Twenty-Eighth Meeting of the
IMF Committee on Balance of Payments Statistics

Rio de Janeiro, Brazil
October 27–29, 2015

BOPCOM—15/10.d

Improved FDI-CDIS and Cross-Border FDI-Related Measures at Statistics Canada and Associated Issues

Prepared by the Statistics Canada

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1. Introduction

The annual FDI program in the International Accounts is one of the long-standing programs, with data (though not completely continuous or coherent through time) running back to 1926. More recently, there have been efforts to update and improve the FDI and FDI-related statistics, with respect to improved accuracy and relevance – the latter reflecting the transition toward new standards, including CDIS, as well as domestic policy-analytic uses. This short note outlines some of the current and future work, including where funds have been set aside as part of Statistics Canada's long-term investment proposals plan.

2. Recent initiative: FDI re-design project

Foreign direct investment is a major component of the international investment position, currently comprising 39.7% of Canada's international assets and 32.2% of international liabilities. As a result, given its importance, the content, collection and methodology as well as systems have to be periodically reviewed. Work was initiated and completed on the re-design of the FDI surveys, as a 5 year-project in 2008.

This project included a link to the Statistics Canada centralized business register, which allows for development of linkages across survey programs at the agency and improved methodology. As part of this initiative, all survey collection activities have been centralized and transferred to centralized collection services, allowing for a more efficient collection process. On the methodology front, the initiative involved the introduction of a stratified sampling methodology to replace the list frame that had been in place for many years. It also included a corresponding systems upgrade to deal with a "rust out" problems related to software that was no longer supported or considered part of the corporate systems architecture at the agency. At the same time, the new system integrated the various components of the FDI program.

The content review portion of the project involved principally a revamping and modernization of the annual and quarterly surveys, with the objective of focussing on key areas while reducing respondent burden. Three content changes are worth noting. First, the FDI survey was adapted for (optional) IFRS reporting, as firms move to adopt new "current value" accounting standards. This could eventually provide a good estimate of *own funds at book value*[1], as opposed to historical cost FDI equity. That said there has been

[1] That term is somewhat of a misnomer, since what is meant is own funds with assets-liabilities at current value.

very little change in reporting to date. Second, the annual outward FDI survey was modified to integrate the outward foreign affiliate statistics survey[2] (FATS) as a module, in an attempt to improve response rates. Third, the quarterly FDI transaction survey has seen its sample being increased significantly and adapted to collect information on equity-debt basis and on an asset-liability basis beginning with the first quarter of 2012.

This overall effort has paid some dividends to date. Response rates for both annual and quarterly FDI surveys (including the slightly expanded outward FATS module) have increased, thus improving quality. Response burden has been reduced from reduced and more focussed content. The new survey content will enable Canada to meet new international standards.

3. New FDI initiatives and CDIS

Extending MV FDI into the annual release with industry-geography details

Canada generates a market value estimates for FDI to supplement its collected and released book value (largely historical cost) measures. Currently Canada's quarterly International Investment Position presents FDI assets and liabilities at market value in its official measure. There are plans to extend this into the annual geographical-industry FDI estimates.

The new international standards for FDI (IMF BPM6 and OECD BD4), state that equity positions for FDI should be at current values. This is consistent with SNA08. However, there is more than one approach to current valuation, including market valuation of shares, current values from mergers and acquisitions (which is limited in application) and own funds at book value – derived equity with relevant assets and liabilities at current valuation, which is possible if firms adopt the newer accounting standards (IFRS).

Canada has opted for market valuation of FDI equity[3]. This is arguably the most widely-accepted methodology in the international standards, which yields relatively consistent measures by industry and in a time series context. In short, market prices were used for listed companies. For unlisted companies, the market capitalization approach was used. This amounts to using capitalization ratios (market value / book value) derived from listed companies and applying these to the book value equity estimates of unlisted companies in the same industries, with exceptions for specific cases (e.g., small companies, specific sectors).

The issue of a size cut-off (for small companies) or threshold is based on the argument that relatively large listed and unlisted companies face similar economic realities, and therefore one would expect their equity values should move more or less in tandem. The approach is then to determine whether the investment level for an unlisted company is above a certain size threshold

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[2] Inward foreign affiliate statistics (FATS) are generated as a record linkage exercise, with good quality results at zero response burden and minimal cost.

[3] For debt instruments, the market value is set to be equal to the book value.

and then apply an appropriate industry average market-to-book ratio and/or reference recent mergers and acquisitions activity; if it is not above the threshold, then the market value will be set equal to the existing book value.

It should be noted that all calculations are undertaken at the micro, or firm, level. This allows for a simple extension of this into the annual geographical-industry detailed release as well as CDIS, and this improvement is planned to be implemented over the next few years.

Canadian statisticians have worked towards what we consider to be the best estimate of market value for FDI. However, the approach of assigning market values to unlisted companies is not recommended in the CDIS. CDIS requests market values for listed companies and book values for unlisted companies, in the context of international comparability. This situation makes for three potential measures of annual Canadian FDI in geographical-industry space, which can be confusing to users:

- The existing book value (largely historical cost) estimates, which will be retained;
- The new market value estimates, running (initially) from 1990; and
- A CDIS measure with market values for listed companies and book values for unlisted companies.

Planned enhancements to CDIS

There are a number of planned CDIS enhancements related to details that Canada does not currently provide. The first initiative is the split of equity and debt. We are providing this at the aggregate level in the quarterly IIP as part of our comprehensive revision in December 2015. Extending this into the annual geographical details is relatively straightforward, but it will take a bit more time due to the need to undertake confidentiality checks (a significant issue for a small open economy)

The second initiative is *total debt (gross) liabilities and assets* by country. This is the extension of the asset-liability principle into the typically directional based annual geographical FDI estimates. One concern is that this, like the market value initiative, also heads down the multiple measures of FDI road. While more data is generally considered to be better, multiple measures of FDI may generate confusion among users.

The third initiative is *total debt (net) for (i) resident financial intermediaries and (ii) other resident corporations* by country. This is a sectoring request which we can meet at some point but, geographically, the financial institutions portion would possibly contain significant suppressed cells for confidentiality.

The fourth initiative is *total FDI with fellow enterprises (gross and net)*. This item is not yet in the work plan of the international accounts program. That said some possibilities to generate this information have become evident, through inward FATS work for inward FDI and related to increased use of administrative data for outward FDI.

FDI immediate and ultimate ownership measures

As part of an initiative to improve geographical information, the international accounts program is making progress in two other areas. First, we looking at a means to standardize the geographical details published in different parts of the international accounts program. Along with this we are looking at ways to expand the geographical details that we release for the annual immediate ownership based FDI. This is based on the demonstrated need for more geographical information on FDI from key policy departments and international agencies.

Second, we will be moving towards adding ultimate ownership measures of FDI in addition to immediate ownership measures of FDI in the context of work we are doing on foreign affiliate statistics (FATS), activities of multinational enterprises (AMNE) statistics, and the development of new globalization micro-macro databases.

For Canadian direct investment abroad:

- Ultimate Canadian ownership of foreign affiliates is known for outward FDI
- Ultimate foreign destination for Canadian outward FDI is being developed with a new question (and sub-questions) on the latest FDI survey, supplemented by private sector databases and research

For foreign direct investment in Canada

- Ultimate foreign ownership (country of control) of Canadian enterprises has been developed by leveraging an ownership and control database that Statistics Canada maintains in conjunction with the FDI frame

Ultimate ownership measures of FDI might also make for an interesting supplement to the CDIS at some point, and may help explain some country counterpart discrepancies in FDI data.

4. More on cross-border inter-connectedness

Non-bank domestic firms can be exposed to the global economy in several ways, trade being one example. Financial inter-connectedness is another example of more recent policy-analytic interest. Portfolio investment, which has expanded significantly with some global financial crisis consequences, is one aspect of financial inter-connectedness. However, cross-border inter-company ownership claims (of parent enterprises) are arguably of a different level of commitment and exposure. For one, FDI is generally considered to be lasting investment, and is typically not as liquid as investment in securities. It therefore exposes parent firms to socio-economic conditions in other economies over a period of time. For another it takes place among outwardly-focussed enterprises. It reflects these firms' organization of their global production. The positive and negative feedback effects from such a relationship have implications for the global enterprise and therefore for the economies of the parent firms and ultimate parent firms.

One level of exposure is FDI with 50% or less of the voting shares in affiliated foreign companies. The value of equity investment and any inter-company loans and advances is at risk. In this instance the value of the total FDI position is a reasonable indicator of exposure. However, supplemental measures of the level of intra-firm trade and FDI income flows can also be useful.

A second level of exposure is FDI with in excess of 50% of the voting shares in affiliated foreign countries – majority-owned foreign affiliates (MOFAs). In the case of MOFAs, domestic parent companies typically consolidate these on their global financial statements, indicating a considerable level of engagement and exposure. As a result, the level of FDI in MOFAs is a limited measure of foreign exposure that can be broadened. It can be easily argued that parent companies are exposed to the liabilities and assets of their MOFAs. A need for a more complete set of statistics on cross-border exposures of non-financial corporations and financial institutions is reflected in DGI Recommendations 13 and 14.

As a result of the need to better understand foreign exposures related to FDI as well as a number of other demands from users, the Canadian statistics are being expanded to broaden the coverage of Canadian and foreign affiliates, their linkages to trade and FATS variables. Efforts include:

- Expanded outward FATS data for MOFAS, which are moving to cover financial variables, including: Foreign affiliate assets, broken down into financial and non-financial assets; liabilities, split between FDI and other debt; and, equity (**http://www.statcan.gc.ca/daily-quotidien/150915/dq150915b-eng.htm**)
- New estimates of Inward FATS variables, including turnover, trade, employment and financial variables (**http://www.statcan.gc.ca/pub/13-605-x/2015007/article/14220-eng.htm**)
- Move to add ultimate FDI measures, and identify Canadian direct investment abroad that is linked to foreign direct investment in Canada
- Improved estimates of Trade by Enterprise Characteristics (TEC), with a link to FDI firms

This work is being organized under a broader framework for globalization: Development of micro-macro integrated databases that tie in all FDI firms and their activities as well as all trading firms and their activities, such that:

- The performance and exposures of outward-focussed firms can be assessed in relation to the Canadian economy;
- The development of expanded FATS and AMNE estimates are supported, along with the expansion and integration of TEC measures;
- Future measures of global production estimates (e.g., goods for processing) are supported; and,
- Supply-use tables can eventually add sub-industry granularity.

5. Summary

Relevance is a moving target, particularly as a more integrated global economy continues to evolve and impact on domestic economies. The International Accounts and Trade Division is taking a number of steps to (i) improve on existing FDI data and (ii) to add new micro datasets in relation to the foreign direct investment relationship and trade by enterprise characteristics.

As noted in this paper initiatives include market valuation for FDI, improved CDIS details, development of ultimate FDI measures, and the expansion of the FATS program. In addition, a long-term perspective is underlined by developing the analytical capacity in micro databases in order to improve the quality, details and breadth of macro-economic statistics as well as to support micro-data based studies.