The inflation matching characteristics of mixed tenure private housing

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About the authors

David Toplas

David has a background in corporate finance and property, and has developed a number of innovative fund structures, ranging from BES Schemes to Public-Private Partnership funds for investors seeking long term cashflow returns. He gained much of his experience in residential property as a director of 24 unquoted public limited companies operating in the property market, with a £50 million housing portfolio, where David was responsible for overseeing the acquisition, development and letting, together with a £63 million student accommodation portfolio and a £22 million home reversion property portfolio.

Since setting up Mill Group in 1994, David has led the creation of several property and Private Finance Initiative (PFI) funds, with a current capital value of c.£1 bn. He is also a non-executive Director of the project company carrying out a £100 million PFI scheme at Miles Platting, Manchester to build and/or refurbish 1,500 homes.

Nick Mansley

Nick is an independent non-executive and a consultant to fund managers and investors on strategy, investment-related and governance issues. He spent 18 years with Aviva, where he grew the multi-manager business which to manage c$20bn for a range of pension funds and other clients across all asset classes, leading a team of 40 investment professionals across seven offices globally. He also served as Director of the Aviva Money Purchase Committee, and previously led the global real estate strategy and indirect investment teams. Prior to joining the investment management industry, Nick worked for seven years in economic consultancy for clients including the OECD, the European Commission, government departments and corporate clients on a mixture of policy evaluation and strategy work.

Nick has been involved in many industry groups and as a regular conference speaker. He retains a keen interest in research and teaching, and is a visiting fellow/lecturer at the University of Cambridge and the Cass Business School.

Foreword

Andrew Smith

Executive Director, Mill Group and Chairman, Investment Property Forum

The UK's property investment market appears to be at a crossroads. The effects of the global financial crisis forced a review of investment policies, risk controls, fee structures and governance. As a result, investors have refocused on market fundamentals when considering real estate's role in a multi-asset portfolio, and are less inclined to view leverage as a key driver of performance.

One attribute often ascribed to property is its inflation-hedging characteristics. For UK commercial property, a combination of factors have taken their toll on the sector's ability to act as an effective hedge. Examples include shortening lease lengths, depreciation, obsolescence, and structural factors such as the changing role of retail property in the face of competition from the internet.

While there is strong appetite for property investment, supported by the search for income and backed by an improving economy, investors are taking a selective approach. Large inflows of international capital have fuelled aggressive pricing at the prime end of the market. At the same time, worries about retail oversupply and continued caution towards secondary assets have limited their capacity to deploy substantial volumes of new money and still achieve satisfactory returns. This has prompted a search for alternative forms of property investment. Institutional exposure to residential property has hitherto been very limited in the UK, but this is unusual in international terms, and the sector is now firmly in the spotlight. Home ownership rates are falling, and well-publicised supply shortages across much of the country are fuelling an expansion of the rented sector, which many see as the start of a long-term trend rather than just a cyclical adjustment.

It seems timely, therefore, to review the extent to which residential property investment can offer inflation protection.

This paper is a contribution to that debate.

Housing investment and inflation matching

Introduction

- This document considers the linkages between the residential rental market, capital value movements and inflation.
- It concludes that housing investments should provide an effective proxy for inflation linked cashflows.
- Different tenure structures offer different degrees of inflation protection. To test this, an Appendix to the paper analyses the effect on a modelled mixed tenure residential investment portfolio comprising:
  - Short term lettings
  - Longer term lettings
  - Mill Group’s part-rent/part-buy arrangement

Historical evidence from the UK

- No reliable long run residential rental value series is available for the UK, but there is evidence from a variety of sources that rents have broadly tracked inflation:
  - IPD data for the period 2000-2012 shows that market let residential rents and RPI grew at 2.5% and 3% p.a. respectively. IPD portfolios are particularly skewed towards Central London, which has been more volatile than regional markets. London rents fell by 6% in the 2008-9 period whilst generally levels were still rising.
  - ONS data for the period 2000-2012 period shows "actual rental" growth of 2.6%, compared with 2.3% p.a. for the Consumer Price Index (CPI).
- Residential rents are much less volatile than house prices (standard deviation of 2.5% v 8.4% for 2001-12 (Source: IPD)), and this has been reflected in an increase in the rent/house price ratio as house price growth has outstripped general inflation, leaving this measure around 30% above its long term average (Source: OECD Economic Outlook, 2013).
- Historically, over the very long term, housing's share of total consumer expenditure has generally increased, reflecting both that it is income elastic (demand rises with income), and that the supply has been constrained.
- A number of more local studies also indicate a movement of rents in line or slightly ahead of general price inflation over the long term. (Source: DCLG 2013 and BPF 2013)
- IPD figures show a tracking error against the Retail Price Index (RPI) of over 2%, which is not surprising given the skew in the portfolio towards central London. This is higher than national ONS figures, which show a tracking error of 1.3% versus CPI.

History suggests rents broadly track inflation, particularly over the longer term

International evidence

- Given the absence of long term data on rents in the UK it is also interesting to look at the long run history for rental movements in other markets to assess their inflation matching characteristics. Different processes of regulation and deregulation have played a part in some markets.
- In the US, between 1950 and 2000 gross median rents increased steadily in real terms, increasing in every decade, after a fall of c.1% p.a. between 1940 and 1950.
- OECD statistics for the US show housing rental growth of 3.3% p.a. over the period 1983-2013, compared with general consumer price inflation of 2.9% p.a.
- Germany shows 3.8% p.a. housing rental growth against general consumer price inflation of 2.8% over the 50 years 1963-2013 (source: OECD). Rents have broadly increased above inflation, but with some 10 year periods where rents have increased by 0.5% less than inflation.
- Data from the Netherlands shows housing rental growth of 4.8% p.a. compared with general consumer price inflation of 3.6% from 1963 to 2013, with no 10 year period of rents falling in real terms (source: OECD).
- Even in Ireland, where the economy and property markets have been particularly volatile over the last decade, rents are still c.10% above 2005 levels in real terms.

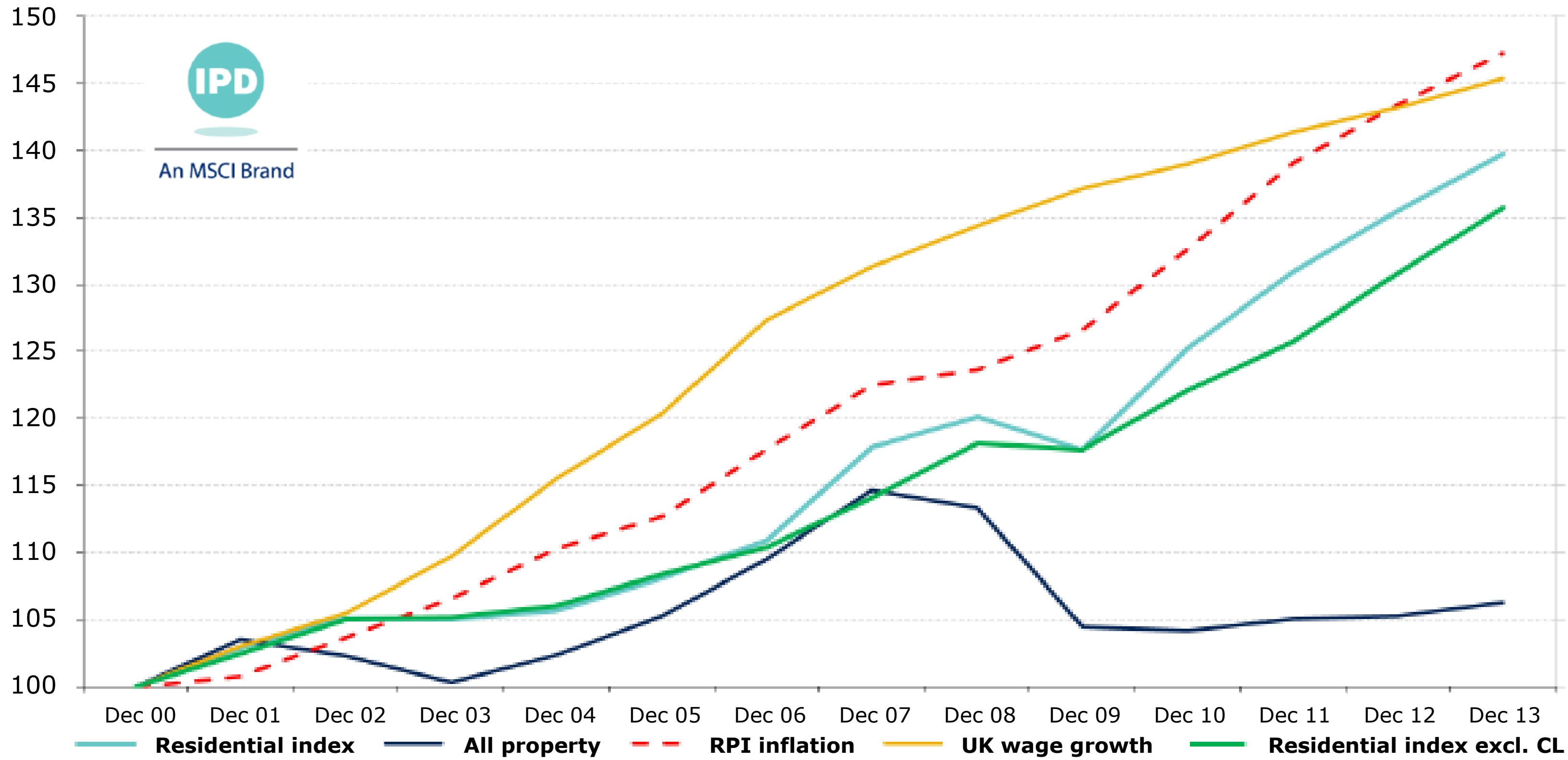
International evidence suggests residential rents have strong inflation matching characteristics in different jurisdictions

UK housing rents and inflation – the linkages

- Housing rents have a direct impact on inflation measures. RPI includes the impact from residential rents, Mortgage Interest Payments (MIPs) and House Depreciation. 8.6% of the RPI is driven by rents, 2.9% MIPs and 5.8% House Depreciation. The CPI is a harmonised measure of inflation with a 6% weight given to housing rents.
- Demand for housing is relatively income elastic: as incomes rise demand rises. A 10% increase in income has been estimated to lead to 20% increase in spend on housing (Source: Cheshire, P. & Shepherd S. 1998).
- Conversely, supply is relatively inelastic and is affected by planning, anticipated returns and the complexity of delivering new houses. Consequently, it is not surprising that prices rise in real terms at times of strong economic growth. Given the supply constraints in the UK, house prices tend to rise in real terms, rising in line or ahead of real incomes.
- Rental demand is affected by the availability/affordability and attractiveness of owner occupation, as well as other tenures.
  - The supply of rental property is influenced by investor attitudes towards renting property (reflecting anticipated returns, the returns available in other asset classes, risks and attitudes towards risk).
  - Rental demand is stimulated in times of high house price growth by affordability pressure, but buoyant housing markets are likely to increase investment in housing and the supply of rented stock, acting to stabilise rental growth.
  - Similarly, in times of weak economic growth and high interest rates, rental demand is likely to increase, dampening the impact of the cycle on housing rents.
- Housing Association and local authority rented property has typically seen rental growth in line with general inflation. This would dampen private rented market demand if private market rents grew significantly faster than inflation. Conversely, it would support private rented market demand if rents lagged general inflation or Housing Association rents. Over the long term, the income elasticity of demand for housing is likely to lead to rents rising in real terms, and upward pressure on both private and Housing Association rents.

The economics of housing support private market rents acting as a hedge against general inflation

Correlation between UK rents and RPI inflation



Source: IPD March 2014, Rental growth indices, December 2000 = 100

- IPD's information suggests that rents have closely mirrored inflation (index of 140 versus 146 over 13 years), especially when taking out the volatile prime Central London market
- Wage growth has outstripped rental growth over this period, despite recent restrained wage rises, ensuring affordability for consumers

Mixed tenures and inflation

- There are a variety of lease structures and tenures that give exposure to the housing market and offer differing degrees of inflation protection, including:
  - Short-term lettings of 12 months, after which there is an open market review or new tenancy to reflect annual rental growth.
  - Medium term lettings to individual tenants with contracted uplifts in line with RPI, for example up to five years. After this period leases could be renewed at market rents or re-let on the open market.
  - Long term lettings on RPI-linked leases to housing associations or local authorities to provide contracted RPI-linked income streams.
  - Part-rent/part-buy arrangements under which occupancy rights have payment obligations. Occupancy charges are increased in line with RPI annually and then rebased to the higher of RPI or a yield on the house price.
- The consumer is interested in a variety of tenure options reflecting their motives for renting: living in an area temporarily; to provide flexibility; to rent rather than buy; or to rent before being in a position to buy.
- Options that provide some medium term link to RPI improve the inflation matching characteristics of private market residential property compared to short term lettings.
- Simulations in the Appendix illustrate the portfolio effects of a mixed tenure portfolio compared to short-term let portfolios. They show that a mixed tenure portfolio provides improved inflation matching characteristics and similar returns compared with a portfolio of shorter-term lettings.

Mixed tenure portfolios improve the inflation matching characteristics compared to portfolios of short-term leases

Outlook for housing, rents and inflation

- The UK remains significantly under-supplied with housing and this position looks likely to continue. Demand is coming from increased population (including net migration) but primarily from an aging population and changes in household make-up. The impact on frustrated demand is evident in the sharp increase in the numbers of 20-34 year olds living with parents (up by 0.5m) between 2001 and 2011.
- Household projections are implicitly based on the assumption that affordability continues to constrain demand (i.e. the longer term trends in household size do not reassert themselves).
- Housing supply is unable to respond rapidly to increased demand and hence prices face upward pressure.
- Rental demand is likely to remain strong (stimulated by net migration into and within the UK and by high house prices), but rental supply cannot respond rapidly.
- Inflation is likely to remain low (particularly given structural issues in Europe) but with a desire to ensure that modest positive inflation continues to prevent debt problems being exacerbated.
- Interest rates are therefore likely to remain low with a gradual normalisation only if inflation accelerates and/or if economic growth is above trend (above 2-2.5% p.a.).
- Higher interest rates will dampen house prices, but will fuel rental demand as owner occupation becomes less attractive. Similarly, a market shock that lowered economic growth and increased uncertainty would increase rental demand. Strong rates of housing supply would dampen prices and rents, but would stimulate faster economic growth, itself attracting more demand, including from those frustrated in their choice of where they live now (e.g. living with parents).

Demand for housing is likely to remain very robust, with continued upward pressure on rental values, but in the event of shocks there are a number of "automatic" stabilisers to ensure rental growth maintains its link with inflation

Conclusions

- Historic evidence in the UK suggests private market rents have moved in line with general inflation.
- International evidence also suggests rents tend to rise in line or ahead of inflation.
- Housing economics supports the expectation that residential rents will continue to track inflation and over the long term rise faster than inflation.
- As wage growth has eased off recently, rents have kept pace with inflation, a long term trend. Renting as an option has become more affordable, and is increasingly seen as a lifestyle choice. With returning economic growth and expected increases in the rate of growth of wages, above inflation rental growth could arise.
- The outlook of suppressed housing demand due to high unit costs and supportive demographics provides sound fundamentals for rental growth going forward.
- A mixed tenure approach to private housing can offer improved inflation matching characteristics without adverse impact on return prospects.

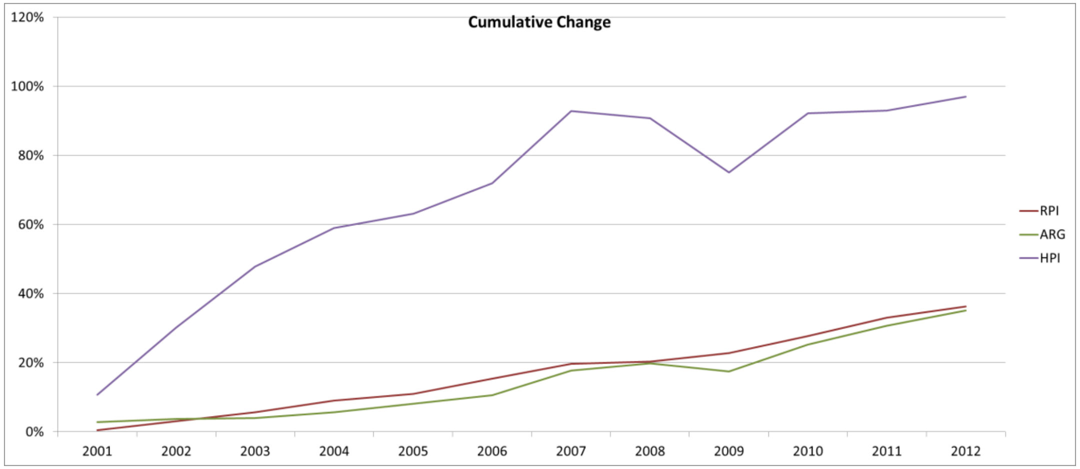
Appendix

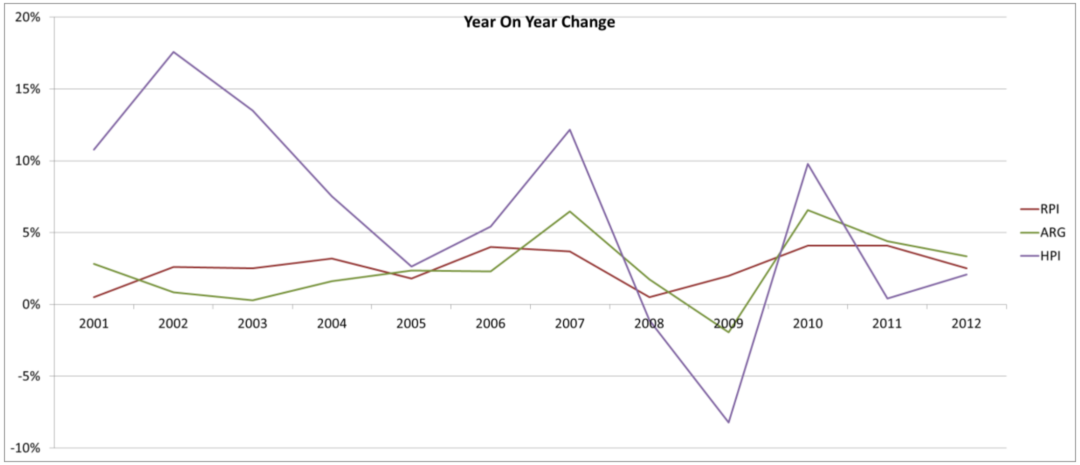
Inflation protection in mixed tenure portfolio

The mixed tenure concept

- Different tenure structures offer different degrees of inflation protection. In constructing an investment portfolio it is helpful, therefore, to understand the characteristics of different options.
- Mill Group has developed a mixed tenure approach under which three types of offer are made to consumers:
  - Short term lettings of 12 months, after which there is an open market review or new tenancy to reflect annual rental growth
  - Longer term lettings of up to five years (LT AST)
    - Assumed to last for an average of four years
    - After each year the rent increases by RPI
    - At the end of the term the rent is adjusted up or down to the current open market rent
  - Part-rent/part-buy (PR/PB) arrangements under which:
    - Occupancy rights with payment obligations are granted until they are terminated
    - Occupancy charges are set at an initial yield (6%) and increase by RPI (upward only) each year
    - At the end of every five years the charge can be rebased and increased further to take into account increases in capital values (rebasing takes the investor's share of the open market vacant possession (OMVP) value of the property and applies the initial yield (6%) to this)
    - Termination of a PR/PB arrangement happens by choice of the consumer through:
      - the consumer offering to sell his/her interest back to the investor at their share of OMVP value; or
      - the consumer buying out investor at share of OMVP value; or
      - by both agreeing to sell simultaneously, so each receive their share of OMVP
- The changes in cashflows for each tenure have been modelled using historic data, to show how closely they would have tracked RPI.

Historic context: market rental growth and RPI





Correlation

	RPI	*ARG*	*HPI*
RPI	100.0%		
ARG	98.4%	100.0%	
HPI	90.0%	85.0%	100.0%

Standard deviation

RPI	11.2%
ARG	10.6%
HPI	26.6%

- On a cumulative basis over the 13 years to 2012, RPI and annual rental growth (ARG) have shown strong correlation; and
- The volatility of ARG and RPI has been very similar

HOWEVER…

- Based on year-on-year changes, RPI and ARG have been only weakly correlated; and
- ARG has been more volatile than RPI

Correlation

	RPI	*ARG*	*HPI*
RPI	100.0%		
ARG	47.8%	100.0%	
HPI	19.6%	30.5%	100.0%

Sources: ARG data from IPD; RPI data from ONS; HPI data from Oxford Economics in respect of Southern England portfolio chosen by Mill Group reflecting their target property allocation

Correlation between RPI and property generated income

- In order to better replicate RPI returns, Mill Group has developed a multi-tenure approach incorporating Longer Term Assured Shorthold Tenancies (LT AST) and a part-rent/part-buy option (PR/PB):

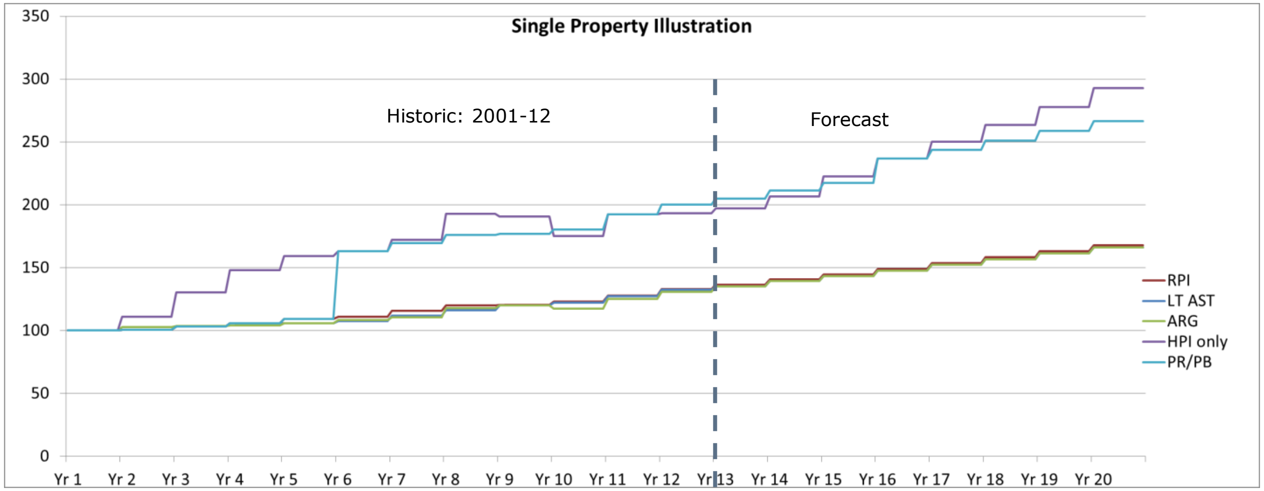
Longer Term Assured Shorthold Tenancies

- Annual rental increases are linked to RPI for the entire term of the tenancy. When the property is re-let, the rent is set in line with the rental market and hence reverts back to the long term ARG trajectory.

Part-rent/part-buy

- Annual “rental” increases are linked to RPI for five year periods after which they re-adjust to take into account any capital growth in the value of the property.

- The high correlation and improved income profiles of these two tenures is shown below:

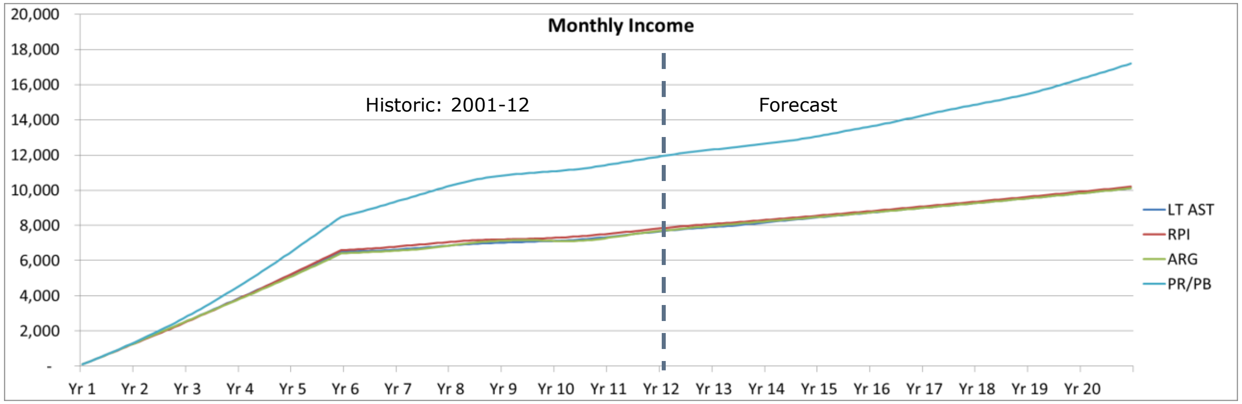


Correlation (historic period only)

	LT AST	*RPI*	*ARG*	*HPI*	*PR/PB*
LT AST	100.0%				
RPI	98.9%	100.0%			
ARG	98.7%	98.2%	100.0%		
HPI	85.8%	90.9%	86.7%	100.0%	
PR/PB	91.2%	94.3%	91.3%	89.2%	100.0%

The portfolio effect

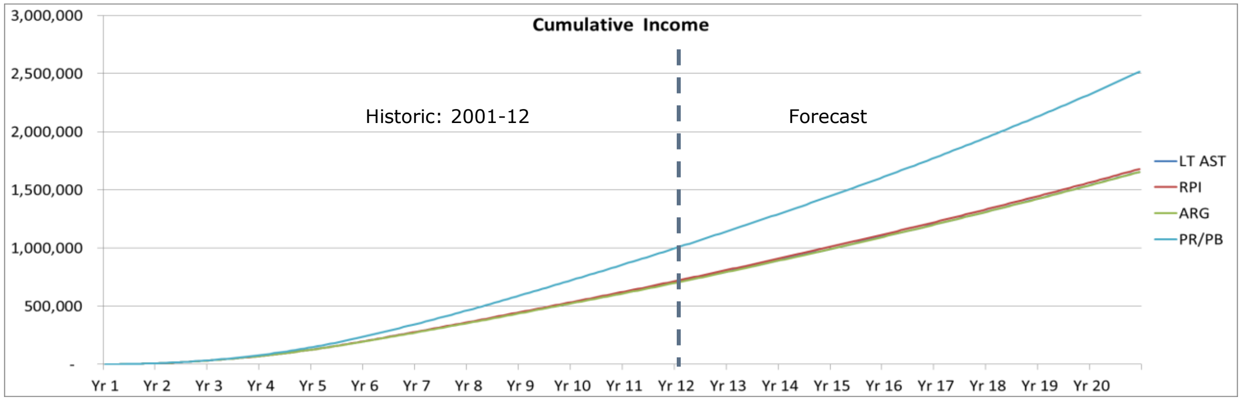
- The impact of having a portfolio of properties with staggered acquisitions and staggered rent reviews makes monthly income derived from the properties less volatile and more correlated to RPI, as shown below:



Correlation (historic period only)

	LT AST	*RPI*	*ARG*	*HPI*	*PR/PB*
LT AST	100.0%				
RPI	100.0%	100.0%			
ARG	100.0%	100.0%	100.0%		
HPI	99.5%	99.6%	99.6%	100.0%	
PR/PB	98.8%	99.0%	99.1%	99.0%	100.0%

- On a cumulative basis, a portfolio of properties further enhances the income profile and RPI correlation as shown below:



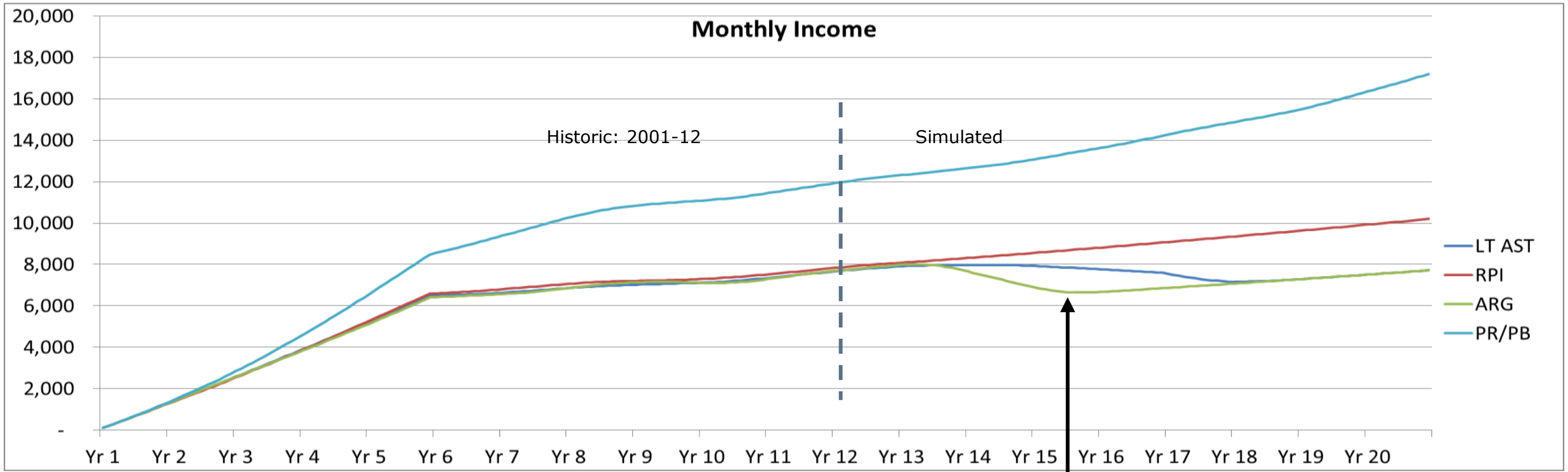
Correlation (historic period only)

	LT AST	*RPI*	*ARG*	*HPI*	*PR/PB*
LT AST	100.0%				
RPI	100.0%	100.0%			
ARG	100.0%	100.0%	100.0%		
HPI	100.0%	100.0%	100.0%	100.0%	
PR/PB	99.9%	99.9%	99.9%	100.0%	100.0%

Resilience to falling rental values

- Due to Mill Group's LT AST and PR/PB products being linked to RPI, a fall in rental values (negative ARG), in any given period would have:
  - a lower impact on LT AST income (a re-let would, however, reflect the lower rental value); and
  - no impact on PR/PB

This is illustrated below:



If rental values were to dip in any year but RPI remained positive, LT ASTs would produce higher levels of income in that period compared to ordinary ASTs, and would revert to the ARG trajectory over a longer period.

Conclusions: multi-tenure and inflation protection

- Mill Group's Longer Term AST and part-rent/part-buy tenures deliver annual rental/occupancy charges which broadly increase in line with RPI (upwards only).
- This increases the correlation between changes in income generated by a property subject to these tenures and changes in RPI.
- The correlation is further increased when looking at returns generated by a portfolio of properties subject to these tenures (due to a staggered acquisition and rent review profile) .
- The correlation increases further still when comparing the cumulative income generated by such a portfolio and the cumulative RPI.
- The "upwards only" RPI-linked feature of these tenures means that if open market rents were to decline, the income generated by such a portfolio would maintain a more robust and attractive income profile.

Glossary

- ARG – Annual Rental Growth
  - The percentage change in the level of rents from one year to the next. The historic record for this is goes back 13 years
- AST – Assured Shorthold Tenancy
  - The standard tenure for short term private rentals
- BTL – Buy-to-let mortgage
  - The dominant method for private investors to purchase property to rent out to other consumers
- CPI – Consumer Price Index
  - An alternative measure of inflation to RPI
- HA – Housing Association
  - A not for profit organisation that has traditionally provided social housing through funding from Government
- HPI – House Price Index
  - The change in open market vacant possession value of housing
- OMVP – Open Market Value with Vacant Possession
  - The standard historic valuation basis of a residential property
- ONS – Office for National Statistics
  - The UK Government's official source of economic data and statistics
- LT AST – Longer Term Assured Shorthold Tenancy
  - An Assured Shorthold Tenancy expanded on average up to five years in length, often with an inflation-linked rent
- PR/PB – Part-Rent/Part-Buy
  - A hybrid option where a consumer purchases part of a property and then rents the residual whilst they prepare to buy – widespread since the 1980s
- RPI - Retail Price Index
  - This is still the most common and best understood measure of inflation by consumers, renters and investors

Inflation Matching Characteristics of Mixed Tenure Private Housing

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