TC NOTES

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TORONTO CENTRE

CROSS-BORDER SUPERVISION OF CAPITAL AND LIQUIDITY ADEQUACY

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CROSS-BORDER SUPERVISION OF CAPITAL AND LIQUIDITY ADEQUACY

IMPLICATIONS FOR HOME AND HOST SUPERVISORS

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CROSS-BORDER SUPERVISION OF CAPITAL AND LIQUIDITY ADEQUACY

IMPLICATIONS FOR HOME AND HOST SUPERVISORS

Introduction[1]

This Toronto Centre Note focuses on the implications for home and host financial supervisors of the cross-border supervision of the adequacy of capital and liquidity. It considers the issues and challenges associated with cross-border and conglomerate supervision. While both home and host supervisors have similar concerns, the supervisory challenges they face can be unique and different. Both perspectives will be examined in this Note.

This Note focuses primarily on banking supervision, reflecting the global standards on capital adequacy and liquidity adequacy in this sector. However, the principles, challenges, and supervisory responses presented for the most part apply equally to the supervision of cross-border insurance and securities firms. Moreover, many conglomerates combine banking, securities, and insurance firms, which need to be supervised on both a group-wide and a legal entity basis. For the most part, capital adequacy and liquidity adequacy are examined on a consolidated basis. When considering cross-border implications, supervisors should also take into account the solo or stand-alone application of the capital/liquidity standards.

This Note builds on earlier Toronto Centre Notes (2016 and 2021) on consolidated supervision and on the risk-based supervision of cross-border groups. The Note discusses home and host supervisory perspectives. It also describes some specific issues relating to capital, liquidity, and leverage; capital instruments and how their quality can be compromised in the cross-border context; and Supervisory Colleges.

Capital instruments are the foundation of any capital adequacy measure; however, instruments differ from one jurisdiction to another. This Note examines capital instruments and how their quality can be compromised in the cross-border context. The Note also addresses the use of, and participation in, Supervisory Colleges. It discusses how Supervisory Colleges can benefit host and home countries as well as provide context regarding the importance of foreign operations in host countries.

Cross-Border Supervision

Cross-border supervision is one of the more challenging supervisory priorities. It adds layers of complexity, new stakeholders, and potential challenges to effective supervision. Supervisors have had to deal with these challenges since financial institutions became more than simple domestic institutions.

Issues relating to the relationship between home and host supervisors have been addressed since the beginnings of the Basel Committee on Banking Supervision. The Committee's very

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[1] This Toronto Centre Note was prepared by Brad Shinn. Please address any questions about this Note to publications@torontocentre.org.

first publication (Basel Committee 1975) was the Concordat dealing with information sharing for foreign branches, subsidiaries and joint ventures operating in host jurisdictions.

As more expansion of international banking has occurred, the need for continued cooperation has become even more important. Indeed, the international activities of some groups are larger than their domestic business. In addition, in the early days of international activities the focus was mostly on branches, but as time has passed the types of organizational structures have also expanded and become more complex to include not only branches but also subsidiaries, joint ventures and others.

Home and Host Perspectives

Home and host supervisors both have the objective of protecting depositors or policy holders. However, there are differences between home and host supervisors in terms of the level of available information and the oversight of an entire financial group.

Home supervisors should remain cognizant of the legal entities in the home jurisdiction, the consolidated group, and the contribution of the entities in other jurisdictions. They should also consider the location of capital and assets. Consolidated supervision practices sometimes assume there is a free flow of assets and liquidity between jurisdictions, which is not always the case. Supervisors must take these circumstances into account when assessing the capital adequacy and liquidity adequacy of the financial groups and the individual entities they supervise.

Host supervisors are most concerned with the foreign entities operating in their jurisdiction. Depending on the nature of the entity operating in a host jurisdiction, there may be more or fewer supervisory challenges to complete a comprehensive assessment. For example, in some cases a foreign entity could be a domestically significant institution in the host jurisdiction. A key issue for host supervisors is the proportionality considerations of the entity operating in their jurisdiction. Whether a branch or a subsidiary provides the best alternative for the host country to meet its prudential responsibilities will depend on the significance of the operation and the nature of the depositors. If the entity is relatively large, a host supervisor might prefer a subsidiary because its structure might provide increased supervisory oversight.

These perspectives emphasize the need for information sharing and transparency between home and host supervisors. These elements are crucial for effective supervision. The home supervisor tends to have the most information and oversight of structural elements when focusing on the consolidated group. The host supervisor should have processes in place to obtain the information required to conduct their supervisory responsibilities. Some of the processes include information sharing, regular supervisory contacts, and participation in supervisory colleges.

Branches, subsidiaries, and joint ventures

This section builds on Toronto Centre (2021) to consider prudential oversight issues relating to structures. While many organizational structures can be used by financial groups, the most common are branches, subsidiaries, and joint ventures. Each can produce some unique governance, oversight, and prudential challenges.

The corporate structure for any financial group is based on the group's strategies, business plans, and considerations of the legal, tax, and regulatory environments in which it will be operating.

Branches are extensions of the parent entity operating in a foreign jurisdiction. Operating through branches can be attractive; a branch remains part of the parent entity and can mostly avoid separate capital, liquidity, and leverage calculations and reporting. It also reduces the governance and control structures required to manage the overall entity. While geographically separate, the management and governance remain with the parent entity.

Subsidiaries, on the other hand, are legally separate entities, with their own board of directors, management, and capital structure. However, there are reputational issues that go in both directions. Accordingly, the parent entity will usually maintain oversight control and/or board members to ensure the subsidiary follows the parent's strategy, business models, and controls. As with branches, subsidiaries have reputational issues that can influence entity actions and supervisory responses.

From the supervisory perspective, branches and subsidiaries have both advantages and shortcomings. These elements can differ across home and host supervisors' requirements and across jurisdictions, depending on legal structures and financial markets.

The host supervisor's supervisory preference and level of oversight of any entity structure often depends on the business purposes of the entity. For example, is its focus primarily retail or wholesale? Is it funded by local retail or wholesale funding or by its parent? If the structure is going to have a retail focus, supervisors need to assess what is required for them to perform their prudential responsibilities. The degree of supervision will dictate whether a subsidiary or branch is best for the jurisdiction. If the entity's purpose is more lending and/or investment management dealing with more sophisticated counterparties, the prudential oversight may well be reduced. Accordingly, oversight through a branch may meet the requirements.

The supervisory concerns can change depending on the nature of the funding – if the lending is funded by local retail, local wholesale, or simply funding from the parent. With external funding by the parent, there are fewer supervisory concerns for the local market. However, when funding is local, a supervisor will want to know the effects of that funding on local markets. Depending on the size and complexity of the entity and the extent of local funding, a host supervisor may want the local entity structured as a subsidiary rather than a branch to provide the host authority with greater oversight and control.

In other circumstances, the entity structure may be less important. If so, a branch structure may be attractive to a host supervisor because this leaves greater responsibility (and the associated resource burden) with the home supervisor. However, for a host supervisor the elements of control and oversight are reduced.

For subsidiaries, the home supervisor loses an element of control as these are separate legal entities requiring independent Boards and specific local capital and liquidity requirements. Despite the independence in structure, subsidiaries are not completely independent and still follow the strategies and objectives of the parent entity. Host supervisors have more control over subsidiaries as they are now the lead supervisor of the subsidiary and can establish limits, capital, and liquidity requirements. However, there may be additional risks (capital and liquidity) that the Supervisor may be faced with, and these will be discussed in the following sections.

Joint ventures are arrangements of two or more groups/entities to create a single entity for profit, sharing the risks associated with the operations. These entities can be domestic or international in nature. They are often created to take advantage of economies of scale, provide access to new markets and networks, and share knowledge and business strengths in new markets. Depending on the legal structure of the joint venture, the risks and oversight can be similar to subsidiaries, with the reliance placed on the joint venture management. Often there are ownership restrictions within a jurisdiction that make joint ventures necessary.

Supervisors need to assess the financial strength of the joint venture to ensure the parent groups are not creating a risk position for the domestic jurisdiction. Capital and liquidity adequacy standards need to be applied according to the legal structure of the joint venture.

Capital, Liquidity and Leverage

Capital adequacy, liquidity adequacy, and leverage are key contributors to the solvency and viability of any financial institution. Supervising them in the context of home and host perspectives requires supervisors to cooperate to share the relevant information. Or they may require financial institutions operating in a foreign jurisdiction to post additional capital and liquidity in the host jurisdiction.

Guarantees and other assurances may sometimes be enough for the host country. However, additional protections may be required if a financial institution is significant for the host country, even if the entity in the host country is not that material to the parent entity in the home country. Similarly, while information exchange can help, it may well be insufficient to capture all supervisory concerns, especially in the areas of capital adequacy and liquidity adequacy oversight.

Capital

A home supervisor needs to rely on consolidated information to calculate group-wide capital adequacy. The data collection and information systems must be compatible and extensive to adequately capture the data. This would be the case whether the foreign entity is a branch or a subsidiary. In the case of a subsidiary, it would also have its own capital adequacy calculation. This would be reviewed by both the home and host supervisors; the main authority would be the host supervisor, as the entity is operating as an independent in that jurisdiction.

Calculating capital adequacy can present some challenges in addition to information collection. In the banking world, most jurisdictions have at least partly adopted the Basel standards. This should produce a reasonably consistent approach to calculating capital adequacy. But there is a significant amount of national discretion built into the Basel frameworks to account for legal and market differences. Also, jurisdictions are at different stages in their adoption of the Basel 2 and Basel 3 standards. Home and host jurisdictions may therefore be applying different approaches, such as in the extent to which entities are allowed to use internal ratings-based approaches.

A reliance on consolidated frameworks by a home supervisor can have limitations as it combines the financial positions of domestic and foreign entities into one set of financial statements. This means some issues for oversight can be overlooked or missed.

For example, it may not be appropriate for a parent entity using an internal ratings-based approach to apply this approach to a foreign subsidiary. In this case, the loss data history, definitions of exposures, and most importantly the probability of default and loss given default components, may vary considerably across jurisdictions. All variables must therefore be assessed to ensure the capital calculation is appropriate for all entities and exposures. Loss experiences on common exposure types such as mortgages can vary considerably across jurisdictions. If the approved ratings approach does not take these jurisdictional differences into account, the result would be an inaccurate capital adequacy calculation.

It is the responsibility of the supervisors, both home and host, to review and challenge the capital adequacy calculations. This is especially important for measuring and including the foreign components in the capital calculations.

A host supervisor of a subsidiary has the authority to establish a capital adequacy framework appropriate to the individual jurisdiction. If the jurisdiction only uses the standardized approaches, there is no requirement on the host supervisor to accept the approach and allow the subsidiary to use the parent's model. This is so even if the parent entity has approval from the home country supervisor to use an internal ratings-based approach. The host supervisor may not have the expertise or the regulatory framework to approve and oversee the use of the parent's model by the subsidiary. In such cases, the host supervisor would not know whether the capital adequacy calculated by the subsidiary using the parent entity's model is appropriate to protect the depositors in the host jurisdiction. Accordingly, it would not be unreasonable for the host supervisor to require the subsidiary to use the approach of the domestic market for supervisory purposes.

Supervisors also have at their discretion the implementation of Pillar 2 – Supervisory Review and Evaluation – requirements. Pillar 2 approaches are described in Toronto Centre (2020). These specifically apply to the oversight of subsidiaries, although they could also be used in the oversight of risk measurement for branches. Within international standards, the Pillar 2 requirements are the least defined and are therefore an area with a lot of supervisory latitude to implement. It is generally accepted that capital adequacy at the minimum Pillar 1 levels is not sufficient.

Supervisory capital targets above the minimums are the most prudent approach to ensure that capital adequacy provides the appropriate cushion of capital to absorb unexpected losses.

Pillar 2 not only potentially adds additional capital adequacy requirements but also encourages institutions to better manage and measure the risks to which they are exposed. Given that these are discretionary requirements, and the measurement of risk is not necessarily an exact science, the supervisory review and evaluation process enables the elements of cross-border supervision to be applied to individual subsidiaries. Supervisors must work closely with institutions to assess the adequacy of a firm's own assessment of how much capital it needs to hold – are the amounts accurately measured and do they reflect the management approach to the exposures? When these capital tools are used it is important that the home and host supervisors communicate the purpose and implications of any additional capital buffers.

A few types of targets and/or buffers can be used under the concept of Pillar 2. These Pillar 2 add-ons can take the form of additional capital as determined by the entities themselves or assigned by the supervisors based on their own risk assessments.

Pillar 2 can be applied on an individual institution basis or as an aggregate requirement applicable to all similar types of institutions. For the latter, Supervisors can establish a Pillar 2 capital charge in addition to Pillar 1. This add-on capital charge could be risk sensitive or a simple buffer based on a percentage against an activity or balance sheet metric.

When applied to all institutions of a similar type, the additional capital requirements are generally based on more macro-determined metrics. These are focused on particular asset classes or as a general market buffer to add protection.

By definition, branches do not have a unique capital adequacy calculation, nor do they have their own capital base. A branch relies on the capital of the parent and the injection of parental funding to cover any losses arising from branch operations. If it can be assumed that the parent is a source of strength and not a source of weakness, a host supervisor may be comfortable relying on this parental commitment.

A host supervisor must also assure itself that a branch operation in their jurisdiction is not being used to support the parent entity from losses it may be experiencing. This could occur if the profits from a branch are being repatriated to the parent entity, thus weakening the branch. This may not be an issue in the short term; however, over a longer term, this can create risks within the host jurisdiction. Such a situation could create a “contagion risk,” where financial difficulties from the parent jurisdiction spread to the host jurisdiction, putting depositors of the branch at greater risk. For a branch that is a significant entity in the host jurisdiction, this can lead to contagion risk for other domestic entities in that host jurisdiction. Accordingly, host supervisors must remain aware of the operations, activities, and financial strength of the branches in their jurisdictions and the financial strength of the parent entities.

Depending on the nature of the business model of the branch, there are possible supervisory actions that can be considered to provide the host supervisor with some comfort and control of the institutions operating in their jurisdiction. One such supervisory action would be to establish an “equivalency deposit.”[2] This would function as a de facto capital cushion available to provide stability to the branch in case of financial stress or the inability of the parent entity to provide support.

Such a capital equivalency deposit is used in North America and other jurisdictions where reciprocal arrangements exist for foreign entities. The size of the deposit would reflect the nature of the business and the size of the branch. The concept would be that such a deposit would be made by the branch directly or by the parent entity at either a central bank or another commercial bank. There would need to be a regulatory ability to create such a permanent deposit. However, many jurisdictions have this ability, and it is prudentially used to provide the host jurisdiction with an element of control in addition to the parent commitments.

Another possibly more difficult option would be to insist that such significant entities be formed as subsidiaries. In many cases, both the parent entity and the host jurisdiction may not have the supervisory framework or options for both branches and subsidiaries.

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[2] A capital equivalency deposit would function as de facto capital (since branches do not have capital). The amount would be held in trust at another institution to be used at the discretion of the supervisor to protect the depositors and creditors of the branch in their respective jurisdiction.

In the case of branches, the Pillar 2 options are more limited as there are no capital requirements on branches. Accordingly, supervisors need to operate within their regulatory frameworks to protect depositors and the operations of the branch. Options to apply a Pillar 2-type approach could be to increase the equivalency deposit to better reflect the risk of the branch beyond the minimum established. An alternative could be to limit the business activities the branch can engage in to align expertise with the activities undertaken.

Liquidity

As with capital adequacy, the measurement and management of liquidity adequacy is fundamentally based on a consolidated approach. This provides a comprehensive perspective of the liquidity adequacy of the group. This can produce some unintended consequences for both the home and host supervisors.

Liquidity adequacy has many more variables and has a much newer set of metrics as a prudential framework. In addition, liquidity tends to be less stable and can deteriorate much quicker than capital. While these are challenges, firms have been measuring liquidity since banks were created. In the capital adequacy space, there is one primary metric used. With liquidity, there are a series of metrics covering short-term stress scenarios, longer-term funding metrics, and a series of monitoring metrics[3], all of which in combination provide a liquidity profile.

As supervisors the oversight of liquidity is time-sensitive and involves a series of metrics. Accordingly, there needs to be regular communication with the entities on their cash inflows and outflows, changes to business models and general market trends. With capital adequacy, firms always need to meet targets, however reporting tends to be on a monthly or quarterly basis. This is due to the fact the balance sheet does not tend to go through large changes in short periods of time. Liquidity on the other hand, is very dynamic and can change very quickly. Entities need to be able to calculate their liquidity positions on a daily (and intra-day) basis. Firms may not be required to report this daily in normal times, but more frequent reporting to the supervisors should be expected in times of stress. Supervisors need to react quickly to understand the firm's stress and ensure the contagion of the stress event does not spread to the wider financial system. This ultimately means that the supervisors need regular contact with the entities regarding their liquidity positions to determine where sensitivities may exist.

Supervisors need to assess some aspects of cross-border liquidity when considering the overall liquidity positions. It is expected that all liquidity metrics are applied on a consolidated basis. However, it is also recognized that individual branches and subsidiaries of a cross-border entity have a unique liquidity calculation that takes into account the potential for differing inflow and outflow rates. In other words, the rates used by the parent group may not be applicable for the inflows and outflows experienced within a host jurisdiction. The authority for host jurisdictions to apply different inflow and outflow rates is outlined in the international agreements on liquidity from the Basel Committee.

Host supervisors should therefore assess the applicability of the inflow/outflow rates used for the consolidated entity to check whether these rates apply to business activities in host

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[3] Greater detail can be found in documents on liquidity metrics and monitoring tools. For banks, see Basel Committee (2019); for insurance companies, see International Association of Insurance Supervisors (2022).

jurisdictions. If necessary, they would apply specific inflow and outflow rates to the entities within their jurisdiction. Given these differences, host supervisors often require unique reporting requirements for the local branch or subsidiary. Home and host supervisors should work together to ensure consistency among firms in that jurisdiction.

Supervisors need to assess the ability to transfer liquidity from one jurisdiction to another when required. Home and host supervisors need to be aware of restrictions that can affect that transfer. Restrictions on the free flow of liquidity and the transfer of assets can relate to currency restrictions, ownership of assets, and other considerations.

Supervisors must also be aware of currency differences, as liquidity must be available in the currency required. Depending on the structure of an entity and the liquidity needs of the branches and subsidiaries, pools of liquidity could ultimately end up trapped in jurisdictions. When needs arise in other jurisdictions, there may be constraints on the movement of this liquidity through the restrictive aspects of asset transfer. These elements need to be understood by both firms and their supervisors.

As can be expected, any host supervisor would want full liquidity coverage for any potential risk that could arise. This is where communication and cooperation are needed, since a group may not have sufficient liquid assets globally to meet all liquidity requirements. Accordingly, a supervisory consideration needs to include the understanding that if in normal times the liquidity is transferrable, these transfers should also be possible in times of stress. In addition, entities should have contingency plans in place to ensure liquidity availability in times of stress.

Leverage

The Leverage Ratio is a non-risk-sensitive backstop to the risk-sensitive capital rules. The ratio limits an excessive build-up in leverage and reduces the impacts of deleveraging during times of stress, thus protecting the broader financial markets.

Leverage ratios have actually been around longer than the risk-sensitive ratios and are very easy to understand. A leverage ratio is simply a balance sheet ratio using the accounting balance sheet and the regulatory capital. Balance sheet growth through low risk weighted assets creates other risk problems which a leverage ratio limits. Interest rate and other risks increase with higher leverage. Home and host supervisors should use maximum permissible leverage ratios for both consolidated groups and stand-alone subsidiaries. This would require additional reporting requirements and oversight to analyze the positions and provide the additional information needed for full prudential oversight.

Solo Capital / Liquidity

Consolidation combines the financial positions of domestic and foreign subsidiaries into the combined financial results of the parent entity. It can influence the presumed strength of the parent by combining assets and capital that may not be fully available. Consolidated capital adequacy calculations can identify the risk of “ring-fencing” (a virtual barrier between core services) or double leverage (a debt offering to acquire a large equity stake), but do not eliminate these risks. This will be addressed in the next section. When looking at the consolidated positions, the same principles used for capital adequacy can also be applied to liquidity adequacy.

Supervisors can apply some solo or stand-alone calculations to both capital and liquidity to address some of the concerns relating to consolidated approaches and to deal with the unique aspects of branches and subsidiaries. Solo or stand-alone capital and liquidity positions are key to understanding the strengths and weaknesses of firms operating in a jurisdiction, and the resilience and stability of financial markets. This holds true for both home and host supervisors. The stand-alone elements are captured in Core Principles and have been echoed in papers from the Joint Forum.

Box 1: The need for solo or stand-alone approaches

Core Principles for Banking Supervision

"The Supervisor requires adequate distribution of capital within different entities of a banking group according to the allocation of risks."

"In addition to supervision on a consolidated basis, the responsible supervisor supervises individual banks in the group. The responsible supervisor supervises each bank on a stand-alone basis and understands its relationship with other members of the group."

Insurance Core Principles

"The group-wide capital adequacy assessment should identify and appropriately address restrictions on the fungibility of capital and transferability of assets within the group in both 'normal' and 'stress' conditions…..an approach with a consolidation focus using a consolidated accounts method, which starts by assuming that capital and assets are readily fungible/transferable around the group, will need to be adjusted to provide for the restricted availability of funds."

Basel Framework (Banks)

"To supplement consolidated supervision, it is essential to ensure that capital recognized in capital adequacy measures is adequately distributed amongst legal entities of a banking group. Accordingly, supervisors should test that individual banks are adequately capitalized on a stand-alone basis."

Joint Forum (Banking, Insurance, Securities Sectors)

"Supervisors should require that capital adequacy assessment and measurement techniques address excessive leverage and situations where a parent issues debt and down-streams the proceeds in the form of equity to a subsidiary."

Supervisors need to ensure that the parent and/or host entity is positioned to hold a sufficient amount of capital or liquidity that is free of regulatory and legal barriers in normal times and that is readily accessible to the parent or host entity in a stress environment. These barriers could include regulatory restrictions on the transfer of capital or assets that would not normally be captured in the consolidated framework. A stress environment could be characterized by heightened prudence among prudential supervisors, including the increased likelihood of supervisory authorities restricting the intra-group movement of capital or liquidity.

These barriers are often referred to as “ring-fencing” risk. In some cases, this risk arises in reaction to financial stress. In other cases, the power to ring-fence is built into a jurisdiction’s laws. For both home and host supervisors, an awareness of the situation affecting the consolidated and foreign entities is key to their capital adequacy and liquidity assessments.

Consolidated capital and liquidity adequacy calculations assume assets are interchangeable (fungible). This means the home supervisor is free to reallocate capital and assets across the group entities at any time, including in times of stress. This assumption is important when the home entity has subsidiaries and/or branches in foreign jurisdictions. The ring-fencing risk arises when a host (foreign) supervisor places legal or regulatory barriers to the transfer of capital, assets, or funding back to the parent. If so, the parent entity experiencing a stress event may not have ready access to the capital or assets held in the foreign operations.

From the host supervisory perspective, there may be no issues in normal times and the free flow of capital and assets is a normal business process. But in a stressed situation, the host supervisor wants to be able to lock down the branch or subsidiary to protect the depositors in the host jurisdiction.

A potential drawback to ring-fencing is that a depositor in a host jurisdiction could sometimes be better protected than the depositors of the parent entity. This again emphasizes the need for information exchanges between home and host supervisors. Both home and host supervisors need to understand the ring-fencing abilities and what it could mean to depositors of the entity in all parts of the corporate structure. That assessment will determine whether home and host supervisors can be comfortable with the levels and distribution of capital and liquidity.

Along with the information exchanges between supervisors, the calculations associated with stand-alone or solo capital and liquidity are key to effective supervision. With only limited international standards or guidance on the measurement of solo capital approaches, this tends to be left to national discretion.

Differences in approach and definitions mean there is little consensus and comparability on the calculations. Some jurisdictions use a solo balance sheet approach or some form of adjusted consolidated approach. Along with the solo capital ratio approaches, some jurisdictions have included a double leverage approach in the supervisory toolbox. This approach would assess the source of capital that is being down streamed from the parent entity to better understand the quality of the capital held at a host entity. This approach would also help the home supervisor assess the transferability of capital and assets from foreign jurisdictions back to the home jurisdiction before including the amounts in the home entity solo calculation.

Capital

A solo balance sheet approach calculates the stand-alone capital ratio, where the numerator is the solo entity’s own capital available over a denominator of its own risk-weighted assets. Investments in subsidiaries are deducted as most of these are financial entities. For the denominator, commercial investments are risk-weighted at the 1250% level. Other investments in financial entities are risk-weighted at 250%.

As an alternative approach for calculating the solo balance sheet, supervisors can use an adjusted balance sheet approach. An Adjusted Consolidated Capital Approach uses the same basic formula as the solo balance sheet approach. However, some differences include deductions for all non-controlling interests, and parent investments in foreign subsidiaries. The formula should also deduct a percentage of “equity” equivalence from any foreign branches. On the denominator side, deductions should be all of the assets from subsidiaries and branches.

The calculation should also add a capital charge for any parental guarantee of the obligations of subsidiaries and branches. This approach is more conservative than just risk-weighting exposures but has the potential to provide a more focused and narrow approach for solo capital.

Regardless of how the stand-alone capital is measured, the home or host supervisor needs to establish a consistent approach and process. An underlying principle when deciding the approach, the supervisor should consider the relative size of cross-border operations within the entity and the relative size of the foreign entity within a domestic market. If the entity is relatively large, a host supervisor might prefer a subsidiary because of the increased supervisory oversight that structure provides.

Depending on the significance of the entities and the supervisory comfort provided by other supervisors, a number of considerations may come into play when establishing a process.

A Pillar 1-style approach would require a supervisor to establish a threshold or target. This could be the same as or different from the consolidated ratios. It would be established based on the requirements for other like entities within a jurisdiction. The supervisor may also need to establish buffers, so entities do not operate too close to the minimums. The process would need to be clear about the actions associated with breaches of the capital levels. As with the consolidated approaches, the supervisor also needs to consider the role of market discipline through disclosure requirements.

An alternative option for supervisors would be to communicate the threshold levels of capital expected to be met but to take a more flexible, less punitive approach to the consequences of a breach or anticipated breach.

Liquidity

Key attributes for the solo liquidity calculation are the fungibility and accessibility of the group’s liquid assets if and when needed. Depending on the jurisdictions and currencies, a consolidated and “significant currencies” approach may provide sufficient information to assess liquidity within a jurisdiction. If not, a host supervisor must request appropriate information from host entities to ensure an appropriate understanding of the liquidity position of each host entity. As previously mentioned, trapped pools of liquidity are potential risks if a home or host supervisor restricts the flow of liquidity across jurisdictions. A solo liquidity approach may then be the best approach.

Capital Instruments

Cross-border activities and the consolidation of foreign branches and subsidiaries can lead to misrepresentations of the financial strength of a group or an entity within the group.

Double-gearing or double leverage is the most common supervisory concern associated with the capital instruments of a parent entity with subsidiaries. This occurs when a debt instrument is issued by a parent or holding company and the proceeds are invested in a subsidiary as equity. This may occur where debt funding is more cost-efficient for the parent than equity funding. These practices may improve the capital base and funding costs of subsidiaries and the parent. However, they also adversely affect the quality of the capital and its continuing ability to absorb losses or be permanent in nature.

The holding company or parent's capital injection of equity into a subsidiary, originally funded by debt, provides the subsidiary with greater debt capacity. This allows it to borrow additional funds on its own. Therefore, the original borrowing by the parent has effectively been compounded when the subsidiary borrows based on its newly injected equity. Supervisors should assess the methods by which the down streaming of proceeds from parents to subsidiaries occurs, and their potential to produce excessive leverage.

Cashflows are also impacted through double leverage. Instruments recorded as equity at the level of the subsidiary could act more like debt if the parent needs payments from the subsidiary to repay the debt at the parent level. A payment mismatch is created for the parent, which may need to rely in full or in part on dividend income from subsidiaries to service the parent's debt. Dividend income is often uncertain as it is dependent on earnings, is payable at the discretion of the subsidiary's board, and could even be restricted by the host supervisory authorities. To mitigate against this risk the parent entity needs to maintain a diversified income stream and buffers of liquid assets.

Another risk for the parent entity is a maturity mismatch risk. When a parent entity has used a double leverage strategy, it must refinance the debt issued by the parent.

Risks are also created for the subsidiaries. Cash flow risks can threaten the safety and soundness of the subsidiary due to adverse reputational contagion if the parent comes under stress. In addition, a subsidiary can be pressured by the parent to upstream dividends in order to service the external debt, thereby weakening the subsidiary's capital position. Host supervisors should consider the potential for undue pressure to service a parent's debt (for example, the obligation of a subsidiary to pay dividends to its parent). In this situation, the effective leverage of the subsidiary may be greater than its leverage calculated on a solo basis.

While this type of leverage is not necessarily unsafe or unsound, excessive use can create a prudential risk. It can give rise to excessive leverage at the subsidiary level even in groups subject to a consolidated capital requirement. This would require significant supervisory monitoring by the host supervisor. To achieve this, host supervisors will need to be able to obtain information from the home supervisor about the parent of the holding company that allows assessing its ability to service all of its external debt.

Supervisors can identify double leverage through consolidated supervision. This is because a consolidated balance sheet will show the total (external) equity issued by a group, which can then be compared against the total risk exposures of the group. Significant use of double leverage will result in inadequate equity capital at the consolidated group level, even if it appears adequate for each solo entity. Supervisors can insist that the parent entity issues equity to be down streamed to subsidiaries, or that a subsidiary itself issues equity (externally, not to its parent or other group entities).

The quality of capital can also be affected by other business decisions of a consolidated group. Supervisors must be aware of and willing to correct actions relating to multiple pledges, step-in risk, connected lending, and unregulated entities in a group, as discussed in Toronto Centre (2021). These can produce risk to both consolidated groups and solo entities. Supervisors should take immediate action when they discover these activities. The most effective action would be to require a diversified capital base and that the subsidiary issue capital on its own. However, additional capital requirements may be required to address many of the issues. Otherwise, the group or entity may need to be restructured to minimize or reduce the issues.

Solo/Stand-Alone Capital and Capital Instrument Summary

An assessment of group capital on a consolidated basis, as outlined in international standards, continues to be the recommended approach. However, given the limitations of consolidated capital, supervisors should supplement their frameworks with stand-alone or solo assessments.

Home supervisors should ensure that the parent entity has sufficient capital free of regulatory or legal barriers in normal times and has ready access to it in a stressed environment.

Home and host supervisors should consider the trade-offs between the complexity and efforts required between the various approaches and how they apply these approaches to their financial institutions. This will help decide the measure of solo capital/double leverage and the supervisory approach. Regardless of the approach adopted, the frameworks require some quantitative thresholds to help determine when supervisory interventions are required.

Supervisors may not be expert in the accounting detail or business practices of the parent or subsidiary. They must rely on the expertise within their authority on how to share the assessments between front-line supervisors, in-house supervisory/accounting experts, external experts (accountants), and firms' own management. In the latter, the firm's management should be able to show that their ICAAP/ORSA is adequate.

Supervisory Colleges

A key activity for home and host supervisors is organizing and participating in supervisory colleges. For host countries, this is an opportunity to work with other supervisors and the financial group's senior management on the risks and practices of the entity operating in their jurisdiction. It also provides a higher-level view of the group that may not be available from the branch or subsidiary. For home supervisors, it is an opportunity to communicate with the host supervisors and the group about the consolidated position and future strategies.

The most important element of a supervisory college is the amount of information sharing that is possible when the colleges are structured and focused appropriately. The college also allows for all home and most host supervisors to gain a common understanding of the business and the risks associated with a cross-border group. A common understanding of the risks and vulnerabilities also provides a level of consistency in the supervisory approaches.

For home and host supervisors, it is important to be aware of the international guidance on supervisory colleges. While not intended to be definitive on the structure and functions, the revised Basel Committee (2014) principles for effective supervisory colleges provide a framework and rationale for participation and objectives.

A key enhancement to the revised principles is the emphasis on collaboration and information sharing. The expansion of these areas outlines the importance of collaboration and information sharing being an ongoing process and not simply in a yearly gathering of supervisors.

Participation at supervisory colleges has many benefits for host supervisors, such as the ability to ask specific questions relating to domestic issues and information sharing. However, participation may not be possible or important from the perspective of the home country for many smaller countries. This is especially so for those that host subsidiaries or branches of large financial institutions. The second Basel Committee principle for effective supervisory colleges emphasizes the importance of including host supervisors where the entity in the host jurisdiction is considered domestically important, even when such an entity is not significant for the financial group.

Regarding capital adequacy and liquidity, specific interests can align when home and host supervisors collaborate using the principles of supervisory colleges as the driving force. Colleges can help supervisors better understand and deal with the risks discussed throughout this Note, such as trapped pools and double leverage. Home and host supervisors can work together to increase knowledge, assess risks, and collaborate on a positive outcome that benefits all jurisdictions and does not endanger the viability of the regulated entity.

Host supervisors should gain as much knowledge as they can when attending supervisory colleges. They should ensure they participate in discussions with the entity and the home supervisor as to the current corporate structure and business activities. They should obtain a clear understanding of the forward plans of the group regarding new business lines, potential mergers, growth projections, and management changes. Many issues can affect the capital and liquidity positions in host jurisdictions, and it is important that host supervisors have knowledge of the entire forward-looking plans and not simply the current financial and regulatory reporting.

Beyond participation at colleges, collaboration and information sharing should be built into supervisory frameworks. Size, complexity, and significance of the entity in the respective jurisdiction will be key determinants of the level and frequency of information sharing. As mentioned, liquidity can present challenges, if it results in trapped pools of liquidity in foreign (or home) jurisdictions. Collaboration among the supervisors is not just a once-a-year task. Liquidity is always changing, and home and host supervisors need to be in regular communication to understand the dynamics of the group's liquidity management. Regular communication reduces the adverse effects of liquidity runs, reduced availability of high-quality liquid assets, and trapped pools.

The terms *collaboration* and *information sharing* are used extensively in the supervisory context. Unfortunately, the amount shared can be a roadblock to success. Supervisors must establish a framework for the scope of materials to be shared. This deals with confidentiality and the two-way exchange of information to ensure that all parties benefit.

Information shared needs to be detailed enough for all home and host supervisors to have confidence that prudential standards can be met. Risk assessments and respective findings and actual changes should be key information shared. Impact analysis, stress testing, and supervisory plans are also important. Capital adequacy and liquidity plans should be detailed on both a consolidated and solo basis.

Crisis preparedness is necessary for the effective oversight of capital and liquidity. Home and host supervisors need to understand firms' plans in stress situations, at both group and solo entity levels. Just as importantly, both home and host supervisors need to understand and plan for coordinated and complementary actions.

This information sharing is something that is built over time. Host supervisors first need to request the information and then demonstrate how it will be used. Home supervisors will often be reluctant to share more information, but the home and host supervisors can work together to increase the level of cooperation by building an understanding of why information is sought and how it is used.

Conclusions

Cross-border supervision presents challenges and complications, especially in the areas of capital adequacy and liquidity. Issues can relate to the consolidated entity and whether the institution is as strong consolidated as its individual parts. Issues can also relate to:

- The consistency of the assessment approaches used
- The risks of the assets in domestic and foreign jurisdictions
- The double counting of capital instruments
- The use of a solo approach to capital and liquidity and the consequences of unique approaches.

The issues are numerous, and this Note does not purport to address all of them. Instead, the Note has attempted to raise some of the more common risk areas from the perspective of both home and host supervisors. A risk mitigant from one perspective can create risk in another jurisdiction.

Home and host relations have been a challenge ever since cross-border activities began expanding. Information sharing and collaboration have had to develop to keep effective supervision as the cornerstone of financial stability. Capital adequacy and liquidity frameworks present additional challenges as these are the key attributes in the solvency of any financial institution.

Home and host supervisors need to work together to ensure cross-border groups do not introduce contagion risk into the broader financial system. This might be the case, for example, when capital and liquidity approaches result in arbitrage or increased risk profiles.

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