

Second quarter 2010

# Residential Property Investor Report

From Irish Mortgage Brokers in association with PropertyWeek.ie & Frank Quinn (Senior College Dun Laoghaire)  
With a critique provided by Iain Nash (independent economist)

## HEADLINE FINDINGS

- 1. Based upon valuations using four different methodologies, residential investment property is overvalued currently by an average of 37% in Dublin, 43% in Cork, and 39% in Galway.**
- 2. For residential investment property to stack up either rents need to increase or prices need to drop:**
  - In Dublin average rents would need to be €1,609 or property prices would need to be in the region of €177,638.**
  - In Cork rents would need to be €1,431 or property prices would need to be in the region of €141,241**
  - In Galway rents would need to be €1,359 or property prices would need to be in the region of €141,173**

## FOREWORD

'Price' is a complex concept. We may feel that we have an innate understanding of it, but it is in fact the rationalisation of hundreds, often thousands of factors of input, and this is particularly the case with housing. Our pricing guidance in this report doesn't take into account factors such as the cost of labour, land or other costs which play into asking prices; it isn't about sentiment or trajectory, but the application of several price/value models to the present market.

In that process, we have determined that over-valuation is still the dominant characteristic of the Irish residential property market. Perhaps there will be no return to mean but in our opinion property has not "bottomed out", as many commentators have been saying. Our calculations would indicate that (from an investor perspective) the time has not yet arrived for a confident return to property for investment. Having said that, there are outstanding deals in particular markets at specific price levels which a broad market report cannot reflect. Be always on the look out, but with plenty of caution.

"Falling rents, declining property prices and changes in both lending and taxation policy have brought enthusiasm and confidence in the property sector to all-time lows." This was how we introduced our Spring 2009 report and little has since changed. Our methods too have remained consistent. We have utilised three different measurements:

1. Discounted Cash Flows / Net Present Values
2. The Investment method of property valuations
3. Property vs Deposits, with examples using leveraged and without leverage

If price is complex, the same can be said of 'value'. We will demonstrate the disconnect in prices on the sell-side, but on the buy-side of the market the concept of value is also changing and prospective buyers are entirely at odds with sellers. We agree with the old adage that 'the market can stay irrational far longer than you can stay liquid', and therefore the outcome will be either that sellers hold out long enough for some kind of recovery – in which case current buyers will end up paying more than expected, or (more likely) that sellers will accept prices closer to what buyers are currently willing pay. The adjustment is weighted in favour of a downward movement in our opinion.

Good news in 2010 will primarily be of two types: firstly, that there are buyers out there when the guide price is right - recent liquidation auctions have proven this (while the failure at formal auctions only reinforces the argument); and secondly, that demand remains in certain areas, primarily cities and more specifically, particular boroughs.

Property may be hibernating, but it isn't dead. We feel that the wise investor, using sound valuation methods, considerate of financing costs (where required) and working with a well selected group of professional advisers will be able to capitalise on long term opportunities this year, but opportunities are a finite unit in an infinite market given our oversupply. Nonetheless, the prevailing message of our report is that prices will need to drop further before prudent investors will return to the market in significant numbers.

**Karl Deeter, Operations Manager, Irish Mortgage Brokers**



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## Current Prices

According to the monthly, moving average analysis of all asking prices conducted by PropertyWeek.ie, the market is still falling by on average between 0.5 and 2% per month depending on the city. The April snapshot for 2-bed apartments was as follows:

2-bed apartments: advertised price changes				
Market	Average asking price & % drop for April 2010	Previous month	Percentage drop to date in 2010	Apr 2009 average asking price & % drop in 12 months
Dublin	€283,794 ▼2.1%	€289,839 ▼1.1%	4.3%▼	€349,736 = 19%▼
Cork	€247,597 ▼0.6%	€249,052 ▼0.6%	4.8%▼	€297,242 = 17%▼
Galway	€235,552 ▼2.1%	€240,643 ▼0.7%	6.0%▼	€277,078 = 15%▼

Source: PropertyWeek.ie

## Investment Analysis Results

Based on current asking prices (which are, anecdotally at least, somewhat higher than the prices being achieved in actual sales), we have looked at how the present market compares to what would be ideal "investment-favourable" prices derived from our calculations below.

### Dublin

Current asking price average: €283,794,  
Current average renting price €1,021

Our average valuation: €178,963.  
Rents would need to be €1,609 to justify the current price of €283,794

1. Discounted Cash Flow price range: €187,338 to €213,449
2. Investment method range: €144,342 to €168,500
3. Deposit v Property range: €177,750 to €182,400

Properties are currently overvalued by an average of: 37%  
Total overvaluation range: 24% to 49% (taking highest and lowest valuations across all methodologies)  
Current Rate of Return (assuming rental increases of 1% p.a.): 2.78%  
(assuming rental falls of 1% p.a.): 0.98%

### Cork

Current asking price average: €247,597,  
Current average renting price €782

Our average Valuation: €141,341  
Rents would need to be €1,431 to justify the current price of €247,597

1. Discounted Cash Flow price range: €156,929 to €179,402
2. Investment method range: €110,556 to €129,059
3. Deposit v Property range: €130,600 to €141,550

Properties are overvalued by an average of: 43%  
Total overvaluation range: 27% to 55% (taking highest and lowest valuations across all methodologies)  
Current Rate of Return (assuming rental increases of 1% p.a.): 2.34%  
(assuming rental falls of 1% p.a.): 1.06%

## Galway

Current asking price average: €235,552

Current average renting price €787

Our average Valuation: €141,173

Rents would need to be €1,359 to justify the current price of €235,552

1. Discounted Cash Flow price range: €154,321 to €180,236

2. Investment method range: €111,225 to €129,059

3. Deposit v Property range: €129,800 to €142,400

To justify current price rents would need to be: €1,359 p.m.

Properties are overvalued by an average of: 39%

Total overvaluation range: 23% to 53% (taking highest and lowest valuations across all methodologies)

Current Rate of Return: (assuming rental increases of 1% p.a.): 3.03%

(assuming rental falls of 1% p.a.): 1.06%

### A quick explanation of analysis:

These higher rates of return (**Dublin : 2.78%, Cork : 2.34%, Galway : 3.03%**) assume rent increases in future years and even with that positive assumption, they are all still *below* the risk free rate of Irish 10yr treasury 4.4% (actual current price 98.53 w/ YTM 4.75%) and therefore fail the fundamental market test of taking risk for reward. Until property beats the risk free return by c. 50% (to reflect risk) it's hard to justify investment purchasing based on the figures.

**Discounted Cashflow Price Range (DCF) based upon achieving a 6% return:** Using discounted cash-flows the range occurs due to an assumption of rent drops or rent increases both at 1% p.a. respectively. Currently every range for either scenario is below the current asking price in each market.

**Price as determined by Investment Method:** This method uses multipliers which are arrived at based on certain yields - explained later in the report. Using this method every price in every example is well above those one would look for based on the investment method of property valuations.

**Price required to match return on deposits:** Currently deposits would offer superior cash returns on a like for like basis (un-leveraged) or where deposit plus cost is put into a deposit account rather than being leveraged up to purchase a property (leveraged).

**Conclusions:** Ultimately each valuation model we applied showed that property is currently overvalued in our major cities by somewhere between 20-50%. There is a large disparity in this range: it takes the lower end of the investment method as the low point, and the higher end of a discounted cash-flow method as the high (where rising rents are factored in after year 5). The actual range is probably somewhere in the middle-ground of the examples but obviously we can't prove that empirically except to state that the other methods placed the range broadly in that arena every time and we feel that at those prices property would represent a viable investment with positive upside – it depends on which method you trust the most, the most liberal (upper end of the discounted cash flow range) or the most conservative (lower end of the investment method range).

One important issue the way in which cash flow from property is taxed: the taxation treatment of it currently means that despite sometimes having a higher gross yield (when no leverage is used) that the after-tax income is lower than deposits, this will deter any investor other than those who already have significant S23 allowance to make the option more viable.

## Methodologies for ideal "investment-favourable" price calculations

### 1. Discounted Cash flow model

In finance, the discounted cash flow approach describes a method of valuing an asset using the concepts of the 'time value of money'. All future cash flows are estimated and discounted to give their present values. The discount rate reflects two things:

1. The time value of money (risk free rate) - investors would rather have cash immediately than having to wait and must therefore be compensated by being paid for the delay.
2. A risk premium (risk premium rate) - reflects the extra return investors demand because they want to be compensated for the risk that the cash flow might not materialize after all.

We use a Discounted Cash Flow analysis to examine the net-flows involved in a property investment over a 10-year timeline. Discounted Cash Flows are a method widely used to determine the profitability of an investment or to determine the Rate of return (IRR – Internal Rate of Return) of an investment where the cash inflows and outflows can be calculated.

It is based on the principle of discounting and consists of reducing to present value at the required discount rate all cash in and out in relation to a project. The rationale of the DCF method is that future money is worth less than money at present and all future receipts should be reduced to their present worth i.e. rent of 10,000 received today is worth more than rent of 10,000 received in 4 years time.

In this model, we use a Discounted Cash flow analysis to examine the net flows and returns involved in a residential property investment over a 10-year timeline in Dublin, Cork and Galway. The model uses average house prices and rents for the three areas and we assume five yearly rent reviews for each property. We assume 10% costs of purchase and 5% costs of sale.

The rental increase for year 6 is calculated by increasing the rent by the rental growth (1%p.a.) each year for the previous 5 years e.g. Rent of 10108(1.01)<sup>5</sup> = 10624. The property which was renting for 10108 p.a. from years 1-5 is now renting for 10624 p.a. from years 6-10.

The sale price at the end of year 10 is calculated by using the Investment method and valuing the property on the basis of rental value received for the lifetime of the property discounted at the yield.

We then calculate the net flows for each year and discount them at a target rate of 5%. The NPV (Net Present Value) of the cash flows is the value of the future net flows of money in today's terms. Therefore 283,794 spent on a property today is worth 283,794 in today's terms but selling it for 313,638 in 10 years time is only worth 192,542 in today's terms due to the loss in value of money over time.

Example: Dublin Property Investment – Rental growth of 1%

Year	Netflow	PV@5%	DCF@5%	PV@1%	DCF@1%
0	(312173)	1	(312173)	1	(312173)
1	9097	0.9524	8664	0.9901	9007
2	9097	0.9070	8251	0.9803	8918
3	9097	0.8638	7859	0.9706	8830
4	9097	0.8227	7484	0.9610	8742
5	9097	0.7835	7128	0.9515	8656
6	9561	0.7462	7135	0.9420	9007
7	9561	0.7107	6795	0.9327	8918
8	9561	0.6768	6471	0.9235	8830
9	9561	0.6446	6163	0.9143	8742
10	307518	0.6139	188729	0.9053	278392

NPV = (57434)

NPV = 45868

IRR = 2.78%

The investment has a negative NPV (57434) at the target rate of 5%p.a.. This means that the investment will not make the target rate of 5%. As 5% is not reached we must try to see if the investment will make a lower target rate.

We choose a second target rate of 1%p.a. and re-calculate the present values of the investments cash flows. This time the NPV is positive (45868). This means that the investment should make a return of over 1%. We now know that the return on the investment is more than 1% but less than 5%. Now we can calculate the actual rate of return on the investment using the IRR (Internal Rate of Return) formula.

The rate of return on the Dublin investment property is 2.78% p.a. We then repeated the process for Cork and Galway. We also were interested in what returns would occur if rental falls continued over the next 10 years. Therefore we analysed the model using rental falls of 1%. The returns on both investments in the three areas are contained in the table below.

#### ANNUAL RETURNS FROM PROPERTY INVESTMENT

	1% Rental Growth	1% Rental Fall
DUBLIN	2.78%	0.98%
CORK	2.34%	0.62%
GALWAY	3.03%	1.06%

If there is Rental growth of 1% p.a. over the next 10 years, then the return on property in Dublin would be 2.78%, below the risk-free rate of 4.4% and close to the highest 5-year bank deposit rate of 3.6%. This would appear to suggest that property prices have further to fall before the prudent investor would consider it as a viable investment.

If rental falls continue over the next 10 years, the returns on property investment will be lower. An average fall of 1% in rents over the next 10 years would result in an annual return of just 0.98% on the investment.

#### WHAT PRICE SHOULD PROPERTY INVESTORS PAY ?

Investors can receive risk-free returns of 4.4% and Bank deposit rates of 3.6%, therefore we also examine what property investors should pay today for properties in the 3 locations to achieve a Target rate of 6%p.a..

Year	Netflow	PV@6%	DCF@6%
0	(X)	1	(X)
1	9097	0.934	8582
2	9097	0.8900	8096
3	9097	0.8396	7638
4	9097	0.7921	7206
5	9097	0.7473	6798
6	9561	0.7050	6740
7	9561	0.6651	6359
8	9561	0.6274	5999
9	9561	0.5919	5659
10	307518	0.5584	171716

NPV = 0

The NPV is set at 0 indicating that the Target rate is exactly met. Therefore the purchase price of the property including costs is X (234,794). So the purchase price of the property to achieve the target rate of 6% is 213,449 (X /1.10 costs). We then can repeat the process for Cork and Galway and for negative rental growth. The results are in the table below.

#### PURCHASE PRICE TO ACHIEVE TARGET RATE OF 6%

	1% Rental Growth	1% Rental Fall	TODAYS PRICE
DUBLIN	213,449	187,338	283,794
CORK	179,402	156,929	247,597
GALWAY	180,326	154,321	235,552

The results show that Dublin house prices have a considerably long way to fall before the prudent investor will consider returning to property investment.

If there is rental growth of 1% p.a. then the property price should be 213,449 compared with the current price of €283,794. If there is a fall in rents of 1% p.a. then the investor should pay 187,338 rather than the current price of 283,794. This would suggest that property prices in Dublin are between 25-34% overvalued for the prudent investor to consider property as a viable investment. Similar results are repeated in Cork and Galway indicating that property prices have considerably further to fall before investors will return to the market.

## 2. Valuing residential property using the investment method

We will also describe the investment method of valuations and consider some of the reasons for why it may be a better gauge than the comparison method. For people who are renting, it has never been a better time in terms of price, selection and location, for people who are considering buying, it would be a good idea to weigh up the pro's and cons of such a decision, while property may be getting cheaper the financing required to purchase it certainly won't be cheaper in the future, we are confident that banks will continue to increase their margins in 2010 and eventually rates will increase further via the ECB. While Irish people have always been keen to own their own home, it may be that we will see the start of the first generation of Irish lifetime renters - that presents some long term key opportunities for investors.

The main method of valuations in residential property is the Comparison method. We value a property on the basis of what similar properties in a similar location have recently sold for. For example, if a 3 bed semi-detached property in Blackrock is to be sold, the valuer will look at the comparable sale prices in the area, make an adjustment for the differences of this individual property and value accordingly. The basis of the Comparison method is that it is the market that decides the value of property in each location, it is the most commonly used and widely accepted method in Ireland by both consumers and practitioners alike.

In recent years due to the lack of volume of sales, the comparison method has run into difficulties. The method is only as good as the comparables available and with few property transactions, even experienced valuer's are having difficulty valuing properties.

Another method of valuing property is the Investment method. The Investment method is based on the principal that Annual values (rents) and Capital values are related to each other, Therefore if we know the Income (annual value) a property produces, we can calculate its Capital Value(what it will sell for)

The formula used for the Investment method is  $\text{Capital value} = \text{Annual Income} \times \text{Multiplier}$

The Multiplier is the number of times the Annual income must be received to cover the Capital value. The formula for the Multiplier =  $100 / \text{required yield}$

Annual income on many properties are known as the properties are let to tenants. But even if a property is not let then the rent can be calculated by comparison with similar properties which have been let.

### Calculating Annual Income

For example, the average rent on properties in Dublin is 1021 per month. We can multiply this by 11 (assume 1 month vacancy) to get the annual rent (€11,231) and deduct 10% costs from this figure to get the annual income of €10,108. We can repeat this process for both Cork (€7,742) and Galway (€7,791).

	Monthly Rent	Annual Rent	Annual Income
Dublin	1021	11231	10108
Cork	782	8602	7742
Galway	787	8657	7791

Now we've calculated Annual income, the only question is what should we multiply this by to calculate our Capital value?

At present, the yields on property are

Dublin 3.56% giving a multiplier value of  $100/3.42 = 28.08$

Cork 3.07% giving a multiplier value of  $100/3.07 = 31.98$

Galway 3.30% giving a multiplier value of  $100/3.24 = 30.23$

So property prices are:

	Annual Income	Multiplier	Capital Value
Dublin	10108	28.08	283,794
Cork	7742	31.98	247,597
Galway	7791	30.23	234,552

Now we will look at Where they should be according to this method:

The property investment website Globalpropertyguide uses a Multiplier table to assess the valuation of properties.

Yield	Multiplier	Assessment
20%	5	Very undervalued
10%	10	Undervalued
7%	14.28	Fairly priced
6%	16.67	Fairly priced
4%	25	Overvalued
2%	50	Very overvalued

If we use these figures combined with the Income figures for Dublin, Cork and Galway we can gauge if property in Ireland is overvalued compared with international benchmarks

Dublin

Yield	Annual income	Multiplier	Capital Value
20%	10108	5	50,540
10%	10108	10	101,080
7%	10108	14.28	144,342
6%	10108	16.67	168,500
4%	10108	25	252,700
2%	10108	50	505,400

This would suggest that the property is overvalued at its current level of 283,794. A fairly priced property in Dublin should be between 144,342 and 168,500.

Cork

Yield	Annual income	Multiplier	Capital Value
20%	7742	5	38,710
10%	7742	10	77,420
7%	7742	14.28	110,556
6%	7742	16.67	129,059
4%	7742	25	193,550
2%	7742	50	387,100

This would suggest that the property is overvalued at its current level of 247,597. A fairly priced property in Cork should be between 110,556 and 129,059.

Galway

Yield	Annual income	Multiplier	Capital Value
20%	7791	5	38,955
10%	7791	10	77,910
7%	7791	14.28	111,255
6%	7791	16.67	129,876
4%	7791	25	194,775
2%	7791	50	389,550

This would suggest that the property is overvalued at its current level of 234,552. A fairly priced property in Galway should be between 111,255 and 129,876.



## **Commentary on comparative versus Investment methods of pricing:**

There are two primary schools of thought in the area of property valuations; one is that of comparative pricing which in essence is similar to a 'mark to market' approach, where the price attainable on the market is taken as true value. The other is the Investment method which uses a more mechanical approach similar to 'mark to model'.

The fundamental difference is one places an asset price at (or near) the price that a transaction will take place, the other will set the value based on rental yield multiplications. In a healthy market where supply and demand are in balance the figures should actually be roughly in line with each other, more desirable areas naturally attract higher rents and neither supply or demand are out of skew causing any distortion.

Of course, that doesn't always happen in the real world and thus we are left trying to decipher the market using one or the other methods, in Ireland the comparative pricing practice is by far the most popular, people talk about the value of their property in terms of what one down the road sold for and because it is so pervasive amongst both practitioners and consumers it tends to be the most accepted method.

Both approaches have shortcomings, the Investment method sets an ironclad price based upon yields and yields themselves are dynamic, it also factors out funding costs if borrowing is used in the purchase, having said that, it doesn't have the anywhere near the same inherent level of distortion as the comparative method which was part and parcel of the property bubble, as one house sold for more than the previous one it set a new benchmark and sadly, it wasn't different this time, trees didn't grow to the sky. For this reason we would argue that the Investment method should be promoted further in Ireland or at least widely understood.

The idea that the investment method is only viable for actual 'rented out' investment property ignores the fact that values for owner occupier properties can be calculated by looking at what similar properties in the area are renting for. It also overlooks the ability of a prospective buyer to substitute one solution in shelter provision for another, renting is a viable option for housing in a manner not far removed from that obtained by purchasing. Rent is dead money, but so is mortgage interest.

To a degree you can consider the investment method as being similar to a P/E ratio for a stock, and when you see a stock trade for high multiples it is usually because of a future expectation of gains or dividends, for a property to trade over 14 times income you would need to have some information which leads you to believe you will capture higher future gains or profits, in looking at the other methods we used it doesn't appear that there are any, hence the current average prices are not (in our opinion) based upon fundamentals which can be proven in the market.

### **3. Valuing property using a comparison against deposits.**

The 'risk free rate' in investment is normally Treasuries, however, income from treasuries is subject to income tax as opposed to DIRT and for the average investor the option tends to be to keep money on deposit (low risk scenario) versus property (medium risk scenario), obviously that isn't a mandatory choice but it is a pragmatic and common occurrence because the capital value is safer than with bonds and the income is not open to default risk, liquidity risk or other similar issues. It is important to understand that this is not using the common metrics, rather it utilizes one that we often see in real life with real clients via our interaction with them in the intermediary channel.

There are two choices, one in which a person has the money to buy a property outright (ie: cash buyer) and we consider the returns in that scenario versus that of putting it onto deposit, then we apply the taxation of each (one is case V income the other is subject to DIRT) and look at the actual net income at the end of it. While pre-tax incomes may make for better headlines it is really income after the state take their cut that concerns the average individual.

In the other example the person doesn't have the money to buy outright (mortgage required) and we look at expected returns. So the comparison is done in two ways, one with leverage the other without, leverage generally has the effect of magnifying volatility, if you borrow to get results it delivers superb returns on the way up and devastating loss on the way down. However, the reason we use this is because many property investors are not 'cash buyers' and for that reason it helps to give a real world comparison.

When comparing a pure like for like (un-leveraged or cash purchase) it is important to remember that there is a cash flow difference, a property bought with leverage may well turn out to be cash negative, however, when bought for cash it shouldn't be (assuming it is rented out) and in that case we invest returns at the deposit rate to give something along the lines of a yield to maturity, otherwise deposits are compounding and profits from the property are not.

The big issue appears to be the taxation treatment of property versus deposits, because of it you can actually earn more in property but come out with less and that is a critical and often overlooked example, it is also the reason that any 'bottom' calls being made are largely ignoring the reality of the situation when you drill down to the level of costs, returns, and taxation. We have tried to give a 'real life' analysis in this comparison and while there are constraints in looking at a long term investment over a 5 year window it helps provide some real world working examples.

# Residential Property Investment Report - A Critique

Iain G Nash<sup>1</sup>

## OVERVIEW

The latest *Residential Property Investment Report*, released by Irish Mortgage Brokers in association with PropertyWeek.ie and Frank Quinn, paints a bleak picture of the Irish property market, suggesting that house prices in Dublin, Cork and Galway are 37%, 43% and 39% overvalued based on their methods of investment analysis.

I would agree with the sentiment that the fall in house prices is not yet over, a sentiment also echoed by Brian Lucey and Ronan Lyons in the latest Daft Report<sup>2</sup>, but I do offer a brief treatment on the methodology used by the authors of the *Residential Property Investment Report*. I do not believe it possible, on the basis of the valuation methods used, for the authors to be able to identify the turning point in the property market. I discuss the two main methodologies used; however, the points raised in this document are applicable to all four investment appraisal methods discussed by the authors.

## DISCOUNTED CASH FLOW MODEL

The authors of the RPIR use a discounted cash flow (DCF) model to calculate the Net Present Value (NPV) of an average house in the city regions. The problem with this method is that it aggregates heterogeneous assets and assumes them to be homogeneous. House prices are highly spatially correlated as there exist blocks of similar houses which have very different prices and attributes to those of neighbouring blocks. By using the average citywide value, the DCF model presented fails to distinguish between the subtleties of the location of the asset which includes exogenous factors such as local amenities and services, resident security and commuting potential. Furthermore, housing prices are not normally distributed along a set scale. Comparing property prices between Dublin 4 and Dublin 1 will result in two very different profiles of residence and two differing prices, this difference will be enhanced by many orders of magnitude when compared to residences in Dublin 24. Yet crucially, the average price and attributes of these three examples will create a residential profile that may not exist in reality. I would be of the opinion that the 'average' price drop reported in the RPIR would be understating property values in some areas of Dublin and overstating it in others, yet this means that the stated value fails to be an accurate investment guide when compared to specific houses on the market.

## INVESTMENT METHOD

The second method used by the authors assumes that rental flows are directly related to the ultimate capital value of the house. Once more the authors have aggregated each city into one average price and therefore have potentially created a false investment profile. Furthermore, we can see from comparing the Daft Rental and Daft House Price reports, that during the boom there was a growing disconnect between rental costs and house prices, with rents staying static and house prices increasing. The RPIR report implicitly assumes that the recent convergence between rental costs and housing prices is the market correcting itself, yet there is little evidence available publicly for an investor to verify this. We note that if there is a significant structural shift in the property market from that of home ownership to renting then this relationship assumed by the investment method will no longer be correct. We note that Ronan Lyons, using the Daft.ie dataset, reports a rise in rents in all regional markets during January while property prices continue to fall. Finally, it is important to note that the Investment Method is mechanical and therefore will not adjust to structural market changes. As a tool used to aid an investor, it certainly is a valuable one, but the authors over estimate the precision of this instrument and fail to discuss the (large, I believe) confidence interval caused by aggregation of heterogeneous local markets and the potential interpretational effects caused by an apparent onset of a structural break in the rental market.

## CONCLUSION

The methods proposed by the authors of the reports do provide good insight into the property market for investment purposes. It must be noted however, that for these methods to yield analysis that can begin to be considered for investment purposes, an investor must engage in analysis that is not skewed by outliers in the data that are not representative of the area in question.

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<sup>1</sup> I am grateful for discussions with Ronan Lyons. Correspondence; iain.nash@gmail.com

<sup>2</sup> Daft.ie House Price Report, Q1 2010

Furthermore, any figures obtained by such methods should be presented with associated confidence intervals in conjunction with figures derived from substantial sensitivity analysis. I believe that these tools can be employed to determine the sign of the change of the property market, but they will not yield precise enough estimates to identify the turning points in the medium to long run.

Investors should also be aware that they make up only a subset of the market. This means that the rest of the market may be valuing property using models and methods which are not applicable for someone looking to buy-to-let. Thus, house prices may well move because of factors which lie outside of the models discussed above and hence their predictive power will be weakened.

Iain Nash  
May 2010

## NOTES & ASSUMPTIONS

Mortgage rate is the average of a 5 & 10yr rate

Deposit rate is the best available 5yr fixed deposit

Risk free 10yr rate - Irish 10yr treasury 5.9%

**Property prices:** focusing on the classic residential investment property type of two-bed apartments, we look at Ireland's three main urban markets, Dublin, Cork, and Galway, and use a moving average calculation applied to the largest database of asking prices in the country (as maintained by The Property Week). Based on these asking prices we calculate an average amount of money required to purchase one of these properties in each market.

**Rent:** we take an average for the current rental rates in each market for a two-bed apartment, and set these figures against fixed-rate mortgages on interest-only terms to determine the gross cash-flow. The amount of rent taken is based on one month of vacancy per year to allow for the fact that there are often gaps in tenancy. Rent per annum is therefore 11/12ths. One natural flaw in this is if there was a movement in either direction to full occupancy or extended vacancy.

**Expenses and taxation:** we factor in 10% of the rent per month to cover management fees, insurances and other landlord related costs. We take the 41% rate of taxation to calculate the tax due after expenses, assuming that if you were in the 20% tax band you would be less likely to have the income with which to obtain an investment mortgage, and while there will be exceptions we feel this has the broadest application. One of the things which have changed is that of 75% allowance in Mortgage Interest against rent. Mortgage Interest is an expense to a landlord the way regular expenses are to any business, this is an oversight which will see many investors not only paying to support their investment property, but also being taxed in income they never made. We didn't consider a VAT reclaim in our calculations.

**Capital appreciation:** This is not factored into the figures as for the five-year perspective taken here it would be inappropriate.

**Deposit rates:** We take a market leading 5-year fixed deposit rate likely to be available to anybody who would have the amount of money required in each example to purchase the property in question. Dirt tax is applied at 23% and the income levy at 2%

**Mortgage rates:** We assume a general loan-to-value (LTV) of 80% for an investment property, with a rate which is an average of the best 5-year and 10-year fixed rates on the market. While this may skew the figures slightly for some, not every investor will get the best rate on the market and for that reason the middle figure is good for giving a fairly accurate picture of mortgage costs.

**Target prices:** These are the approximate prices that would need to be paid in order to match the current rental yields with the current deposit yields. Our target prices consider the 'break even' point under two scenarios: 'Target price at current rent' is the price you would need to buy at in order for the current rental yield to match deposits, while 'target prices with rents falling' assumes that with such a large oversupply of property for sale (both new and second hand) it is likely that rents will not hold up and therefore yields will be lower. We assume that drops in rents of 10% in year 1 and the same again in year 2 might be required in order to attract a tenant. In some areas it may be even more extreme, but as we are dealing only with urban markets in this report, we felt that 20% would give an indicative picture.

**Start up costs:** This is made up of the deposit required plus the stamp duty and kit out costs, we have not factored in legal costs.

## Appendix

### Un-leveraged Returns on property v.s deposit

Unleveraged example (Dublin)		Deposit Rate (5yr)		3.00%		
		Deposit Performance		interest	dirty 23% + levy 2%	after tax
property cost (avg 2bed apt)	€182,400	yr1	€191,890	€5,757	€1,439	€196,208
stamp duty	€4,018	yr2	€196,208	€5,886	€1,472	€200,622
fit out costs (1%)	€1,824	yr3	€200,622	€6,019	€1,505	€205,136
acquisition costs (2%)	€3,648	yr4	€205,136	€6,154	€1,539	€209,752
Total	€191,890	yr5	€209,752	€6,293	€1,573	€214,471
				€30,108	€7,527	
Average Lease	€1,021		Deposit net profit after ta	€22,581		
average costs per month	€102		Gross return	15.69%		
net	€919		Net return	11.77%		
Annual Lease (11 month occupancy)	€10,108		average after tax p.a.	2.35%		
			Property performance	interest	dirty 23% levy 2%	after tax
tax due (41% +2% levy + 6%PRSI)	€4,771	yr2	€5,337	€160	€40	€5,457
		yr3	€10,794	€324	€81	€11,037
net income	€5,337	Yr 4	€16,374	€491	€123	€16,742
		Yr 5	€22,079	€662	€166	€22,576
				€1,638	€409	
			property profit after tax	€22,576		
			gross return	27.19%		
			net return	11.77%		
			average after tax p.a.	2.35%		
			Deposit	€22,581		
			Property	€22,576		
			Difference	€5		



Unleveraged example (Cork)			Deposit Rate (5yr)	3.00%		
			Deposit Performance	interest	dirt 23% + levy 2%	after tax
property cost (avg 2bed apt)	€141,550	yr1	€146,955	€4,409	€1,102	€150,261
stamp duty	€1,159	yr2	€150,261	€4,508	€1,127	€153,642
fit out costs (1%)	€1,416	yr3	€153,642	€4,609	€1,152	€157,099
acquisition costs (2%)	€2,831	yr4	€157,099	€4,713	€1,178	€160,634
Total	€146,955	yr5	€160,634	€4,819	€1,205	€164,248
				€23,058	€5,764	
Average Lease	€782		Deposit net profit after ta	€17,293		
average costs per month net	€78		Gross return	15.69%		
Annual Lease (11 month occupancy)	€7,742		Net return	11.77%		
			average after tax p.a.	2.35%		
			Property performance	interest	dirt 23% levy 2%	after tax
tax due (41% +2% levy + 6%PRSI)	€3,654	yr2	€4,088	€123	€31	€4,180
		yr3	€8,267	€248	€62	€8,453
net income	€4,088	Yr 4	€12,541	€376	€94	€12,823
		Yr 5	€16,911	€507	€127	€17,291
				€1,254	€314	
			property profit after tax	€17,291		
			gross return	27.19%		
			net return	11.77%		
			average after tax p.a.	2.35%		
			Deposit	€17,293		
			Property	€17,291		
			Difference	€2		

Unleveraged example (Galway)			Deposit Rate (5yr)	3.00%		
			Deposit Performance	interest	dirt 23% + levy 2%	after tax
property cost (avg 2bed apt)	€142,400	yr1	€147,890	€4,437	€1,109	€151,218
stamp duty	€1,218	yr2	€151,218	€4,537	€1,134	€154,620
fit out costs (1%)	€1,424	yr3	€154,620	€4,639	€1,160	€158,099
acquisition costs (2%)	€2,848	yr4	€158,099	€4,743	€1,186	€161,656
Total	€147,890	yr5	€161,656	€4,850	€1,212	€165,293
				€23,204	€5,801	
Average Lease	€787		Deposit net profit after ta	€17,403		
average costs per month net	€79		Gross return	15.69%		
Annual Lease (11 month occupancy)	€7,791		Net return	11.77%		
			average after tax p.a.	2.35%		
			Property performance	interest	dirt 23% levy 2%	after tax
tax due (41% +2% levy + 6%PRSI)	€3,677	yr2	€4,114	€123	€31	€4,206
		yr3	€8,320	€250	€62	€8,507
net income	€4,114	Yr 4	€12,621	€379	€95	€12,905
		Yr 5	€17,019	€511	€128	€17,402
				€1,262	€316	
			property profit after tax	€17,402		
			gross return	27.20%		
			net return	11.77%		
			average after tax p.a.	2.35%		
			Deposit	€17,403		
			Property	€17,402		
			Difference	€1		

## Property versus deposits with leverage (borrowing)

Dublin		Deposit rate (5yr)	3.00%		
Property cost (avg 2 bed apt)	€177,750.00	Deposit	Capital	Interest	Dirt
5/10yr fixed rate for investors (avg)	4.70%	year 1	€41,020.00	€1,230.60	€307.65
Mortgage required (to max LTV of 80%)	€142,200.00	year 2	€41,942.95	€1,258.29	€314.57
		year 3	€42,886.67	€1,286.60	€321.65
		year 4	€43,851.62	€1,315.55	€328.89
Deposit required (20%)	€35,550.00	year 5	€44,838.28	€1,345.15	€336.29
Stamp Duty fit out	€3,692.50			€6,436.19	€1,609.05
Total start up costs	€41,020.00				
		total profit on deposit	€4,827.14		
Average Lease price	€1,021.00	total profit/loss on prop	€4,827.93		
Annual rent (11mth occupancy)	€11,231.00				
		Difference	€0.79		
Interest only mortgage cost per month	€556.95				
Interest only mortgage per annum	€6,683.40				
% that can be offset (as per new budget)	€5,012.55				
General additional costs (c. 10% of rent p.m.)	€1,225.20				
Taxable Income	€4,993.25				
Tax Due (41%+2% Levy + 6%PRSI)	€2,356.81				
Profit/loss per month	€378.97				
Profit/loss per annum	€965.59				
After 5 Years	€4,827.93				
Situation if rents were to fall by 20% (10% p.a.) over the next 2 years then level off with 11mth occupancy etc.	-€157.51				
yr 2	-€1,280.61				
yr3	-€1,280.61				
yr4	-€1,280.61				
yr5	-€1,280.61				
total in rental drop scenario	-€5,279.97				



<b>Cork</b>					
Property cost (avg 2 bed apt)	<b>€130,600.00</b>	Deposit	Capital	Interest	Dirt
5/10yr fixed rate for investors (avg)	4.70%	year 1	€27,818.00	€834.54	€191.94
Mortgage required (to max LTV of 80%)	€104,480.00	year 2	€28,460.60	€853.82	€196.38
		year 3	€29,118.04	€873.54	€200.91
		year 4	€29,790.66	€893.72	€205.56
Deposit required (20%)	€26,120.00	year 5	€30,478.83	€914.36	€210.30
Stamp Duty	€392.00			<b>€4,369.98</b>	<b>€1,005.10</b>
fit out	€1,306.00				
<b>Total start up costs</b>	<b>€27,818.00</b>				
		total profit on deposit	<b>€4,369.98</b>		
Average Lease price	<b>€782.00</b>	total profit/loss on prop	€4,370.80		
Annual rent (11mth occupancy)	€8,602.00				
		Difference	-€0.81		
Interest only mortgage cost per month	€409.21				
Interest only mortgage per annum	€4,910.56				
% that can be offset (as per new budget)	€3,682.92				
General additional costs (c. 10% of rent p.m.)	€938.40				
Taxable Income	€3,980.68				
Tax Due (41%+2% Levy + 6%PRSI)	€1,878.88				
Profit/loss per month	€307.62				
Profit/loss per annum	€874.16				
After 5 Years	<b>€4,370.80</b>				
Situation if rents were to fall by 20% (10% p.a.) over the next 2 years then level off with 11mth occupancy etc.	€13.96				
yr 2	-€846.24				
yr3	-€846.24				
yr4	-€846.24				
yr5	-€846.24				
<b>total in rental drop scenario</b>	<b>-€3,371.00</b>				



Galway					
Property cost (avg 2 bed apt)	<b>€129,800.00</b>	Deposit	Capital	Interest	Dirt
5/10yr fixed rate for investors (avg)	4.70%	year 1	€29,296.00	€878.88	€202.14
Mortgage required (to max LTV of 80%)	€103,840.00	year 2	€29,972.74	€899.18	€206.81
		year 3	€30,665.11	€919.95	€211.59
		year 4	€31,373.47	€941.20	€216.48
Deposit required (20%)	€25,960.00	year 5	€32,098.20	€962.95	€221.48
Stamp Duty	€336.00			<b>€4,602.17</b>	<b>€1,058.50</b>
fit out	€3,000.00				
Total start up costs	<b>€29,296.00</b>				
		total profit on deposit	<b>€4,602.17</b>		
Average Lease price	<b>€787.00</b>	total profit/loss on prop	€4,597.31		
Annual rent (11mth occupancy)	€8,657.00				
		Difference	€4.85		
Interest only mortgage cost per month	€406.71				
Interest only mortgage per annum	€4,880.48				
% that can be offset (as per new budget)	€3,660.36				
General additional costs (c. 10% of rent p.m.)	€944.40				
Taxable Income	€4,052.24				
Tax Due (41%+2% Levy + 6%PRSI)	€1,912.66				
Profit/loss per month	€314.71				
Profit/loss per annum	€919.46				
After 5 Years	<b>€4,597.31</b>				
Situation if rents were to fall by 20% (10% p.a.) over the next 2 years then level off with 11mth occupancy etc.	€53.76				
yr 2	-€811.94				
yr3	-€811.94				
yr4	-€811.94				
yr5	-€811.94				
total in rental drop scenario	<b>-€3,193.99</b>				



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