"A LONG TERM ANALSIS OF HOUSING AFFORDABILITY IN MALTA"

Introduction

The Maltese archipelago according to the section "Key information, social and economic statistics", issued by the Central Bank of Malta (2009), consists of Malta, Gozo & Comino, as noted in figure 2. This archipelago situated in the centre of the Mediterranean is a small island state of 316km^2. With a population of 410,290 persons (2007) and an average annual growth rate of 0.7%, it is the most densely populated country in the EU at 1,298 persons per km^2.

Malta joined the European Monetary Union EMU in 2008. Its currency presently is the euro, with its GDP per capita at current market prices (2007) 13,300 euro, and with its GDP per capita in PPS relative to the EU-27 average, stands at 77.8%. Note that 2.33 euro is equivalent to the old Maltese lira Lm currency.

Malta's average annual rainfall over the period 1990 – 2007 stands at 478.7mm, with average temperatures over the same period December – February at 13.3^{o}c and June – August 26.1^{o}C, with a small diurnal range of 5^{o}C. A wet year may be defined when the total annual rainfall exceeds 700mm and a draught year when it is below 400mm. The annual global rainfall mean is just about 1,000 mm.

According to the Flood Hazard World Map, the maximum 24 hour precipitation (in mm) for torrential rain and flash floods, Malta classifies in the 100-200mm group. This compared to the highest daily amount of precipitation encountered over the equator and in the monsoon regions of southern eastern Asia, with places recording more than 500mm precipitation in a single day.

The above data classifies Malta's climate as a semi-arid and well-behaved Mediterranean marine environment. The Maltese Islands are however, definitely windy with only 7.7% of the days on average, being classified as calm with a wind speed of 0m/s. On most other days the wind speed varies between 0.5m/s and 11m/s (1 & 21 knots), with the North Westerly, at 40% of the time being the predominant wind direction, all other directions equally represented.

Due to its strategic location and its high population density, Malta compares to Singapore and Hong Kong. However, this is where the comparison ends, as Malta's housing is largely privately owned, unlike Singapore's and Hong Kong's extensive State owned housing system.

Unlike Malta, both Singapore and Hong Kong exercise the public leasehold systems to manage their limited land resources. The public leasehold system not only captures the surplus land value, but also enables the Government to reserve land for public purposes and manage urban growth. The Singapore Government

is the significant landowner who owns around 85% of the total land area. Furthermore, roughly 88% of the country's population lives in public housing flats. In the case of Hong Kong all land and other natural resources are State Property, the Government is responsible for the use and management of land on behalf of the State, Chi-Man Hui et alia (2004).

Housing Affordability in Malta 1982 - 2008.

This paper aims at analyzing trends and principal causes of developments in house prices in Malta over the past 26 years, with a specific focus on the issue of affordability. It also derives projections for likely future developments in this context and in the light of this, discusses some policy options. Comparisons undertaken taken mostly with small states.

The analysis presented here is based on data collected by the office of Dhi Periti over the past 26-year period. A discussion lends on trends in housing prices within the affordable category with up market housing just touched upon. An investigation undertakes the determinants of developments in house prices in relation to movements in household disposable income. This focusing on the strong demand for home ownership and interest from foreign buyers, supply availability together with its relationship to the high vacancy rate existing.

Also delved into include, the distortions in the rental market, sustainable housing measures, housing densities and high-rise developments. Finally noted is the implication on the use of housing as an investment asset in relation to trading on Malta's Stock Exchange.

The Characteristics of the Housing Market 1982 - 2008.

This has been a period of high Homeownership, varying from just over 50% up to 75% over this period. This high percentage did not always exist, when in 1948 this registered a mere 23.1 %, as noted in table 1.

This high homeownership rate at 75%, by European standards is to be compared to Spain's 82%, Greece and Portugal at 72%, UK at 70%, Finland at 62%, the Netherlands, Denmark and France at 54% & Sweden & Germany at 45%.

This high homeownership helped by an efficient mortgage market over this period with the mortgage rate varying from an initial stable 8% in the eighties in a period of high global inflation rates, when similar overseas mortgage rates were above 12%, to the recent low mortgage rate of 3.15%.

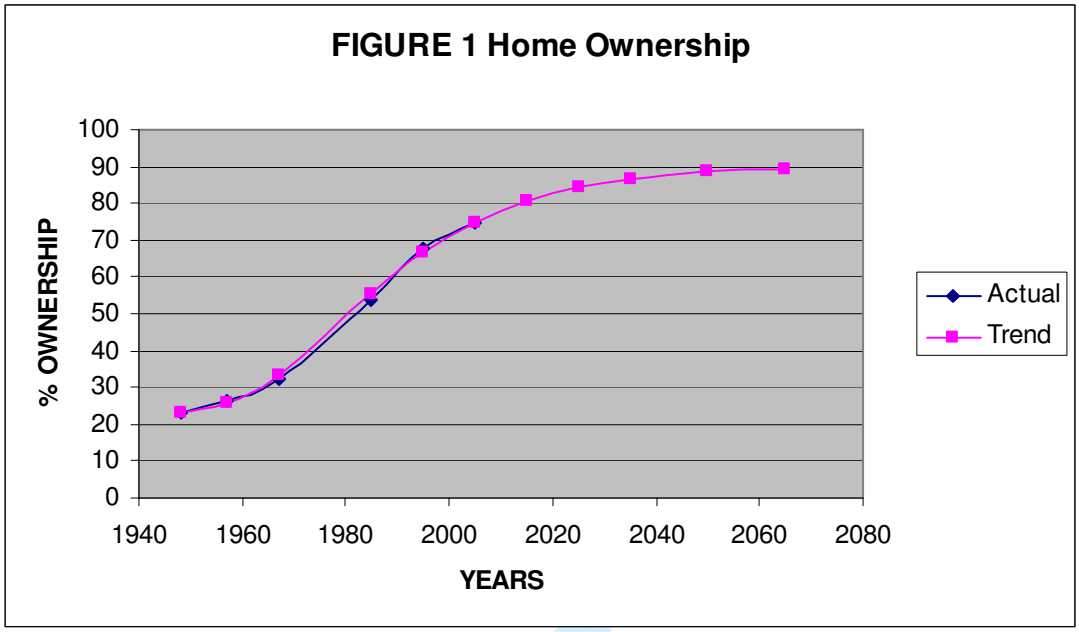
Table 1: Homeownership rate as at Census date

YEAR	1948	1957	1967	1985	1995	2005
%	23.1	26.1	32	53.9	68	75.2

Source: National Statistics Office (2007), *"Census of Population and Housing 2005"*

The homeownership trend line outlined in figure I indicates a declining growth rate. The homeownership rate will appear to maximize at 90% in the year 2065. This considers that 10% of all households would always require subsidence provided with their residence.

FIGURE 1 Home Ownership



This declining growth rate characterized by an increasing growth rate in the 1st phase of development followed thereafter by decreasing growth rates is given by the Gompertz curve, where:

*Y = A*B^(C)^x*
Where Y is the % Ownership at a given time
A, B & C are constants
And x is a given year.

Over this 26-year period, various subsidy schemes introduced tried to restrict the increase in property prices. These however, often-fuelled demand and/or curbed supply and resulted in stronger price increases in the property market within a period of some months.

This healthy homeownership growth over this period helped the growth of the Maltese economy, whilst cushioning any dire effects over periods of a shortfall in the economic growth. The economic importance of the property market relates to the National GDP with an 8% slice obtained from the Construction Sector due to the multiplier effect having a beneficial effect on other sectors, whilst the Real Estate sector is only second in the importance of the compilation of the GDP, overtaken solely by Personal Services (Cordina 2007).

Referring to table 7, Malta's real estate growth may be gauged from the value of an average property contract in 1982 which stood at Lm3,766, to that of a property contract in 2006 as noted at Lm35,232, declining from the 2005 value at Lm41,632. This implies an annual average growth of 9.25% pa, as compared to the annual growth of the GDP current market price/capita, which over the same period stands at 5.125% pa. The above total annual property contracts now equate to 22.25% of the GDP at current market prices as opposed to 9.75% in 1982.

Referring to table 9 the average price of property purchased by foreigner buyers stood at Lm12,600 per unit in 1982, whilst in 2005 the price per unit stands at Lm126,000, a tenfold increase.

Affordable Housing over the period 2002 – 2008.

A Belfast report (2007) outlines Affordable Housing as related to the ability to pay. Affordable housing costs should not exceed 35% of gross household income. This signifies that households who would have to spend more than 1/3 of their net income to purchase a starter home are eligible for a housing sale at below market value. However, normally financial intuitions do not accept that the borrower pays more than 25% of the household income towards mortgage monthly repayments.

There are 3 house purchase affordability assessments most prominent in the literature, 2 of which are applicable for this study. The 2 methods to be looked into include for the least sophisticated of the 3, the house price to earnings ratio, which however, gives good indications about the Maltese residential market. The 2nd method housing expenditure to income ratios is generally regarded as a more accurate measure of housing affordability, because this method takes account of the cost of borrowing for housing as well as house prices. The third method, which caters for Mortgage Interest Tax Relief, is not applicable for Malta, as this has been inexistent over this period of study.

Considerable discussion has been undertaken on the meaning of housing affordability with weaknesses revealed in the traditional ratio standard of affordability leading to the alternative residual income approach concept of affordability, which developed on the theoretical foundations laid in the UK and the practical experience in the US in the late 1960's Stone (2006). It is further quoted that what is striking is that affordability standards have arisen only for housing and not for other necessities such as food, clothing, medical care and transportation costs amongst others. Housing affordability relates to income adequacy and living standards, not merely as a matter of housing costs. The inadequacy of the ratio method fails the poor miserably, as what is left after paying for housing costs, creates a miserable quality of life. The compelling argument is thus in favour of the residual approach, in that the full amount needed for housing, whilst leaving sufficient to meet the other basic needs. The ratio approach will continue to have its adherents, if for no other reason in that it

is so well established and widely applied to specific policies and practices, such as rent setting, mortgage lending conditions, and the design of allowances. Hopefully the formulation of an operational residual income approach will lead to a practical complement to the ratio paradigm.

Over the past 26 year period 1982 – 2008, as per tables 2 & 3 and figure 2, it is noted that affordable house prices have increased by 625%, doubling in price over the initial 10 year period, doubling again in price over the subsequent 10 year period and then nearly doubling again in price over the past immediate 5 year period. The affordable house price growth over the past 25 year period stands at 8.1% pa as per table 2, increasing to 15.8% pa over the past immediate 6 year period, as per table 3. This as compared with the gut feeling, that growth rates for Maltese properties double in value over every 10 to 12 year period.

Table 2: Affordable Property Rates Lm/sqm for the Maltese Islands.

Locality	1982	1987	1992	1997	2002	2007	Annual % growth rate over a 25-year period 1982 - 2007
Fgura / Paola / Zabbar	45	55	110	175	200	423.9	9.30%
M'scala	50	75	160	160	217	429.6	8.30%
Mosta / Naxxar	80	85	125	205	225	533.3	7.70%
San Gwann	65	75	110	185	239	468.6	8.30%
Sliema inner prime	90	145	190	305	379	589.3	7.60%
St. Julians	80	100	175	235	295	567.3	7.90%
Swieqi	85	105	180	275	337	632.5	8.30%
Malta	**70**	**91**	**150**	**220**	**270**	**520**	**8.10%**
Gozo						**368**	

Source: DHI Periti in-house valuations: Camilleri (1999) updated table

Table 3 notes an annual growth rate of only 12.5% pa for inner Sliema over the immediate 6-year period. This demonstrates, prime property as not subjected to hefty falls or increases in value, classifying them as safer investment properties due to lower growth volatility. This compared with the maximum growth rate at 18.90% pa, as registered in the Mosta/Naxxar locality.

As noted, the affordable property rates in tables 2 & 3 average out by in-house valuations undertaken. In 2007 the affordable 3 bed/r apartment averaged out

at Lm45,000 and Lm40,000 for a 3bed/r & 2 bed/r apartment in Fgura/Paola/Zabbar. In M'scala these averaged out at Lm47,500 and Lm41,000 respectively. Similarly for Mosta/Naxxar at Lm65,000 and Lm51,750, San Gwann at Lm60,000 and Lm42,000, Sliema inner prime at Lm85,000 and Lm50,000, St. Julians at Lm80,000 and Lm50,000, with Swieqi at Lm85,000 and Lm60,000 respectively.

Figure 2:Maltese Archipelago location of towns referred and their location classification:

Prime residential	*Sliema.*
Very good residential	*Swieqi, St. Julians.*
Good residential	*Mellieha, St. Paul's Bay, Mosta, Naxxar, Valletta.*
Fairly good residential	*Bugibba, San Gwann, M'scala, B'Bugia.*
Fair residential	*Paola, Fgura, Zabbar.*

Further over the years the affordable accommodation floor area has been shrinking, with a 3 bed/r apartment in 1982 having an average floor area of 135sqm, reducing by 2008 to 115sqm, whilst a 2 bed/r apartment in 1982 had an average floor area of 95sqm reducing to 80sqm by 2008.

The 2005 Housing Census lists the number of rooms per person at 2.5. On a European level this varies from a low of 1.4 persons per room to a high of 2.6 persons per room. Malta's accommodation is at par with the Netherlands, UK, Luxembourg, Austria, Belgium, Denmark, Sweden, France, and Ireland, whilst it is superior to accommodation in Finland, Germany, Greece, Italy, Portugal, and Spain.

This double figure of 15.80% pa growth rate for the immediate past 6-year period, noted in table 3 considered unsustainable, for the period 2006 – 2007, the growth rate was a meager 0.75% pa over this immediate 1-year period. Further to table 3 for the period 2007 - 2008, growth now halts with the property market suffering a 2.3% decline.

Table 3: Affordable Property Rates Lm/sqm for the Maltese Islands 2002 – 2008.

Locality	2002	2003	2004	2005	2006	2007	2008	% growth rate Pa 2002-2007
Fgura / Paola / Zabbar	200	247	291	327	398.2	423.9	412.6	16.40%
M'Scala	217	258	347	371	443	429.6	422.6	15.70%
Mosta / Naxxar	225	279	399	415	493.3	533.3	504.9	18.90%
San Gwann	239	286	323	416	537	468.6	472.4	17.00%
Sliema inner prime	379	352	399	565	593	589.3	592.3	12.50%
St. Julians	295	311	360	544	535	567.3	557.6	16.40%
Swieqi	337	346	407	454	614	632.5	591.6	15.30%
Malta	**270**	**297**	**361**	**442**	**516**	**520**	**508**	**15.80%**
Gozo						**368**	**361**	

Source: Dhi Periti in-house valuations

Figure 3 reflects the Maltese property affordable growth rate over the past 26 years, with an average growth rate over this period of 8.1%pa. Over the initial 5-year period, 1982 -1987 this growth rate stood at a low of 5.4% pa. Over the next 5-year period, 1987 – 1992 this growth rate increased to 10.5%, whilst for the following 5 year period 1992 -1997 it stood at 8% pa, easing off to its lowest in the following 5-period 1997 -2002 to 4.2%pa. The double figure growth rate

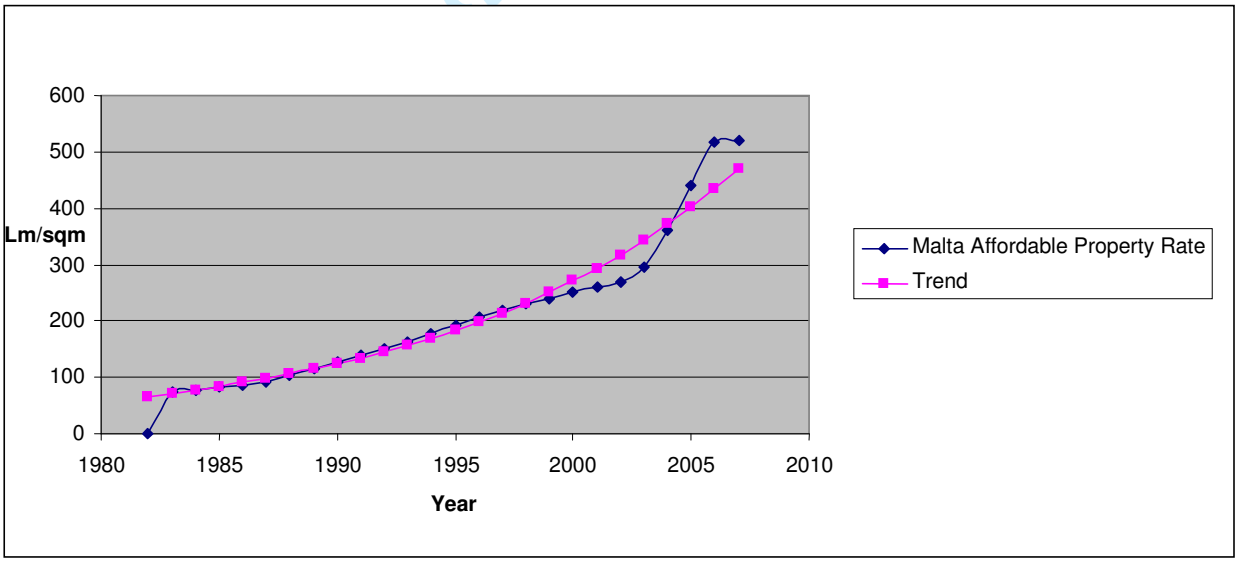
for the immediate past 5-year period at 15.8% pa is as noted above. Leveling off in values noted for the years 2006 – 2007. This signifies that the previous 4-year growth rate standing at 18.4% pa has now lowered to 15.8% pa, as calculated over a 5-year period, with a decrease in value recorded at 2.3% for the period 2007 - 2008.

Lind (2009) notes that a housing bubble occurs if:

Real prices have at least doubled during a 5-year period, table 3 above notes that this has occurred for Malta from 2002 – 2007
Real prices have increased with at least 50% during a 3-year period. Table 3 again demonstrates this to have occurred from 2002 – 2005.

Figure 3 then demonstrates maximum market prices achieved in 2007, with the tailing off in prices commencing in 2008. Further on is addressed the decline in market value, and over what period, in the section dwelling on "The Housing Affordability Index", with reference again to Lind (2009).

Figure 3: Malta Affordable Property in Lm/sqm.



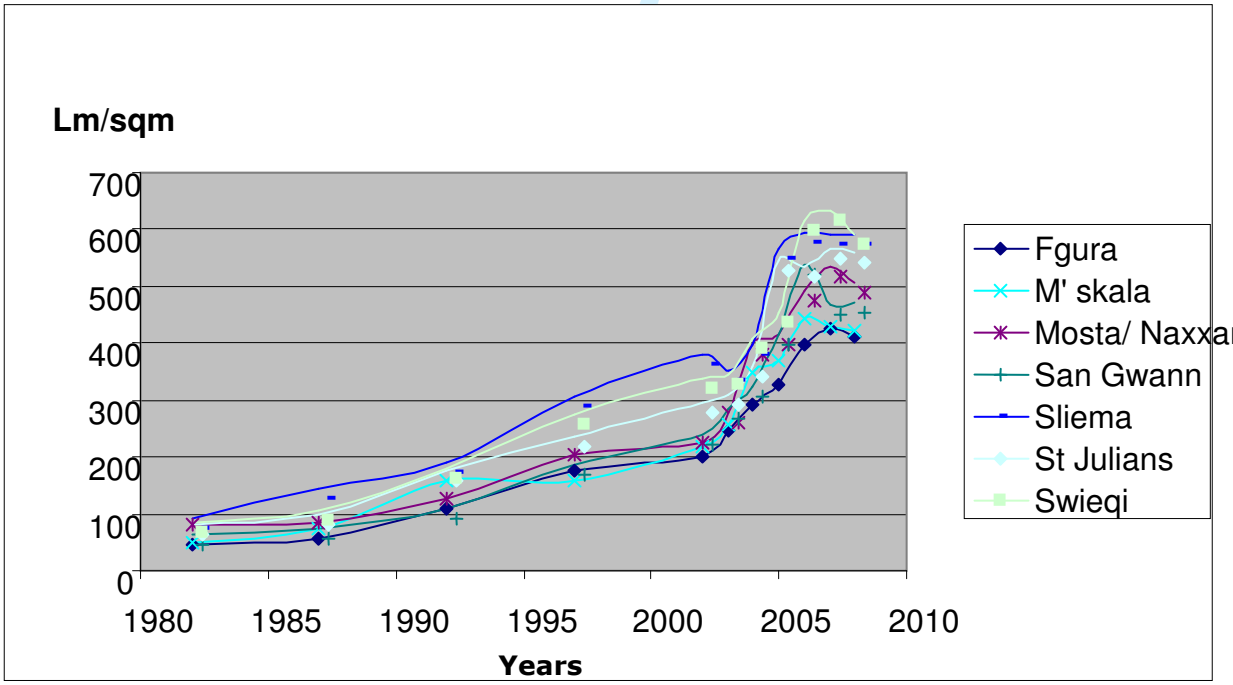
The Trend line plotted over this period as per figure 3 shows that the property market line coincided with the trend line in the initial years 1982 – 1997, but then underperformed as outlined above, for the period 1997 – 2002. Over the period 2002 – 2007 the property market has overshot the trend line with the actual value for 2007 standing at Lm520/sqm as compared to the expected growth over the past 25 year period, which works out at Lm469/sqm. This signifies that first time times buyers in 2007 were paying 11% more for their residence, than previously in the initial 20-year period under consideration. This present overpricing for an affordable residence at 11% is however, less than the

figure for 2006 that stood at 20%. On the sister island, Gozo's affordable property rate standing at Lm368/sqm as at 2007, signifies that affordable property in Gozo is thus 21.5% cheaper than the trend line for the Maltese Islands.

The period 1997 - 2002 with the lowest growth rate at 4.2% coincided with a Conference organised by the Chamber of Architects & Civil Engineers in 1999 on "Housing Affordability in Malta" followed by another Conference organised by the Housing Authority in 2000 on "Social Housing Now and in the Future". This had helped in creating awareness on Housing Affordability. Unfortunately overshadowing of this awareness occurred due to Malta's euphoria on its EU accession in 2004, with the herd mentality overtaking the proper functioning of the Property Market. Hence the double figure growth rates over the past heated period, whilst a slowing down of these market growth rates appears now, to have commenced.

Figure 4 shows that although Fgura, M'Scala, Mosta and San Gwann in the initial years may have been slow starters, these localities all seemed to have picked up in the immediate past 4 years. From table 2 it is noticed that Fgura, M'Scala, and San Gwann had a higher annual growth than the Malta average. These same localities in this last year are converging in value, with Fgura/Paola/Zabbar still experiencing increases whilst San Gwann and M'Scala have experienced a drop in their values.

Figure 4: Property Market Rates in Lm/sqm for various Localities.



The above average affordable Malta house rate of €1,185/sqm (Lm508/sqm) is to be compared with the up market residential developments which presently average out at €3,494/sqm (Lm1,500/sqm), with the top end in the €4,659/sqm (Lm2,000/sqm) bracket, whilst the same up market Gozo rate averages out at €1,747/sqm (Lm750/sqm). Furthermore, a comparison of these annual growth rates for up market developments, as subjected to growth rates varying from 15% pa down to 9.5% pa are compared to the growth rate for affordable properties over the same 25-year period at 8.1% pa.

The Maltese Up market Housing Market.

These Maltese Up market developments at around €5,000/sqm are as compared to similar developments in London at €17,500/sqm, Dublin and Paris at €9,500/sqm. Madrid, Sydney and Croatia attract the same Malta price tag, Phuket and Cape Town attracts half the price, with Bulgaria attracting a quarter of the price. The wealthiest location is Monaco at €35,000/sqm Knight Frank (2008).

The prime residential property market, as this relates to wealth is unlike the same market influences as that of the affordable market. The prime property market, which fixed in demand, compares to the same trends as in the luxury retailing. In general, over a long time span luxury prices have been rising every year by an additional 2.6%, compared to general prices Knight Frank (2007), confirming the higher growth rates for Maltese prime properties as noted above. Wealth exists in Malta, providing for the need of a prime residential market, whereby growths are above the mainstream growths. As wealth increases, luxury products, and services continue to rise in value, as they are more desirable, the more expensive they are, with prime property being the ultimate product.

Wealth has been growing and its growth has been fastest for the super wealthy. A more stratified society developed in the late 20th Century in the US, UK and Canada defined by the term plutonomy. Plutonomies are countries where the wealthy have a disproportionate slice of economic wealth. To illustrate this trend, the top 1% of households (by wealth) in the UK have increased their share of national income dramatically in recent years, from a low of 6% of national income in the 1978 to 13% in recent years. The property buying habits of the City Banker and the Russian billionaire characterized the rise of serious wealth in London. The UK's increase in wealth is not far short of the US at 15%. This experience is totally unlike continental Europe and Japan, where the share of wealth held by the top 1% of households has declined in recent years from 10% to 9%.

Concentrations of wealth in plutonomies have a huge impact on savings, and consumption patterns. In these economies, the very wealthy power and consume growth. Its opposite model, the egalitarian economy has simply not seen such wealth concentration. Japan and most of continental Europe are examples of such egalitarian economies. Considering the wealth created in Malta

and Gozo, despite the economy's low economic growth rate, it appears that the Maltese Islands follow more closely a plutonomy than an egalitarian society. This where prime properties are subjected to higher market increases than the affordable market. Where the plutonomy model has been developing, the wealth pie has become larger for just about everyone.

Housing Affordability Index

This index indentifies with banks' workings. The qualifying income by the Banks was obtained in 1982 by factoring the mortgage monthly payment by 4 times the households', reducing to 3.5 by 2007. The median family income over this period is from the annual reports "Economic Survey", as issued by the Ministry of Finance. The following workings are limited to the median wage-earning households. For households on the poverty line that amount to above 15% of the total households Camilleri (2000), those without aid will not manage to own their home, whilst for the wealthy they can afford more than the above quoted percentages to achieve higher housing specifications.

Table 4 notes the Housing Affordability Index (HAI) calculated for the period 1982 - 2008. For a 3-bed/r median apartment, the HAI had in 2007 at 74 slid down from the previous year's 79. However, the worst for this period stood in 1997 at 65, coinciding with the introduction of VAT in 1995. Over the years it has always appeared affordable to purchase a 2 bed/r median apartment with the HAI peaking to 123 (1987) and dipping to 101 (1997).

Table 4 - Housing Affordability Index for the Maltese Islands – HAI

Year	Mortgage Monthly Payment		Medium Family Income**	Qualifying Monthly Income		Ratio of Qualifying Family Income		HAI		House Price: Earnings Ratio
	3-bed	2-bed/r		3-bed	2-bed/r	3-bed	2-bed/r	3bed	2bed	
1982	Lm60	Lm42	Lm184	Lm240	Lm168	1.3	0.91	77	110	4.28
1987	Lm69	Lm49	Lm242	Lm276	Lm196	1.14	0.81	88	123	4.23
1992	Lm108	Lm72	Lm320	Lm432	Lm288	1.35	0.90	74	111	5.27
1997	Lm165	Lm106	Lm427	Lm660	Lm424	1.55	0.99	65	101	5.80
2002	Lm169	Lm113	Lm522	Lm676	Lm454	1.29	0.86	77	116	5.60
2006	Lm260	Lm184	Lm715	Lm910	Lm644	1.27	0.90	79	111	7.22
2007	Lm289	Lm205	Lm746	Lm1046	Lm717	1.35	1.01	74	104	6.97
2008	Lm282	Lm190	Lm772	Lm 987	Lm665	1.28	0.92	78	116	6.58

An HAI of 100 according to the US National Association of Realtors' signifies that a family earning the median household income just qualifies for a median residence, whilst with a HAI of less than 100, this signifies that the median family has to do away with other necessities.

***the median family income is factored at 1 for 1982, and by 1.35 for 2002 increasing to 1.575 for 2008 to account for the effect of the 2nd wage earner.*

Source: updated table Camilleri (2000)

Workings for the HAI as given in table 4, are outlined below in table 5 for the 3bed/r apartment over the 25-year time span, for 1982 and at 2007 and then extrapolated to 2012.

Extrapolation to 2012 notes the trend line analysis outlined in figure 3 as giving an affordable housing rate for 2012 standing at Lm695/sqm. Decreases to the affordable price growth rate, estimated for 2009 at 7.5%, followed by decreases of 4% for 2010 and 1.5% for 2011 before stabilizing to a sustainable growth rate from 2012 onwards.

This gives an affordable rate for 2012 estimated at:
*Lm508/sqm*0.925*0.96*0.985 = Lm445/sqm*

The estimated affordable rate for 2012 at Lm445/sqm, signifies that purchasers in 3 years' time should be purchasing *(Lm445/sqm/Lm695/sqm = 0.64)* 36% cheaper than indicated on the above trend line analysis, over this 30-year period (1982 – 2012).

Table 5 - HAI CALCULATION OVER A 25-YEAR PERIOD & EXTRAPOLATED INTO THE COMING 5-YEAR PERIOD

Year	A Apart-ment floor area sq m	B Afford-able Market Rate Lm/sq m	C Apartment Affordable Price Lm	D Mortgage Deposit/Year term/ interest rate			E Monthly Mortgage Repay-ment Lm	F Qualifying monthly income Lm	G Median Family Monthly Income Lm	H HAI	J House price : earnings ratio
			B X C	%	No	%		(* E X 4) /E X3.5		100 X G/F	C/(F X 12)
1982	135	70	9450	20	25	8	60	*240	184	76	4.28
2007	120	520	62400	10	40	5.5	289	1012	746	73	6.97
2012	120	445	53400	10	40	3	172	602	832	138	5.35

With the present low mortgage rate era and decline in property values as anticipated up to 2012, an HAI for 2012 from table 5 works out at 138 for a 3-bedroomed apartment. This signifies that for Malta, the global credit crunch is beneficial to the first time homeowners. An improvement in the quality of life of the Maltese family is to occur, as a main job should be sufficient to own one's home.

Drawing a comparison with the French situation in earlier years, the HAI was 100 in 1992, and then increased steadily to 160 in 1999, whilst dipping to 140 by 2003, Ball (2004).

The affordability for first time buyers over the period 1982 – 2008, has varied slightly as noted in table 4 averaging out at 77 for a 3 bed/r apartment and at 112 for a 2 bed/r apartment. This occurred, despite the increase in house prices over the period at 8.1%pa equating to double the wage growth over the same period, which stands at 4%pa. The HAI managed to

keep a relatively stable level over this period, due to the household income as supplemented by the provision of a greater reliance on the wage of the second wage earner. This further supplemented with a lower mortgage rate as standing at 8% in 1982 climbing down to 3.5% in 2008. This together with a higher repayment period as increasing from 25 years in 1982 up to 40 years in 2007. As noted earlier, on a reduction in the floor area purchased occurred also over these years.

Although over the past 26 year period with the HAI averaging out at 77, a 3 bed/r apartment was unaffordable for the median Maltese household, whilst a 2 bed/r apartment over the same period with an average HAI of 112 was affordable. With foreclosures considered minimal, the answer to the above dilemma probably lies in the industrious characteristics of the Maltese worker, who to own his residence over this period worked overtime to cap his wage packet by:

100/77 = 1.3 i.e. 30%

The HAI indicates the most affordable Year 1987 as standing at 88 & 123, this on introducing in 1986 of a housing scheme reduction to the long-standing 8% mortgage rate. The worst HAI noted for 1997, with improvement occurring up to 2006, as the mortgage-lending period extended from 25/30 years up to 40years, together with the high mortgage rates reduced to a low of 3.5%. However, over 2007 this had increased up to 5.5% with the price of property remaining stable. It is thus due to the increase in the mortgage rate that a drop in affordability had occurred over the period, 2006 - 2007. As a drop in the mortgage rate to 5.125% and a drop in affordable property prices occurred in 2008, improvement to the HAI has again occurred. Thus, improvements expected to the HAI in 2009, due to a further decline in property prices and a present mortgage rate standing at 3.15%.

The above averaging out of HAI's values over the period 1982 to 2008, is in stark contrast to the conclusions drawn by Darmanin (2008) over the period 1999 – 2006, who had noted deteriorating HAI's, posing a serious concern on the possible future movements in the housing market.

The price earning ratio noted in table 4 above, has increased gradually from 4.28 in 1982 peaking in 2006 at 7.22, before declining to 6.58 in 2008. These ratios considered high, as a long-term 35 Year average level of house prices to incomes ratio stands at 3.5 Wayne (1999). Norris et alia (2007) mention that in Eire, price earning ratios of 4 were considered high, but then mention that housing expenditure to income ratios are regarded as a more accurate measure of housing affordability, as the method takes account of house prices in relation to the cost of borrowing for housing, which has presently reduced drastically. The UNCHS (habitat) indicators then mention the price earning ratio desirable range to lie between two & six.

Lind (2008) mentions that a little property bubble will occur if the price earning ratio is less than 6 and a serious bubble will occur if higher than 10. As the

highest price earning ratio stood at 7.22 in 2006, Malta's property bubble is characterized as substantial but not serious. Noting from table 5, the extrapolated price-earning ratio for 2012 at 5.35, signifies the property bubble to totally subside by 2012.

Further to the above mortgage payments, expenses accumulate due to the normal present 10% deposit anticipated, down from the 20% deposit requested in the earlier years. To this deposit must purchase expenses added onto, which includes for stamp duty + notaries and survey fees.

This tallies with the Irish experience where Norris et alia (2007) quote, that by focusing on the costs of mortgage repayments, measures such as 'housing expenditure to income ratio' ignore the deposit which is often an important barrier to housing affordability. This notes that to accumulate the 10% deposit to purchase the average new house in 2003; an individual must save 100% of the net annual average wage, up from 62% in 1989. In Malta's case in 1982 to purchase the 20% deposit + further expenses as outlined, still required 100% of the then average annual wage.

A further reduction in the stamp duty fees targeting the affordable market should help 1st time buyers in acquiring their first residence. It is to be noted that in the UK and Eire presently, for properties below the 175,000GBP mark no stamp duty is payable. A progressive rate then applies varying from 1% up to 4%, with the higher rate applicable to properties above the ½ million-price tag. Stamp duty in Singapore and Hong Kong apply at a progressive rate but not higher than 3% Chi-Man Hui et alia (2004).

RESIDENTIAL DEVELOPMENT PERMITS

The surge from the year 2000 onwards, in the number of residential permits issued as from 1995 as noted in tables 6 & 8, which is well above the supply required should surely have righted any affordability problem?

Although there has been a slowdown in the homeownership rate, this has not deterred developers from undertaking residential developments, as noted in the number of residential applications submitted to Malta Environment and Planning Authority MEPA over the years as noted in table 6.

TABLE 6: Development Permits for Dwellings over the Intercensal Period.

YEAR	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
APPROVED DWELLINGS	4229	3351	3411	3004	2273	2369	4180	5481	6128	6707	9081

Source: Malta Environment and Planning Authority

Tables 6 & 8 show a slowdown over the 1999 – 2000 period, followed by a surge from 2001 onwards. Further, the number of permits for 2006 increased to 10,409 permits, topping to 11,343 permits in 2007. The number of permits issued over this intercensal period is to be compared to the Housing Requirement A housing demand calculation undertaken in MEPA's Housing Topic paper (2002), stands at 2,850 units pa. The supply calculation, excluding the existing vacant properties, over a 20-year period was given at 95,000 units, which averages out at 4,750 units pa. This supply calculation now requires a further adjustment due to the Schemes Rationalization Exercise undertaken in 2007, whereby further annexation of tracks of land provided into existing Building Schemes.

Tables 6 & 8 further indicate that over the past 5-year period a higher supply had been provided, with possibly the increase in demand not being matched. This, as evidenced by the number of annual property contracts undertaken, noted as in table 6. This presently stands below the 11,000 mark, whilst in 2002 these stood at above the 12,000 mark. These annual property contracts include for not only the sale of residential but also commercial premises. The number of marriages over the period has averaged out at 2250 annually together with separations/annulments averaging at 375 annually. Considering these figures together with 2nd home and foreign buyer purchases in the 400 region as noted from table 12 below, the demand figure does not appear to be too far off from the above supply figure of 4,750 residential units annually, as noted above. Thus in the coming years it is anticipated that building permit applications for residential units will again revert to the pre-2002 figures.

A further comment that may be gauged from table 7, is that underreporting of property values was rife in the 1982 – 1992 period, but once VAT and Capital Gains Tax on property transactions was introduced in 1995, the declared values as noted in the average price quoted, from 1997 onwards were more realistic.

Table 7 - Property Contracts, average prices of total and marriages/separations.

Year	No of annual Contracts	Average Price Lm	% of National GDP at current market prices	Annual Marriages	Separations & Annulments
1982	13,281	Lm 3,766	9.7	2475	
1987	9,388	Lm 5,230	8.5	2535	
1992	11,642	Lm 5,328	7.1	2377	303
1997	9,300	Lm17,531	12.7	2370	275
2002	12,394	Lm30,368	22.2	2240	375
2006	10,252	Lm35,232	17.1	2285	447

Source: Ministry of Justice and Home Affairs, Annual Reports

Cyprus our island neighbour in the Mediterranean, with a land area 5 times the size of Malta and a population twice that of Malta during the period 1998 – 2001 had property transfers and compulsory sales averaging out at 29,998 contracts annually. This as compared to Malta's averaging out at 9,061 contracts annually over the same period.

The number of compliance certificates as issued by MEPA as noted in table 8, gives an indication of the excess present supply produced.

Table 8 –Residential Units as approved by MEPA, together with Compliance Certificates issued:

YEAR	2000	2001	2002	2003	2004	2005	2006	2007
Number of Residential Units	3970	4180	5481	6128	6707	9081	10409	11343
Compliance Certificates	2735	2582	2552	2719	4975	3884	3400	
% Completed	69%	62%	47%	44%	74%	43%	33%	

Source: BICC State of the Construction Industry report 2005.

Table 8 indicates that the take-up of residential units has fallen from 2/3's of the supply as at 2001 falling to 1/3 of the supply as at 2006.

The apartment/maisonette types witnessed the highest increase in residential permits. Apartments have grown from a base of 64% in 2000 to 90% in 2007, whilst terraced housing has decreased from 10% to 2.25% over the same period. This signifies moving away from the traditional low-density terraced house to the more highly dense units comprising maisonettes and apartments. In 2001, the average number of residential units per permit issued stood at 3.2 increasing to 4.2 by 2005.

The control of building heights has been a key tool in the Maltese Planning system aimed at controlling town space, the urban form, and densities of development within designated urban areas. This tool introduced in the Town Planning Schemes of the 1960s indicated mostly two Floors above ground level. This has contributed to the present pre-dominantly low-lying compact urban form.

The Town Planning Schemes of 1988, an updated remnant of the 1960's planning schemes, indicated statutory building heights of 2 floors in most urban areas and 4 floors in exceptional cases. However, they included 6 and 8-storey building heights for Sliema and St Julians. In 1993, a revision to the building heights policy allowed an additional floor in areas outside Urban Conservation Areas (UCAs) with a height limitation of 2 floors, subject to certain conditions. In these same areas, together with areas that already had a height limitation of 3 floors, the recent amendments permitted an additional penthouse construction on a building height of 3 floors, instead as previously, allowed over 4 floors.

Although Malta escaped the high-rise building boom for social housing and speculative offices occurring in European countries in the 1950s and 1960s, the Structure Plan of 1990 introduced a new tool for control of building heights – namely the floor area ratio (FAR). Although not containing any policy guidance on tall buildings, this policy has now created five approved high-rise projects, 25 pending development applications and another 10 pre-submission requests submitted to MEPA. These projects have heights varying from 9 to 40 floors, concentrated mostly at Xemxija, Qawra, Sliema and Gzira.

MEPA's topic paper (2006) defines tall buildings as "a building which is sufficiently higher than the built development in its local context". Significantly higher in the local context is considered to be when the building is more than twice as high as the maximum building height limitation for the locality as established in the Local Plan or more than 10 floors (40m) whichever is the lower, as measured from the lowest street level. Designated locations for tall buildings require a minimum site area of 4,000m^2. These areas are not to be more than 75% built upon, the rest provided as public open space of which at least 40% of this open space is dedicated for soft landscaped.

Medium-rise buildings then defined as those that are higher than the statutory building height limitations but are not determined to be tall as they are equal to or less than twice the statutory building height or 10 floors (40m) whichever is the lower.

The above planning policies have succeeded in obtaining for Malta a reasonable residential density notwithstanding its high population density standing at 1,298 persons per km^2. From a MEPA study (2002), the residential units per hectare vary from 8 up to 80, whilst the number of residents per hectare varies from 25 up to 150. This in comparison to Singapore, with a population density of 5,454 persons/km^2 and land area ½ build upon, as compared to Malta's with land 1/5 built upon. The national average residential density quotes at 142 units per hectare for Singapore, with 82% of the population living in high-density housing at 215 units per hectare.

Hall (2001), quotes that it is worthwhile to design urban areas somewhere in the 30 – 40 unit range, translating to 75 to 150 persons per hectare. These densities assume that the maximum distance people are prepared to walk is around 2000m, with the optimum being 800m, a comfortable 10-minute walk, with shopping developers using 400m as the maximum shopping distance. On the other hand Jacobs et alia (1987) do point out that San Francisco achieves superb urban quality with 3-storey row houses above garages at densities as high as 120 units per hectare, translating to 240 – 475 persons per hectare. Nevertheless, they then warn that at densities above 500 persons per hectare, the concessions to less desirable living environments mount rapidly.

A further altered Maltese housing scenario presents in a greater number of developments presently undertaken on previously developed brown sites, as

opposed to the previous virgin green sites. In the year 2000, developments on brownfield sites stood at 30%, with 70% of developments undertaken on green sites. In 2005, brownfield development totaled 60%, lowering to 50% of all residential developments in 2006 (Formosa 2007a). This is good news as the take up of further virgin land is considered harmful to Malta with an urban sprawl as registered at 21% in 2000, when on the continent this averages out at 7% Formosa (2007b). Edwards et alia (2001) notes that brownfield site redevelopment provides the opportunity to create new, integrated communities close to work leisure and education. Further, only by achieving densities above 80 units per hectare is public transport be sustainable with streets designed to provide safe walking and cycling facilities. As housing density increases further, other potential is unleashed such as art centres and branch libraries that often bring redundant buildings into use.

Malta's land-use planning system closely modeled on the UK Town and Country Planning Act 1947. However, compared to the UK, development control procedures have been applied much more liberally in Malta, as in Ireland Norris et alia (2007). The emphasis that the UK planning system has placed on limiting the expansion of urban areas, which also constrains the supply of development land, is the primary cause of the relatively low housing output in the UK and ultimately of the strong house price inflation since 1960, which in turn led to problems of housing affordability and price volatility. Due to the more liberal planning system adopted in Malta as in Ireland, this has provided a healthy supply of housing which has not created affordability problems as acute in the UK.

FOREIGN PROPERTY BUYERS

Since 1974 when a foreigner purchases property in Malta, it requires registering via a law known as the Immovable Property (Acquisition by Non-Residents) AIP Act. Just over 14,000 permits have since been registered, i.e. an average of 406 permits per year. These foreign resident purchases, peaked in 1989 at 899, then plummeted to 155 in 1998. This number of annual foreign contracts compare favourably, with the property contracts occurring in Malta exceeding 10,000 annually, as per table 7.

Table 9 demonstrates that presently, foreign buyers are purchasing property in the up-market range peaking in 2005 at Lm971/sqm as compared to the affordable rate at Lm442/sqm. This was not the case in the earlier as noted in 1982 as noted in 1987 & 1992. This signifies that foreign property transactions are not negatively affecting the affordable property market.

Table 9 - No of AIP permits issued, with average price Lm compared to affordable property rate (tables 2 & 3).

YEAR	PERMITS – MALTESE ISLAND	AVERAGE VALUE	PRICE/ SQ M	AFFORDABLE PRICE/ SQ M
1982	175	Lm12,055	89	70
1987	351	Lm10,368	77	91
1992	315	Lm19,860	147	150
1997	163	Lm34,667	257	220
2002	465	Lm70,389	521	270
2003	669	Lm69,871	517	297
2004	705	Lm62,675	464	361
2005	400	Lm126,270	971	442
2006	399	Lm88,330	679	516
2007	478	Lm90,060	692	520
2008	368	Lm75,202	578	508

Source: Department of Capital Transfer Duty, Inland Revenue. AIP data.

Table 9 shows that the number of transactions to foreign purchasers in 2003/4 is well above the 35 year average at 406 annual permits. This period coincides with Malta's entry into the EU. Another interesting point is that for the first time in 2002 since 1982, these foreign purchases were well above the affordable price range. A surge in the quality of premises purchased occurred in 2005 at a market rate of Lm971/sqm, with a specification decline following thereon. The up-market property rate over the immediate past period to 2005, had averaged out at Lm1, 150/sqm. In 1987 and 1992, foreigners were actually purchasing properties below the minimum local standards. It appears that the recent up-market developments are appealing to foreigners.

Further 2002-2007 AIP data available outlines that of the 4,574 permits granted to 86 nationalities, 70% of purchasers were British. These followed by Irish 3.75% and then the Italians and Russians at 3% each. The remaining nationalities were the Americans, Dutch, Germans and French each averaging out at 2%.

From further AIP data over the same period 2002-2007, the Sliema/St Julians area at 28.75% of purchases was the most sought after, followed by the St Paul's Bay area at 21% and Mellieha at 9%. The fortified towns attracted 8.5% of purchases, together with Marsascala at 5.5%, whilst Birzebbugia attracted 1.75%. Sales in Gozo approximated to 18.85% of those occurring in the Maltese Islands.

VACANT DWELLINGS

The number of vacant dwellings, as at 2005 stands at 53,120, up from the 1995 value of 35,723. In 1995, 23% of total dwellings were vacant, whilst in 2005 this increased to 27.6% of 192,314 residential units available. Of these vacant units 10,113 are listed as holiday dwellings, i.e. 1/5 of the total vacant stock of which only 349 was rented. This figure shows the importance of 2nd homes of which in 2005 only 85 holiday dwellings were located aboard.

The Census (2005) then states that 43.4% of these vacant dwellings were in a good state of repair, 21.3% needed only minor repairs, whilst 5,274 units were in shell form with a small percentage in a dilapidated condition. Furthermore, 65% of vacant dwellings were flat/maisonette/penthouse.

Table 10 (Census, 2005), shows that over the censal periods from 1861 to the present date, vacant dwellings were always high for the Maltese Islands. The highest stood as at 1881 at 29%. Double figure percentages exist for all censuses except for 1957, which strangely gives this at 4%, as noted in table8.

Table 10: Vacancy rates over the various Maltese Census's

YEAR	1861	1881	1891	1901	1911	1921	1931	1957	1967	1985	1995	2005
%	25	29	20	20	22	19.9	19.4	4	14.9	19.2	23	27.6

Source: National Statistics Office (2007), "Census of Population and Housing 2005"

Considering vacant dwellings in the Euroland, one notes the high vacancy rates existing, at 23.1% for Cyprus, 35.44% for Greece and 29.5% for Portugal. These countries like Malta embrace good family ties, thus noting residential hoarding in these countries for their offspring. At the other end of the scale, Sweden has a vacancy rate of 1.67%, the Netherlands at 1.97%, Luxembourg at 2.3%.

Now for the proper functioning of the property market, a 4% to 5% of vacant stock is necessary. Thus, the above European statistics indicate that where the vacant percentage is below the 5% mark, the market works inefficiently. Nevertheless, is this inefficiency carried over when the vacancy rate is as noted above, being in the region of a quarter of the total housing stock available?

Considering Malta's scenario, this does not appear to be the case for the proper functioning of the property market, as property hoarding appears to be a favoured investment medium, due to property's perceived capital growth rates. This appears to be also corroborated by Cyprus, Greece and Portugal.

It had been noted by Hoekstra & Zad (2006) in a similar vein that the Mediterranean countries, are characterized by specific phenomena that contradicts with economic theory: High vacancy rates, as noted in table 8 go together with high house prices, a high housing production rate, noted in table 5 and a high rate of homeownership as outlined in table 1. This leads to a wrong

allusion that the problem of vacant dwellings is to be one of the major challenges for Southern Europe in the decades to come.

Thus, a high property vacancy rate has more of an adverse effect on our surroundings and built environment, considering our limited size, than on the proper functioning of the property market. On the plus side, these vacant properties would come to good use in the scenario that a natural disaster befalls Malta, as the homeless would then not find accommodation for years on end in tents or makeshift premises. A previous study Camilleri (2003) undertaken had shown that sufficient vacant properties are existing for such a scenario.

Rental Matters

This is a sorely debated point; will the releasing of a number of rental premises at market rates be beneficial to the better workings of the affordable property market? This section tries to clarify this dilemma with references also to global experiences.

The effects of the Maltese housing market due to rent control since 1939 are well known. The control that was a World War II measure has stayed with us, distorting the property market. These rent controls have been controversial, due to the adverse effects of

1/. lower maintenance by owners,
2/. longer tenancy rates,
3/. vacant properties
4/. higher prices in the uncontrolled sector
5/. an aggravation of the social housing problem

A study carried out in the US Early & Phelps (1999), concluded that by removing rent controls, rents in the uncontrolled sector should fall by 15 – 25%. The present uncontrolled rental market of affordable properties constitutes only 1½% for 1-bed/r, ½% for 2-bed/r and ½% for 3-bed/r affordable premises as compared to the total rental market, according to the 1995 Census.

Tulla (1998) notes that in Finland, following regular market deregulation since 1991, between 1992 and 1996 an estimated 50,000-rented private dwelling came onto the market. This motivation for a deregulation of rents was for a desire to expand the private rental sector, for a true alternative to owner-occupation to occur.

Table 11 - % No. of dwellings by ownership

Year	owned	Free of charge	Rented furnished	Rented unfurnished
2005 (NSO)	75.2%	2.7%	3.1%	19.0%
2002 (NSO)	70.0%	3.8%	2.6%	23.6%
1995 (Census)	68.0%	3.69%	2.49%	25.82%

Source: as noted

According to the Sunday Times Housing Survey 2003, 17.6% of all occupied residences in Malta are rent-controlled, with only 20% of the rent-controlled tenancies relating to tenants in the lowest income group. 8% of the rent-controlled properties belong to owners in the lowest income group. This in relation to the 81% of all rentals not considered to the based on the free market rental level, this as noted by the rental amounts not exceeding Lm300pa, as per Census 2005.

Although from table 11 the rental market accounts for just a ¼ of the total housing tenure, just more than 60% of this amount rents out at less than Lm100pa. On average, households who rented the dwelling where they resided paid Lm309 per annum, varying from Lm154pa for unfurnished dwellings and Lm1,173 for furnished dwellings. Further, 21,905 occupied dwellings or 76.2% of rented occupied dwellings rented at less than Lm200pa. On the other hand, 13.9% of rented dwellings rent out at Lm700 or more per annum.

An accepted principle is that households should pay around 15% to 30% of their income to secure a rented home. JRF (1991) noted that rents for those on low incomes should not absorb more than 20% of income. Many argue that the impact of rent levels is best measured by what a tenant has left to spend on other goods, rather than on the % of income devoted to paying the rent. The average rental amount at Lm309 per annum equates to 4.5% of the average median wage.

Restricted rents require a factor of 10, to bring them up to the present rental values. This factor equates in proportion to the index of inflation as at 2008 standing at 743, divided by the index of inflation for 1939 at 80, signifying an approximate tenfold increase. Measures require implementing, whereby a household falling below the poverty line benefit, noting that the poverty line in Malta exceeds 15% (Camilleri 2000).

Rental increases from 1999 up to 2003 for affordable property was minimal, with the rental increases noted in the up market villa developments (BICC 2005). This indicates that presently it may be cheaper to rent out an affordable property, as the rental payments could be substantially less than the mortgage payments, although this differential has presently been reduced due to the present low mortgage interest rate era. Presently, the renting of a 3 bed/r apartment is equivalent to 75% of the necessary mortgage payments, this as compared to 100% in 1997.

The above is further reinforced with the improved residential rental capitalization rates, which since 1997 have shifted towards the more realistic market residential annual capitalisation rates, standing between 2.75% - 4.5% in 2007 from the 8.5% - 5.5% highs in 1997, as noted in Table 12.

JRF (1991) noted that one does not expect an investment in housing to obtain a much better return than from any other comparable investment, but neither is it

expected to do worse. A comparable return yardstick from the private sector to rent levels works out as the yields from index-linked government gilts. By reference to index-linked treasury stock, a real return of 4% for capital-value rents considered acceptable. In addition to incorporating a real return of 4%, capital value rents should also cover the management and maintenance costs of the property. Maintenance costs work out annually at 0.65% of the full value of the property.

Property returns normally measure against the target rate for similar investments with comparable risks and liquidity, with the risk of inflation as it effects investments not fully quantified. Wood (2006) notes that with the advent of index-linked gilts in 1981, within a range of probability the expectations of inflation are predicable, making it possible to relate property investment yields to the yield on gilts.

Table – 12: Rental values for various localities as a % of market value

Locality	Rental value as % of market value - 1997	Rental value as % of market value - 2004	Rental value as % of market value - 2007
Bugibba – internal	8	3.6	3.25%
Qawra - internal	8.5	4.3	2.75%
Sliema front	5.5	2.0	3.5%
Sliema inner	5.5	4.1	4.5%
St Julians	7.5	3.5	3.75%
Swieqi	7.0	4.15	4.175%

Source: Dhi Periti in-house valuations

Hargreaves (2008) argues that lower yields are justified so long as mortgage interest rates remain low, but this overlooks the fact that interest rates are more volatile than yields, since property is a long-term investment. Rental gross yields have also been declining in New Zealand over the past decade. This decline considered a function of increasing house prices with rents increasing at a much lower rate than house prices. Over the period 1993 – 2005 in New Zealand, average weekly wages increased by 36% compared to rental increases of 66% and house price increase of 150%. From an affordability point of view, it was noted that landlords can justify increasing rents as wages rise. Notwithstanding the above, depending on the index-linked gilts, the real return of capital value residential rents will hover around 4%.

Considering the above present residential rental capitalization rate, noted as per table 12 to hover around 3.65%, the net return to the property investor, who also anticipates to achieve a 7.5% pa annual capital return and after deducting 0.65% for maintenance costs is seen to receive a net annual return given by:

3.65% + 7.5% - 0.65% = 10.5% pa

Thus, homeownership is way above a present safe Government 15 year bond issue averaging at around 4% pa.

Rental deregulation as noted above should lead to deductions of 15% to 25% rental payments Early & Phelps (1999), which as noted from table 12, should initially be achievable in the Swieqi/ inner Sliema areas as their respective rental capitalization rates are presently on the high side. Eventually lower rentals achievable in the Bugibba/Qawra localities should lead towards lower market value rates, as presently the rental capitalization rates are within the accepted norms for residential premises. This could then lead to an improvement in the affordability of homeownership.

The answer could possibly lie in that more emphasis has to be on *sustainable affordable provision* as opposed to sustainable home ownership. A healthy rental market would make available an existing housing stock; better utilization and upgrading of rented properties and generally give new life to degraded urban cores and services. A housing system, which is sustainable into the future and across social groups, is one that possesses inherent variety and where switches are possible between tenures. It could then make state finance available for upgraded services and subsidies to really deserving cases. Sustainable strategies are inclusive rather than exclusive and therefore the right housing policies are those that prevent rather than promote social division.

Sustainable Housing: the way forward!

Malta's national report on sustainable development presented to Johannesburg 2002, notes that:

'The construction industry should be directed to improve design for thermal efficiency and to adopt energy saving measures prior to being granted development permission'. In this regard, there is the need to step up funding for research to improve knowledge on local materials and conditions'

Following this, *Document F Technical Guidance on Conservation of Fuel, Energy and Natural Resources (minimum requirements on the energy performance of building regulations, 2006)* issued by the Services Division Building Regulations Office Malta was made legal notice in 2007.

However, as capital costs add onto the building constructions, this would further affect their affordability, although green buildings have been quoted as being more affordable, as they can cut down on heating/cooling costs. It is commendable that the Housing Authority has taken the initiative in constructing an energy efficient block. The economics of sustainable construction in Malta is still not delved into, whilst new cheaper sustainable forms of construction yet to be introduced.

With Malta's quarries and the high thermal capacity of globigerina limestone, it is an obvious building material. As stone occurs naturally, it is healthy, enduring, and attractive. Although health problems can occur in quarrying and site cutting, generally stone, poses little pollution risk. Quarrying is however, visually and

ecologically damaging, with large transportation energy costs involved. Ideally, materials are site produced or sourced within a radius of 10km. Stone buildings can be more sustainable with particular emphasis given on the mode of quarrying/transporting the material to site with reduced dust production, together with greater importance given to its re-use.

Malta with a quarter of its area built upon, together with a favourable climate, requires solutions *adapting not adopting* to the local context. A glass clad high-rise building using as much energy as a whole town is not a sustainable solution for Malta. Local materials require the use of thermal mass to average out temperature variations. The West façade requires a closed gable wall, whilst the South wall should take advantage of the low winter sun for lighting and shading provided for the high summer sun. Orientation together with natural ventilation principles can reduce the energy intake by 30%. It is possible to achieve thermal comfort by passive means not involving the use of energy. The utilization of basements as a passive form of cooling to the upper floors is virtually unknown. The internal yard concept although appreciated has lost its planning appeal. A residence requiring air conditioning for its comfort may be considered a design disaster A good climatic orientation taking ventilation advantage of light breezes, a light coloured roof top, the provision of ceiling fans, together with humidity reduction with the help of a dehumidifier should create a comfortable environment for most days of the year. If air conditioning has to be installed the provision of ceiling fans would reduce the demand by 5°C. Besides the initial capital expenditure, there needs to be more education on the energy efficiency ratio (EER) number of a unit, together with choose of units, such as VRF that are more environmentally friendly.

Generally, natural building materials are also healthy ones. Presently revival of traditional materials, some neglected because of fashion or poor performance occurs because of their undoubted healthiness. Organic materials require better detailing than modern materials, with damp penetration being one example. The main organic materials are earth products ranging from clay mortars and earth-based plasters, together with stone, timber and lime mortar.

The above treatise on the choice of adapting sustainable materials raises a dilemma. If our insulated constructions are to keep the heat in winter and reduce the heat gain in summer, does this, necessitate the use of unsustainable materials to infill the wall cavities such as urea-formaldehyde systems. This as, when most households for most of the year, prefer opening their external aperatures, to capitalize on the benefits of natural ventilation.

Sustainability involves a frame of mind that thinks long term rather than short term. This strategic long-termism should take account of the way individual buildings may adapt to the changing needs of occupants – perhaps with the onset of illness or as an individual's age.

Thus, it is noted that sustainable housing is not just an exercise in low energy design, but brings together physical, social, and cultural factors into a single agenda Edwards et alia (2001).

Malta's Real Estate & the Malta Stock Exchange.

Property has always been a favourite investment medium for the Maltese. With the recent creation of the Malta Stock Exchange in 1996, has this provided a safe void where the small investor can address his funds, even prior to settling on the property ladder? What are the risk scenarios for the affordable property market vis-à-vis investing in the Malta Stock Exchange?

Figure 5 compares the growth of the affordable property market in comparison with the growth of the Stock Exchange Index, since its inception, from 1996 up to 2008. It is to be noted that if trading by an investor commenced in 1996, this investment on the Stock Exchange would have grown by 5 times, whilst investment in the affordable property market over the same period would have only increased by 2½ times. This is only half the growth experienced by the Stock Exchange over the same period.

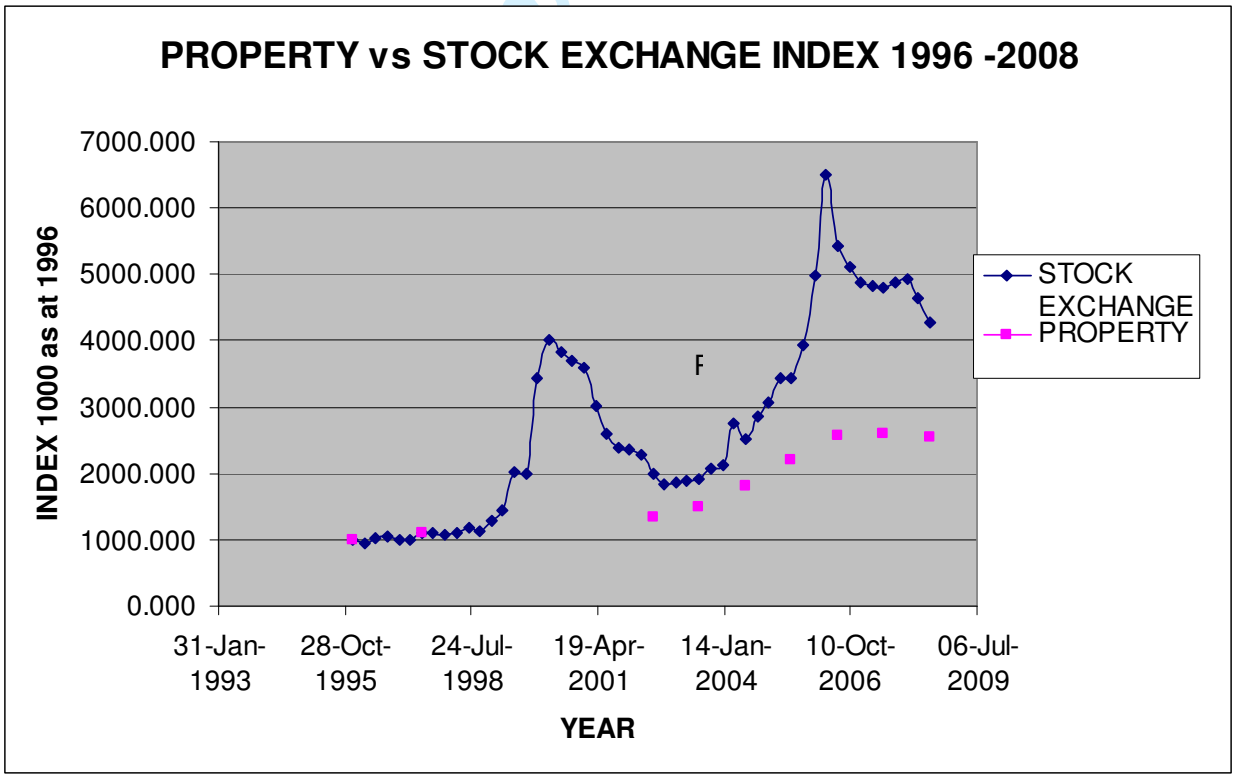


FIGURE 5: The Affordable Property Market Index compiled from Tables 2 & 3, whilst the Stock Exchange Index compiled from the database provided by the Malta Stock Exchange on its website.

The above appears to suggest that trading in the Stock Exchange is superior to dealings in the Property Market. This is the case if the risks involved in both investments are unaccounted. The serrated curve of the Stock Exchange Index is a clear example of a very volatile market, unlike the Property Market's smooth exponential curve. The timing of entry in the Stock exchange is of prime importance. If an entry had been undertaken in the 1st quarter of the year 2000, the growth up to 2007 in the Stock Exchange would have registered only a 20% increase over this 6 ½ year period, whilst over the same period the Property Market registered a 120% growth.

Table 13: Statistical Data on Returns from the Malta Stock Exchange & the Affordable Property Market over the period 1995-2008.

	Average Annual Return	**Standard Deviation of Returns**
Affordable Property Index	8.82%	7.43%
Stock Exchange Index	19.55%	38.05%
Correlation coefficient 0.29		

Table 13 confirms the superior annual return of the stock Exchange at 19.55%, as opposed to the 8.82% return on the affordable property market. However, the higher volatility of the Stock Exchange further evidenced by the high standard deviation, which for the Stock Exchange at 38.05% is 5 times the Affordable Property's Market standard deviation value at 7.43%. Thus, a prudent first time investor would do well to invest in his personal residence, considered as a risk adverse investment, unlike rollercoaster ride on the Malta Stock Exchange.

The correlation coefficient for any 2 markets varies between 1 and -1. A correlation of 1 denotes perfect correlation – returns always move in the same direction, whilst a correlation of -1 indicates perfect negative correlation, with returns moving in exactly the opposite direction. The classic example is here a Skiwear and Sunglass manufacturer. The Sunglass manufacturer does well in summer and poorly in winter, unlike the Skiwear manufacturer who does well in winter. A correlation of 0 denotes that there is no relationship whatsoever. With a correlation coefficient of 0.29, these 2 markets although positively correlated, however demonstrate a minimal relationship in the way the relative returns interact Lee (1991).

The Malta Stock Exchange does not conform with the normal concept of property as having a negative relation to equity and gilts. This concept has breath belief that property is a hedge against inflation, and thus including property in an investment portfolio, enhances portfolio returns, and reduces risk.

Pointers for the coming 5-year period.

The double figure affordable property price annual growth rate as at 16.75% in 2006 as gauged from table 3 had halted in 2007 at 0.75%, whilst a 2.25% decrease in value registered for 2008. Considering the number of annual permits issued for dwellings, which stood at 6,128 in 2003, increasing to 11,343 in 2007, these excess building permits are to be added onto the amount of 53,146 vacant properties available as at 2005. These excess figures relate to the number of annual marriages standing at below 2,500 annually as per table 7. Further, breakup in marriages, together with people purchasing second homes, the quoted supply figures are indicative of a surplus stock. This as evidenced by the low turnout of completed premises, as confirmed by the percentage fall in compliance certificates issued over the past years, noted as in table 8.

An improvement to the HAI is also to be expected, not only due the anticipated slowing down of the affordable housing price growth rate but also due to reductions in the mortgage rate, presently standing at 3.15%, for an ECB base rate of 1.25%. The immediate possibility is that mortgage rates can even slide further.

Reduction in mortgage rates is good news for borrowers. As noted in table 4 mortgage monthly repayment amounts increased from Lm260 in 2006 up to Lm289 in 2007 for a 3 bed/r apartment and from Lm184 in 2006 up to Lm205 in 2007 for a 2 bed/r apartment. These increases were solely due to the 1% increase in mortgage rate, as the value of affordable property, noted in 2007 was subject to an insignificant increase. Thus, Malta's housing market is following the global trend, although with a time lag occurring, with the global housing market stabilizing a year earlier on. The affordable housing market should return to a sustainable level by 2012.

Improving the housing affordability for first time buyers, by adopting the right strategies will achieve a further uplift in the quality of life for the Maltese Nation. An anticipated increase in the HAI will achieve this. For the first time the median Maltese household can own its own home doing away with the necessity of working overtime hours.

Malta forms part of the European Monetary Union EMU, with unlike Central European Countries has a large owner-occupied sector, mainly financed by variable rate debt, also the case in Eire. This means that interest rate changes have a greater impact on the housing market, than in countries with smaller homeowner sectors utilizing fixed-rate debt Memery (2001). As the interest rate policy of the European Central Bank ECB could vary from Malta's housing need requirements, it is of importance to undertake the fiscal steps necessary in time, to best manage the Maltese housing market within the agreed EMU framework.

Revisiting the stamp duty bands on property sales for the first time buyer will also improve affordability.

Conclusions

Malta fits in within the Mediterranean housing context, which as noted over the past years, characterized by a high homeownership, increased steadily over the past 40 years. This has then led to above normal housing price growths and a supply that exceeds the needs of the population. This fuelled by the demand for second homes by locals, together with foreigners attracted by a milder climate by the Mediterranean Sea.

Another characteristic is a high vacancy rate, which does not appear to interfere with the proper functioning of the market. Second homes are another important feature for these countries. Maltese, as at 2005 registered a small ownership of foreign properties. This however, possibly on the increase, due to the purchase of second properties in the emerging markets of the EU. These countries still register modest price growth, despite the global trend in the reducing of property annual growths.

On the other hand, Malta varies from the Mediterranean setting in that its housing accommodation size is closer to that found in the northern countries. Another sector where divergence is again noted from its southern neighbours, is in its larger amount of social housing provided.

Figure 1 indicates a slowing down in the homeownership rate expected over the coming 50-year period. This could help to address the present distortion of the rental market, which can lead to a higher rental demand in future, alluring to a higher mobility factor, with the Maltese taking up jobs in the EU. This then stresses the importance of the deregulation of the rental market which as noted leads to a more efficient free open rental market This should then translate into lower rentals, thus the rental option will further improve, as compared to the financial strain on taking out a mortgage. The case of Finland's experience with rental deregulation noted above, should translate into a number of vacant properties released onto the local market, spread over a number of years. This should help towards preventing further households falling below the poverty line, so important for when the household's income goes below a certain proportion of the annual median wage.

The present excess housing supply on the market should address a required cooling period in house price growth. Expectations for addressing the affordable price differential from the trend value should occur within the coming 3-year period. This cooling off period is not to be as drastic in prime property, with the wealth phenomenon fuelling the demand for luxury property.

Figure 5 and table 11 notes the lower risk profile of purchasing property as opposed to transactions on the local Stock Exchange. This long-term analysis indicates Maltese home ownership to constitute a safe investment, reaffirming the trust the Maltese have of brick and mortar investments.

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