ProMS®

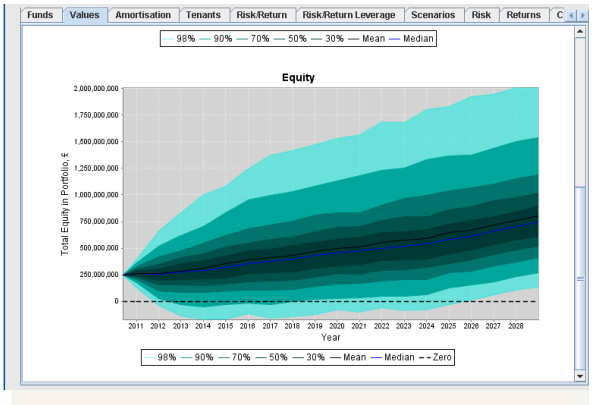
Can you afford not to be interested in risk

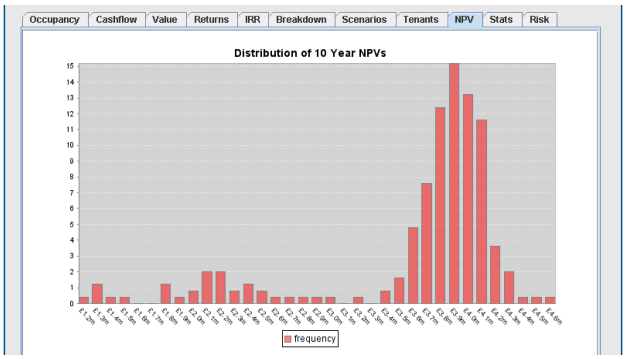
Radley & Associates Ltd

Radley & Associates is an independent firm dedicated to the development of advanced simulation based analytics for the Commercial Real Estate industry. Our clients include leading banks, fund managers and REITS. We have deep expertise in property, simulation modelling, econometric analysis and risk.

Radley & Associates
2 Nottingham Street
London
W1U 5EF
0207 224 3079

Following the 2007 crisis and massive worldwide losses in Commercial Real Estate can you afford not to be interested in risk?





These two rather dull looking charts will fundamentally change your view of how to think about value in commercial real estate.

Investors still need nous, experience and judgement but these charts add a whole new dimension to understanding the likelihood of making money out of real estate. Powerful computing has opened a world that was previously unimaginable. These two charts tell you something of incredible value – they measure the risk you are taking. Once you can measure risk you can compare two projects with seemingly identical outcomes that in reality are likely to turn out very differently. You will know which investment is most likely to provide the right level of returns.

When estimating the outcome from a development or building today you have a good idea of its total returns - *if your assumptions are correct* – but what if they are wrong, how likely are you to be wrong, and what will be the impact?

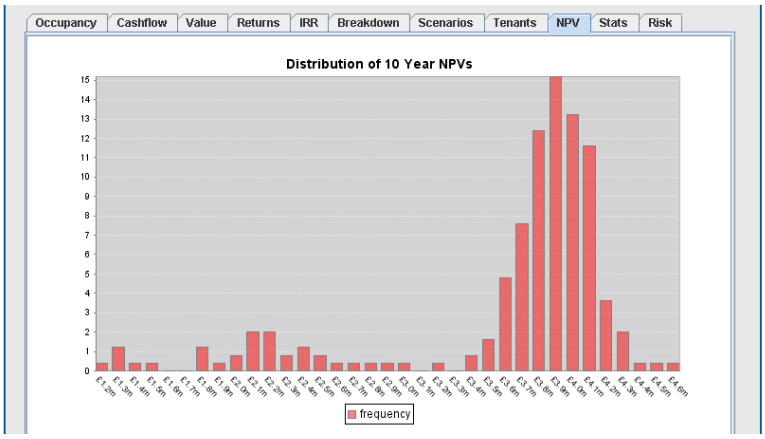
Estimates of future rental values, debt costs, breaks exercised, tenants failing, future tenancies, refurbishment costs, void lengths and capital values etc. all have a major impact on the outcome of your valuation and investment decision. How do you know if you have got these right? This is very important when a large number of assumptions must be made because human beings have a strong disposition to underestimate bad outcomes and overestimate favourable ones. There are billions of possible combinations and values for each of these assumptions – some realistic while others could never happen in reality. It is impossible to estimate these intuitively; indeed it is impossible to build a cash flow that can manage such complexity.

Or it was until ProMS.

This brings us back to those first two charts. What they show us is the shape of the distribution of returns for two particular investment properties.

The future may be unknowable but we can accurately estimate the distribution of future events and therefore investments. It is not possible to tell you whether you will get heads or tails next time you flip a coin but if it is flipped a 100 times it is highly likely the result will be roughly 50 heads and 50 tails – and if it is flipped 1,000 times the distribution of outcomes becomes more certain. If a small weight is attached to one side of the coin it is possible to work out the effect of biasing it to that side: the results will be skewed and predictable.

Likewise an investment property can have an average value but with the results biased to the up or downside.



This building has an average return of £3.9m but with very significant downside risk
(both negatively skewed and significant tail risk with much less upside)

Additionally there may be some occasions where one could earn or lose a lot more than expected – when everything lines up in the investor's favour (great tenants, interest rates remain low, rents rise consistently, capital values keep going up, void rates fall etc) and thus make a lot more than the average would imply. Conversely everything could go wrong resulting in losses. All investments will perform differently as they have varying lease terms, numbers of tenants, tenant quality, locations, use sectors etc and so these 'extreme' characteristics will vary from property to property – but by how much?

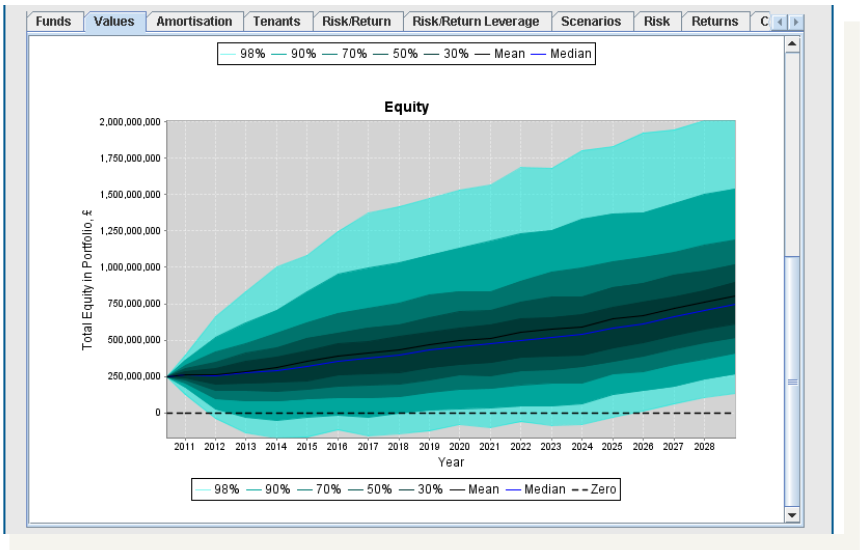
If you owned the building in the chart above and received an offer at around £4 million you should be tempted as there is significant risk in holding this particular asset with very little upside – and that risk would be missed by traditional assessment techniques.

	Typical returns estimates generated by other approaches	***ProMS***
Building A	**5 year IRR = 6.0%**	**5 year IRR = 6.0%** **Standard Dev. = 5%** **Probability of negative return 11.5%**
Building B	**5 year IRR 5.9%**	**5 year IRR = 5.9%** **Standard Dev. = 3%** **Probability of negative return 2.5%**

Two buildings with same average return but very different risk characteristics

The chart below shows the equity value of a leveraged building. The central or dark portion shows how the investment will perform on average over time (rising from about £200k to £700k) but there

is a small but significant chance of the bank repossessing the property – a bit over a 10% chance of this happening between 2013 and 2018. Should an investor be content with the level of risk vs. returns?



Equity value of property and risk of loan equity default

If you would like to understand (and challenge us) how we are so confident that we can estimate the likely returns for individual commercial buildings, portfolios, funds, leveraged assets, loans, loan portfolios and CMBS please call for a demonstration of our revolutionary technology.