- Theme O: *Real Estate Finance & Investment*
  Session: O-3
  Time: FRIDAY, 26.JUN.2015 09:00-10:30
  Location: Taskisla Room 109
- **Has anyone seen my neo-cortex? I'm sure I left it here somewhere.**
- *Behavioural biases among real estate investment decision makers*

In this session we will:

- Identify some important behavioural biases
- Consider these in the context of real estate investment markets
- Suggest ways to reduce the possible impact of this behaviour

Q&A to follow

Thinking fast and slow
A framework for understanding our biases

Thinking *Fast:* System 1

Quick, automatic, intuitive and emotional.

Default option for information processing.

Examples:

Detecting hostility in someone's voice.

Judging which object is more distant

Thinking *Slow*: System 2

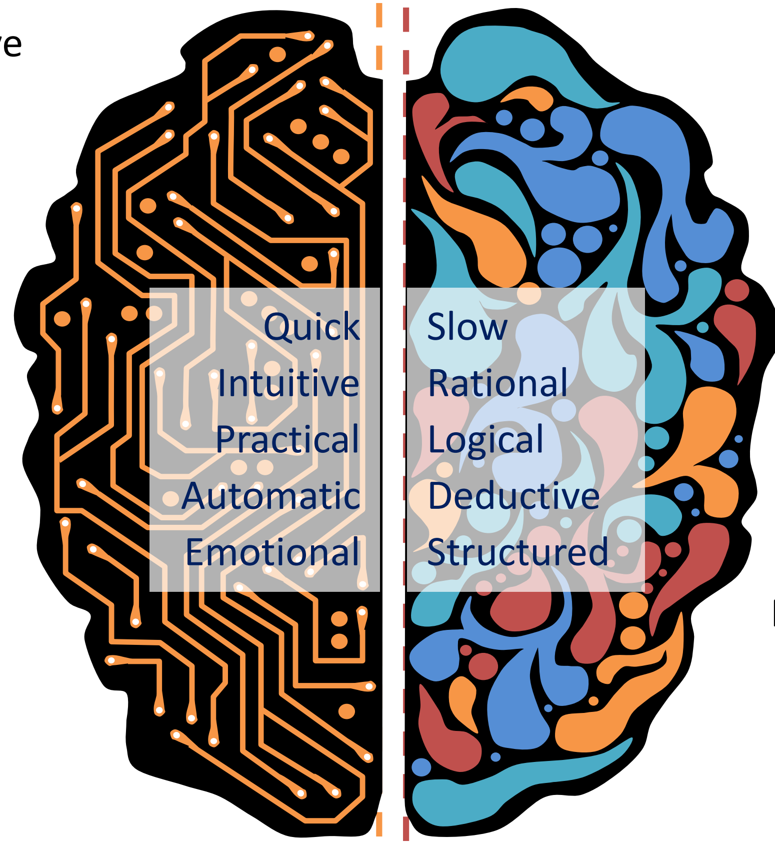
Slow, conscious, more deductive and logical.

Deliberate effort required means we often defer to System 1.

Examples:

Parking in a narrow space.

Multiplying several numbers.



Understanding the decisions we make

Knowing how our brains work might make us better investors

Investors are prone to a range of systematic errors and psychological biases.

These decision-making errors help to create inefficiencies in financial markets.

They also help to explain irrational booms and busts like the [ ] bubble.

Human psychology can have a big impact on investing.

We make 'cognitive' errors on a routine basis by using rules of thumb and over-simplifications.

Examples of biases

Self-deception	Simplification	Social
Confirmation bias	**Framing** and nudging	**Herding**
Hindsight bias	Representativeness	Priming
Narrative fallacy	Gambler's fallacy	Imitation
Overconfidence	**Anchoring**	
Cognitive dissonance	**Loss aversion**	
Information overload	Familiarity and mere exposure effect	
Illusion of control/ illusion of knowledge	**Substitution**	
Hyperbolic discounting	Halo effect	

Let's focus on FIVE key biases and how we can address them

ANCHORING
Clinging to an irrelevant piece of information such as a number

SUBSTITUTION
If a hard question cannot be answered quickly, an easier related one is found

FRAMING
Considering issues based on how they are formulated (framed)

LOSS AVERSION
Responding more strongly to losses than to gains

HERDING
Doing what everyone else seems to be doing

ANCHORING
Clinging to an irrelevant piece of information such as a number

Original data

Property	Frequency	Percentage
Property A – Average return / low risk	4	23.5
Property B – Average return / high risk	0	0
Property C – Above average return / moderate risk	13	76.4

New data

Property choice	Frequency	Percentage
Property A: 70% probability higher return than property C	4	23.5
Property B: 50% probability higher return than its current return	1	5.8
Property C: 70% probability same return	1	5.8
No, my decision stays the same	11	64.7

Example of anchoring: clinging to irrelevant data, failing to adjust

SUBSTITUTION
If a hard question cannot be answered quickly, an easier related one is found

Example of a hard question

❑ What is the true nature of this real estate investment?

Easier related questions

❑ Which familiar asset class does it resemble?

❑ How did this property fund perform against its peers recently?

Can lead to misunderstandings about nature of real estate

☒ It’s all about capital values

☒ Real estate is broadly the same everywhere

☒ You can buy the market, just like with equity

☒ Good asset allocation is all that matters

FRAMING
Considering issues based on how they are formulated (framed)

- ✓ Market participants view decisions through the lens of industry norms
- ✓ Data made available shapes how we perceive risk and return
- ✓ Consistently use familiar but unhelpful frames of reference with which to position the asset class:
  1. Focus on sectors
  2. Focus on geographies

"It's kind of amazing what is not measured" – Robert Shiller

- ✓ Market participants view decisions through the lens of their own career risk and social standing
  1. Focus on avoiding relative under-performance
  2. Hugging the peer group (managers) or colleagues (investment committees)

"…it is better for reputation to fail conventionally than to succeed unconventionally" – JM Keynes

Framing: “data shape” determines our approach

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Office

Select Table: TOTAL RETURN (%)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
TOTAL RETURN (%)																					
London Postal Districts & Postcodes																					
EC1	13.9	0.1	-0.7	3.5	12.8	23.1	40.5	34.6	19.1	-15.4	-18.3	-6.7	17.3	9.4	5.4	8.9	17.3	13.6	16.5	21.7	10.9
EC2	16.3	10.2	7.4	8.9	13.6	23.0	42.2	20.5	6.9	-14.4	-15.4	-7.2	16.9	14.7	5.9	9.2	16.2	8.2	8.5	18.1	10.3
EC3	16.3	8.6	5.6	6.5	11.1	18.2	37.0	20.8	4.3	-14.3	-18.9	-5.3	23.4	10.5	5.9	5.7	13.5	8.8	10.8	14.9	10.8
EC4	15.8	11.1	6.8	8.3	9.0	22.3	37.9	23.7	8.5	-14.1	-16.2	-7.4	25.3	8.8	2.9	5.4	15.8	9.3	11.5	15.9	12.5
WC1	14.4	3.9	3.9	5.5	8.9	14.8	37.5	46.9	29.1	-7.0	-17.6	-11.3	16.9	8.6	-0.2	8.2	23.7	18.3	17.6	25.0	12.4
WC2	15.7	3.9	7.4	7.4	9.5	13.7	41.8	40.5	18.0	-12.3	-20.2	-15.7	16.1	14.4	4.1	8.4	19.6	12.5	14.6	21.0	8.5
W1	13.6	2.5	4.9	11.0	12.1	18.4	39.7	44.8	19.6	-10.3	-18.8	-14.0	17.6	15.2	5.0	10.3	17.8	12.9	17.3	18.8	6.2
SW1																					
South Bank & Fringe																					
Bank/Broad Street																					
Barbican																					
Belgravia																					
Bloomsbury																					
Bromley																					
Cannon Street/Eastchea																					

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IPD UK Annual Property Digest 2014

All Property and Sectors

Annual performance

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
All Property and Sectors														
Performance Measures														
Index returns excluding Transactions and Developments														
Total Return (% pa)														
Retail	17.3	10.4	12.3	13.8	12.7	11.7	20.8	24.8	9.9	-8.2	3.4	3.6	20.7	12.9
Office	15.0	6.7	5.5	6.9	7.7	12.1	30.7	31.1	16.5	-9.9	-10.8	-7.2	19.3	10.7
Industrial	12.1	5.7	6.1	6.0	3.5	9.2	25.1	39.3	28.7	-3.5	9.1	1.4	21.2	11.8
Residential	34.7	6.9	11.9	28.8	14.3	32.0	25.7	27.4	14.2	-2.5	-7.4	5.2	14.0	15.4
Other	8.6	4.2	5.9	5.0	-7.6	-4.5	7.5	22.9	13.0	4.6	1.1	1.4	19.1	15.8
All Property	15.0	7.5	7.6	8.8	8.3	11.3	26.0	29.5	15.4	-8.4	-3.1	-1.6	20.2	11.9

Why aggregate performance data by geography & sector?

LOSS AVERSION

Responding more strongly to losses than to gains

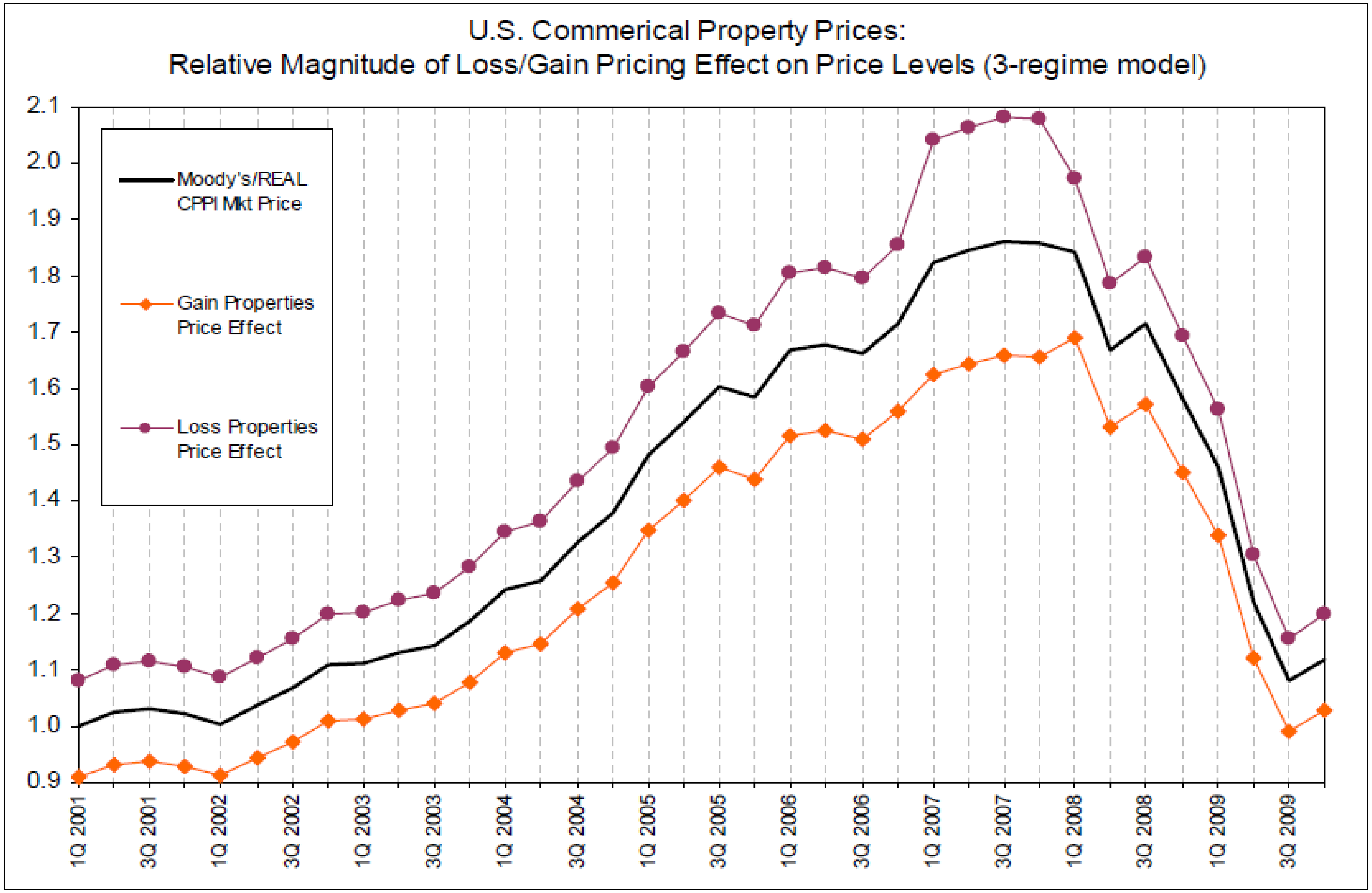
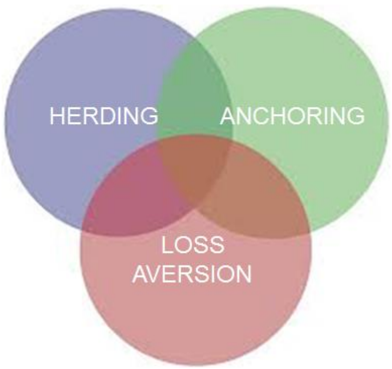


Chart shows magnitude and cyclical nature of the differential pricing strategy of "losers" and "gainers" during the property market cycle of 2001-09

Loss aversion – US findings

- Loss aversion exists in the commercial property market
- Of similar magnitude and impact as in the housing market
- Greater among larger institutions such as funds and REITs
- Behaviour carries through to:
  - Higher transaction prices (on average)
  - Longer time on the market
- The effect of loss aversion behavior varied over cycle
  - Increasing in the early stage of the peak and turning point
  - Collapsing as demand side weakness became apparent



LOSS AVERSION combined with HERDING

Or why some investors sell at exactly the wrong time
(using the UK commercial property crisis of 1988-1993 for illustration)

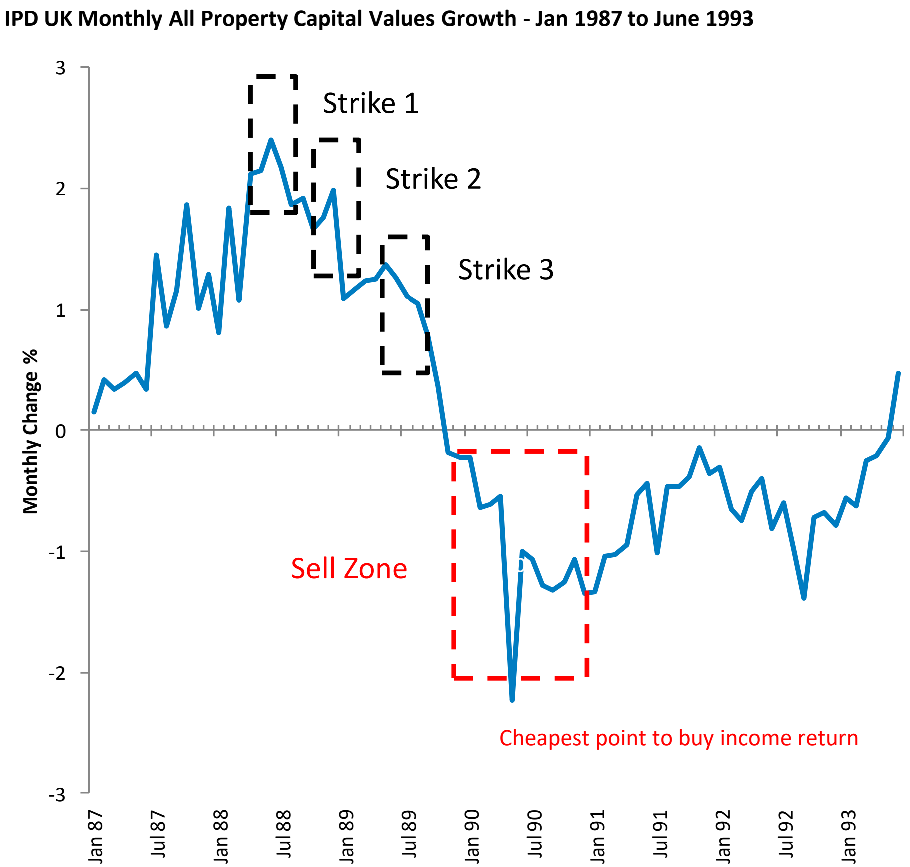
There is some evidence that investors use a rule of three to dealing with losses:

Strike 1: They are prepared to ride out the first correction in the market.

Strike 2: They are pained by the second correction but hold on.

Strike 3: Finally, they capitulate after the third wave of selling pressure.

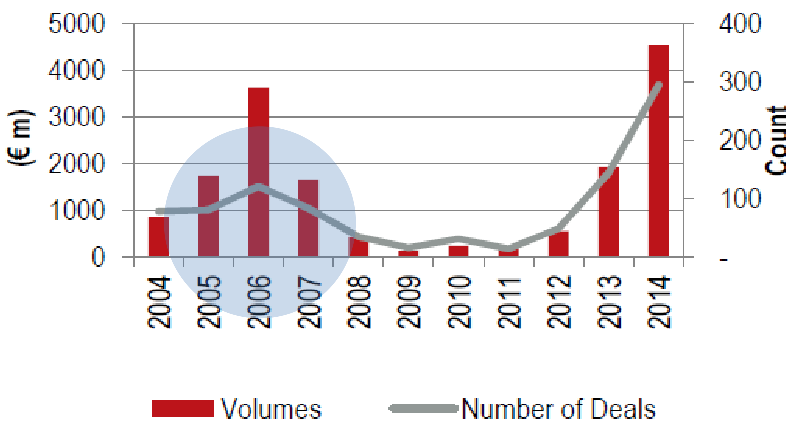
The irony is that property markets often correct in three downward waves, meaning investors sell at the bottom. Precisely the wrong time.



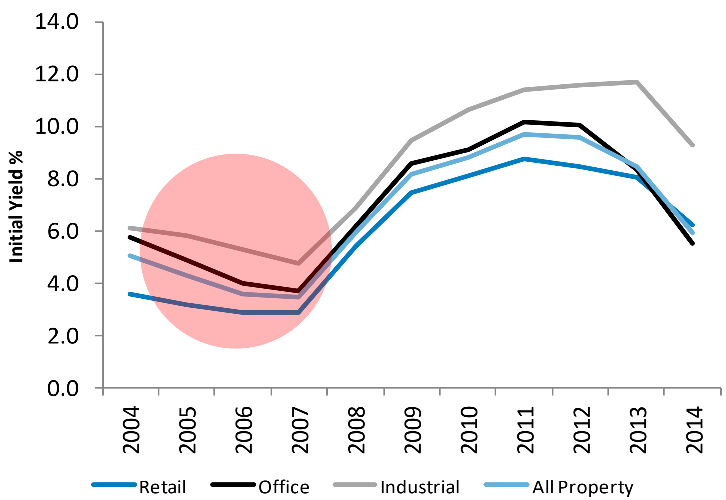
Source: FIL Limited, IPD UK Annual Digest 2014

HERDING
Doing what everyone else seems to be doing

Ireland – Investment Volume & No. Deal 2004 to 2014



Ireland – Initial yield by sector Dec 2004 to Dec 2014



Herding in real estate markets can push up the values of certain assets or sectors to extreme levels, causing bubbles.

Largely on the basis of attractive capital returns (see Anchoring)

Following the crowd can mean buying when prices are high and *selling when prices are low*, also known as 'chasing the market'. This is a poor strategy but widely used in real estate

See recent examples of "prime" assets and long lease strategies...Spain?

Source: FIL Limited, IPD Ireland Quarterly Index March 2015

- We have looked at five cognitive biases that interfere with rational logic
- Anchoring, framing, loss aversion and substitution fall into category of simplification
- All these can be mitigated by moving to System 2

Thinking *Fast:* System 1

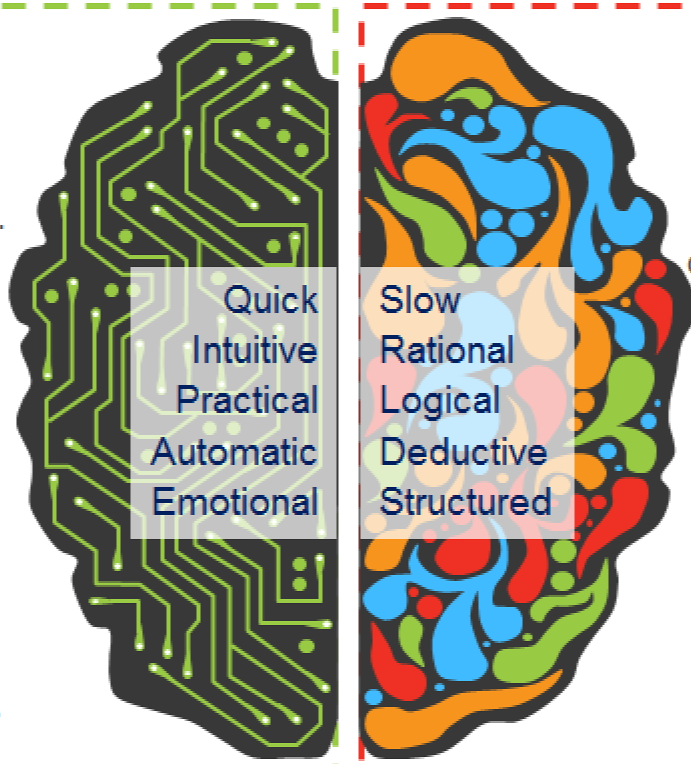
Quick, automatic, intuitive and emotional.

Default option for information processing.

Examples:

Detecting hostility in someone's voice.

Judging which object is more distant



Thinking *Slow*: System 2

Slow, conscious, more deductive and logical.

Deliberate effort required means we often defer to System 1.

Examples:

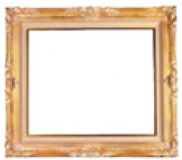
Parking in a narrow space.

Multiplying several numbers.

Possible ways to mitigate the effects

ANCHORING
Clinging to an irrelevant piece of information such as a number

Model income and capital values separately

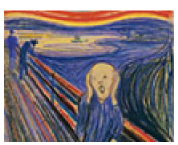


FRAMING
Considering issues based on how they are formulated (framed)

Ask yourself: who has shaped the question this way?

HERDING
Doing what everyone else seems to be doing

Buy investments when they are lowly valued versus history



LOSS AVERSION
Responding more strongly to losses than to gains

Don’t run losers to avoid ‘taking a loss’ - run the winners, cut the losers

SUBSTITUTION
If a hard question cannot be answered quickly, an easier related one is found

Convert the question to a calculation, to activate System 2

Moving from System 1 to System 2

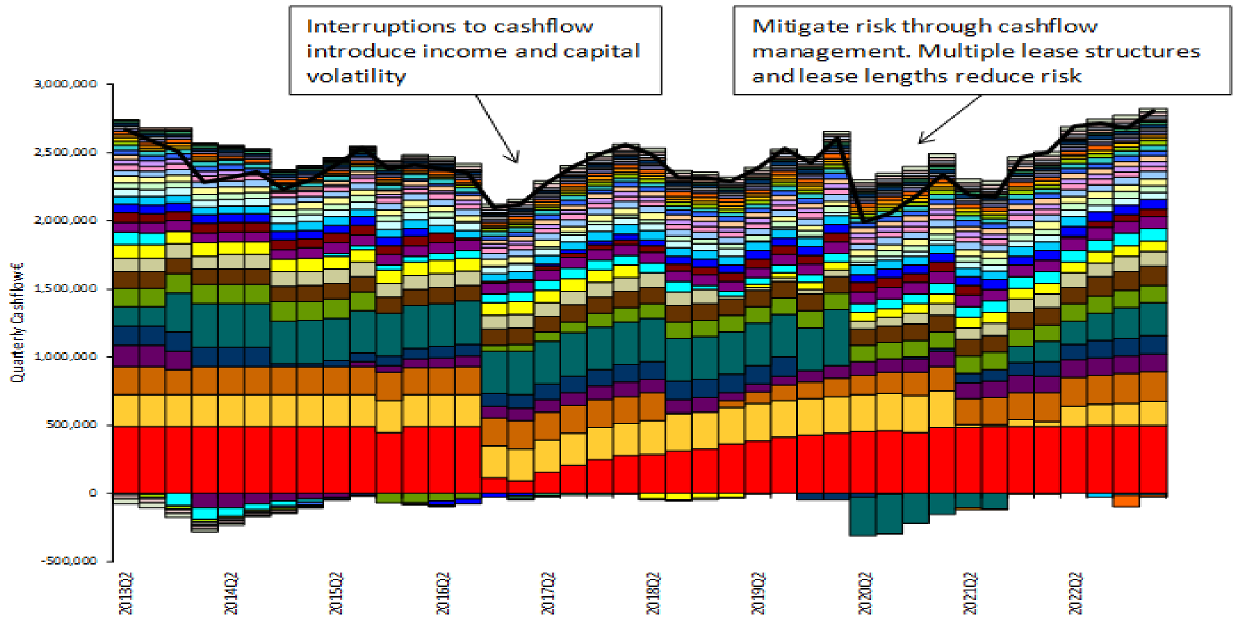
1. Run MVO exercises, treating income returns and capital returns as separate asset classes

2. When assessing risk-return ratios, use the coefficient of variation (risk per unit of return)

3. Estimate future cashflows, with particular emphasis on lease events

4. List in writing the pros and cons of each choice

5. Ignore sector and geographic data formulations ("frames")



The road towards better decisions - ten tips for the real estate investor

1. *I will forget the price I paid for an investment, to mitigate emotional anchors*
2. *I will analyse the income component of total return with particular attention*
3. *I will focus on expected returns, largely ignoring sector and geographic labels*
4. *I will not be seduced by top down asset allocation*
5. *I will strive to reduce my need for social validation, which encourages herding*
6. *I believe that most references to risk are really references to emotion*
7. *I believe that widening yields represent an opportunity rather than a risk*
8. *I will strive to eliminate my myopic loss aversion*
9. *I will resist the temptation to replace hard questions with easy ones*
10. *I will consistently pursue a focused asset selection (not allocation) strategy*

Sources

Thinking, Fast and Slow by Daniel Kahneman

Loss Aversion and Anchoring in Commercial Real Estate Pricing by Bokhari and Geltner

Heuristic-driven bias in property investment decision-making in South Africa by Cloete, Hall & Lowies

Driving Emotions from your Invesment Process by Tom Howard