banks to have - or to pledge - a minimum amount of safe assets tied to the host jurisdiction so that these assets can be easily monetized to compensate local depositors in the event of liquidation. Permanent asset maintenance requirements may be imposed, where a minimum proportion of domestic assets, generally expressed as a percentage of deposits, is to be maintained in the host country in the form of buildings, liquid assets or holdings at the central bank. Branches can also be subject to asset maintenance requirements or be required to hold an endowment account or a capital equivalent deposit, deposited in a separate account and overseen by the prudential supervisor. This amount can be expressed as a proportion of local deposits or assets.
- ▶ **Asset quality erosion:** For this concern, which is high on the supervisor's agenda, a range of restrictions on intragroup cross-border asset outflows, or inflows of doubtful assets from

other group members, can be imposed. These are intended to prevent the purchase of assets at inflated prices from group members or the sale of assets at lower than market prices. At the very least, intra-group asset inflows or outflows will be considered as a transaction with a connected party, which is subject to the application of the arm's-length principle.

- ▶ **Contagion risk:** Stricter large exposure measures³⁴ or limits on intragroup funding can be used to reduce interconnectedness. Exposures to group companies can originate from a variety of sources: loans from the parent or group entities to the foreign subsidiary; intragroup shareholdings; central management of short-term liquidity within the group; and guarantees or commitments provided to, or received from, other entities in the group. This network of contractual obligations within a banking group can, from a host supervisor's perspective, materially raise the likelihood of contagion to the local operations in case of distress in another group entity or in the group as a whole. Equally, intragroup exposures are likely to become avenues of intragroup support in times of stress.
- ▶ **Funding and solvency risk:** Imposing higher than minimum capital requirements is a very simple way to shield national banking systems from possible funding problems and capital adequacy concerns of the parent bank or the international banking group. It is also a way to encourage local lending and protect the domestic financial system from "deleveraging" when capital and liquidity may be transferred to other parts of the group.
- ▶ **Risks from conflicting interests:** Territorial approaches can be introduced in the form of firewalls or specific governance requirements to manage conflicting interests between the group and the subsidiary.³⁵ Company and banking laws diverge greatly in the extent to which parents can instruct their subsidiaries to engage in certain transactions, and hence make subsidiaries consent to transactions that are not necessarily in their best interest. In some countries, the notion of "group interest" is defined in company law and asset transfers are allowed against fair compensation. In a cross-border context, where it is easy to see how this notion could conflict with the interests of depositors, creditors and minority shareholders of the subsidiary. Although group and subsidiary interests are often not detachable, host

³² Market liquidity risk is the risk that the market liquidity worsens when the bank needs to unwind a position. Funding liquidity risk is the possibility that over a specific horizon a bank will become unable to settle obligations with immediacy.

³³ Upstream means from the subsidiary to the parent bank, downstream means from the parent bank to the subsidiary.

³⁴ A large exposure regime refers to capturing credit concentration risk, generally on a borrowers' basis.

³⁵ European Commission (2010)

supervisors will act first in accordance with their core mandate, which remains the protection of local depositors in the host jurisdiction, regardless of the group interest.

Such conflicting interests can have important implications. In more general terms, all board members of a partly or fully foreign-owned subsidiary have a “duty of care” and a “duty of loyalty”³⁶ toward the subsidiary bank itself, regardless of who appoints them. In other words, the board of the subsidiary needs to validate that its decisions are not detrimental to the sound and prudent management, the financial health, and the legal interests of the subsidiaries’ stakeholders. It will not always be straightforward to align this obligation with centralized cross-border banking structures and practices, certainly not when some of the members sitting on the subsidiary board also sit on the parent’s board. When financial difficulties arise, whether at the parent or at the subsidiary, a clear conflict of interest emerges. Moreover, for host supervisors, strong governance requirements can act as safeguards to enhance risk management in a local affiliate. For example, some jurisdictions have requirements for independent, nonexecutive and locally based board members and, to a lesser extent, for locally based senior management and internal auditors. This allows supervisors to better oversee the governance of foreign entities in their jurisdiction, and to make the board, senior management and the internal auditors accountable and liable to local authorities in case problems arise. Other supervisors go as far as requiring that most directors and key management of the bank operate independently from the group management and speak the local language. This would also allow them to sell the subsidiary more easily if problems arise.

- **Resolvability:** Territorial approaches can also be introduced by restricting certain business models or requiring a specific legal form to ensure easier resolvability of the local operations. More and more host supervisors (e.g., Brazil, Mexico, India and New Zealand) now impose subsidiarization to protect local stakeholders from losses for SIBs or for banks where the home country applies depositor preference.³⁷

³⁶ The OECD defines “duty of care” as the duty of a board member to act on an informed and prudent basis in decisions with respect to the company. The OECD defines “duty of loyalty” as the duty of the board member to act in the interest of the company and shareholders.

³⁷ Some home countries have general deposit preference which gives preference to all deposit liabilities irrespective of their deposit insurance eligibility, their covered status or the location

Intuitively, subsidiaries as independent legal entities under the control of the host supervisor may provide more protection for local depositors than branches. Forced subsidiarization by itself cannot, however, be seen as the silver bullet to “protect” a foreign subsidiary from contagion from the parent. Indeed, cross-border banks are generally organized along business lines, leading to operational structures that are very different from legal structures. In fact, some branches operate rather independently from their headquarters and some subsidiaries are very closely directed and managed by the parent bank. This trend has made it very hard for banks and banking supervisors alike to allocate activities to legal entities. The independent subsidiary view is thus increasingly undermined by the growing integration and centralization of key management functions, such as liquidity and funding, compliance, IT, auditing and internal controls. Common practices, such as issuing group-wide guarantees and cross-guarantees, raising of equity through entities in “cheaper” jurisdictions, and the onward direction of these funds to the jurisdictions where they generate a higher return, further blur legal separation from the parent bank.

On the other hand, subsidiary structures can allow more efficient resolution or wind up in a crisis provided that the business interconnections are well understood, there is a feasible and credible strategy to resolution and effective firewalls exist. Subsidiarization can probably also help with the calculation of burden sharing in case the crisis has to be resolved with public support. The set up of crisis management groups, and the drafting of cross-border cooperation and coordination agreements, as well as recovery and resolution plans are very useful tools in this respect. Nevertheless, the operations of international banks in many host countries are not always material to the banking group and host supervisors are thus not always as actively involved in these exercises as they would like.

Some argue, therefore, that more radical approaches are needed, particularly in host countries dominated by foreign subsidiaries or branches of parent banks that are located in vulnerable sovereigns (e.g., countries with a dominant

where the deposits are booked or payable (whether in the home jurisdiction or at a foreign branch). This may lead to the home country depositors taking preference over the host country branch depositors in the case of resolution.

presence of Greek bank subsidiaries) or sovereigns with weak supervision. Requiring operations of foreign banks to be organized as stand-alone subsidiaries has been considered in those situations. Under this model, each entity would hold sufficient capital and liquidity to survive on its own, without support from the parent, reducing the connectedness and thus potential contagion risk between different components of the group.

The incidence of ring-fencing measures is not well described in the literature and no measurement of the extent of home bias can be found. Measuring home bias is very difficult, mainly because of the lack of transparency, as most decisions imposing capital, liquidity buffers or other restrictions on individual foreign banks remain confidential. While banking laws and regulations, which can also introduce territorial bias, are publicly available, comparing these laws and prudential regulations, thresholds and calculations across jurisdictions is a complicated exercise. Moreover, the existence of a supervisory power in the banking law or the prudential regulation does not automatically mean that it will actually be used in practice. D'Hulster has performed a survey of 22 prudential host supervisors of the Organisation for Economic Co-operation and Development (OECD), Euro and Eastern Europe and Central Asia (ECA) banking systems, and established a simple measure of territorial bias in prudential regulation and supervision.³⁸ Appendix A provides some examples of national practices and the ring-fencing instruments used, the use of which seems to have accelerated recently in Europe as banks look to reduce their risks and regulators become more focused on firewalls.³⁹ Appendix B looks into the implementation of the Banking Union and possible implications for ring-fencing measures introduced in the Eurozone.

5. Characteristics of ring-fencing decisions

Ring-fencing comes in many guises. We can distinguish several dimensions of ring-fencing decisions:

- ▶ The originator: home or host supervisor
- ▶ The scope: all banks in the jurisdiction, a group of banks with a similar risk profile or one bank
- ▶ The legal basis: legislation, prudential regulation or moral suasion

³⁸ D'Hulster (2014)

³⁹ Morgan Stanley (2012)

- ▶ The disclosure: public measure, confidential measure
- ▶ The timing: permanent ring-fencing or temporary ring-fencing (preventative, remedial and resolution stages)

5.1 The scope of the ring-fence

The scope of ring-fencing can be the whole banking population in a jurisdiction, a group of banks with a similar risk profile or a single bank. In the aftermath of the global financial crisis, some Central and Eastern European host supervisors of banking systems dominated by foreign banks have imposed dividend restrictions to ensure banks build stronger capital bases (see Appendix A). The scope of application of these dividend restrictions was based on a variety of indicators of the risk profile of a group of banks, such as Core tier 1 ratios, the supervisory risk rating score and the share of FX loans to unsecured borrowers.

5.2 The legal basis of the ring-fence

The legal basis for ring-fencing can be in legislation or prudential regulation or, in its absence, moral suasion can be used. Most banking laws or prudential regulations provide a legal basis for relatively straightforward ring-fencing decisions, such as higher capital ratios and liquidity buffers. In some instances, however, specific conditions, such as the requirement that capital adequacy must have fallen below a certain threshold, are included. In those cases, forward-looking supervisors may base ring-fencing decisions on their supervisory risk assessment and use moral suasion.

5.3 The disclosure of the ring-fence

Permanent territorial approaches incorporated in regulation and legislation are publicly available. A temporary ring-fencing decision on an individual bank that results from the supervisory risk assessments will generally not be disclosed. But temporary territorially biased decisions for a group of banks with similar risk profiles are usually made public as part of a Pillar 2⁴⁰ supervisory methodology or as an effort to build the resilience of the local banking system.

⁴⁰ The Basel II Framework is built on three mutually reinforcing pillars. Pillar 1 sets out the mechanics for new minimum capital adequacy requirements for credit, trade market and operational risk. Pillar 2 relates to the internal assessment of capital adequacy and the supervisory review process. Pillar 3 deals with market disclosure and market discipline. Pillar 2 capital buffers have been introduced by supervisors to address risks that are not included in Pillar 1 capital charges or that are not appropriately captured by Pillar 1.

5.4 Timing and stages of application of ring-fencing: permanent versus temporary ring-fencing

Ring-fencing is often part of the overall policy framework in the sense that the requirements have been discussed before being implemented, they are permanent and they are publicly disclosed. Ring-fencing can also be temporary, in the form of an ad hoc decision of the prudential supervisor. During the global financial crisis, many host supervisors resorted to temporary ring-fencing decisions. When ring-fencing is temporary, the time for planning and preparation given to the bank as well as the health of the banking group or the overall economy become important factors in assessing its impact.

A closer look at stages of banking supervision will help to explain the complex interlinkages between temporary ring-fencing decisions and the timing of their implementation. Claessens et al. describe the three typical stages of banking supervision (preventative, remedial or recovery and resolution stages) and the instruments used during each stage.⁴¹ In reality, the first two stages are more of a continuum and banks can move back and forth between them. The first, or preventative, stage consists of licensing procedures; ongoing supervision, such as inspections and off-site analysis; and taking actions to address potential risks when required. In this stage, policy is developed and supervision is performed to address emerging risks. In the remedial or recovery stage, the bank has come under some financial stress, but is normally still viable. Supervisors take actions in response to the problems that have emerged. In the resolution stage, the bank, as a whole, has generally passed the point of viability and supervisory authorities act in concert with central banks, the Ministry of Finance, resolution authorities and bankruptcy courts, where applicable. The instruments range from private sector solutions, such as a takeover, restructuring and bankruptcy, to public sector solutions, such as public capital injections and nationalization.

Rosengren and Claessens et al. have found that divergences in incentives between home and host supervisors become magnified as problems get worse.⁴² As a consequence, incentives for ring-fencing will increase as uncertainty increases, the health of the bank deteriorates and problems in the home country or global financial stress worsen. In those instances, each jurisdiction

tends to prioritize addressing its own problems instead of communicating with others. It is expected that the timing and the stage of introduction of ring-fencing actions matter for the impact on the banking group. Ring-fencing decisions made during the preventative banking supervision stage clearly tend to come with less risk for the financial health of the institutions than ring-fencing actions targeting an institution already under financial stress or operating in an already distressed financial environment. Similarly, ad hoc ring-fencing decisions, with little lead time for implementation, are also more likely to put the banking group under strain, as are decisions on a banking group that does not have robust liquidity contingency planning.

When looking at the third stage, there are two main strategies to the resolution of cross-border banks. First, there is the “single point of entry” resolution, in which resolution powers are applied to the top of a group by a single national resolution authority. Second, there is a “multiple point of entry,” in which resolution tools are applied to different parts of the group by two or more resolution authorities acting in a coordinated way. Neither of these approaches has actually been fully put in practice, but the reality has tended toward the second approach. This will almost automatically result in the application of ring-fencing approaches by host supervisors during a resolution since national authorities tend to pursue their own national interests in the management of a crisis.

6. Implications of ring-fencing on the banking group and financial stability

The potential impact of ring-fencing measures on the banking group and financial stability in the home and host country depends on a number of factors, including:

- ▶ Whether the home or the host supervisor is ring-fencing
- ▶ Whether the parent/home country or the affiliate/host country is experiencing financial stress
- ▶ The business model of the cross-border banking group
- ▶ The geographic risk profile of the banking group
- ▶ The level of development of the host country financial system
- ▶ Whether one host or multiple hosts are ring-fencing at the same time

⁴¹ Claessens et al. (2010)

⁴² Rosengren (2007); Claessens et al. (2010)

- ▶ The timing of the ring-fencing decision, as well as the level of crisis preparedness of the banking group and the lead time to implementation

The outcomes of ring-fencing decisions taken by the host supervisor on the banking group, the home country and the host country are described below.⁴³

6.1 Impact on the banking group

The banking group will, in general, be worse off as a result of ring-fencing actions. Although a ring-fencing action by one host supervisor is not necessarily known by market participants, it may quickly encourage other host supervisors to react in a similar way. If many host supervisors ring-fence liquidity, the banking group may not be able to manage its liquidity on a global basis. This could result in defaults in group entities and the bank might eventually fail. Overall, funding and liquidity costs will be higher with capital and liquidity trapped in individual subsidiaries. Mitigating factors to this scenario are less centralized business models, where individual operations are more self-sufficient; ring-fencing decisions that have been permanently in place; or banking groups with sound liquidity contingency planning. A banking group with a relatively high percentage of domestic assets and profits generated in the home country will also be less vulnerable.

6.2 Impact on the home country

In many respects, the interests of the home country are aligned with the interest of the banking group. Ring-fencing would be a blessing for a home supervisor with limited fiscal resources if the problem entity is not the parent bank. This will reduce the fiscal burden on the home country if the foreign operations become distressed, provided they are organized as a subsidiary. The home country supervisor will not be faced with the choice of either saving or resolving the banking group in its entirety. The arrangement can thus isolate a parent from a stand-alone subsidiary's problem and potentially limit the latter's problem from spreading to other parts of the banking group, thereby allowing for a selective resolution of the troubled subsidiary. A home supervisor may also welcome or even actively encourage, ring-fencing of host operations when faced with doubts about the adequacy of supervisory cooperation arrangements, the stability

of the regime or the strength of the host country economy.

6.3 Impact on the host country

The host country financial system will be less vulnerable to contagion from other countries and will be better protected from parent bank problems at least in the short term. At the same time, credit availability for large international clients would be undermined and the banking system would become less diversified. For host countries with underdeveloped and shallow capital markets, and weak deposit bases, measures to ensure self-sufficiency could have significant implications for the availability and cost of lending. This may be reduced by direct cross-border lending, but this could complicate monetary policy decisions of the host country.

There is a risk that in the longer term, global banking groups, faced with higher costs imposed by ring-fencing requirements, may revise their business models, becoming more inward looking and perhaps ultimately leaving the host jurisdiction. Such home bias could result in retrenchment of international banks from host jurisdictions, including those where no territorial approaches have been adopted, creating more fragmented financial systems. Provision of credit to the private sector could thus be adversely affected in vulnerable regions or countries. This could contribute to existing deglobalization pressures that have emerged due to the need to shrink balance sheets, and shore up capital and liquidity for weak banks since the global financial crisis. Moreover, this trend could be exacerbated by some home regulators' increased desire for banking systems that have more limited exposure across borders so as to preserve the available capital and funding for stressful times at home.

6.4 Impact on the global financial system

The business model of many global banking groups requires the ability to operate efficiently across borders. These global market players benefit from diversification as they are then less exposed to a single domestic market or region. They also play an important role in the efficient allocation of resources across jurisdictions. The existence of "trapped pools of resources" (liquidity and capital) in different jurisdictions makes the financial system, as a whole, less resilient and more fragmented. Ring-fencing reduces the ability of global banking groups to mobilize resources to respond quickly to problems in particular locations.

⁴³ In the case of ring-fencing by the home supervisor, the impact on the host supervisor will be similar to the descriptions outlined below.

There is broad consensus that group-wide mobility of resources can help to dampen the impact of financial stability shocks and act as a stabilizer, a shock absorber or a source of systemic stability.

7. Conclusions

This paper has discussed why both home and host countries may find it beneficial to introduce restrictions and firewalls between parts of a cross-border banking group to protect their country from external shocks and minimize the fiscal costs of a failing bank. In so doing, they consider a number of factors, including: supervisory quality and cooperation, sovereign credit risk (home and host), uncertainty about the fiscal capacity and willingness of the home authority to support the affiliates in stress, how the resolution process will function in different jurisdictions, and the systemic importance of a foreign affiliate for the domestic banking system.

While ring-fencing may provide immediate benefit for host supervisors, it comes at a cost that is positively correlated with the severity of the ring-fencing measures. These costs have implications for the resilience of the banking group and the financial system as a whole; the availability and cost of capital and funding; the ability to manage liquidity and funding risks; the real sector consequences in host countries with less well-developed financial markets to provide alternative sources of funding; and a potential trend toward deglobalization.

The negative connotation surrounding ring-fencing comes mainly from its detrimental effects when it is abruptly implemented during a crisis. It is, therefore, important to distinguish between home bias as part of the policy framework (permanent ring-fencing) of the host country and sudden supervisory ring-fencing decisions (temporary ring-fencing) when problems start to emerge in a banking group or the system as a whole. While the former is common and does not necessarily put additional stress on an ailing banking group, the latter certainly would. Hence, well-calibrated and well-designed ring-fencing approaches may be better introduced when the banking system is healthy and has the ability to adapt and embed them in its centralized business practices. This gradual approach could well be considered a second-best option for many host supervisors, while the international policy work on resolution and burden sharing

continues.

The ultimate solution to ensuring financial stability, and making nationalistic policy responses by home and host authorities redundant, lies in:

- ▶ The establishment of compatible and enforceable international mechanisms, which ensure effective oversight and orderly resolution of banks at both national and global levels
- ▶ The development of a combination of national and international arrangements to ensure that cross-border banking groups fully internalize the costs associated with their failure. These should address: (1) better risk management by banking groups; (2) effective supervisory oversight; (3) adequate information sharing and supervisory coordination mechanisms; and (4) workable cross-border resolution regimes and burden-sharing agreements.

In this context, addressing information asymmetries, within and across borders, would go a long way toward achieving these key elements and avoiding mutually harmful nationalistic policy responses. Clear rules that allocate responsibilities to home and host jurisdictions, and that address the lack of comprehensive information about how the resolution process functions in relevant jurisdictions, would allow stakeholders to plan more efficiently for potential consequences of insolvency. Globally enforceable information sharing and resolution mechanisms could reduce the need for ring-fencing.

In practice, however, there always remains the risk that during a crisis, authorities make decisions driven by political expediencies and deviate from agreed mechanisms and frameworks.⁴⁴

⁴⁴ For example, Iceland did not pay for UK and Dutch deposits, while under European Economic Area (EEA) arrangements it had to support foreign deposits of the Icelandic branch. Also, institutions of relatively small magnitude have time and again been classified by politicians as too big to fail, e.g., Hypo Alpe Adria and German State banks.

Appendix A

Country	Measure												
Albania	A “systemic” threshold above which regulation of subsidiaries applies to branches that become systemic. The banking supervisor also has the power to require a foreign branch to become a subsidiary owing to “systemic risk.”												
Australia	Asset maintenance requirements: a bank’s assets in Australia must be equal to or greater than the amount of its deposit liabilities in Australia.												
Austria	In late 2011, Austrian rules limited new lending in Central and Eastern Europe (CEE) above 110% loan-to-deposit ratio, introducing limits on parent-funded credit expansion in CEE subsidiaries.												
Brazil	The Brazilian banking supervisor has specific regulation banning the application of funding mobilized domestically (deposits/securities/equity issuances) to fund the acquisition of assets abroad, including lending to headquarters or buying portfolio/assets. Brazil also has regulations to prevent subsidiaries from returning earnings to the parent bank. The granularity of information that the authorities collect and analyze using artificial intelligence algorithms can be used to detect unusual patterns and spot when such transactions occur. Banks would be subject to penalties for doing so. Since there is no regime of prior authorization for transfer abroad, the detection of the transaction is ex-post. There are no barriers on parent funding of the subsidiary using various instruments (e.g., equity or debt).												
Croatia	During the 2007-08 crisis, bank regulators recommended the non-distribution of profits by the subsidiaries of foreign banks despite relatively strong bank fundamentals. The Croatian National Bank (CNB) Governor said that “the CNB would not look favorably upon attempts to withdraw capital, deposits, or pay out total accumulated profits because that would destabilize the domestic banking system. In such a case, the CNB would be forced to undertake protective measures, regardless of thus connected risks.”												
India	In a statement issued on 6 November 2013, the Reserve Bank of India required foreign banks to establish a wholly owned subsidiary if the following conditions are satisfied. A: (1) Banks incorporated in a jurisdiction having a legislation giving a preferential claim to deposits of home country in a winding-up procedure; (2) banks that do not have adequate disclosure requirements in their home country; (3) banks with complex structures; (4) banks which are not widely held; (5) the Reserve Bank of India is not satisfied with the adequacy of supervisory arrangements (including disclosure arrangements) and market discipline in the country of incorporation; (6) for any other reason that the Reserve Bank of India considers necessary for subsidiary for or presence of the foreign bank; Or B: If a foreign bank, which has set up its presence in India through a branch mode, is considered by the Reserve Bank of India as being systemically important by virtue of its size of business												
New Zealand	In January 2013, the Reserve Bank of New Zealand issued a “Statement of Principles” on bank registration and supervision. The principles detail that foreign bank operations will have to take the form of a locally incorporated subsidiary if a foreign bank falls, or is expected to fall within the next five years, in one of the following four categories: (1) SIBs, that is, banks whose New Zealand liabilities, net of amounts due to related parties, exceed NZ\$15 billion. (2) Retail deposit takers incorporated in a jurisdiction that has legislation, which gives deposits made, or credit conferred, in that jurisdiction a preferential claim in a winding up. Australia and the US are examples of countries with such legislation. (3) Retail deposit takers which do not provide adequate disclosure in the home jurisdiction. (4) Applicants other than those listed above may also be required to incorporate locally if the Reserve Bank is not satisfied that supervisory arrangements (including disclosure arrangements) and market disciplines in the country of incorporation are adequate.												
Poland	The Polish prudential supervisor, the Polish Financial Supervision Authority or Polish KNF, has imposed risk-based dividend restrictions for the earnings of 2011 and 2012. In a letter sent to all banks, the Chairman of the KNF expressed an expectation that all banks take action aimed at strengthening their capital base due to heightened risks in global financial markets. He stated that should be done by retaining earnings from 2011 if the capital adequacy ratio is below 12% or the tier 1 ratio below 9%. Capital ratios were not the only criterion influencing the ability to distribute earnings for 2011. Other areas taken into consideration included: the score a bank received in the Supervisory Review and Evaluation (SREP) process, the share of FX loans to unsecured borrowers in the bank’s loan portfolio and the financial situation of the parent company. The level of dividend payouts was not allowed to exceed 50% of total 2011 earnings. In November 2012, the Polish KNF issued another statement on dividend policy. The level of earnings retention was relaxed and banks were allowed to pay up to 75% of the 2012 earnings. The criteria were, however, tightened; the prescribed levels of capital ratios of 12% and 9% tier 1 capital should be maintained by banks under the adverse scenarios of the Polish KNF’s bottom-up stress test exercise. The SREP score criteria referring to the capital level and internal were also maintained, while the criteria for the desirable level of FX lending in the credit portfolio were removed.												
Poland and Hungary	More recently, Polish and Hungarian regulators have started to closely monitor intragroup liquidity flows and localizing business models with the intention that with negative ratings migration tighter parent liquidity should be offset by local ring-fenced funding and high capital buffers.												
Slovakia	In 2012, the National Bank of Slovakia recommended that banks restrict the distribution of profits that have not yet been included in equity capital, in accordance with the table below.												
	<table border="1"> <thead> <tr> <th>Value of Core tier 1 capital when the decision of profit distribution was taken</th> <th>Percentage of profits that should be used to increase equity capital instead of being distributed</th> </tr> </thead> <tbody> <tr> <td>1. Less than 9.625%</td> <td>100%</td> </tr> <tr> <td>2. At least 9.625%, but less than 10.25%</td> <td>At least 80%</td> </tr> <tr> <td>3. At least 10.25%, but less than 10.875%</td> <td>At least 60%</td> </tr> <tr> <td>4. At least 10.875%, but less than 11.5%</td> <td>At least 40%</td> </tr> <tr> <td>5. More than 11.5%</td> <td>No limit</td> </tr> </tbody> </table>	Value of Core tier 1 capital when the decision of profit distribution was taken	Percentage of profits that should be used to increase equity capital instead of being distributed	1. Less than 9.625%	100%	2. At least 9.625%, but less than 10.25%	At least 80%	3. At least 10.25%, but less than 10.875%	At least 60%	4. At least 10.875%, but less than 11.5%	At least 40%	5. More than 11.5%	No limit
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5. More than 11.5%	No limit												

	The National Bank of Slovakia also warns those banks that need to strengthen their capital adequacy ratio. It states that they need to do so by means of current earnings or share capital increases. Banks should avoid tightening lending conditions as a means of bringing their capital ratios into line with the regulatory requirements or with the level recommended in the decision.
Switzerland	The Swiss authorities have introduced regulation that relates to the global operations of SIBs and foreign banks operating in Switzerland. A set of criteria was presented using a scorecard approach called the "Resolution Effectiveness Test" to determine whether the banks are organized in such a way that resolution in a crisis is facilitated while protecting the systemically critical functions of these banks. Based on the outcomes of the assessment, the authorities can propose territorial measures that require changes in these entities so that intragroup exposures are limited, and domestic and foreign operations are legally separated.
Turkey	Bank regulators recommended the non-distribution of profits by the subsidiaries of foreign banks despite relatively strong bank fundamentals. The head of the banking regulation agency stated in December 2009 that, "it is our natural right to expect those profits generated in this country to be invested and used in credit extension again in this country." Banks in Turkey were expected to consult the regulator before distributing dividends during the crisis.
UK	The UK FSA imposed a liquidity regime that requires stand-alone liquidity requirements on both subsidiaries and branches of foreign banks.
US	<ul style="list-style-type: none"> ▶ In February 2014, the Federal Reserve approved a final rule strengthening supervision and regulation of large US bank holding companies and foreign banking organizations. The final rule establishes a number of enhanced prudential standards for large US bank holding companies and foreign banking organizations to help increase the resiliency of their operations. These standards include liquidity, risk management and capital. It also requires a foreign banking organization with a significant US presence to establish an intermediate holding company over its US subsidiaries, which will facilitate consistent supervision and regulation of the US operations of the foreign bank. The final rule was required by section 165 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. For US bank holding companies with total consolidated assets of US\$50 billion or more, the final rule incorporates the previously issued capital planning and stress testing requirements as an enhanced prudential standard. It also requires such a US bank holding company to comply with enhanced risk-management and liquidity risk-management standards, conduct liquidity stress tests, and hold a buffer of highly liquid assets based on projected funding needs during a 30-day stress event. These requirements will help ensure that these firms can continue to lend to households and businesses even in times of financial stress. In addition, the final rule requires publicly traded US bank holding companies with total consolidated assets of \$10 billion or more to establish enterprise-wide risk committees. The new requirements for US bank holding companies complement the stress testing and resolution planning requirements for large bank holding companies that the board previously finalized. ▶ Banking regulation in New York State notes that in the case of insolvency of the parent bank, creditors with residence in New York State have preference over other creditors with respect to the assets of the foreign branch.
Latin American countries	<ul style="list-style-type: none"> ▶ Some hosts (e.g., Brazil, Mexico) strongly encourage subsidiarization of local business units. ▶ In Argentina, Bolivia, Brazil, Chile and Ecuador, branches face local capital and liquidity charges identical to those applied to subsidiaries and require local representation on their boards. ▶ Spanish subsidiaries in some Latin American countries have many elements of SAS, generally relying on customer deposits to finance loans, but excess liquidity is managed at the group level.
Croatia, Mexico, Australia	Restrictions exist on branches of foreign banks accepting deposits.

Table 3: Territorial approaches in selected countries

Source: Authors' compilation of regulations and supervisory decisions.

Appendix B

Ring-fencing in the EU and the Banking Union

There is a general consensus that the Banking Union consists of four interconnected building blocks: common prudential regulation, common banking supervision materialized by the SSM, common deposit insurance, and common resolution to be implemented by the SRM, including the Single Resolution Fund (SRF). The SSM was fully accomplished by 4 November 2014 when it had taken over the direct supervision of all “significant” credit institutions in the Eurozone, 120 banking groups, including approximately 1,200 supervised legal entities. This represents about 85% of the banking assets in the Eurozone. The SRM became “fully operational” on 1 January 2016 with the SRF being “built up over a period of eight years with 'ex-ante' contributions from the banking industry.”⁴⁵

The SSM is likely to lead to the elimination of many of the ring-fencing measures that were introduced during the global financial crisis in Eurozone countries, particularly the liquidity buffers and the dividend restrictions. Common prudential regulation has been achieved by the implementation of the fourth Capital Requirements Directive (CRDIV) and the Capital Requirements Regulation (CRR). The latter is a directly applicable minimum harmonization regulation; this means that the range of regulatory ring-fencing instruments, such as capital buffers, has become more limited and more difficult to implement for all EU Member States.

In 2014, the EU Commission performed a confidential survey on geographical ring-fencing measures in 27 member states. The survey covered Pillar 2, large exposures and domestic liquidity frameworks. The Commission takes the view that duly justified and proportionate ring-fencing measures are not restrictions on free movement of capital. It is only when these instruments are used for a purpose not in line with EU legislation that they may be considered. The Commission recognizes that only the further integration of the regulatory and supervisory framework can eliminate ring-fencing measures. In other words, the cause of ring-fencing measures, not the symptoms, should be eliminated.

⁴⁵ European Commission (2015)

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