PROPERTY BARометER

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3 key reasons for the SA Housing Market being more so prone to "bubbles" than the Motor Vehicle Market

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MARKET ANALYTICS AND SCENARIO FORECASTING UNIT

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Of the major Household Sector-related expenditure items, motor vehicle purchases and homes are the big credit-dependent items and thus the most sensitive to largely monetary policy-driven interest rate fluctuations.

But 3 key differences between the Vehicle and Residential market mean that the Vehicle Sector is far less susceptible to "crazy or irrational" behavior and market "overshoots", or "bubbles", than the Housing Market.

SUMMARY

In the late-1990s, a sharp downward move in interest rates started late in 1998, from a Prime Rate in 25.5%, declining all the way to 14.5% by January 2000. Then, after a brief hiking period in 2002, a further decline to 10.5% Prime Rate by April 2005 ensued. At the time, the South African economy was already experiencing reasonably good growth, as it benefited from the early-1990s end to the boycotts and international isolation, and was in the process of normalizing trade and business relations with the rest of the world. Lower interest rates would strengthen the economy even more

Given that Household indebtedness levels, as measured by the Debt-to-Disposable Income Ratio, were far lower early last decade than they are today, a massive boom in demand began for both residential properties along with motor vehicles, both heavily credit-dependent areas of purchase. This broad boom period had its early-beginnings in 1999, and lasted all the way to 2007.

The 1999-2007 Boom period – similar demand surges, but very different price outcomes

Whereas the Housing Market experienced rampant double-digit price inflation, Vehicle price inflation remained subdued. The Motor Vehicle CPI actually entered a period of price deflation by 2004, at least according to the CPI numbers, and as at the 1st quarter of 2005 measured -1.6% year-on-year decline. By comparison, the Housing Market was experiencing something very different. The massive demand surge had exposed its supply-side limits, and the FNB House Price Index inflation rate had shot up to 36% year-on-year by the 1st quarter of 2005.

Price "bubbles", where price levels deviate significantly from the underlying "economic fundamentals" can be a major source of financial stress for the market participants, and when the bubbles burst they can bring about major "systemic risk" in the Financial Sector. As such, they are seen as undesirable.

Our recent history suggests that the Housing Market is far more susceptible to extreme house price inflation than the Motor Vehicle Sector. The question is why? Both industries are similar to each other in terms of being strongly Household Sector demand-driven, both items being relatively large infrequent

purchases for most households, and both being heavily dependent on credit to finance purchases.

Admittedly, in good economic times and cheap credit environments, there exists the possibility that both the highly credit driven Vehicle and Housing Markets can "overshoot" due to a general high level of Consumer Confidence that can get to a level of "General Over-Confidence". Vehicle markets can also conceivably have significant price surges on the back of shocks to imported vehicle and component costs.

But the Housing Market has something extra, which leads to its greater propensity to achieve "bubble" levels, overshooting by a far greater magnitude, or so we believe.

While there are no doubt many differences, we ascribe the seemingly big difference in the propensity to experience "price bubble" behavior, between the two markets, to 3 key differences in "market or product characteristics".

1. The Supply Side of the 2 Markets

Firstly, the Residential Market has a more significant constraint of supply of new residential stock in the short term, compared with that of the Vehicle Sector, and in times of extreme growth in housing demand that can lead to rampant house price inflation. Achieving high vehicle price inflation during last decade's boom years was always going to be far more difficult in a market where supply of new vehicles could be ramped up far more rapidly than could the supply of new housing, either by raising local manufacturing output or by importing.

2. South Africa's obsession with home ownership and regarding a home as an investment

Secondly, high price inflation in the housing market, which initially emanated from strong demand growth as the boom times began, then encouraged further growth in demand as speculators, and panicky 1st time buyers obsessed with owning a home before it became too expensive, flocked to the market. Add to this a widespread view in South Africa that a home is an investment, and amongst less experienced investors the notion that times of high price inflation are the times to buy (often an incorrect view), and you have the recipe for a house price "bubble". Motor vehicles, in contrast, are seen as consumer goods rather than as an investment, although in a country with a lack of public transport they are also seen as crucial to own by the Middle Class.

3. Unlike Motor Vehicle Price inflation, House Price inflation is not a direct target of monetary policy

Finally, a 3rd key difference between the 2 markets is the fact that motor vehicle prices are included in the CPI, making them a direct target of the SARB's monetary policy regime. Should motor vehicle price inflation surge to the extent that house price inflation did back around 2004/5, there is a greater likelihood that the SARB may have acted by hiking interest rates, given that such a price inflation surge would exert upward pressure on the overall CPI inflation rate, the target variable of the SARB.

So, while a price bubble can never be ruled out in the Vehicle Market, should supply become constrained for some reason and rampant price inflation follow, a less constrained short term supply capability in the New Vehicle Market, compared to homes, it becomes far more difficult for that market to achieve this. The way the public view a home, i.e. as an "investment", versus viewing a vehicle as a consumer good, can add "fuel" to the fire, and in a CPI inflation targeting regime there is a greater likelihood of a vehicle price inflation surge being curtailed by monetary policy than there is of a house price surge.

Given the consequences of housing price bubbles to Financial Sectors, Household Sectors and Economies in general, as witnessed after last decade's Global housing bubbles in many countries burst, the question has often been asked as to whether asset prices such as house prices should not also perhaps be a direct target of interest rate policy.

WHY IS THE SA HOUSING MARKET SEEMINGLY MORE PRONE TO "BUBBLES" AND "MARKET OVERSHOOTS" THAN THE ALSO HIGHLY CREDIT-DRIVEN VEHICLE SECTOR?

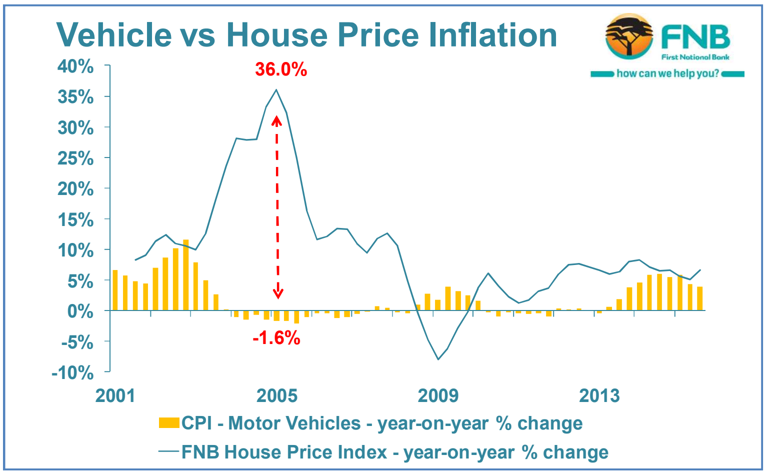
Official inflation targeting was only implemented in early-2000, so is not necessarily the reason behind the start of a big interest rate reduction from late-1998. However, the shift by South Africa to a monetary policy brief of official inflation targeting early last decade was arguably a cause of domestic interest rates continuing on to significantly lower levels after the start of the new millennium. The authorities abandoned previous attempts to use interest rates to protect the Rand during times of weakness. CPI (Consumer Price Index) inflation had been slowing since the double-digit "structural" levels of the 1980s, down into single digit territory, meaning that with the shift in policy approach, already being mooted in the late-1990s, there was no longer any need for the extreme interest rate levels that we had reached by 1998. In that year, Prime Rate peaked at 25.5%, and both the residential and vehicle markets were rather quiet places.

Then came what we refer to as a "downward structural adjustment" in interest rates. Interest rates would fall sharply in the subsequent few years. Prime Rate declined all the way from 25.5% around mid-1998 to 14.5% by January 2000, and then after a brief hiking period in 2002 there was a further decline to a 10.5% Prime Rate by April 2005. Added to this, the South African economy was already experiencing reasonably good growth, as it benefited from the early-1990s end to the boycotts and international isolation, and was in the process of normalizing trade and business relations with the rest of the world. Lower interest rates would strengthen it more

Given that Household indebtedness levels, as measured by the Debt-to-Disposable Income Ratio, were far lower early last decade than they are today, a massive boom in demand could begin for both residential properties along with motor vehicles, both heavily credit-dependent areas of purchase. This broad boom period had its early-beginnings in 1999, and lasted all the way to 2007.

The 1999-2007 Boom period – similar demand surges, but very different price outcomes

Shortly after the start of the boom period, the price behavior of the Vehicle and Residential Markets began to differ significantly despite similar surges in demand in both markets. The Residential Market moved into what could arguably be called a "bubble" period, while in the Vehicle Sector this was seemingly far less the case.



Whereas the Housing Market experienced rampant double-digit price inflation, Vehicle price inflation remained subdued.

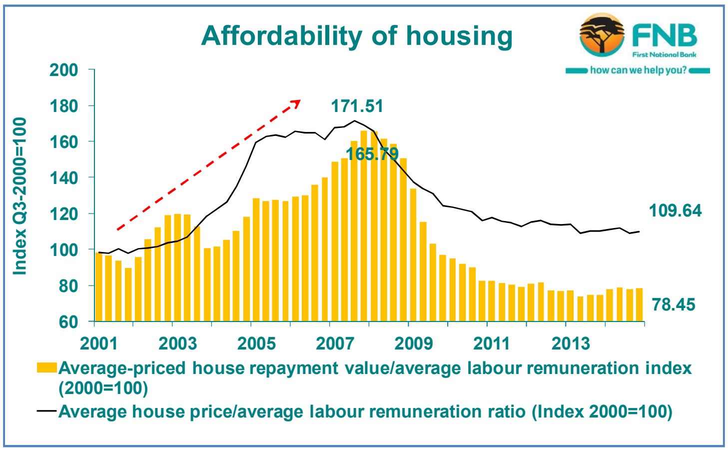
The Motor Vehicle CPI actually entered a period of price deflation by 2004, at least according to the CPI numbers, and as at the 1st quarter of 2005 measured -1.6% year-on-year decline.

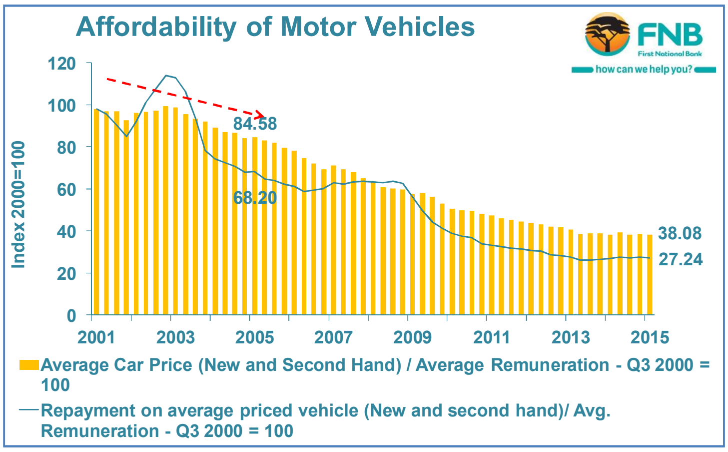
By comparison, the Housing Market was experiencing something very different. The massive demand surge had exposed its supply-side limits, and the FNB House Price Index inflation rate had shot up to 36% by the 1st quarter of 2005.

Therefore, as at the 1st quarter of 2005, the inflation differential between the CPI for Motor Vehicles and that of the FNB House Price Index was a whopping 37.6 percentage points.

The 2 divergent inflation rates implied a divergent path for key affordability ratios. We compile 2 affordability indices for each of the markets. In the Housing Market, the Average House Price/Average Employee Remuneration Index deteriorated (rose) sharply from mid-2000 to 2005 and even beyond, all the way to the end of 2007, rising in total by 71.5%. The 2nd index, namely the Installment on a 100% loan on the Average Priced Home/Average Employee Remuneration Ratio Index, rose (deteriorated) by 65.7% over a similar period to the 1st quarter of 2008.

The 2 corresponding Vehicle Affordability Indices, by comparison, broadly declined through the boom years, and by the 1st quarter of 2008, both were about 37% down (more affordable), with vehicle price inflation/deflation remaining well below average wage growth for most of the time.





Price "bubbles", where price levels deviate significantly from the underlying "economic fundamentals" can be a major source of financial stress for the market participants, and when the bubbles burst they can bring about major "systemic risk" in the Financial Sector. As such, they are seen as undesirable.

This perhaps leads to one key question. Why does the Housing Market appear far more susceptible to extreme house price inflation than does the Motor Vehicle Sector? Both industries are similar to each other in terms of being strongly Household Sector demand-driven, both items being relatively large infrequent purchases for most households, and both being heavily dependent on credit to finance purchases.

While there are no doubt many differences, we ascribe the seemingly big difference in the propensity to "price bubble" behavior between the two industries to 3 key differences in "market or product characteristics".

1. The Supply Side of the 2 Markets

The vastly differing price inflation rates between houses and vehicles through those boom years was very much due to differences in the "supply-side" of the 2 markets.

In the vehicle sector, the supply of new motor vehicles is virtually "unlimited" for a small country such as South Africa. Domestic Manufacturers can ramp up production fairly quickly, and even when maximum output capacity is reached, importing cars by the shipload is relatively easy. While admittedly there are limits on the stock of certain makes and models of vehicles, this is a very different situation from that of new residential homes which cannot be imported, and whose production process is a very long one from the planning phase all the way to the completion phase. In the short term, therefore, the supply growth capability of the residential property sector is far more constrained than that of the Vehicle Sector. It is only in the medium and longer term that this supply capability adjusts more significantly.

The initial late-90s/early-2000s demand surges in both markets thus led to very different price outcomes between the 2 markets.

Given that vehicle production could keep pace more easily, it meant that vehicle price inflation was driven far more by input cost-related factors that drive many other consumer goods that are incorporated in the Consumer Price Index (CPI). From 2002 onward, a period of Rand strength set in, and this was a key benefit for vehicle costs, with both the prices of imported vehicles and imported components for locally produced vehicles benefiting. And so, without getting into too much unnecessary detail for our purposes here, the Motor Vehicle CPI actually entered a period of price deflation by 2004, at least according to the CPI numbers, and as at the 1st quarter of 2005 measured a -1.6% year-on-year decline.

By comparison, the Housing Market was experiencing something very different. The massive demand surge had exposed its supply-side limits, and the FNB House Price Index inflation rate had shot up to 36% by the 1st quarter of 2005.

Therefore, as at the 1st quarter of 2005, the inflation differential between the CPI for Motor Vehicles and that of the FNB House Price Index was a whopping 37.6 percentage points.

2. South Africa's obsession with home ownership and regarding a home as an investment

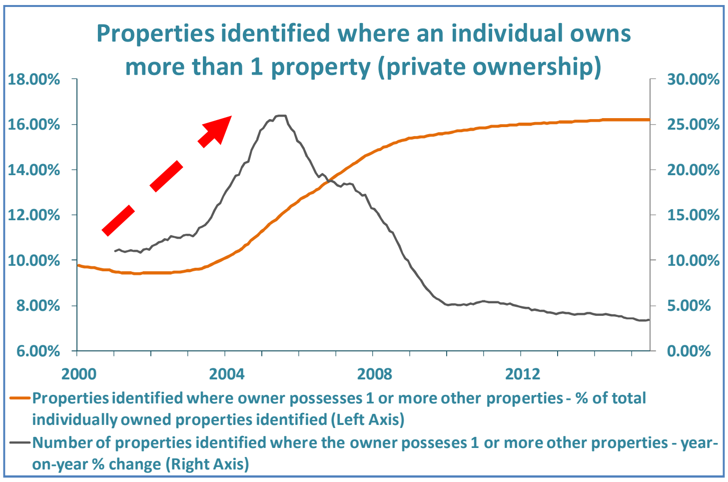
The housing affordability deterioration, due to the initial residential demand surge, was not necessarily a problem on its own. It should merely have choked off demand for homes at an earlier stage of the boom than the demand for motor vehicles, after which you would expect residential affordability to quickly improve, as prices reverted to decline in response to a lack of demand.

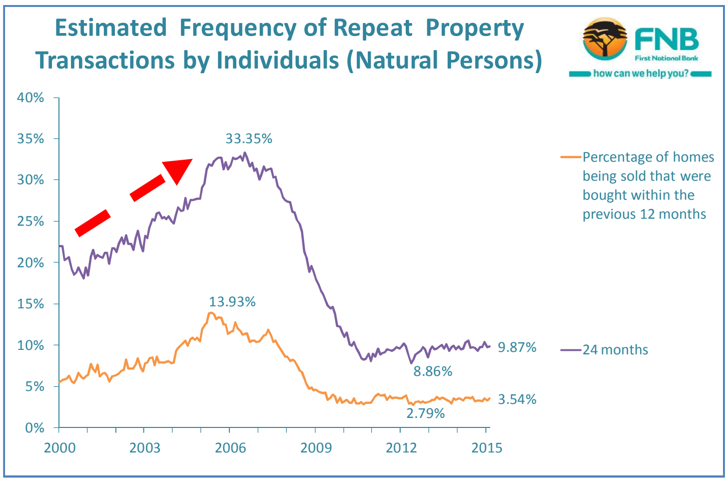
If only it were that simple it would be fine. But humans are a strange specie, and the problem came when the rampant house price growth that emanates from a major supply constraint began to drive both "exuberance" and "panic" at the same time. The exuberance in the market emanated from the very strong house price growth, which peaked at that massive 36% year-on-year in the 1st quarter of 2015.

This price inflation drove 3 very significant groups of buyers into the market.

- *Firstly, there were the speculators. Those who could borrow at low interest rates, then buy and sell homes in quick succession, taking advantage of rampant house price growth for short term speculative purposes, making very quick capital gains.*
- *Secondly, there were what I call the "unseasoned investors", the group who extrapolates the capital growth of the recent past into the future, expecting it to continue indefinitely and make them huge returns. This is a very different investor to the more seasoned investor who may prefer to stay out of the market as he watches strong price growth compressing yields on property. The seasoned investor arguably "buys on the lows and sells on the highs", while the unseasoned investor often does the opposite and often pays a high price.*

The above 2 groups' actions were visible in the data. Using Deeds data for transactions by individuals ("natural persons"), which should be overwhelmingly residential-dominated (as opposed to Commercial Property), we estimate a strong growth surge in the number of properties identified where the owner owned 1 or more additional properties. From 11% year-on-year growth in the number of such properties, this growth rate peaked at 26% year-on-year by mid-2005. These can be a mix of speculative, buy-to-let and leisure properties, and the growth rate of 2005 reflects the "mass exuberance" of the time. This exuberance could also be seen in a rise in the frequency with which properties were transacted. In January 2000, the percentage of properties being sold in that month which had been bought within 12 months or less prior to the sale, was estimated at 5.5% of all transactions by individuals. By May 2005 this had risen to 13.9%. Those properties last purchased within 24 months of the current sale rose from 22% to around 33% over a similar period.





- *Then, in their droves, come the 3rd key group, namely the aspirant 1st time buyers, many who began to suffer from "1st time buyer panic", a panic caused by this rapid price growth and the belief that if they "don't buy a home now they will never be able to afford one in future". This panic meant that many "fast* *tracked" their home purchase to an earlier date than perhaps otherwise planned, a move which can cause many to be financially ill-prepared for home buying. It also leaves a "void" in 1st time buying at a later stage when the market cools, because many who would have bought at that later stage under calmer market circumstances have now already done that.*

These 3 abovementioned types of buyers, who are attracted to the market by the house price growth itself, drive the demand levels still higher than what the economic fundamentals dictate they should be, and can cause a very significant market "overshoot", where house price levels move far beyond where the economic fundamentals dictate they should be.

The consequences can be quite severe when the price inflation ultimately slows, and the exuberance- and panic-driven demand slumps.

Behind many of these 3 categories of home buyers, or at least the latter 2, is a widespread belief that owning residential property is an investment. It drives people to want to buy more properties than they need when times are good, and causes 1st time buyer panic because of the belief that "we must own property". This investment view of property is significantly different to the way most people see a motor vehicle, i.e. as a depreciating consumer item.

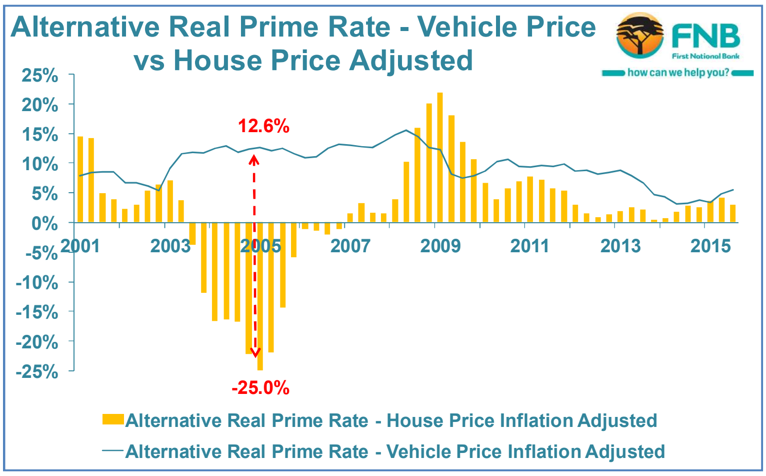
This is not to say that speculative activity and buyer panic could not befall the vehicle sector too if times were ripe for it. Let's say, hypothetically, there was a major supply constraint in vehicle production causing massive vehicle price inflation. It is conceivable that speculation and buyer panic could become widespread in the vehicle market too, given the essential nature of motor vehicles in a country lacking in good public transport. But the "investment" view of cars would probably still be lacking (apart from the vintage car market perhaps), a belief that still gives housing that extra propensity to overshoot the mark.

3. Unlike Motor Vehicle Price inflation, House Price inflation is not a direct target of monetary policy

Finally, a 3rd key difference between the 2 markets is the fact that motor vehicle prices are included in the CPI, making them a direct target of the SARB's monetary policy regime. Should motor vehicle price inflation surge to the extent that house price inflation did back around 2004.5, there is a greater likelihood that the SARB may have acted by hiking interest rates, given that such a price inflation surge would exert upward pressure on the overall CPI inflation rate, the target variable of the SARB.

As it was, house price inflation was not a variable targeted directly by the SARB back in the boom years, and nor is it today. Housing is indeed a part of the CPI, making it an implicit target of monetary policy, but it is rentals that are included, not house prices, and rental inflation follows a different path to house price inflation, generally being less volatile.

So, it was easier for house price inflation to get to extreme levels where speculative activity makes sense. At what stage does speculative activity make sense? As a "rule of thumb", where the level of interest rates is percentage-wise significantly lower than the house price inflation rate, we would say. Borrowing at, say, 10.5% to buy a home whose price is inflating by 30%+, in order to quickly make a massive capital gain before selling the home and settling the debts, starts to make a lot of sense……provided house price growth doesn't suddenly slump on you.



To estimate the extent to which a market becomes a "speculators paradise", we calculate what we term "Real Alternative Prime Rates" for both the housing and vehicle markets. Instead of adjusting Prime Rate to real terms using overall CPI, as is normal practice, we use house price and vehicle price inflation to adjust.

When one of these "alternative real rates" turns significantly negative, it is a rough indication that the environment is becoming ripe for widespread speculative activity.

As at the 1st quarter of 2005, we could see a massive difference between the 2 markets. Prime

Rate was 11% (having not yet quite dropped to the cycle low of 10.5%). Vehicle prices were in mild deflation, translating to a strongly positive Real Alternative Prime Rate of 12.6% for the Vehicle Market. By comparison, 36% house price inflation translated into a strongly negative Real Alternative Prime Rate of -25% in that same quarter.

Small wonder that early-2005 appeared to be the height of speculative and 2nd property buying.

CONCLUSION

In short, in good economic times and cheap credit environments, there exists the possibility that both the highly credit driven Vehicle and Housing Markets can "overshoot" due to a general high level of Consumer Confidence that can get to a level of "Over-Confidence". Vehicle markets can also conceivably have significant price surges on the back of shocks to imported vehicle and component costs for instance.

But the Housing Market has something extra, which leads to its greater propensity to achieve "bubble" levels, overshooting by a far greater magnitude.

It arguably has a greater constraint of supply of new residential stock in the short term, compared with that of the Vehicle Sector, and in times of extreme growth in housing demand that can lead to rampant house price inflation. Achieving high vehicle price inflation during last decade's boom years was always going to be far more difficult in a market where supply of new vehicles could be ramped up far more rapidly.

High price inflation, which initially emanated from strong demand growth, then encouraged further growth in demand, as speculators and panicky 1st time buyers flocked to the market in response. Add to this a widespread view in South Africa that a home is an investment, and amongst less experienced investors the notion that times of high house price inflation are the times to buy (often an incorrect view), and you have the recipe for a house price "bubble".

A price bubble can never be ruled out in the Vehicle Market, should supply become severely constrained for some reason (a disruption to the supply chain for example) and rampant price inflation follows. But given less constrained supply of new vehicles compared to homes in a "normal" production environment, it becomes far more difficult for that market to achieve this.

Even if the vehicle market could get to a state of high price inflation, vehicle prices are included in the CPI, and are driven by similar factors to the overall CPI such as the Rand and import prices. They thus correlate better to overall CPI movements than house prices, and are a part of the target of SARB monetary policy. This implies that interest rate hiking could be precipitated sooner by a massive vehicle price inflation surge than by a house price inflation surge, thereby choking off bubbly behavior earlier.

Given the consequences of housing price bubbles to Financial Sectors, Household Sectors and Economies in general, as witnessed after last decade's Global housing bubbles in many countries burst, the question has often been asked as to whether asset prices such as house prices should also be the target of monetary policy.