Australian household net worth

Anthony Goldbloom and Andrew Craston[1]

Treasury has decided to cease compiling its own measure of private sector wealth in favour of a series based on Australian Bureau of Statistics household net worth. Most elements of the ABS household net worth measure are now available with quarterly frequency. Treasury will apply a quarterly approximation to the remaining components and backcast data to make it suitable for use in the Treasury Macroeconomic Model (TRYM).

The article concludes with a brief analysis of the new wealth figures. Australian household net worth increased by 11.6 per cent in the year to June 2007 — slightly faster than its long run average growth rate of 10.5 per cent.

1 The authors are from Domestic Economy Division, the Australian Treasury. This article has benefited from comments and suggestions provided by John Hawkins and Steven Kennedy. The views in this article are those of the authors and not necessarily those of the Australian Treasury.

Introduction

Wealth was described by the author Frank Herbert as a tool of freedom, whilst being known to scholar Robert Burton as devil's bait. The definition may be contentious, but its analytical uses are not; it is a useful explanator of movements in aggregate consumption, and is often used as a benchmark when examining the level of foreign liabilities.

The Treasury private sector wealth series was developed for use in the Treasury Macroeconomic Model (TRYM) at a time when the Australian Bureau of Statistics (ABS) did not publish a net worth series. Since 1995, the ABS has published a household balance sheet — making available a measure of household net worth. The ABS measure is an annual series and is therefore not suitable for use in the TRYM model, which relies on quarterly data. However, as of November 2006, the ABS altered its methodology — as a result the majority of the ABS household net worth measure is available with quarterly frequency. Household net worth is conceptually equivalent to private sector wealth as the household sector — after subtracting public and foreign ownership — ultimately lays claim on the whole private sector.

This article will continue with a brief discussion of the ABS measure of household net worth. The third section contains a discussion of the differences between the ABS measure and the Treasury measure. This is followed by an overview of modifications made to the ABS measure to make it suitable for use in the TRYM model. A brief analysis is then provided of recent trends in household net worth.

The ABS measure of household wealth

ABS household wealth has been published with annual frequency in the ABS annual national accounts since 1995 with the time-series dating back to 1989. It comprises dwelling assets, financial assets and liabilities and the capital stock held by unincorporated entities.

As of the 2005-06 annual national accounts, the ABS dwelling asset measure adopted the Reserve Bank of Australia's dwelling asset measure (ABS 2006). The RBA estimates dwelling assets as the product of the number and mean value of dwellings held by the private sector. This series is made available quarterly by the Reserve Bank with the publication of their *Bulletin* statistical tables.

The ABS measure of financial assets and liabilities is also published quarterly by the ABS in their quarterly financial accounts (5232.0) publication. Financial assets and liabilities are split by instrument and by sector.

The remainder of the household balance sheet comprises non-dwelling capital and land held by unincorporated entities. These are only available annually with the publication of the annual national accounts. This asset class made up 10 per cent of household net worth in June 2007.

Differences between the ABS measure and the old TRYM measure

Treasury first published annual estimates of private sector wealth in the Summer 1990 edition of the *Economic Roundup*. It drew on several works including: Helliwell and Boxall (1978), Piggot (1987) and Horn (1987). Since this publication, it was updated to include developments in methodology outlined in Callen (1991).

The methodology estimates the consolidated household and business sectors — this equates to household wealth since the household sector ultimately owns the assets of the private sector (again net of foreign ownership). Previous editions of the *Economic Roundup* have argued that estimating the consolidated household and business sector is simpler than the household sector alone, because it avoids the often complex interactions between these sectors. However, the ABS has painstakingly split the private sector into its component parts, which has the advantages of outlining the detail of holdings in the private sector.

The Treasury series also differs from the ABS measure in its valuation methodology. The Treasury approach approximates two wealth series, one at market value and another at replacement cost. The ABS measure values assets of unincorporated entities at replacement cost, whilst it prices financial assets and liabilities at market value. It is true that the ABS uses mixed methodologies, but it is difficult to obtain a market value for the assets of unincorporated entities as they are generally not traded.[2] The Treasury market value approach attempts to estimate all capital at market value, which is theoretically sound, but practically fraught.

Modifications to the ABS measure

As mentioned above, the TRYM model is estimated using quarterly data, so a quarterly wealth series must be determined. Moreover, the consumption function (the main use for private sector wealth in the TRYM model) is estimated from 1972, so a wealth series with more history is needed.

2 In practice market values differ from replacement cost in that they include disequilibrium gyrations. In the case of the ABS measure, the market value of financial assets implicitly incorporates goodwill, whereas the estimated value of the assets of unincorporated entities does not.

Two of the three components of the ABS wealth measure are published quarterly (the dwelling asset measure is compiled and reported quarterly by the RBA as are the ABS quarterly financial accounts). Only assets held by unincorporated entities are not available with quarterly frequency, but with this being only a relatively small component, for the purposes of the TRYM model it is not too problematic to approximate this component.

Quarterly values for assets held by unincorporated entities are obtained using an interpolation approach. These assets are split into the categories: machinery and equipment, non-dwelling construction, non-dwelling land and other. Each are individually interpolated using a constant quarterly growth rate.[3]

The RBA's dwelling asset series is available back to 1960. However, the two remaining non-dwelling components are not. A consistent wealth series based on the national balance sheet was therefore constructed and then spliced on to create this history. An historical non-dwelling wealth series was created as a private sector wealth series, similar in principle to the old TRYM approach; this is spliced onto ABS household net worth (excluding dwelling assets).

The historical series was created by backcasting the national net worth series (using capital stock estimates, estimates of inventories, estimates of the value of commercial land and subtracting off foreign investment). The private components of these categories were then apportioned (where relevant) using various indicators. Finally, domestic private claims on the public sector were added onto this series. The result is an approximation of household net worth going back to June 1960.

Trends in household net worth

Australian household net worth increased by 11.6 per cent in the year to June 2007, slightly faster than its long run average growth rate of 10.5 per cent.[4] Real household net worth increased by 8.9 per cent in the year to June 2007 and real household net worth per capita grew by 7.1 per cent. The increase in household net worth was driven by a 15.0 per cent increase in non-dwelling wealth and 10.0 per cent growth in the value of dwelling assets.

So far this decade, household net worth has risen by an average annual rate of 10.6 per cent, in line with long run average growth, with the driver of this increase

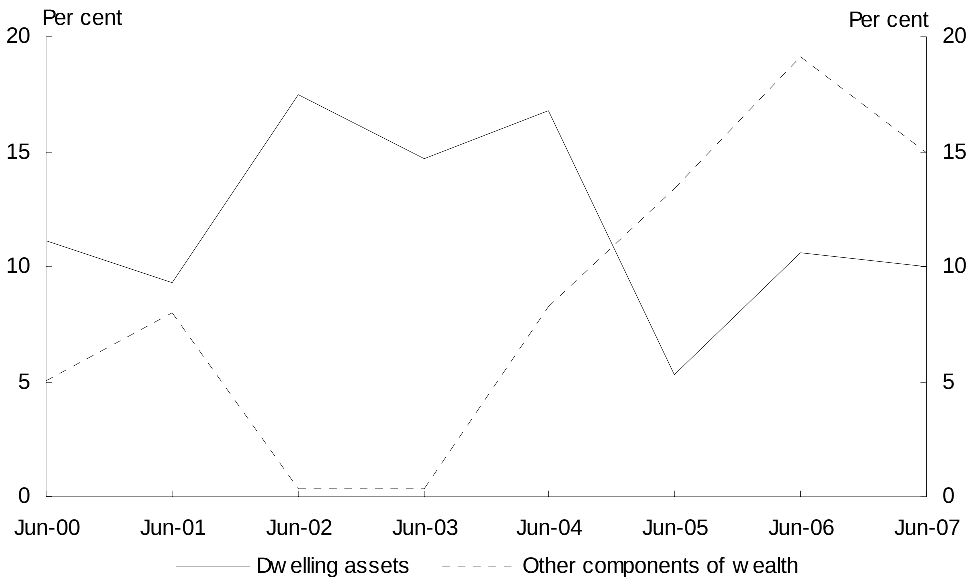
3 An alternative approach would be interpolation using gross fixed capital formation for these categories. However, since the unincorporated entities' component of the capital stock is small, it is not clear that this would provide an accurate quarterly break-up.

4 The long run rate is the average annual growth rate between June 1960 and June 2007.

switching midway through the decade. Between June 2000 and June 2004, the value of dwelling assets increased at an average annual rate of 14.5 per cent, whilst the value of other household wealth components increased by only 4.2 per cent. Over this period, house prices grew rapidly, with a weighted average of capital city prices increasing by 13.3 per cent per year.

However, since June 2004, the value of dwelling assets increased by an average annual rate of 9.2 per cent, whilst the value of other household wealth increased by 15.3 per cent. Over this period the S&P ASX 200 increased by an average annual rate of 21.1 per cent. The 9.2 per cent annual increase in the value of dwelling assets reflected strong growth in Western Australia. House prices in Perth increased by an annual average rate of 22.3 per cent from June 2004, while the volume of dwelling investment rose by an average of 8.7 per cent in the same period.

Chart 1: Annual growth in the components of household net worth



Concluding remarks

With the Treasury discontinuing its measure of private sector wealth, articles of this type will no longer be published in the Treasury *Economic Roundup*. However, the quarterly approximation of ABS household net worth will be released by the ABS as part of the modellers' database.

Table 1: Estimate of household wealth — $billion

As at June	Dwelling assets	Non-dwelling wealth	Total wealth
1960	24.1	22.3	46.4
1961	26.2	23.8	50.0
1962	28.3	25.8	54.1
1963	29.1	28.0	57.0
1964	33.0	30.7	63.8
1965	35.7	33.6	69.3
1966	38.8	36.2	75.0
1967	39.9	38.0	78.0
1968	43.0	40.9	83.9
1969	48.1	44.6	92.7
1970	56.0	48.4	104.4
1971	64.7	53.6	118.4
1972	74.0	59.0	133.0
1973	89.9	65.3	155.2
1974	117.8	77.0	194.8
1975	132.9	91.7	224.6
1976	152.7	106.9	259.6
1977	169.7	121.4	291.1
1978	181.3	134.7	316.0
1979	197.8	153.1	350.8
1980	235.5	170.9	406.4
1981	281.8	197.2	479.0
1982	301.1	227.0	528.1
1983	320.1	254.3	574.4
1984	361.2	285.3	646.5
1985	401.9	314.6	716.4
1986	423.0	354.6	777.6
1987	443.9	409.2	853.1
1988	562.5	464.0	1026.6
1989	714.4	504.8	1219.1
1990	774.7	530.7	1305.4
1991	805.8	549.2	1355.1
1992	838.2	574.8	1412.9
1993	873.6	617.4	1491.0
1994	938.8	657.8	1596.6
1995	999.4	666.7	1666.0
1996	1037.9	702.3	1740.1
1997	1131.5	788.5	1920.0
1998	1255.8	808.4	2064.2
1999	1360.5	893.8	2254.3

Table 1: Estimate of household wealth — $billion (continued)

As at June	Dw elling assets	Non-dw elling w ealth	Total w ealth
2000	1511.7	938.8	2450.5
2001	1652.1	1013.9	2666.1
2002	1940.2	1017.2	2957.4
2003	2224.6	1021.1	3245.6
2004	2598.1	1105.1	3703.2
2005	2736.0	1253.0	3989.0
2006	3027.1	1492.7	4519.8
2007	3329.7	1716.3	5046.0

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Data appendix

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