Data Needs and Cross-Border Exposures
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A key step in determining data needs to assess cross-border financial positions and exposures is to first better define the objective. One of the key initiatives that has arisen from the financial crisis is the adoption of a macro-prudential approach – or systemic regulator. Canada has taken a lead on this initiative through its involvement as part of the G-20 and more specifically the production of the working group 1 report: "Enhancing sound regulation and strengthening transparency". The objective of the macro-prudential approach to regulation would be to mitigate systemic risk, and therefore a better understanding of the potential for contagion and network effects between institutions is required to implement this approach. Given that financial markets and, to a large extent banks, are global in nature, this understanding will necessitate greater understanding of institutions cross-border activities and exposures. In the perfect state, a macro-prudential regulator would need to know the exposures of each systemically important institution at all times. This is clearly unrealistic, but it highlights the daunting task that lies before us.

Once the objective is clear(er), the next step is to determine what information we have, what we need, and determine a course of action for closing the gap. In my presentation, I begin with the argument that in addition to quality and comparability, a key gap in the understanding of exposures is a lack of data about the trading and funding books of financial institutions (by comparison, data on loan book exposures are relatively well developed- if too highly aggregated). The collection of trading and funding book data however presents a number of formidable challenges. For instance, trading book positions are continuously changing. It is unrealistic to have real time data, and probably of little use to resource constrained regulators and macro-prudential overseers anyway.

Given the constraints, a regular snap-shot of trading book exposures of systemically important financial institutions is probably ideal – as it provide a at least a sense of domestic and international exposures (semi-annual is probably realistic). The other key challenge is that it is unclear whether, and on what frequency even sophisticated banks know their aggregate exposures with any precision. Many international banks will often have different books for different lines of businesses that can also be scattered across different regions. As a result, determining consolidated and aggregate positions is likely to be a significant hurdle. I argue in my presentation that risk management theory has important gaps to fill before data collection can significantly improve our knowledge of cross-border and cross-institution exposures.

In this vein, initiative being undertaken in the OTC market should be applauded. Not only would a properly risk-proofed central counterparty reduce systemic risk, but the ability to

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collect data and improve our understanding of counterparty exposures would be equally beneficial. A combined regulatory effort to create a central trade repository is an attractive option – how feasible it is remains an open question. The need for data on FIs outside of banks is also important and more work is needed in this area.

Building International Network Models

I also point out in my presentation, that the theoretical understanding of contagion and network effects is in the beginning stages. One of the key contributions of a macro-prudential approach would be to facilitate our understanding of international network structures. While domestic authorities can establish how their respective domestic banks are interlinked with each other, the ability to extend these relationships to FIs in other countries is extremely limited In order to accomplish this goal, access to micro level data across institutions is essential.

Data Needs

1. A first step would be to collect disaggregated individual institutional balance sheet data for a sub-set of international institutions (BIS is currently working on defining systemic importance).[2] This balance sheet data should include liquid assets, capital and importantly inter-bank assets and liabilities. This data would be useful in defining the size of the node.
2. In order to understand the linkages between institutions we require both direct counterparty exposures as well as common exposures to assets/sectors.
   a. Counterparty exposure - In the network model literature, counterparty exposures has been approximated using counterparty exposures in the inter-bank market. This may be a reasonable first step, but should be expanded to included repo markets as well, to account for different funding models (in Canada, the inter-bank market is a very small sub-set of the funding market).
   b. Common exposures to assets/sectors – FIs may also be exposed through holding of common assets. For instance a troubled FI may initiate a "fire sale" of assets in order to counterbalance significant losses. As such, an otherwise solvent and not directly linked institution may also come under stress. In order to approximate this channel of connectedness, one possibility would be to outline the exposure of these FIs to the top 3-5 commonly traded sets of claims/obligations (some work would be needed to establish this list)

   Note: The collection of balance sheet data should be linked with initiatives to obtain better information on the "shadow" banking system. To this extent, it may be ideal to also include off-balance sheet exposures as this would effectively capture contingent liabilities.

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[2] The top systemically important FIs are presumably banks. However, an important next step would be to extent this anaylsis to other systemically important actors such as hedge funds and non-banks.

Institutional Structure

The cross-border aspect of the data needs entails significant challenges in accessing the information. Given the sensitive nature of this outlined data need, a further test will be to devise a protocol for sharing data across international bodies. To this extent the establishment of supervisory colleges and the increased cooperation between domestic regulators may be a key determinant in improving our understanding of cross-border exposures. However to the extent that the micro and macro-prudential regulators are different bodies, another layer of cooperation and information sharing is needed. As such, an international body may be best suited to compile and safe guard access to this data.

How this might work in practice is that domestic regulators, and those bodies with a macroprudential role, would have access to this central data repository on a highly confidential basis. This data would allow domestic entities to determine how the most systemically important institutions are interlinked amongst each other and with respective domestic financial institutions.

As a final point, I would argue that the establishment of the network between the most systemically important institutions (however defined) represents a significant public good that would be internalised by this process. The inter-connected nature of the financial sector was a important factor in the crisis, and as a result, while this proposal would require a significant amount of resources and cooperation to be successful, I believe it to be a necessary step in alleviating important information gaps that currently exist.