IMPLEMENTATION OF 2008 SYSTEM OF NATIONAL ACCOUNTS BY THE AUSTRALIAN BUREAU OF STATISTICS

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Abstract
The Australian Bureau of Statistics (ABS) implemented the System of National Accounts 2008 (2008SNA) and the Balance of Payments and International Investment Position Manual version 6 (BPM6) with the release of statistics for September quarter 2009. The ABS was the first national statistical agency to implement the revised standards. The implementation coincided with the introduction in the Australian national and financial accounts of an update to the industrial classification used by the ABS and Statistics New Zealand. Managing two concurrent significant changes to Australia's macroeconomic statistics was a major challenge that involved many different parts of the organisation. This paper outlines the processes used, and issues faced, by the ABS in the implementation of the 2008SNA changes. The paper presents a number of principles which the ABS adopted to guide the implementation and describes issues that created difficulties. It is hoped that this paper will provide insights to other national statistical organisations as they implement the new standards.

Key words: macroeconomic statistics, revised standards

1. Introduction

The international standards for macroeconomic accounts, apart from those for Government Finance Statistics (GFS), were updated concurrently. The new standards are presented in the 2008SNA and BPM6. The ABS was a strong contributor to the development of 2008SNA and BPM6 due to its adherence to previous standards and investment in developing national accounting capability. The ABS continues this tradition by supporting other countries to implement new international standards and by supporting the research agendas for the System of National Accounts and Balance of Payments. The Australian and New Zealand Standard Industrial Classification (ANZSIC 2006), which is compatible with the International Industrial Classification Revision 4 (ISIC Rev4), and the Standard Economic Sector Classifications of Australia (SESCA 2008) were also introduced into ABS statistics at the same time as the new international standards.

2. Management of change process

The ABS decided that a clean, once-off cut-over to the new standards would minimise instability in macroeconomic series. The alternative approach would have resulted in instability over a period of several quarters, or even years. Once this key decision was made, the work programs of a large number of statistical operations had to be coordinated, and a user consultation and communications program had to be developed. The approach came to be known as the "big bang" approach. It was recognised that this approach could have been risky if not managed appropriately.

This approach was able to be managed in Australia as the ABS is responsible for the national accounts, the balance of payments and many of the data collections that feed into the macroeconomic accounts. Two senior internal ABS governance bodies were created and charged with the coordination of the implementation.

3. Principles behind the implementation

There is a big investment in standards by the ABS including in the System of National Accounts, Balance of Payments Manual, industry classifications and a range of standards for most statistical measures. Building on the experience of implementing previous upgrades to the international standards and other significant changes, the ABS identified the following principles to guide the implementation.

(a) Departures from standards should:

- be few in number, be of a significant benefit or avoid an unwarranted cost
- be carried through all accounts/statistics (no "local" departures) while being aware that related standards, like GFS, are being updated on a different timetable
- enable a straightforward reconciliation with the standard where feasible
- only be implemented after extensive consultation and publicity.

(b) Timing of implementation

- Changes impacting GDP should be implemented at the same time (as far as practical) and in conjunction with the introduction, for the 2008-09 annual national accounts, of ANZSIC 2006. This meant that data changes were required in ABS annual business collections for the 2006-07 reference year to coincide with the national accounts processing cycle over 3 years.
- Other changes to be made as practicable.

(c) Coordination and consultation

- The implementation must be centrally coordinated so that there is consistent treatment across the ABS and clients receive a consistent message about plans.
- Clients must be provided with sufficient opportunity to consider the changes being introduced and all clients must have equal opportunity to access this information.

4. Backcasting, bridging, parallel runs, seasonal adjustment

The ABS maintains long time series for national accounts, balance of payments and international investment position. A large number of these series is maintained in original, seasonally adjusted and trend variations. The introduction of changes like 2008SNA resulted in shifts in the levels of component and total series. If the shift in level was sufficient to distort the seasonally adjusted time series, the ABS revised the historical series to make the time series as continuous as possible.

To ensure consistent treatment of time series, the ABS established a standard approach to measuring shifts in the level of series. The size of the level shift induced by a methodological or measurement change was assessed using regression analysis techniques on the ratios between the current published estimates and actual or simulated estimates produced by the revised methodology.

In cases where the level shift was found to be significant in the seasonally adjusted series, the historical series was backcast to make the time series as continuous as possible while maintaining, as far as possible, the integrity of the period to period seasonally adjusted movements and taking into account real world changes (e.g. computer and information services do not exist for the whole ABS time series). For a small number of lower level series it was not possible to create a valid time series and these series were marked 'not available' for periods prior to when data collection commenced.

Where it was not possible or necessary to maintain a long time series, the ABS adopted an approach of ‘bridging’ the current published estimates and the estimates produced by the revised methodology. This means that estimates on both the current and new basis were produced for one point in time and both sets of estimates were released along with analysis to help clients understand the differences between the series. This approach was used for the annual economic surveys and was particularly relevant for the Balance of Payments Financial Account series, as many of the series where not appropriate to be modelled beyond a certain time.

Because of the large number of changes being implemented concurrently, together with normal revisions, interpreting impacts or sources of the changes with any precision was not possible. This was not only a difficulty for users, but also an issue for quality assurance of outputs by the ABS, including account compilers.

5. Data Release and Communicating with Users

The ABS chose a September quarter implementation as this coincided with both the release of the annual publications, the start of a new financial year and the normal timing for introducing historical revisions. ASNA changes resulting from revised international standards were implemented with the 2008-09 issue (cat. no. 5204.0), released on 8 December 2009. The new standards were also reflected in the September quarter 2009 issues of Australian National Accounts: National Income, Expenditure and Product (cat. no. 5206.0), and Australian National Accounts: Financial Accounts (cat. no. 5232.0), and the 2008-09 issue of Australian National Accounts: State Accounts (cat. no. 5220.0),

To accommodate additional processing required to compile the macroeconomic accounts according to the revised standards the September quarter 2009 issue of Balance of Payments and International Investment Position, Australia was delayed one week and the September quarter 2009 issue of Australian National Accounts: National Income, Expenditure and Product was delayed two weeks. Subsequent issues of these publications were released according to standard timing.

The ABS developed a comprehensive communication plan. The main features of the plan included: the early presentation of plans to key advisory bodies and other stakeholders; consultation with key government agencies using macroeconomic statistics; the release of information papers outlining key SNA and BPM changes and implementation plans; the release of information papers for affected publications describing the main changes, timing of changes, and impact on time series and the presentation of statistics, this included mock-ups of the publication and time series spread sheets after the implementation of the changes; the release in September 2009 of an information paper summarising the main changes and quantifying, to the extent possible, the impact on key aggregates; for some of the more significant changes detailed methodological information was provided; and finally, the inclusion in the first release of each publication of a comment on the statistical impacts of the changes.

6. Changes to data collections and systems

Apart from ANZSIC06 related changes, there were some changes in data collections to support 2008SNA and BPM6. From a practical point of view the changes to the ABS suite of annual industry surveys and the Quarterly Business Indicator Survey (the main source of quarterly economic data) were minor (although the changes to QBIS coincided with the high impact introduction of non-employing units to the survey). However, these reclassified units and coverage changes were difficult to implement into supply-use balancing. This had a consequence of impacting on the changes from 2008SNA in the supply-use tables and making the implementation process quite difficult.

The ABS relies on administrative data from a number of government organisations including the Australian Taxation Office and the Australian Prudential Regulatory Authority, Australia's financial regulator, and maintains strong relationships with the organisations at both senior and operational levels. Changes to administrative data sources can require a considerably longer lead time than needed for changes to ABS surveys.

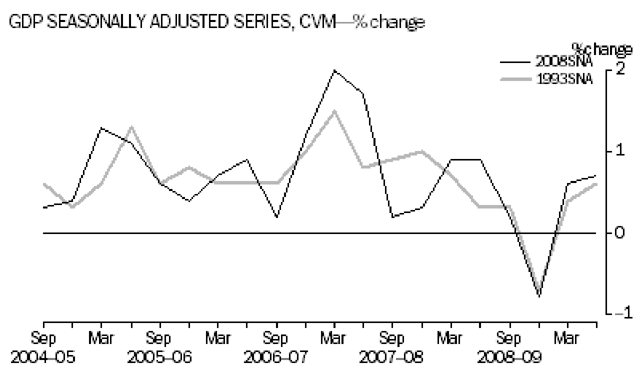
The main change driven from the implementation of new standards was the opportunity to review systems and processes for compiling the accounts

7. Impacts and challenges implementing new international standards

The benefits of a comprehensive set of 2008SNA compliant national accounts was the ability to adapt to global economic changes, such as the Global Financial Crisis (GFC), and maintain a stable set of aggregates with sufficient quality for policy makers and Australia's central bank.

The revisions due to changes in international standards were mainly limited to a shift in the level of the main aggregate for the relevant account, for example GDP levels increased on average by 9%. Graph 1 shows that there was minimal impact on real growth rates for quarterly GDP. These changes were well within the range of standard revisions to GDP growth rates. One of the more complex changes was the capitalisation of Research and Development (R&D) expenditure. Another major change to the levels of GDP was the introduction of defence weapons platforms as capital stock, although the values are not published due to confidentiality reasons. Both of these changes were offset in other parts of the National Accounts. Using the examples above, defence weapons platforms reduced government expenditure and output by the value of the capital product less consumption of fixed capital; and an increase in capitalisation of R&D products was offset by a reduction in own account expenditure.

Graph 1



One of the unintended consequences of a shift in the GDP level before the rest of the world was a distortion to some of the key ratios used to monitor economic performance. For example, within a short time after the release of new data, the Australian government announced that Debt to GDP levels had fallen and Australia's GDP per capita ranking in the OECD had increased. Conversely, some other agencies viewed the changes quite negatively as Australia's innovation and research expenditure as a component of GDP fell and Australia lost ground in OECD ranking tables. This was dealt with by explanatory foot notes and, in some cases, the continuation of 1993 SNA equivalent GDP.

8. User response to implementing new standards

The coincidence of the final implementation with the onset of the GFC resulted in concerns for the ABS and its key users. Reactions to the release of data compiled to the new standards were coloured by this coincidence. Analysts had to cope with new or significantly different series and interpreting their behaviour by attributing movement to economic phenomena or statistical phenomena.

Very close to the implementation date, some users suggested that the implementation should be delayed. Given the lead times required for conversion of data collections to the new standards well before publication, it was practically impossible to delay. In essence delay would have required compilation of 1993 SNA and BPM5 accounts from data collected to 2008 SNA and BPM6 standards.

The difficulties users experienced were reduced to some extent by the communication program the ABS had put in place to inform users well advance about the nature of the changes, the likely impacts and the detailed changes to published tables, spreadsheets and other products. Even so this communication program did not reach all users and some were surprised. Others were aware that changes would occur, but the impacts on their work were not apparent until the data were released.

In addition to the turmoil in the economy due to the GFC, the Government's reaction and the change in standards themselves, there was another impact of the changes in standards. Given the number of data collection and compilation systems that had to be revised to accommodate the standards, the opportunity was taken to improve data sources or methods to address known deficiencies. These quality improvements were impossible to separate out from the standards changes, and made the task of users forecasting or anticipating results more difficult.

Setting aside the coincidence of the release of accounts to the new standards in a time of turmoil, a more considered user view of elements in the new standards has been formed:

- The new standards are an improvement on the previous standards, result in higher quality output, and are welcomed broadly by users.
- Some of the standards changes that attracted some controversy internationally were not controversial in Australia. These include the recognition of unfunded employee pension liabilities and the capitalisation of defence weapons platforms. Australia adopted these features with the introduction of accrual accounting standards in 1998.
- Australia implemented a reasonably complete set of national accounts when implementing the 1993 SNA and BPM5. Therefore, there was little "catchup" in moving to the 2008 SNA and BPM6 by comparison with countries that may have omitted certain 1993 SNA features such as FISIM. Users were familiar with most 1993 SNA concepts and by and large attributed volatility in series during the global financial crisis to measurement difficulties rather than standards changes.
- There is scepticism by some users about the utility of capitalising research and development expenditure. It does not seem to explain some of the productivity "puzzles" while at the same time made forecasting capital formation more difficult.
- There were some user concerns about the shift in the level of GDP due to 2008 SNA. Some agencies that relied on ratio based performance indications, such as business R&D to GDP (downgrade) and debt to GDP (upgrade), GDP per capita (upgrade), move up or down international comparison lists depending on the ratio.

In summary, most users were more concerned with interpreting data in the context of the global financial crisis than issues to do with the new standards.

9. International reporting obligations

An issue that arose from Australia's early adoption of the new standards was how to report to international organisations. There is tension between publishing statistics to the new standards by the national statistical agency and the publication of statistics by international organisations for international comparability purposes, where not all countries report to the same standards. As a result policy and practical questions arise.

The policy question is the desirability of an international agency publishing key indicators different to those published by the national agency. Two sets of key indicators for a country will confuse economic debate, especially in the country concerned.

Informing the domestic economic policy debate is the main reason for producing macroeconomic statistics by national agencies. International comparability is the main reason for international agencies publishing macroeconomic indicators for countries. Adjustment of one set of key indicators to a different standard compromises one of the two objectives. The ABS found it difficult to negotiate a satisfactory outcome on this policy question with the agencies concerned. Similar issues arise even when there are no standards changes, when a country departs from the standards for domestic policy reasons.

The ABS notes that standards and reporting requirements are evolving outside a formal standard setting framework (e.g. G20 data gaps, Basel III developments and globalisation indicators development) and these also need to be managed as well. Also, some of the detailed international manuals were not available when the new accounts were being compiled. Therefore, the ABS had to choose between the detailed presentations from these manuals and using the core of the new standards. This means the ABS requires a separate process to implement the more detailed presentations based on these manuals.

10. Conclusion

In summary, the ABS thinks that management of reporting when the standards change needs improvement. There are some things that international agencies might be able to do to cope with the almost inevitable differences between reporting countries short of publishing a different set of key aggregates.

11. Future developments

The IMF's Government Finance Statistics Manual is in the process of being updated from the 2001 edition, consistent with 2008SNA and is due for completion in 2014. This may result in some additional changes for some economic categories. The implementation of the new standards by other countries may well result in the emergence of best practice as these countries consider their implementation in detail.

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