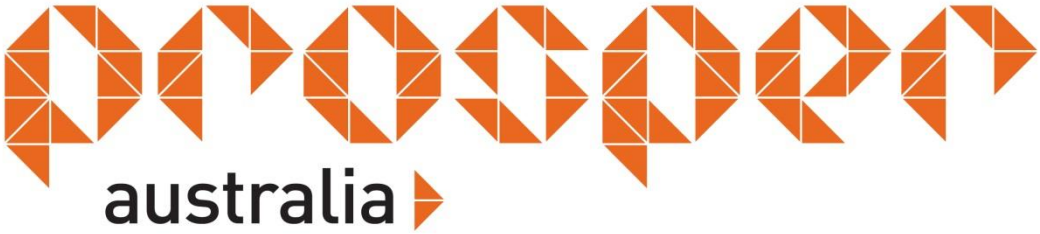


Australia's Land Bubble:

The Cause of Unaffordable Housing

2014 Senate Economics References Committee Inquiry into Affordable Housing

Philip Soos and Paul Egan, with David Collyer.

26th February 2014

Introduction

Over the last decade, Australians have debated the causes of the rapid housing price inflation and perceived lack of affordability. Since 1996, prices have outpaced inflation, incomes, rents and GDP, making it difficult for potential first home buyers to enter the market and realise the Australian dream, while increasing shelter costs adversely impact the homeless and lower income groups. These forgotten people are citizens too. Ominously, the Australian housing market shares similarities with countries afflicted by real estate bubbles, such as the United States, Spain, Latvia and Ireland. Around two-thirds of household wealth is in real estate; a large fall in housing prices would adversely impact many individuals, families and the broader economy.

Government officials, the finance, insurance and real estate (FIRE) sector and mainstream economists predictably deny the existence of a property bubble, even though land market bubbles formed during the 1830s, 1880s, 1920s, mid-1970s and late 1980s. The bursting of these bubbles invariably caused economic recession or depression. Contrary to the protestations of government, industry and academia, nine long-term measures of housing valuation demonstrate Australia is in the midst of the largest housing (land) bubble on record. Policymakers are in a bind: either delaying or implementing needed reforms is likely to burst the housing bubble, with severe financial and economic consequences as residential land values deflate to their long-run average. A chorus of critics stand poised to blame policymakers for the bust and deflect attention away from financial speculation.

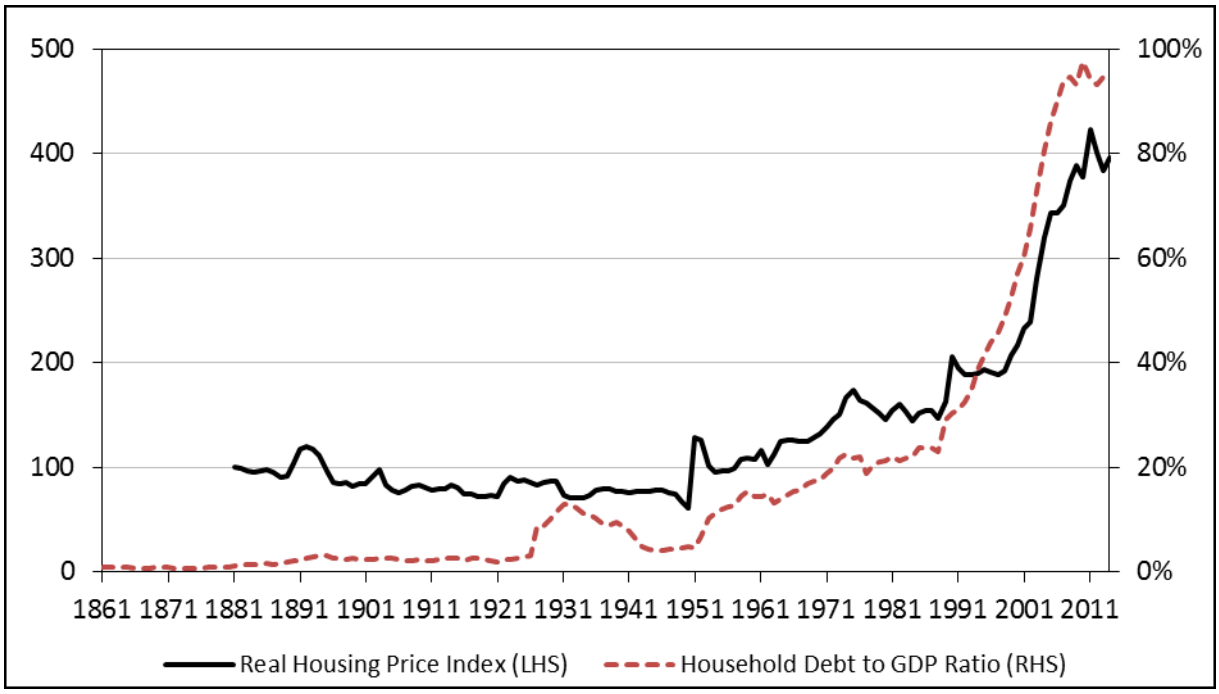
Previous inquiries in 2004 and 2008 identified both supply and demand-side variables as contributing to high housing prices: availability of finance, lower nominal interest rates, preferential taxation treatment for all land owners, developer charges, the composition and rate of employment, demographic factors (population growth, household size and age structure), cash grants to first home buyers, and the returns from other investments.[1] It is argued there are two primary causes for the housing bubble: a rapid acceleration in mortgage debt and tax policies encouraging speculation.

[1] Productivity Commission (2004: 5 – Figure 1.1); Senate (2008: Executive Summary).

Nine Metrics Illustrating the Residential Property Bubble

A residential real estate bubble forms when housing prices and land values rise sharply. Nominal housing price to inflation/rent/income and mortgage debt to GDP ratios escalate, investors' net rental incomes become persistently negative on aggregate, gross and net yields are negligible, and the turnover rate of housing ('flipping') rises. These outcomes result from banks' willingness to finance investor-led speculation in housing markets, amplified by low property and land taxes. Owner-occupiers and investors ignore paltry (imputed) rental incomes, even though this determines the fundamental value of land. The following figure illustrates the long-term trend in real housing prices and the household debt to GDP ratio (the overwhelming majority of which is mortgage debt).

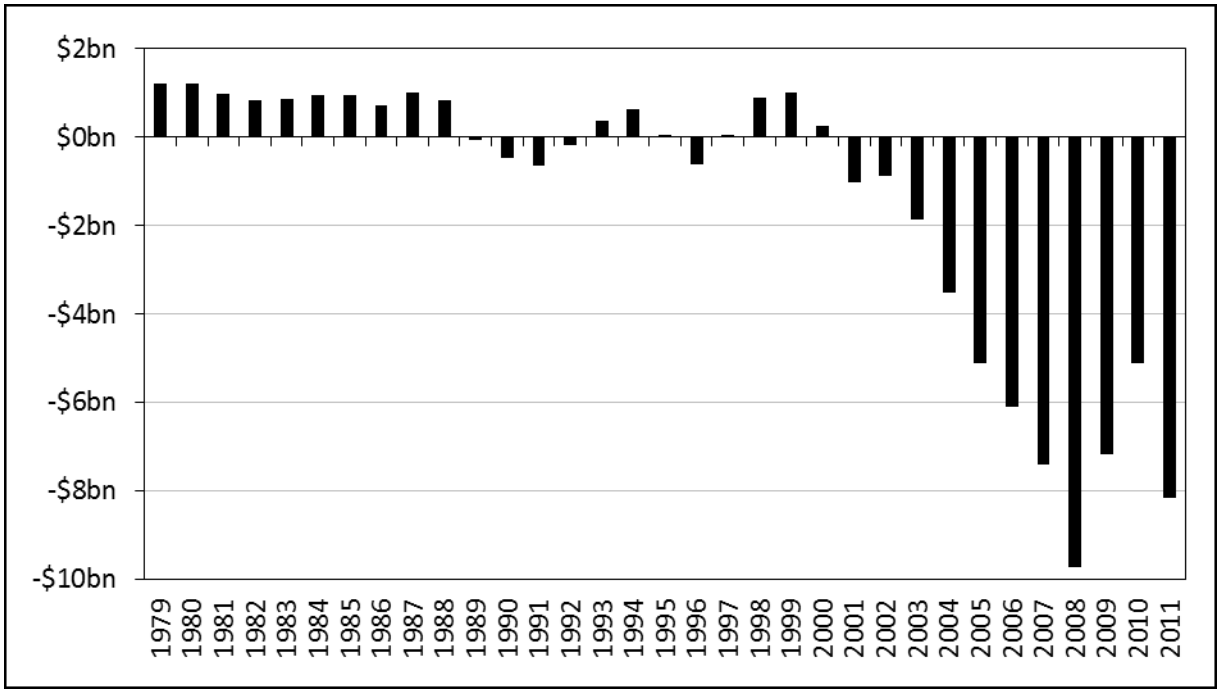
Figure 1: Australian Constant Quality Real Housing Price Index (1880 – 2013; 1880 = 100) & Household Gross Debt to GDP Ratio (1861 – 2013)[2]



[2] ABS (2014; 2013a: Table 5, 30); Battellino (2007); Butlin (1985: Tables 1, 8, 22); RBA (2013a); Stapledon (2007: 64-65 - Table 2.5; 2012: 315-317 - Table A1). Housing prices are in 2013 dollars, deflated by the household final consumption expenditure implicit price deflator and are adjusted for quality.

A rising trend in real housing prices indicates buyers are favouring housing relative to other opportunities. It took forty years from 1950 to 1990 for housing prices to double, but only fifteen years between 1996 and 2010 to double again. The surge in housing prices is driven by the tremendous growth in household debt, as owner-occupiers and investors take out ever larger mortgages to speculate on housing. The household debt to GDP ratio reached a record high of 98 per cent in 2010, the same year real housing prices peaked. In 2013, the mortgage and personal debt ratios were 86 and 9 per cent, respectively, for a combined household debt ratio of 95 per cent.

Figure 2: Australian Property Investment Real Net Rental Income 1979 - 2011[3]

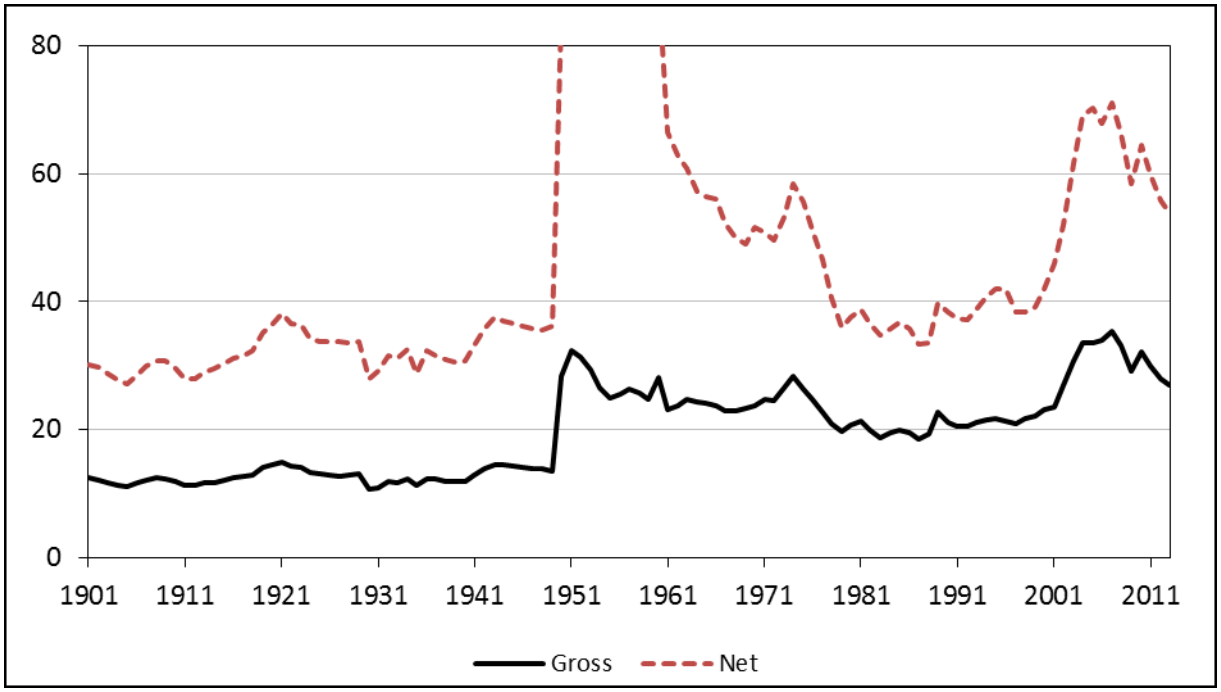


As mortgage debt escalated, investors' net rental losses increased rapidly from 2001 onwards. In that year, net rental income losses were just over $1 billion, rising to $9.7 billion in 2008 as the cash rate peaked at 7.2 per cent. By 2010, when mortgage debt reached its historical peak relative to GDP, investor losses eased to $5.1 billion as the cash rate fell to a then historic low of 3 per cent in 2009 following the global financial crisis (GFC). The latest data shows income losses rose to $8.2 billion in 2011, the second largest absolute loss on

[3] ATO (2004-2013). Net losses are even greater than depicted because the repayment of principal is not included as a legal deduction against rental income.

record. Not only is the investment stock incurring net rental income losses; the entire housing stock is in this undesirable position.[4]

Figure 3: Housing Price to Rent Ratios 1901 - 2013[5]



The housing price to rent (P/R) ratio is the equivalent of the price to earnings (P/E) ratio used in the stock market, and an elevated ratio is a classic sign of a bubble.[6] From the trough in 1997, the gross and net P/R ratios increased from 21 and 38, to a peak of 35 and 71 in 2007, respectively, before falling to 27 and 54 in 2013. The sharply rising P/R ratio was caused by a period of strong housing price growth coinciding with moderate rental income growth. The ratio fell between 2007 and 2010 due to a surge in rents stemming from a combination of high population growth and a collapse in new housing construction in 2009 after the GFC. Investors' indifference to mounting net rental losses and elevated P/R ratios implies they are fixated upon pursuing capital gains over rents and rental growth.

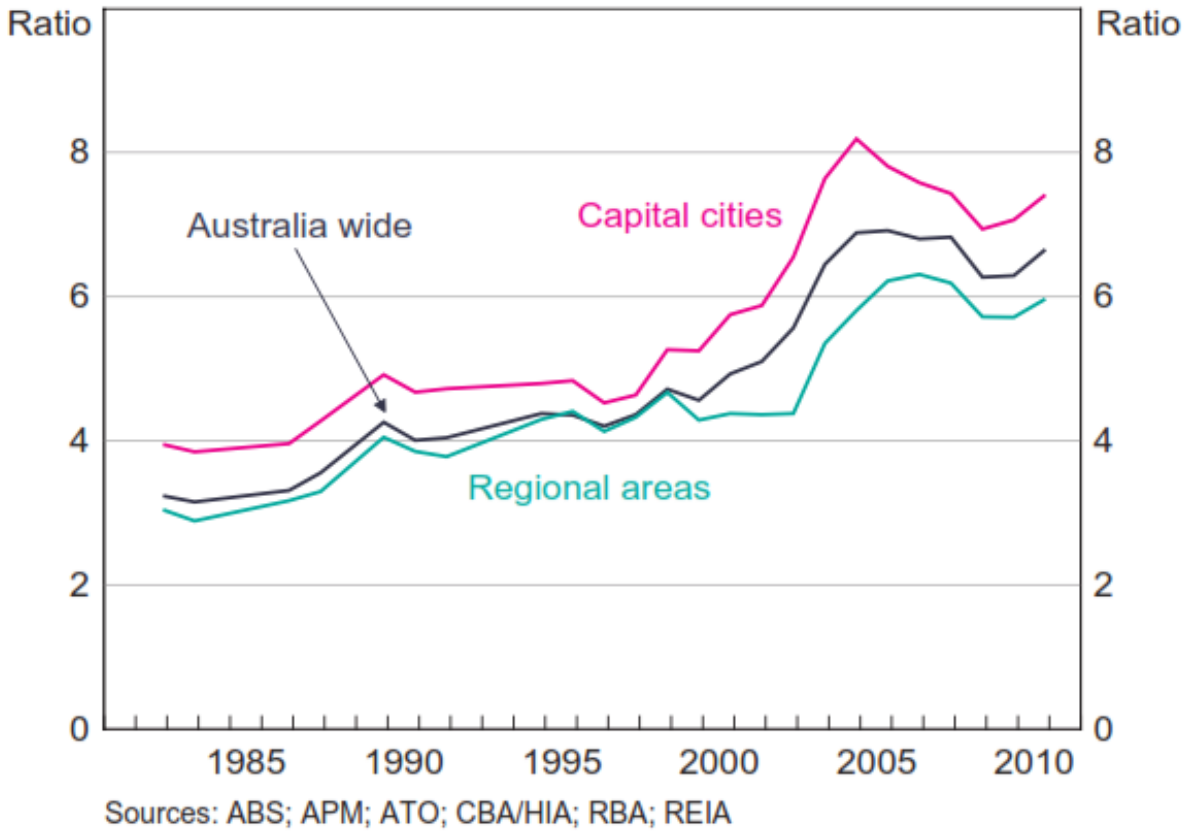
[4] ABS (2013b: Table 49). This refers to imputed rent for owner-occupiers. Net losses for the entire housing stock did not occur until 2004.

[5] ABS (2013b: Table 49); Stapledon (2007: 71-73 - Table 2.9).

[6] The Economist (2013). The P/R ratio also represents the inverted yield. As a rule of thumb, a P/R ratio over 20 signals overvaluation.

The housing market meets economist Hyman Minsky's definition of a Ponzi scheme, as gross rental incomes minus expenses are clearly insufficient to meet principal and interest repayments.[7] As 67 per cent of property investors are negatively-geared as of 2011, investment decisions are predicated upon expected rises in land values, not rents. This strategy will inevitably fail, as the escalation in real housing prices can only be sustained by a continual acceleration or exponential rise in mortgage debt.

Figure 4: Dwelling Price to Income Ratios 1981 - 2011[8]



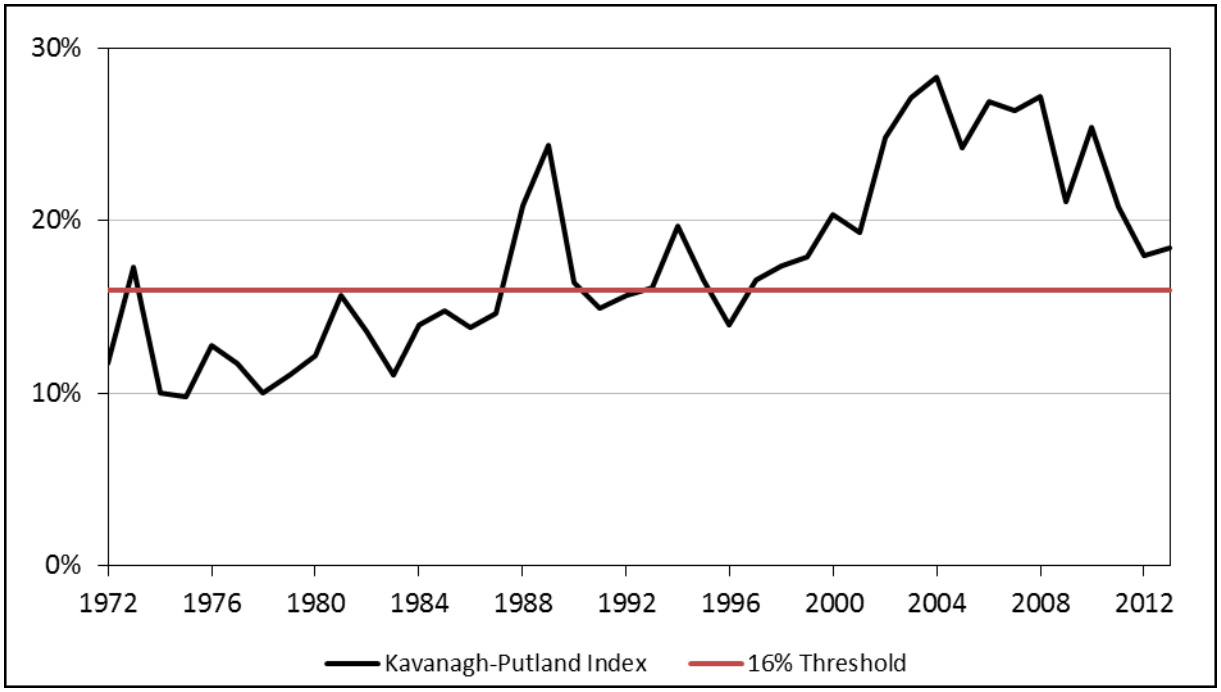
The price to income (P/I) ratio, otherwise known as the median multiple, is another measure of residential property valuation. It is expressed by dividing the median dwelling price (numerator) by the median household income (denominator), providing a simplified measure of the number of years of gross household income required to purchase a home.

[7] Minsky (1992).

[8] Fox and Finlay (2012: 17 - Graph 3).

From the mid-1990s onwards, housing prices outpaced household incomes, and the P/I ratio increased from 4 to 7 nationwide. It is impossible for household incomes to match the rise in housing prices during the boom phase of a property bubble, as wages grow more slowly, usually just above the rate of inflation.

Figure 5: Kavanagh-Putland Index 1972 - 2013[9]



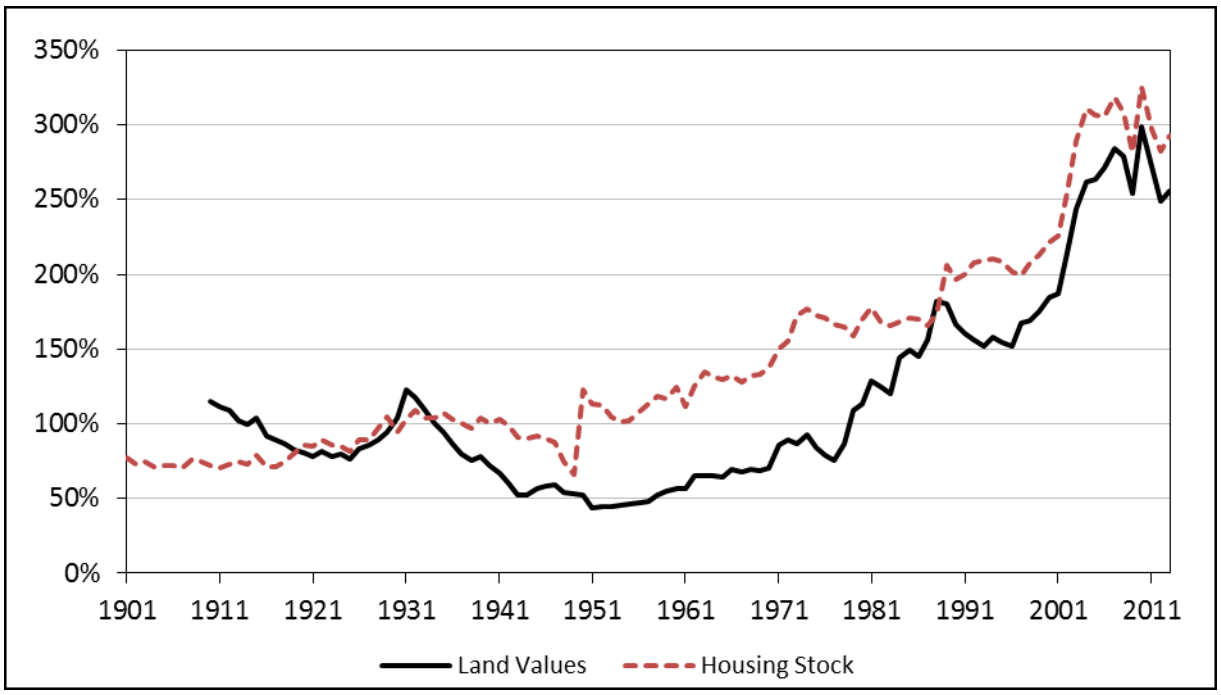
The Kavanagh-Putland Index (KPI) measures the ratio of the total value of property sales to GDP, and is a leading indicator of housing prices and the broader economy.[10] As irrational exuberance mounts, turnover increases, and the total value of annual sales rises relative to nominal GDP. When the 16 per cent threshold is breached and the ratio eventually falls, a downturn in the property market typically occurs, leading to recession.[11] From 1996, the KPI increased from 14 per cent to a record peak of 28 per cent in 2004, and remained near this level until 2008. The KPI has since fallen to 18 per cent in 2013, a level last observed in 1999. The falling trend signifies waning investor mania and partially explains the recent stagnation in housing prices and sales nationwide, except for pockets in Sydney and Melbourne.

[9] LVRG (2013, personal communication).

[10] This index is named after LVRG director Gavin Putland and research associate Bryan Kavanagh.

[11] Kavanagh (2007: 13) notes one exception in the 1994 cycle which was isolated to Queensland.

Figure 6: Total Land Values to GDP Ratio (1910 - 2013) & Housing Stock Value to GDP Ratio (1901 - 2013)[12]

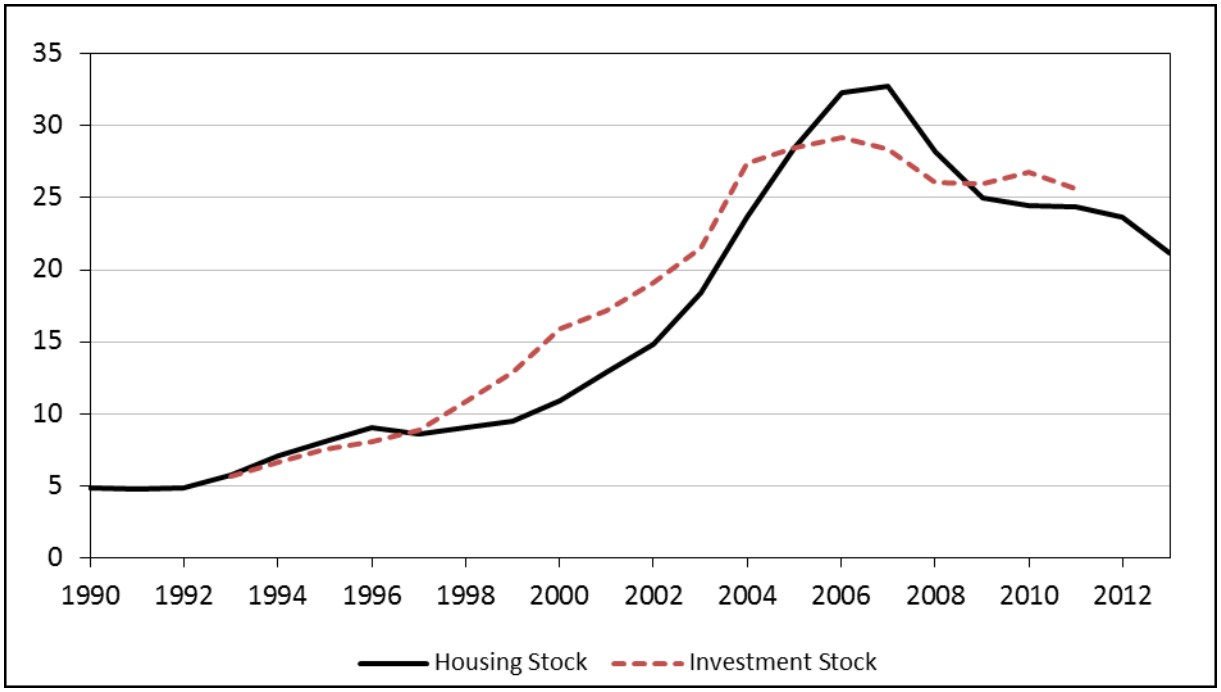


Land is the largest tangible market in Australia. Residential land is the most valuable component, at slightly over $3 trillion, with commercial, rural and other land markets worth $351b, $261b and $225b respectively. Our housing bubble is actually a residential land bubble, as the total land values to GDP ratio doubled between 1996 and 2010, when it reached a record high of 298 per cent ($4.1 trillion). In real terms, residential land values rose from $895 billion in 1996 to a peak of $3.2 trillion in 2010, a relative increase of 262 per cent. This ratio is closely matched by a similar rise in the value of the residential housing stock. The rise in residential land values, rather than structures, is responsible for almost all of the increase in the value of the housing stock. As of June 2013, the total land values and housing stock value to GDP ratios were 256 per cent ($3.87 trillion) and 293 per cent ($4.4

[12] ABS (2013b: Table 61); Coleman (1993); Dwyer (2003); Herps (1985, 1988); RBA (2013b); Scott (1969, 1986); Stapledon (2007: 66-67 - Table 2.6). Total land values includes residential, rural, commercial and other. The housing stock comprises residential land and dwelling values.

trillion) respectively. The total value of the housing stock surpassed the $5 trillion threshold in December 2013 (around 330 per cent of GDP).[13]

Figure 7: Housing Debt to Cash Flow Ratios 1978 - 2013[14]



The debt to cash flow ratio (D/CF) provides a measure of leverage, comparing the stock of debt with the income available to service that debt. The numerator represents household mortgage debt and the denominator, cash flow, is equivalent to net revenue. This metric is a valuable tool of real estate analysis, as the housing sector's financial health is often ignored by mainstream economists who inordinately focus upon government accounts. D/CF ratios are superior to private debt to GDP ratios as the latter assumes an unlimited proportion of national income can be diverted to service debt. The D/CF ratio can be categorized into one of four zones representing relative leverage: inefficient, optimum, warning and calamity. For the household sector, a ratio of 5 or less indicates inefficiency, optimum (5 to 10), warning (10 to 20) and calamity (20 and above).[15]

[13] ABS (2014).

[14] ABS (2013b: Table 49); ATO (2004-2013); BIS (2013); RBA (2013a).

[15] Ramsay (2011). These categories are based upon rules of thumb, following Ramsay's comparisons of the ratios between stable and unstable countries/sectors.

Theoretically, leverage within the optimum zone maximises returns without adversely affecting stability or increasing risk, whilst lower and higher levels are suboptimal because they either generate poor returns, or conversely threaten household solvency due to the scale of debt burdens. The housing stock D/CF ratio was 4.8 in 1990, doubling to 9.5 in 1999 but still within the optimum zone. It escalated to a peak of 32.7 in 2007, well into the calamity zone. With the slowdown in the growth of mortgage debt since the GFC and rising rents between 2007 and 2010, the ratio has fallen to 21.2 as of 2013. The investment stock fares little better, having peaked in 2006 at 29.2 and has decreased slightly to 25.6 in 2011. Households have taken on onerous levels of mortgage debt while cash flows have barely increased. Without a strong rise in imputed and actual rents or active mortgage debt deleveraging, the D/CF ratio is expected to remain in the calamity zone.

The Role of Taxation, Debt and Land Rent in Declining Housing Affordability

The nine measures of housing valuation provide strong evidence of the formation of the largest land price bubble in Australian history, threatening future financial and economic stability when it deflates. Every measure is at or near a historic peak. A convergence of factors are responsible: a large cohort of irrational investors gambling on housing prices, a FIRE sector willing and able to facilitate a credit boom, and low property and land taxes attracting speculators to this asset class. Contrary to neoclassical economic theory which stipulates private debt has no effect upon asset prices, a trend of accelerating mortgage debt growth has driven up housing prices to a historic peak. A positive feedback loop has emerged between housing prices and mortgage debt, with rising prices prompting the take-up of more debt in an upwards spiral.

An inefficient taxation system, comprised of low property and land taxes, allows landowners to expropriate 'geo-rent' (economic rent derived from land) by capturing the uplift in land values generated by taxpayer-funded infrastructure and rising economic productivity.[16] As noted by property valuer Bryan Kavanagh: "...land price is actually the private capitalisation of imputed site rent remaining on a site, developed or undeveloped, after the deduction of government charges."[17] Government willingness to tax wages and business ahead of land has elevated its privileged status, resulting in larger capital sums being paid by owner-occupiers and investors.

Counter-intuitively, reducing wage and business taxation and increasing land tax would not necessarily lower fundamental land prices, given the offsetting boost to disposable wages, profits and hence rents, but it would certainly lower bubble-inflated land prices. Land tax reform – urged on government by every independent tax review in living memory – would firmly correct the price to rent and income ratios. If Australia wishes to escape or ameliorate

[16] Hudson (2010: 2). Geo-rent always determines land's fundamental value, which is a multiple of the annual site rent minus holding costs, or more technically, the discounted present value of current and future expected rent growth, adjusted for risks and taxes.

[17] Kavanagh (2007: 2).

the profound financial destruction of a bursting land bubble, the solution lies in this equation.

Table 1: Estimates of Housing Tax Expenditures ($Billions)[18]

Tax Expenditure	2005-06	2007-08	2011-12
Capital gains tax exemption for owner-occupied housing	29.8	20	14
Discount on capital gains on investor housing	4.2	6	4.4
Land tax exemption for owner-occupied housing	3.5	10	5
Negative gearing for investment property	1.2	2	2.4
Non-taxation of imputed rent for owner-occupied housing	11.7	15	9.6
Home exemption from pension assets test	-	-	7
Total	**50.4**	**53**	**42.4**

The generous scope of tax expenditures relating to the housing market has served to further increase prices. Tax expenditures are defined as a deviation from the commonly accepted tax structure, whether it is a tax exemption, concession, deduction, preferential rate, allowance, rebate, offset, credit or deferral.[19] Australia has the highest rate of tax expenditures among our OECD peers, at more than 8 per cent of GDP.[20] Tax expenditures are vulnerable to lobbying, and often compromise the fairness and efficiency of the tax system. Lavish tax expenditures for both owner-occupied and investment property has significantly worsened housing affordability because they allow landowners to capture greater amounts of geo-rent and prioritise unearned wealth and income over what is earned. Existing home owners capture the most benefit, ahead of first home buyers, investors and tenants.[21]

These tax expenditures provide a strong incentive to speculate on housing prices, and are reinforced by already low property taxes. Investors perceive rental income as secondary to expected rises in capital prices, while first home buyers over-leverage themselves to enter a bubble-inflated market. Tax expenditures, combined with the ongoing deregulation of the

[18] Kelly (2013: 22-23, 25); Senate (2008: 61); Yates (2009: 1). Nominal dollars.

[19] Yates (2009: 8-9).

[20] Tyson (2014: 3 - Figure 1).

[21] Yates (2009).

banking and financial system, has transformed the housing market into a casino. Residential property is commonly viewed as a speculative asset to flip, rather than shelter to raise a family in. The behavior of Australians is profoundly influenced by irrational exuberance, amply demonstrated by a large cohort of negatively-geared property investors; overwhelmingly middle-income earners seeking to escape the PAYE tax system.

Neoclassical economists reduce the functioning of the housing market to supply and demand equations, instead of focusing upon debt-financed speculation and the private capture of land rent as major causes of housing price inflation. Reasons most often cited included population growth, demographic change, housing grants, urban containment policies, low nominal interest rates and inflation, developer imposts, foreign investment, the mining boom and so on.[22] Attributing the rise in housing prices to fundamentals is problematic because the true measure of land value – rental income – has not risen in tandem with prices; also, the rent to income ratio has remained steady.[23] Every time a housing bubble forms, prices rapidly increase but rents tend to track the rate of inflation, resulting in a significant divergence in the P/R ratio.

Australia's current land bubble is the latest in a long line: the 1830s, 1880s, 1920s, mid-1970s and late 1980s. The same pattern of continuous land market cycles has been observed in the UK, US and the Netherlands, often ending in severe recession or depression.[24] History has been unkind to those gullible enough to believe markets are guided by an 'invisible hand' generating efficient economic outcomes. Yet, despite clear warnings from history, economists appear willing and capable of ignoring the role that inefficient capital markets and the private capture of geo-rent has upon the formation of land market cycles.

The Senate inquiry must critically reconsider simple claims that high housing prices stem from a shortage of housing. If we are faced with a genuine mismatch between supply and

[22] Previous inquiries have already given consideration to these factors (PC 2004; Senate 2008).

[23] Kent (2013: Graph 14).

[24] Anderson (2008); Eicholtz (1997); Foldvary (1997); Harrison (2005).

demand, rents would have risen dramatically. They have not, except for a short period between 2007 and 2010. A solitary focus upon supply and demand is a convenient distraction from the twin determinants of land market bubbles: liberal lending standards and non-taxation of land. These factors are common threads explaining more than 180 years of land market data and cycles across fundamentally different economic periods: the early decades of the newly established colonies, the late 19th century before Federation, the Roaring Twenties, post-WW2 social democracy and the current era of neoliberal capitalism.

Two Recommendations

The damage wrought by regular land market cycles implies Australia's largest bubble on record poses a significant threat to future financial and economic stability. All levels of government must engage in significant policy reform regarding the FIRE sector and taxation system to supress speculation. A return to housing affordability in Australia requires directly targeting the impulse of the banking system to lend out too much credit and landowners' capture of geo-rent. To affect the greatest possible change, financial and economic reforms must prioritise the implementation of a land value tax (LVT) and macroprudential regulations.

Recommendation 1: Reform Land Value Tax. The ideal tool to moderate land bubbles and properly fund infrastructure already exists in the hands of state and territory governments: state land tax (SLT). Unfortunately, this tax has been so riddled with exemptions and concessional treatments it must be considered dormant. The states show no interest in, for instance, removing conveyancing stamp duty or payroll tax – both inefficient taxes – and funding this by also removing exemptions from SLT. They fear the political consequences, despite land tax being the most efficient and highly equitable tax.[25]

We suggest the current government introduce a nationwide one per cent federal land tax (FLT) – fully rebatable on SLT paid – to oblige the states and territories to use their taxing powers properly. State governments could adjust their tax rules and keep every dollar the FLT raises, to the benefit of all Australians. The Commonwealth Parliament would be entitled to argue this intervention is for sound economic reasons and dissipate the political fallout. Placing state and territory finances on sound bases would vastly improve the federal system mandated by Australia's Constitution. Transitional arrangements would need to be considered. Rebating all stamp duty paid against a hypothetical past SLT obligation would address concerns of fairness and equity.

[25] KPMG (2010).

Recommendation 2: Macroprudential Regulation. A range of macro-prudential tools are needed to moderate housing price inflation and subdue credit growth in a pro-cyclical financial system, such as those affecting the loan to value, (LVR), debt servicing (DSR) and debt servicing to income (DSTI) ratios.[26] Quantitative restrictions should be placed on the share of new mortgages with moderately high LVRs (60 to 79 per cent), and significantly strengthened for mortgages with an LVR of 80 to 89 per cent. Mortgages with an LVR of 90 per cent and above, interest-only loans and those backed by parental guarantee should be disallowed. Mortgage debt should be capped at a multiple of ten times the imputed or actual annual rental income of the property being purchased to prevent a positive feedback loop forming between rising housing prices and debt.[27]

To reduce systemic risk, a large rise in capital and liquidity ratios (buffers) is required to ensure banks can withstand a future economic downturn, bank run or large fall in the value of collateral. Research suggests the probability of a banking crisis can be reduced to a 1 in 100 year event by raising core equity (Tier 1) capital ratios to 11 per cent in isolation or raising core equity to 10 per cent with an addition rise in liquid assets of 12.5 per cent (the rise in liquid assets over total assets).[28] For the Big Four banks, this would represent a rise of around 3 per cent in core equity. Liquidity and capital buffers should rise in a counter-cyclical fashion during the expansionary phase of the credit cycle, thus taming the size and duration of a debt-financed asset boom. A transition towards higher backing for deposits would enhance financial stability, reduce inflation, minimise public and private debt, restrict over-lending and promote economic growth.[29] The macroprudential toolbox should empower regulators to compel additional capital requirements in investment sectors prone to irrational exuberance; typically residential and commercial land and the stock market.

[26] Rogers (2013: 16-17).

[27] Keen (2011: 398-400).

[28] BIS (2010: 4-5); IMF (2012: 22).

[29] Benes and Kumhof (2012).

Conclusion

In Australia, the FIRE sector is not playing by the rules; bankers are extracting economic rent via wide net interest margins on a colossal stock of mortgage debt, while the unearned increment in rental and land prices flow to those holding property. The popular wealth "creation" strategy of speculating on land prices has dramatically eroded housing affordability and created an almost insurmountable gulf to overcome for many potential homeowners. These outcomes are promoted by a flawed taxation system granting low property and land taxes, a mountain of housing tax expenditures valued in the tens of billions of dollars annually and financial deregulation permitting the issuance of large amounts of private debt. Investor preferences are reinforced by urban folklore backed by government and FIRE sector public relations campaigns stating housing is a solid investment, with a permanent and growing stream of wealth and income. A prohibitive entry point for housing symbolises a triumph of self-interest over the national good, as benefits flow to those Australians who already owned or invested before prices began to inflate during the mid-1990s. Families entering this grossly inflated market bear a heavy burden: decades of dutiful employment and stress to pay down ever larger debts. Enormous mortgages detract from national living standards, given a greater proportion of household income is diverted to mortgage repayments.

Ten years following the Productivity Commission inquiry that recommended reforms to improve housing affordability, all levels of government have worsened market inefficiencies by cynically maintaining and enacting policies which actually inflate housing prices. The inertia regarding housing and taxation policy reform is partially a consequence of the states' over-reliance on conveyancing stamp duty revenue, the fear of a significant fall in housing prices and a serious voter backlash. Political cowardice is expressed in absurd double-speak statements: "Improving housing affordability *does not* mean reducing the value of existing homes, which are usually the primary asset of any individual or family."[30] The tolerance of housing policies that maintain bubble-inflated prices, ignore objective evidence, contradict the recommendations of earlier inquiries, and erode housing affordability, are entirely

[30] Rudd et al. (2007: 4). This quote was also highlighted in submission #7 by Catherine Cashmore.

predictable. Property ownership and speculation has been elevated to the status of religion in Australia, compounded by a perverse culture of homeowner entitlement driven by a degenerate taxation system that penalises effort and innovation, while rewarding speculation.

Long-term vision requires superficial and populist politics be discarded in favour of aggressive taxation and financial reforms that drive down land prices; principally by implementing a comprehensive LVT. As economists Adam Smith and Henry George noted, land is a unique gift of nature whose value is determined by society; its revenues are long overdue to be shared for the benefit of all Australians, not just pocketed by the wealthy. An immediate productivity windfall flows from lower housing prices, improving business competitiveness and lowering cost-of-living pressures. A sufficiently large LVT applied to all forms of land could prevent, or at least minimize, the regular land market cycle observed throughout Australian history since early colonial times. The bursting of land bubbles create horrific costs which most often fall upon the poorest: those who never gained during the boom and have no decision-making power or political influence.

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