Society of Actuaries in Ireland

Finance and Investment Committee
Inaugural Annual Forum

5th Nov 2014

Welcome

Finance and Investment Committee

- Colm Fitzgerald
- Conor O'Brien
- Declan Hanley
- Majella McDonnell
- Brian Murray
- Padraig Flanagan
- Patrick McKenna
- Sandra Rockett
- Stuart Redmond
- John Thornton
- Shane O’Farrell (Chairman)
- Tracy Gilbert and Yvonne Lynch (Society Reps)

Annual Forum on relevant topics

Welcome

Agenda today:

- **Hot topics & current trends in Investment**
- **Sharp summary of a current trends-short talks on emerging issues**

4:30pm

- **Smart Beta Strategies** Ana Harris, SSGA
- **Alternative asset classes** Blair Reid, Bluebay
- **Economic, Social & Corporate Governance (ESG)** Sandra Rockett, ILIM

5.30pm

- **The Irish domestic property market & consequences for the Irish economy**
  Ronan Lyons, Asst. Professor of Economics, TCD

6:30 Close

STATE STREET GLOBAL ADVISORS

Society of Actuaries

3 November 2014

Ana Paula Harris, CFA
Portfolio Strategist, Global Equity Beta Solutions

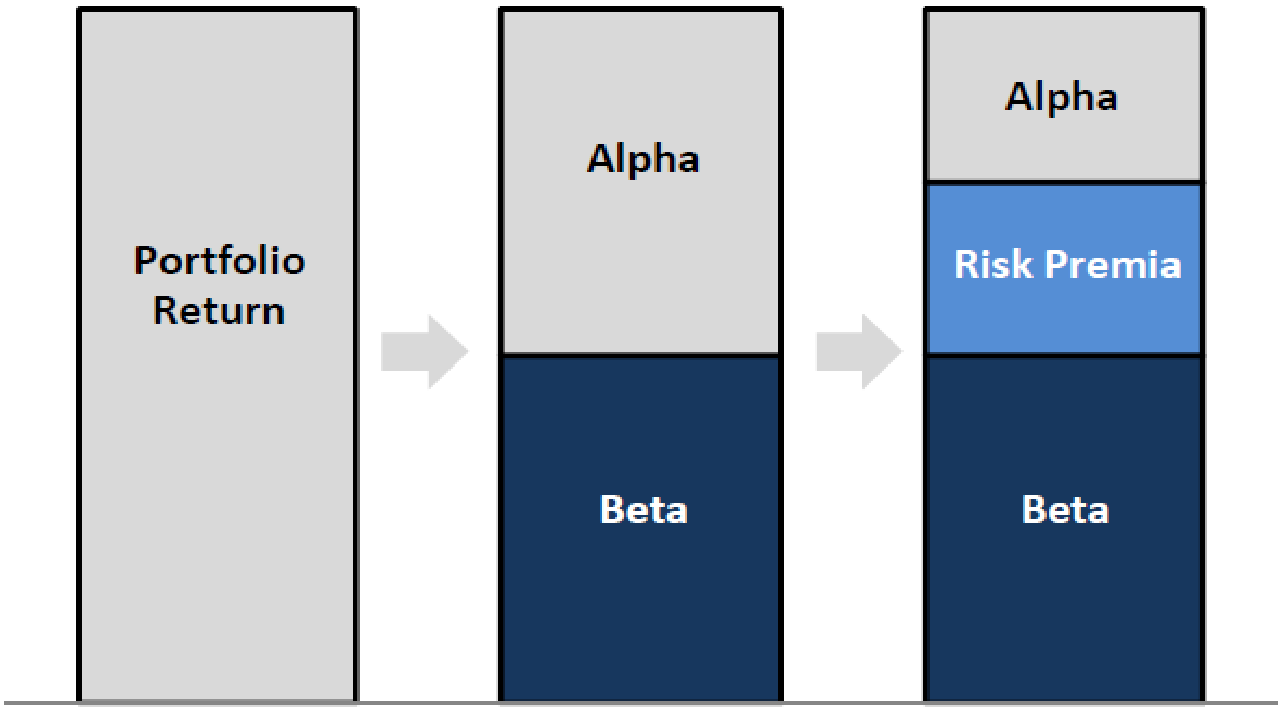
SSgA

Table of Contents

All the information contained in this presentation is as of date indicated unless otherwise noted.

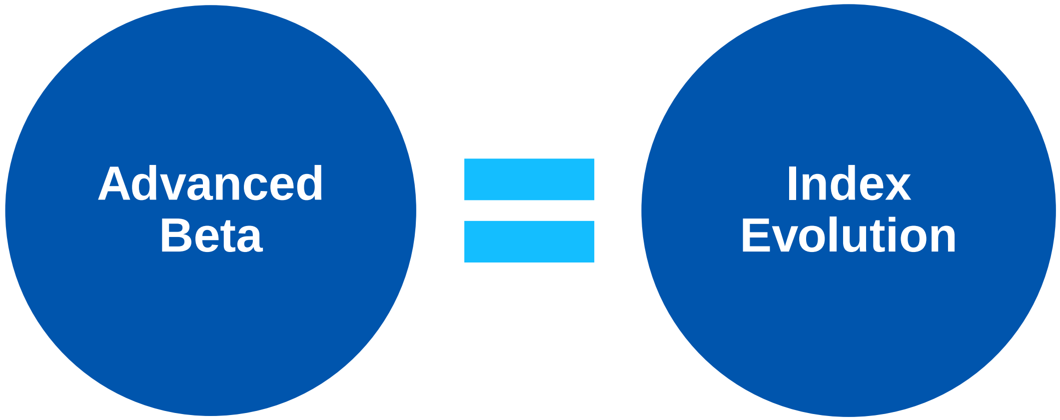
Advanced Beta: An Introduction

Today's Alpha is Tomorrow's Beta



Source: SSgA, MSCI
The information contained above is for illustrative purposes only.

Advanced Beta: The Expanding Passive Universe



Broadens Investors' Toolkit

- To seek to capture **distinct returns**
- To **diversify** portfolios
- To **express investment views** passively
- To retain potential **benefits of indexing**
- To **reduce costs** by partially or totally replacing active management
- To **reduce** overall portfolio **risk**

Source: SSgA
Diversification does not ensure a profit or guarantee against loss.

Key Factors (Equities)

- **Value** – Low Valuation
- **Volatility** – Lower Risk
- **Size** – Smaller Capitalisation
- **Momentum** – Higher Momentum
- **Quality** – Higher Quality

Source: SSgA
The information contained above is for illustrative purposes only.
Value stocks can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time.

Alternative Portfolio Constructions: Examples

Techniques to depart from cap-weighting

- Equal weight
  - Example: MSCI World Equally-Weighted
- Optimization
  - Example: MSCI Minimum Volatility, FTSE Global Minimum Variance
- Weight by attribute
  - Example: FTSE RAFI series
- Scoring
  - Example: MSCI Quality

  - Example: MSCI Momentum

Factors

- Size
- Volatility
- Value
- Quality
- Mom

How are Clients Using it?

“Improve passive exposure”

“Replacing/reducing active manager allocations”

Clients

“Taking the desired risk exposures”

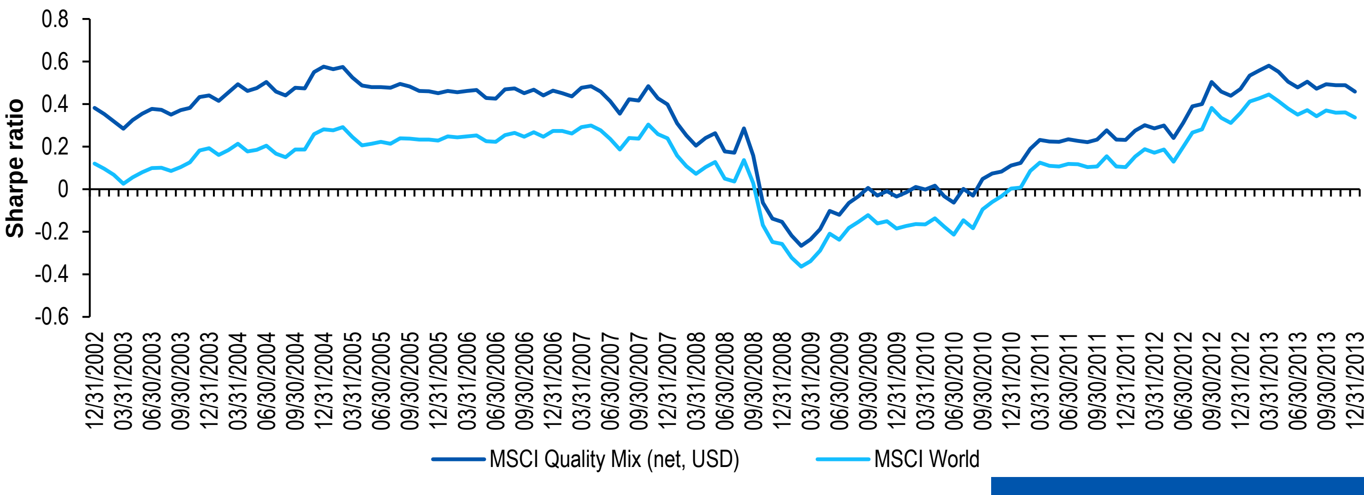
Source: SSgA
The information contained above is for illustrative purposes only.

“Improve Passive Exposure”

“Improve passive exposure”

- **Scenario:**
  – Concerns about volatility and concentration of market cap indices
- **Outcome:**
  – Re-allocate part of passive cap-weight allocation to a multi-factor strategy (combining Value, Volatility and Quality)

10-year Sharpe Ratio



January 1993 – December 2013	Return	Volatility
MSCI World (net)	7.75	15.18
MSCI Quality Mix (net)	9.46	13.02
MSCI World 75% + MSCI Quality Mix 25%	8.19	14.59
MSCI World 75% + Cash 25%	6.93	11.25

As of 31 December 2013.
The simulated performance shown is not necessarily indicative of future performance, which could differ substantially. Please see the Appendix for additional disclosure. Past performance is not a guarantee of future results.
Index returns are unmanaged and do not reflect the deduction of any fees or expenses.
Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.
Source: SSgA, MSCI

"Replacing/Reducing Active Manager Allocations"

"Replacing/reducing active manager allocations"

- **Scenario:**
  - European Pension fund wanting to improve risk-adjusted and total returns
- **Outcome:**
  - Terminate all active managers
  - Allocation to 3 single factor portfolios (Value, Size, Volatility)

January 2003 – December 2013	Return	Volatility	Sharpe Ratio	Tracking Error (%)	Information Ratio
MSCI World	9.12	15.75	0.48	—	—
MSCI Minimum Volatility	9.05	11.45	0.66	6.93	-0.01
FTSE RAFI 3000	12.90	18.28	0.62	4.15	0.91
MSCI World Equally Weighted	11.97	17.59	0.59	3.76	0.76

Source: SSgA, MSCI, FTSE
As of 31 December 2013.
Past performance is not a guarantee of future results.
Index returns are unmanaged and do not reflect the deduction of any fees or expenses.
Index returns reflect all items of income, gain and loss and the reinvestment of dividends and other income.

"Taking the Desired Risk Exposures"

"Taking the desired risk exposures"

- **Scenario:**
  - US Pension Fund, 4 active managers in their global equity portfolio, very low tracking error
- **Questions:**
  - Is over-diversification an issue given the low tracking error?
  - What is actually driving the risk and return in the portfolio?

Perform a risk-based analysis of current holdings

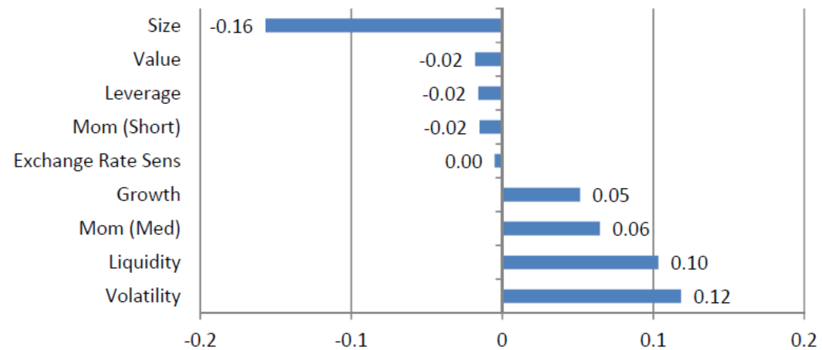
- Manager exposures were offsetting, very low active risk
- Risk and return driven primarily by a small cap exposure

Recommendation

- Identify factor exposures to maintain and remove
- Identify active managers to retain
- Implement single factor strategies

As of 31 December 2013

Predicted Beta	1.00
Active Risk	0.80
Factor Risk (%)	75.00
Specific Risk (%)	25.00



Source: SSgA, Axioma

Source: SSgA
The information contained above is for illustrative purposes only.
The simulated performance shown is not necessarily indicative of future performance, which could differ substantially.
Please see the Appendix for additional disclosure.

IREPRS-0913

Appendix A: Important Disclosures

Important Disclosures

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Investments in small/mid-sized companies may involve greater risks than in those of larger, better known companies.

Companies with large market capitalisations go in and out of favor based on market and economic conditions. Larger companies tend to be less volatile than companies with smaller market capitalisations. In exchange for this potentially lower risk, the value of the security may not rise as much as companies with smaller market capitalisations.

Risk associated with equity investing include stock values which may fluctuate in response to the activities of individual companies and general market and economic conditions.

Investing in foreign domiciled securities may involve risk of capital loss from unfavorable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.

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Investing involves risk including the risk of loss of principal.

Diversification does not ensure a profit or guarantee against loss.

Expiration Date: 31 October 2015

Tracking Code: IREPRS-0913

Appendix B: Biography

Biography

Ana Paula Harris, CFA

Ana Paula Harris is a Vice President of State Street Global Advisors and a Portfolio Strategist in the Global Equity Beta Solutions Group. In this role, Ana acts as a key link between the passive equities investment team and SSgA's clients and distribution teams.

Ana joined State Street Global Advisors in June 2013 from Russell Investments where more recently she worked in the research of active and passive equity managers. At Russell, Ana started as a portfolio analyst supporting the firm's multi-manager funds. Prior to that, she worked as a consultant at Towers Perrin in both Paris and London.

Ana is a CFA charterholder and a graduate of the School of Economics and Management (Technical University of Lisbon).

Opportunities in Alternative Credit:
The tool kit

Blair Reid

RBC Global
Asset Management

Blair Reid

Institutional Portfolio Manager
Member of the Asset Allocation Committee

Blair joined BlueBay in August 2013 from Goldman Sachs Asset Management where he spent 6 years as a Lead Portfolio Manager in the fixed income team, specialising in emerging market debt and FX. Previously he worked for Barclays Global Investors as well as Aon as an investment consultant. He has a Bachelor of Economics degree from Macquarie University in Sydney, an MBA from London Business School and is a Fellow of the Institute of Actuaries.

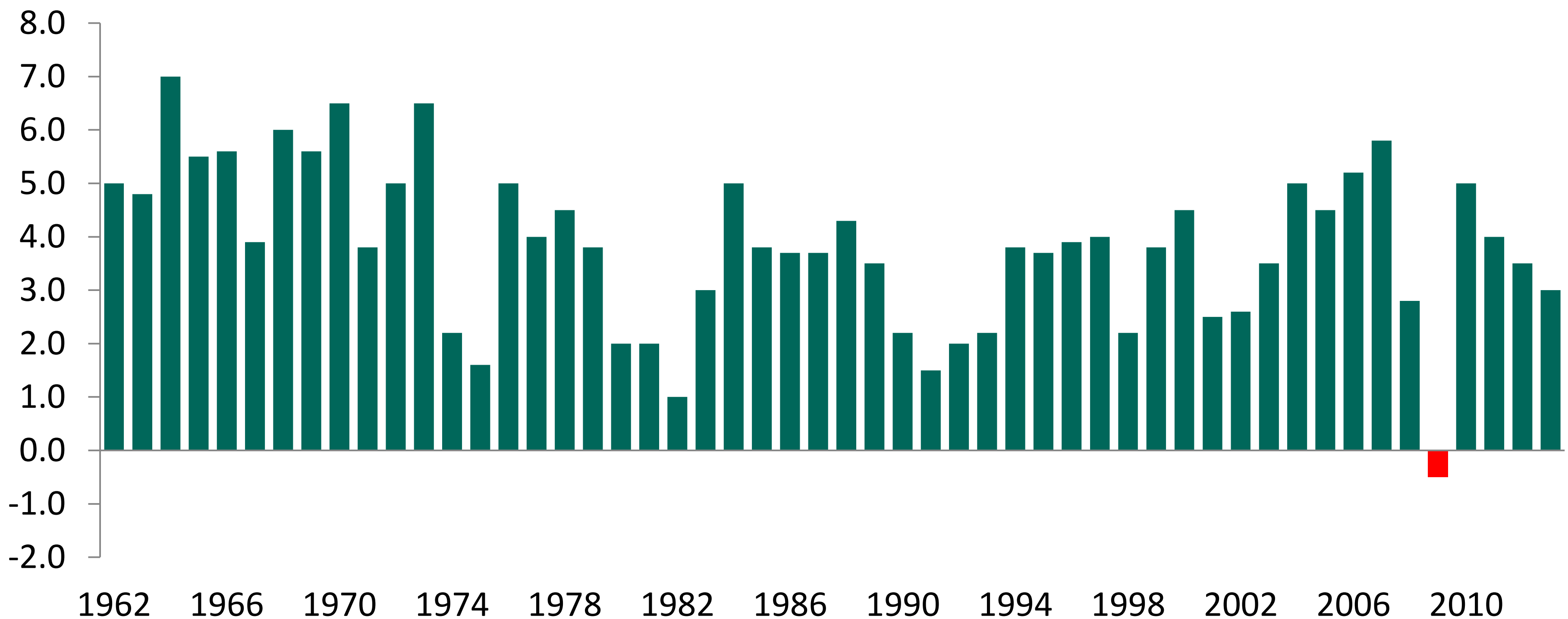
BlueBay
Asset Management

Think of a number ...

... the year the world will get back to normal?

Growth for 51 out of last 52 years ...

World Real GDP (Millions PPP $) Year on Year % Change

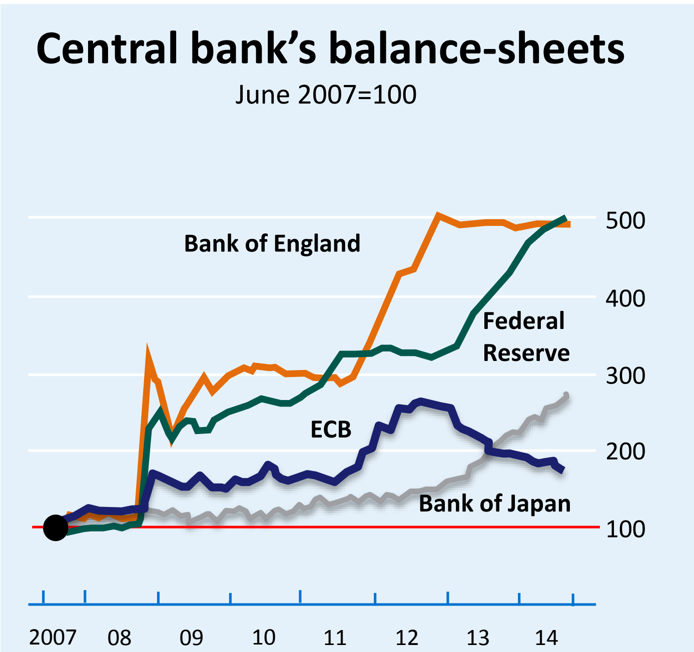


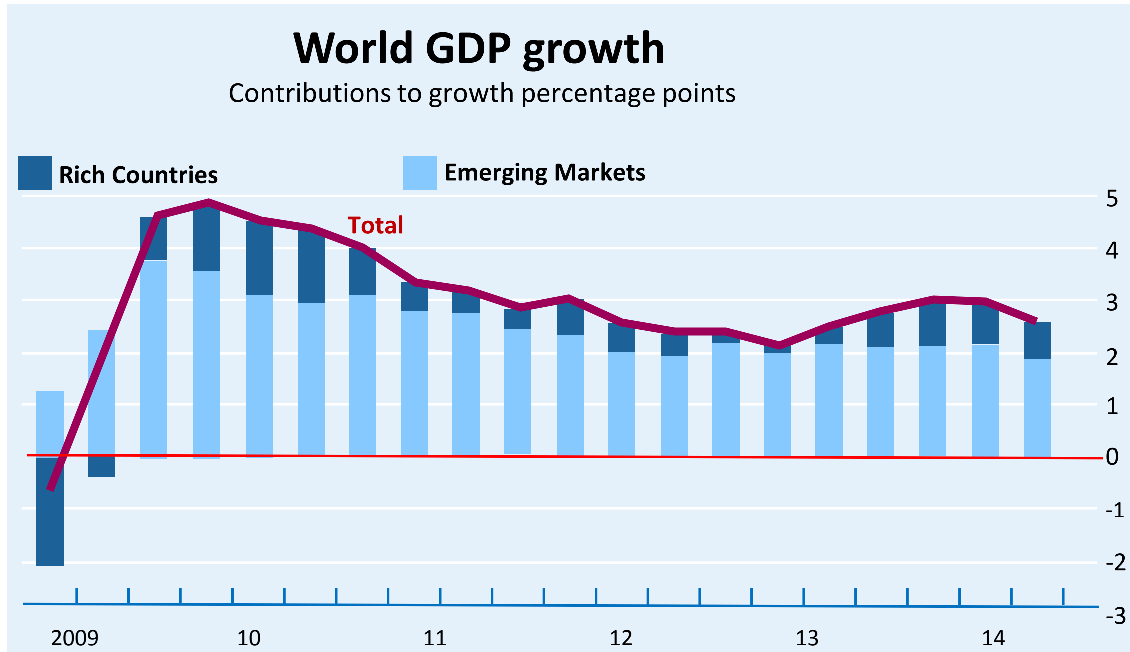
Where to now?

Data source: OECD. As at 30 September 2014.

But recent growth at a cost?

BlueBay Asset Management





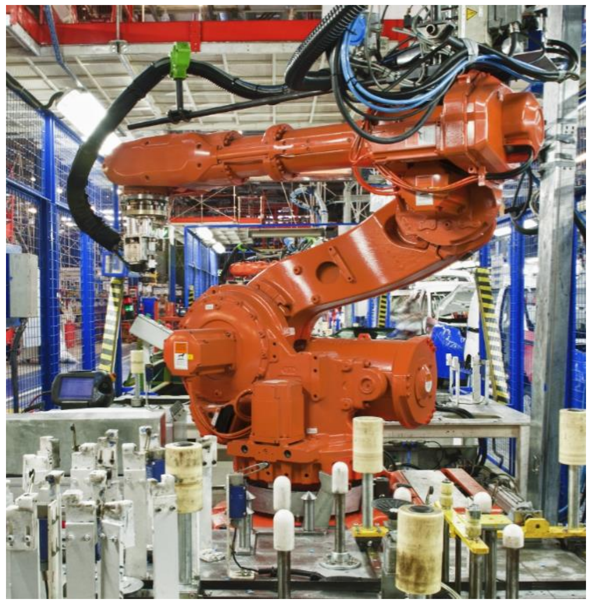
Emerging markets drive global growth

Data source: Economist and BlueBay. As at 30 September 2014.

Three things working against inflation

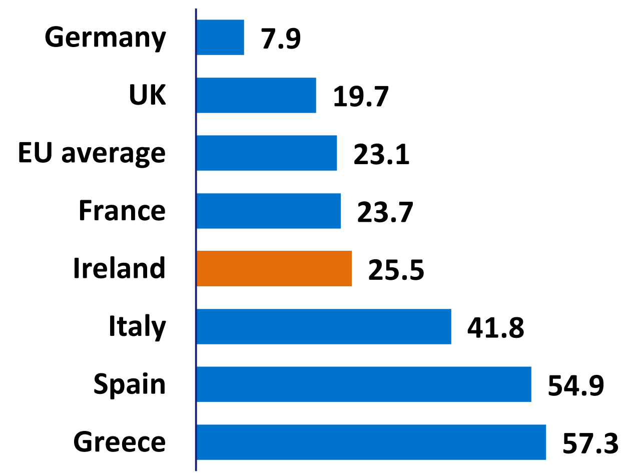
Internet

Automation



Un/underemployment

Youth Unemployment rates, %



Source: Q4 2013 Eurostat

Inflation, disinflation and deflation

History is not a good guide to the future?

BlueBay Asset Management

Yield on US Agg Index to September 2014

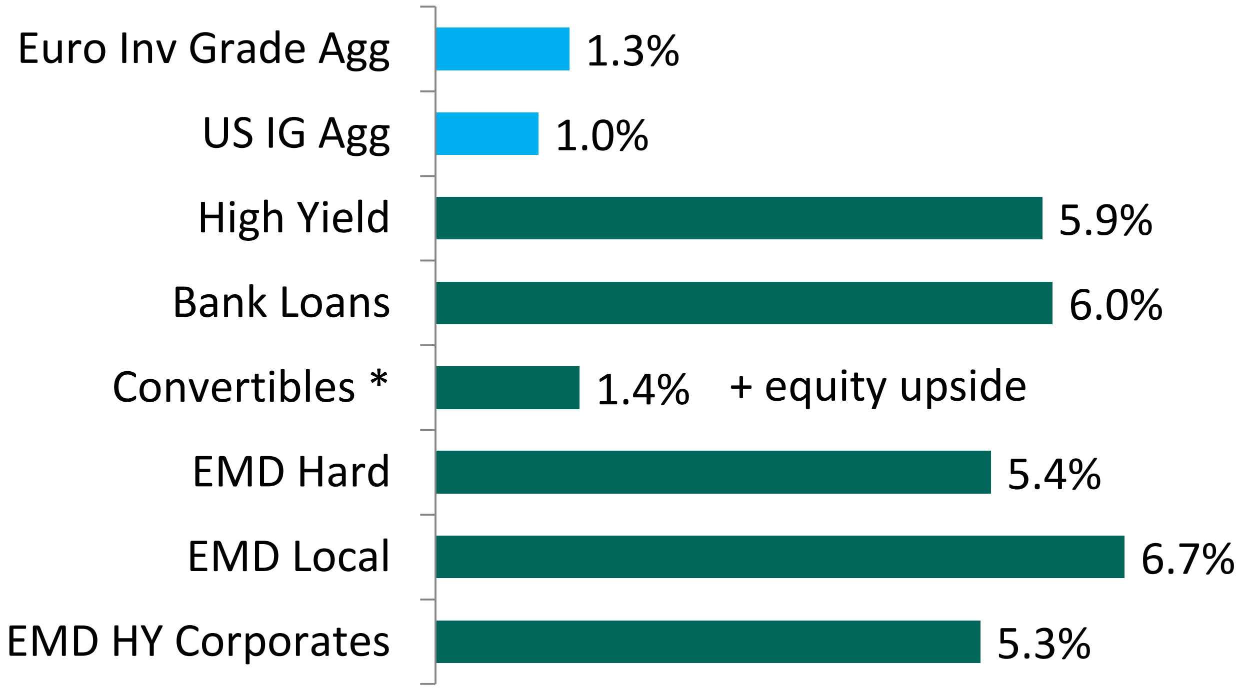
We have entered a new environment of lower returns ...

Data source: Barcap, as at 30 September 2014

What yields are on offer in credit?

BlueBay
Asset Management

Yields to Maturity (as at 30 September 2014)



The hunt for yield is unlikely to abate anytime soon

Data as at 30 September 2014: Sources : Yields based on benchmark data. Indices: Euro Investment Grade Aggregate: iBoxx Euro Corporate Index (QW5A Index); US IG Aggregate: Barclays US Aggregate (LBUSTRUU Index): Global High Yield: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds: UBS Global Convertible Focus Index USD Unhedged (Bloomberg code UICBFOCU); EMD Hard: JP Morgan EMBI Global Diversified - USD Unhedged (Bloomberg code: JPGCCOMP); EMD Local: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates: JP Morgan CEMBI Diversified Index USD Unhedged (Bloomberg code: JCMDCOMP) * Note for convertibles this is a 'running yield', rather than a yield to maturity. Yields to maturity for convertibles are often negative due to the potential equity upside.

This year so far ...

	Yield / spread / duration	2012	2013	Q1 2014	Q2 2014	Q3 2014	Year to Date
High Yield (Global, USD hedged)	5.9% /464/ 3.6	18.9%	7.1%	2.9%	2.9%	-1.7%	4.1%
Bank Loans (US)	6.0% /441/ ~0.25	9.7%	5.3%	0.9%	1.3%	-0.3%	2.1%
Convertible Bonds (Global, USD hedged)	1.4% /178/ 3.5	11.3%	13.0%	3.5%	1.6%	-2.2%	2.9%
EMD – hard currency	5.4% /299/ 6.9	17.4%	-5.3%	3.7%	4.8%	-0.6%	8.0%
EMD – local currency (Rates/FX)	6.7% /n.a./ 4.9	14.8% (12.3%/2.4%)	-7.3% (0.2%/-7.5%)	2.2% (2.0%/0.2%)	3.9% (3.4%/0.5%)	-4.3% (0.9%/-5.2%)	1.6% (6.4%/-4.7%)
EMD – corporates	5.3% /289/ 5.9	16.9%	-1.7%	3.1%	3.9%	-0.2%	7.0%
Investment Grade Corporates (Global, USD hedged)	2.6%/109*/6.3	10.9%	0.1%	2.6%	2.4%	0.7%	5.7%

Data source: Bloomberg. As at 30 September 2014. All returns in USD and unhedged unless otherwise stated. Yield shown is yield to maturity for high yield, bank loans and emerging markets. Convertible bonds shows a running yield. Indices: Global High Yield: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds: UBS Global Convertible Focus Index USD Hedged (Bloomberg code UCBIFX02); EMD Hard: JP Morgan EMBI Global Diversified - USD (Bloomberg code: JPGCCOMP); EMD Local: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates: JP Morgan CEMBI Diversified Index USD (Bloomberg code: JCMDCOMP)

Alternative credit: design decisions

Cash
Developed government bonds
Investment grade Corporate bonds
Asset backed
Bank Loans
Emerging market (hard currency)
High Yield
Emerging market (corporate bonds)
Emerging market (local currency)
Convertible bonds

Which assets to include	All assets? Narrow selection? Quality? Liquidity?
Reliance on market beta	How much of return is expected from beta?
Liquidity	Access illiquidity premium with less liquid assets?
Security selection	Concentrated? Diversified? Turnover?
Wide or narrow ranges	Constrain allocations? Go anywhere?
Capital preservation	Go to cash? Macro and tail hedges?
Transparency	How to measure decisions and performance?

A wide spectrum of possible portfolios

Some definitions

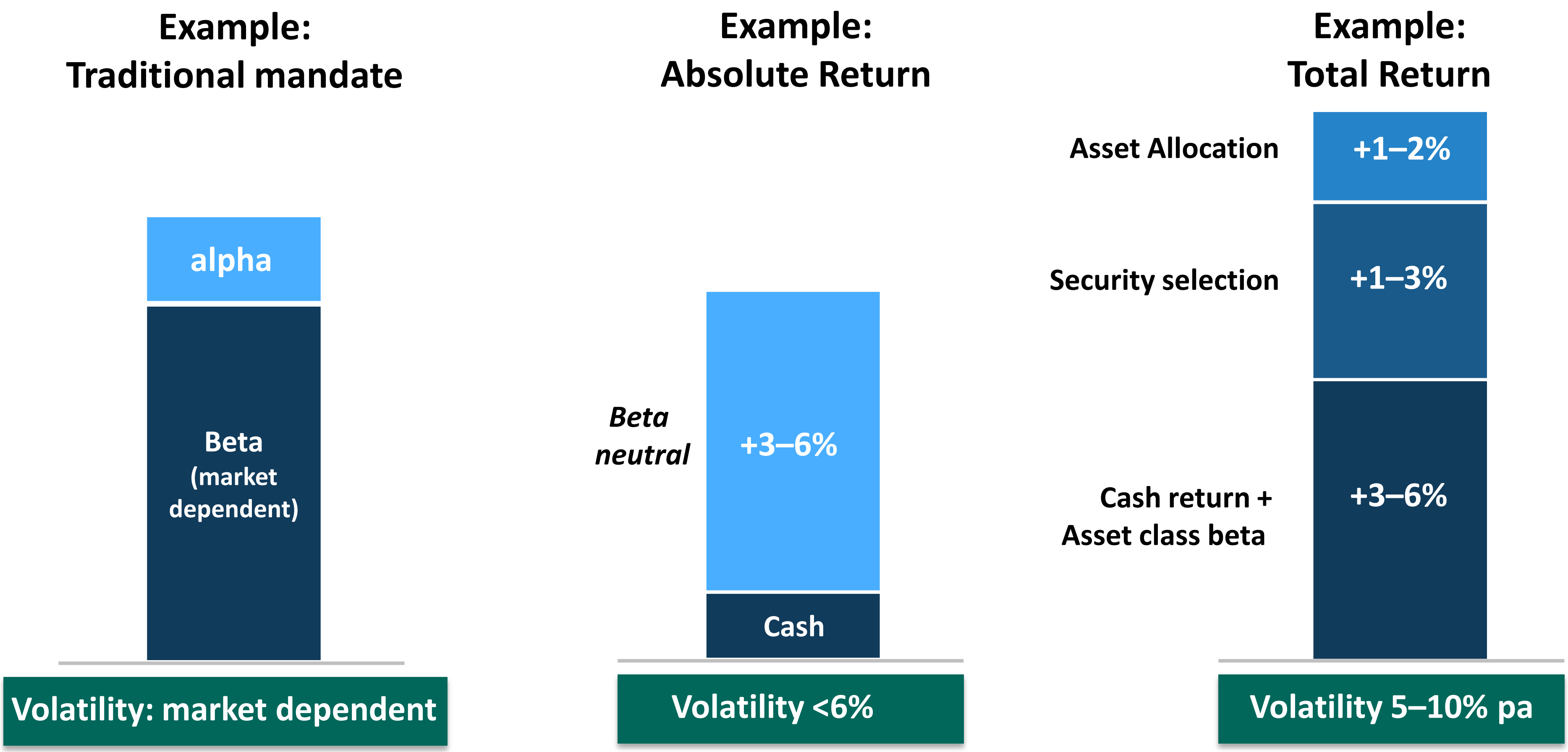
- **What is multi-asset credit?** Multi-asset credit encompasses a wide range of portfolios that invest across different parts of the fixed income market and usually excludes developed market government bonds as these are assumed to have no credit risk. Assets that might be included are high yield bonds, bank loans, asset-backed securities, convertible bonds and emerging market debt

- **What does 'total return' mean?** There is no universal agreement on definition. Often it is taken to mean a fixed income portfolio whose expected return includes an element of market return (beta) i.e. the achieved returns will depend on the direction of markets

- **What is the difference between 'absolute return' and 'total return'?** Absolute return funds are generally assumed to have returns that are not reliant on the direction of markets i.e. they are equally likely to perform in up and down markets. In most cases the expected return of an absolute return strategy will be lower than a total return strategy

No universal definitions

Comparing approaches



New style portfolios greatly increase reliance on managers

Source: BlueBay.

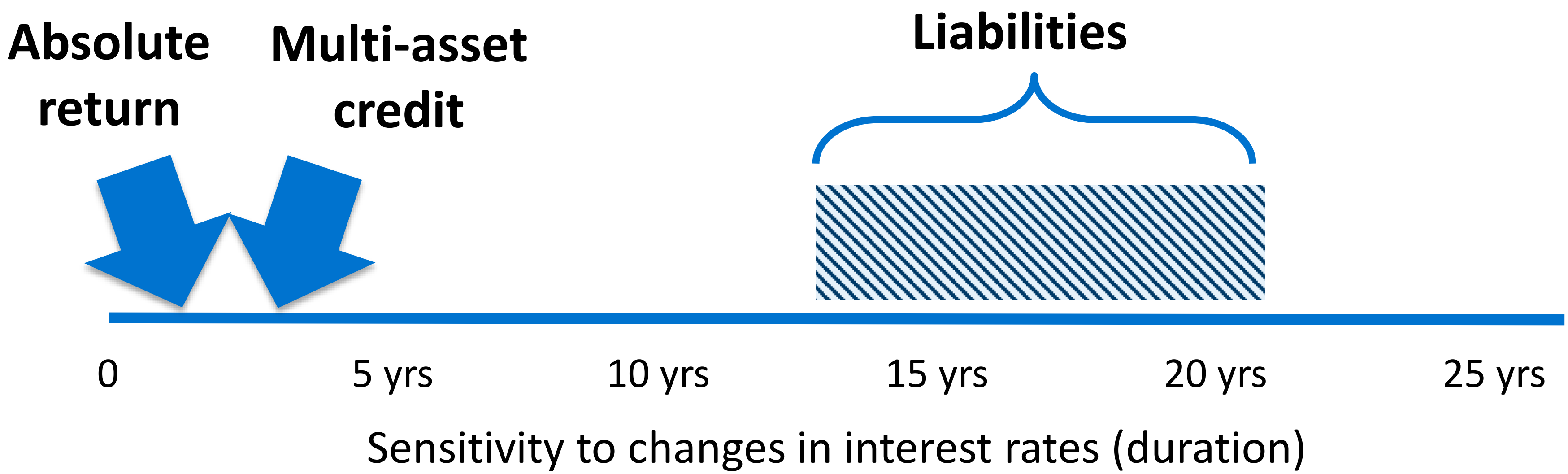
Investor motivations for allocating to alternative credit ...

BlueBay Asset Management

1. **Pension funds de-risking out of equity markets**
2. **Replacement of core fixed income holdings**
3. **Investors seeking active asset allocation**
4. **A portfolio diversifier**

A variety of motivations

Does it match liabilities ... NO!



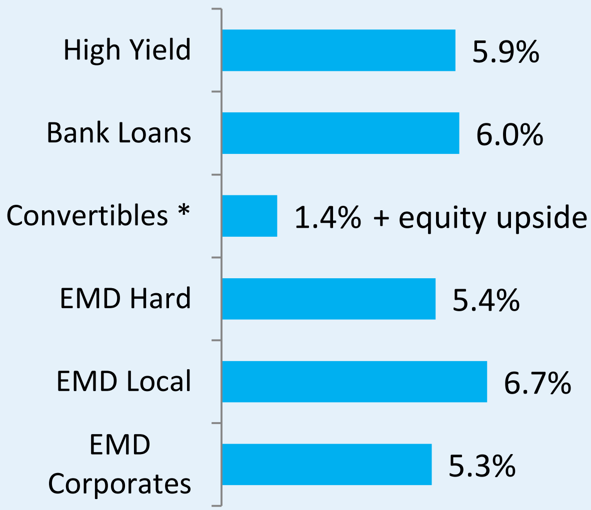
Duration of alternative credit is often quite low

Working harder in fixed income ... an example

1. Focus on higher yielding assets

Higher yielding assets provide greater income which both adds to returns and provides protection against market downturns.

Yields to Maturity (as at 30 Sept 2014)



2. Best ideas security selection

We purchase only our best ideas and do not use benchmarks as a basis for security selection.

3. Active asset allocation

Active asset allocation can enhance overall returns.

4. Capital preservation (minimising drawdown)

Capital preservation techniques can minimise drawdown. Protecting capital can be achieved by holding more conservative securities, a greater allocation to cash or using derivatives to reduce (hedge) portfolio risks.

Opportunities are bond-by-bond, country-by-country

Data as at 30 Sept 2014: Sources : Yields based on benchmark data. Indices: Global High Yield: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds: UBS Global Convertible Focus Index USD Unhedged (Bloomberg code UICBFOCU); EMD Hard: JP Morgan EMBI Global Diversified - USD Unhedged (Bloomberg code: JPGCCOMP); EMD Local: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates: JP Morgan CEMBI Diversified Index USD Unhedged (Bloomberg code: JCMDCOMP)

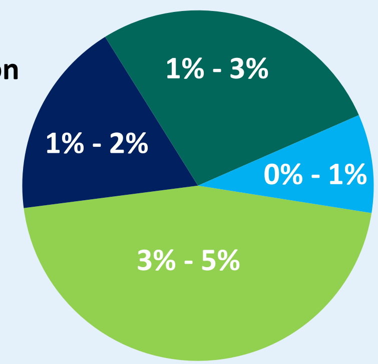
* Note for convertibles this is a ‘running yield’, rather than a yield to maturity. Yields to maturity for convertibles are often negative due to the potential equity upside.

An example of a Total Return fund

BlueBay Asset Management

Target return	5–10% p.a. over a cycle; gross of fees
Expected volatility	5–10% per annum

Expected returns over a cycle



Asset class	Expected range	
High Yield Bonds (Global)	0-45%	0 - 55%
Loans (Global)	0-45%	
Convertible Bonds (Global)	0-15%	
EMD - hard currency	0-25%	0 - 55%
EMD - local currency	0-25%	
EMD - corporates	0-25%	
Cash	2-15%	
Capital preservation: Cash and/or high grade securities	0-20%	

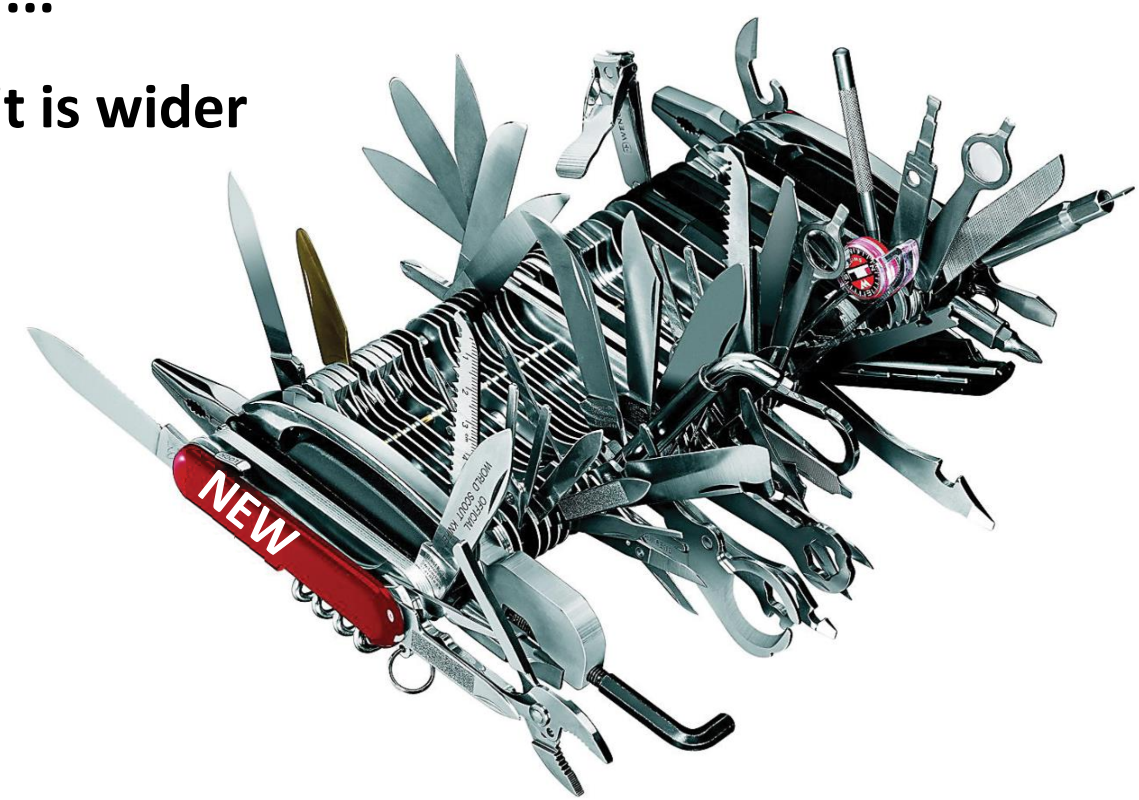
Variety of return drivers

Data source: BlueBay Asset Management Please refer to the Disclaimer located at the back of this presentation for important information regarding the performance shown above

Summary

Assets need to work harder ...

... but the toolkit is wider



Appendix

Characteristics of higher yielding credit asset classes

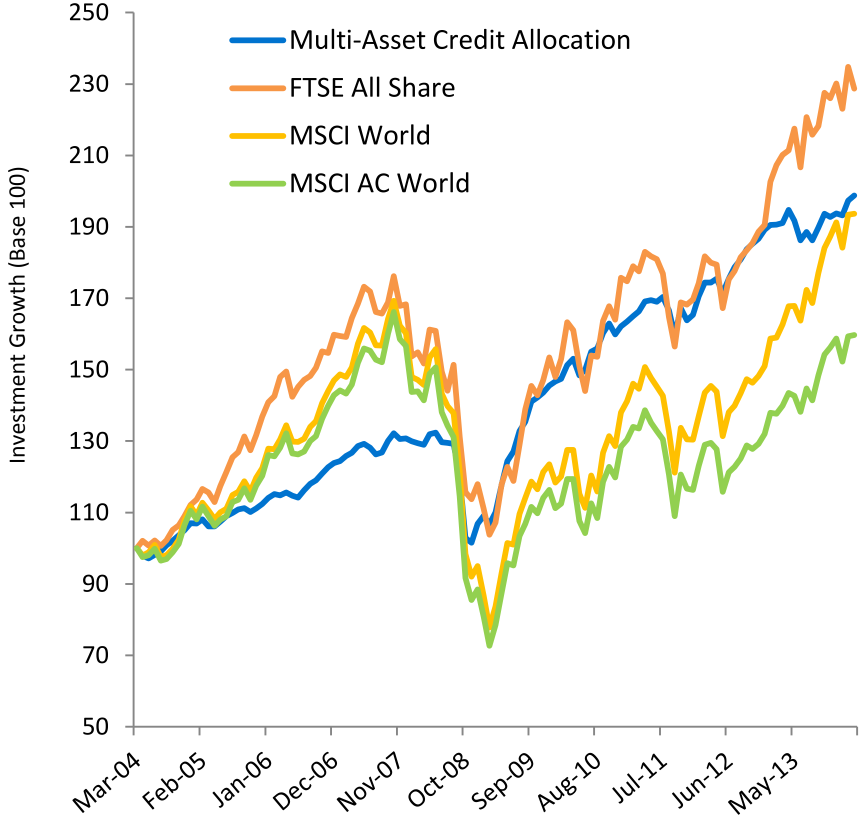
BlueBay Asset Management

	Description	Market size	Yield to maturity	Notable Sensitivities	Default rate expectations	Historic Recovery rates	Approximate transaction costs (full bid offer)	10 year absolute volatility
Global High yield	Corporate bonds issued by companies rated below BBB (investment grade)	~$1.8tr	5.9%	A mixture of Treasury yields and economic expectations	BlueBay estimates 2% for 2014	~40%	~1.0%	10.3%
Global Bank Loans	Tradeable loans of companies rated below BBB	~2.0tr	6.0%	Floating rate, so not sensitive to changes in interest rates	BlueBay estimates 2% for 2014	~70%	~1.5%	8.3%
Convertible bonds	Bonds that can convert in common equity at a predetermined price	~$600bn	1.4% (running yield) + equity upside	Can have two-thirds of equity upside	Extremely low within main index	N/A	~0.50%	9.0%
Emerging Market Debt – Hard Currency	Sovereign bonds issued by emerging market governments in US$	~$1.4tr	5.4%	Very sensitive to US Treasury yields	BlueBay estimates < 1% for next 12 months	~50%	~0.50%	8.8%
Emerging Market Debt - Local Currency	Sovereign bonds issued by emerging market governments in their own currency	~$2.6tr	6.7%	FX risk can be over 70% of short term risk	Very low - no defaults ever in main index	N/A	~0.50%	10.6%
Emerging Market Debt - Corporates	Corporate bonds issued by emerging market companies rated below BBB	~$1.4tr	5.3%	Very sensitive to US Treasury yields	BlueBay estimates 3.3% over next 12 months	~35%	~0.85%	10.1%

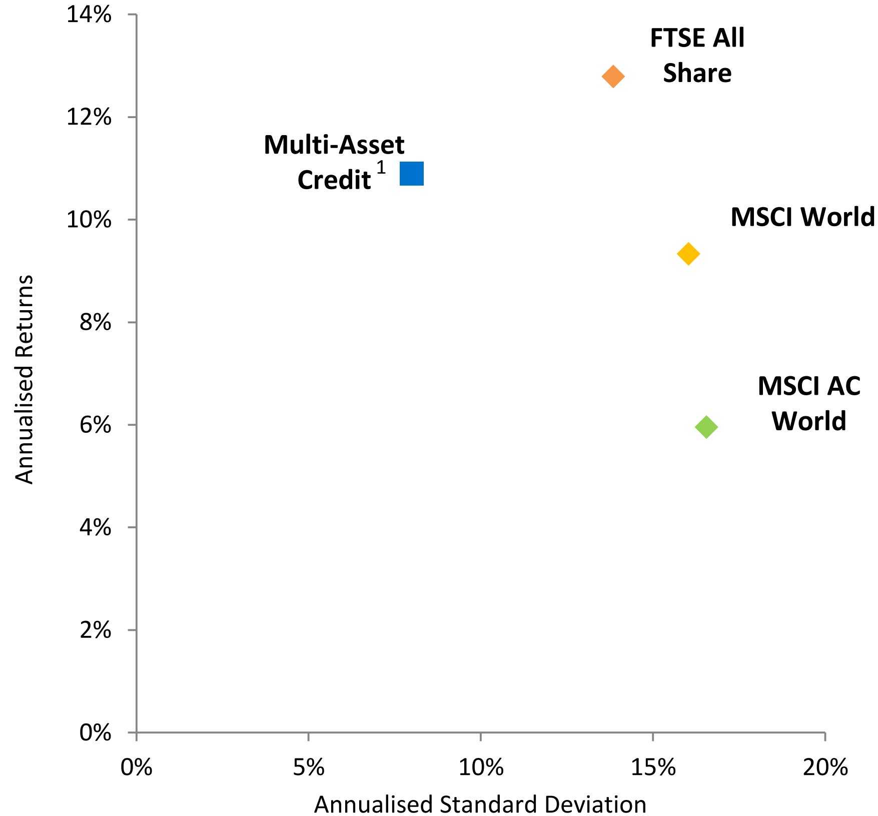
Data as at 30 September 2014. Market size, default rates, historic recovery rates and transaction costs are BlueBay estimates. Yields and volatility (10 year weekly returns) figures based on: Global High Yield: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds: UBS Global Convertible Focus Index USD Unhedged (Bloomberg code UICBFOCU); EMD Hard: JP Morgan EMBI Global Diversified - USD Unhedged (Bloomberg code: JPGCCOMP); EMD Local: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates:JP Morgan CEMBI Diversified Index USD Unhedged (Bloomberg code: JCMDCOMP)

Multi-asset credit

10 Year Cumulative Returns



10 Year Risk & Return



Multi-asset credit has historically generated equity like returns for half the volatility

Source: Bloomberg. Data as at end of March 2014. Past performance is not indicative of future results.

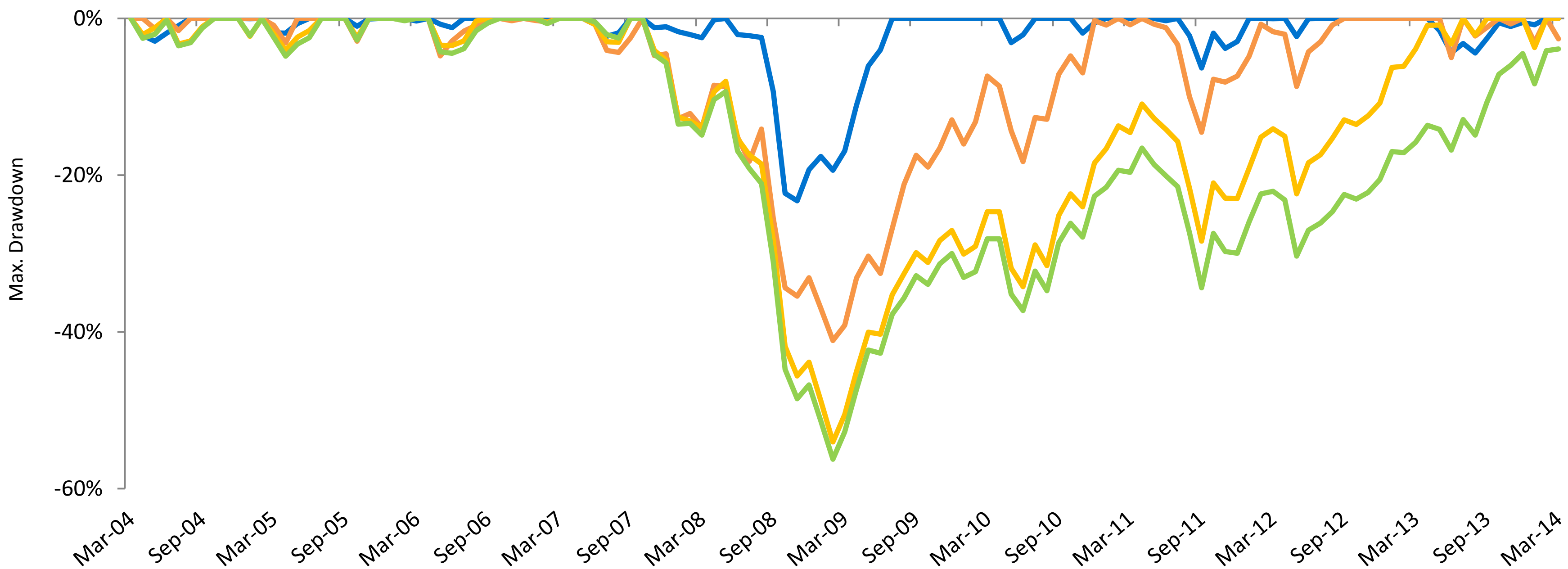
Returns are gross of fees.

1 – Please see appendix for full details on the Multi-Asset Credit allocation

Drawdown analysis

BlueBay Asset Management

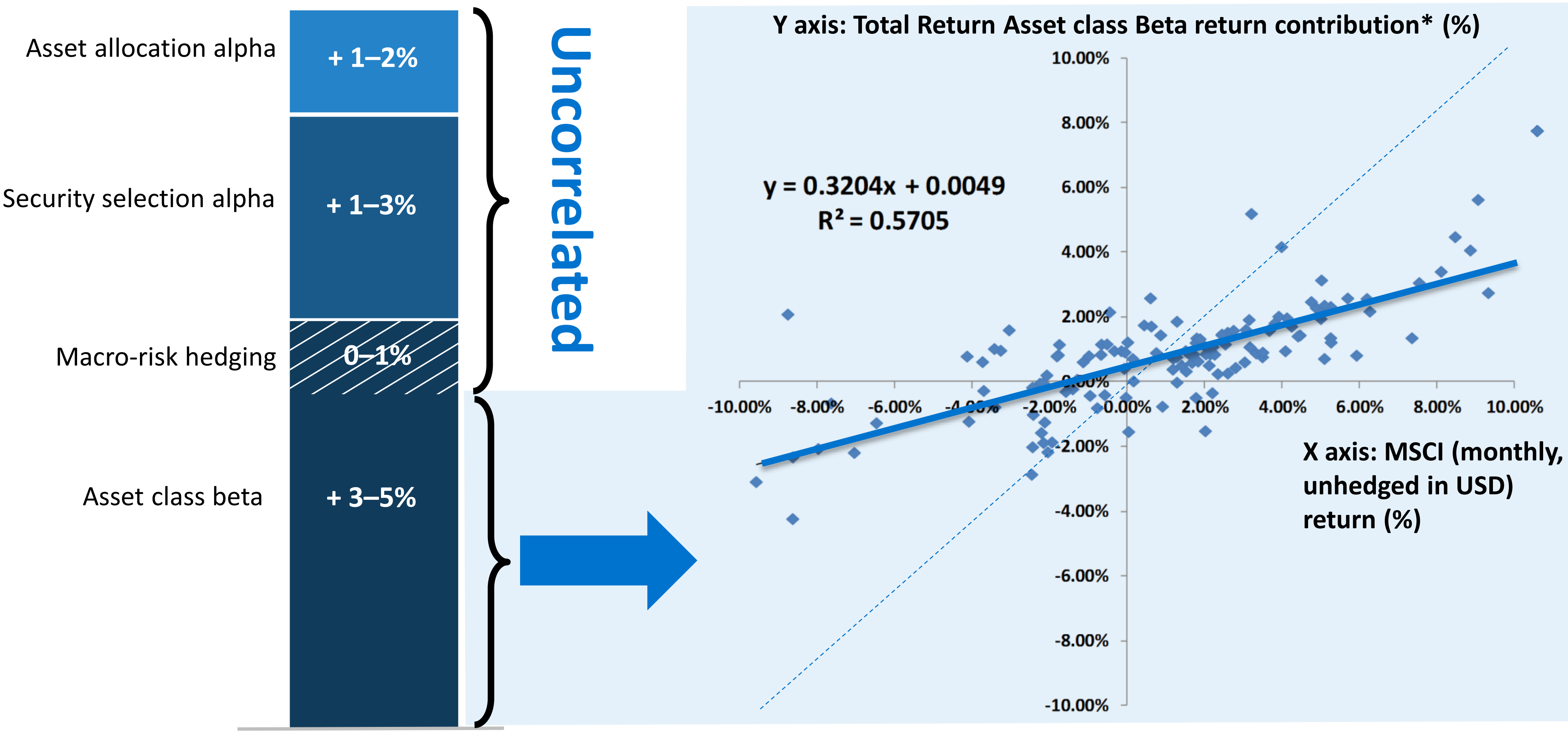
Maximum Drawdown over the past 10 Years



	Max Drawdown
Multi-Asset Credit Allocation [1]	**-23.3%**
FTSE All Share	-41.1%
MSCI World	-54.0%
MSCI AC World	-56.2%

* Monthly returns are calculated as the weighted average of the following indices using the Strategy neutral allocation weights: Global High Yield, 32.5%. Index: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans, 10%: Index: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds,10%: Index: UBS Global Convertible Focus Index USD Unhedged (Bloomberg code UICBFOCU); EMD External, 15%. Index: JP Morgan EMBI Global Diversified - USD Unhedged (Bloomberg code: JPGCCOMP); EMD Local, 12.5%. Index: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates,15%. Index: JP Morgan CEMBI Diversified High Yield Index USD Unhedged (Bloomberg code: JCMDCOMP) and 5% Cash, zero return. Data as at end of March 2014.

Correlation Analysis with MSCI World



... a diversifier versus equities

* Monthly returns are calculated as the weighted average of the following indices using the Strategy neutral allocation weights: Global High Yield, 32.5%. Index: Merrill Lynch Global High Yield Constrained Index USD Hedged (Bloomberg Code: HW0C); Loans, 10%: Index: JP Morgan Leveraged Loan Index USD Unhedged (JPM Code JPLLLILI); Global Convertible Bonds,10%: Index: UBS Global Convertible Focus Index USD Unhedged (Bloomberg code UICBFOCU); EMD External, 15%. Index: JP Morgan EMBI Global Diversified - USD Unhedged (Bloomberg code: JPGCCOMP); EMD Local, 12.5%. Index: JP Morgan GBI-EM Broad Diversified Index - USD Unhedged (Bloomberg code: JGENBDUU); EMD Corporates,15%. Index: JP Morgan CEMBI Diversified High Yield Index USD Unhedged (Bloomberg code: JCMDCOMP) and 5% Cash, zero return.

Data source: BlueBay. Correlation of monthly returns from Jan 2003 to May 2014

There is no guarantee that information shown would have been or will be achieved. Analysis excludes Sept and Oct 2008.
Please refer to the disclaimers for important information relating to information provided above. Data source: BlueBay Asset Management

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Society of Actuaries in Ireland

Economic, Social & Corporate Governance

Sandra Rockett

What is ESG Investing?

- ESG Investing is a type of Responsible Investing.
- ESG Investing stands for an investment process which takes into account Environmental, Social and Governance issues.
- Environmental issues – climate change, hazardous waste, nuclear energy and sustainability of resources
- Social issues – human rights, diversity, consumer protection, health and well being
- Governance Issues – management compensation, management structure, employee relations

3 Types of Responsible Investing

Key types of Responsible Investing;

1. **SRI:** A portfolio construction process which seeks to avoid investments in certain stocks/industries through negative screening according to specified ethical guidelines;

2. **Impact Investing**: Investing in projects or companies with the express goal of effecting specified social or environmental changes/outcomes;

3. **ESG:** The integration of ESG factors with fundamental analysis to the extent they are material to investment performance.

- While all RI strategies, these approaches serve different purposes.
- SRI and Impact Investing use funding and investment to express ethical values or progress the asset owner's mission.
- ESG investing is more about improving investment performance.

Why are people considering ESG Investment

SRI was widely used. However recently, there has been a number of arguments made against SRI as being too restrictive. While still in its relative infancy, the move to ESG has been motivated by;

1. Legislative Obligation

- Some European countries have explicitly introduced legislation to prohibit the investment in certain types of investments e.g. Netherlands introduced a ban on investment in cluster ammunition.

2. Economic Motives

- The increase in the availability of ESG data has facilitated research.
- While research is still underway, mounting support that companies who have good ESG policies tend to outperform in the long run;
- (a) risk management
- (b) better financial performance.

Overview of Fiduciary Duty

3. Expectations from Stakeholders

Increasing acknowledgement by investors that they share an ethical and moral responsibility for consequences of their investment choices.

4. Fiduciary Duty

One of the most disputed issues. Until recently, fiduciary duty was understood as seeking to maximise return subject to risk for beneficiaries.

Generally considered that any SRI investment would lead to lower returns and be at odds with principle duty.

However, since 2005, this view is being challenged based on a report for the UNEP Finance Initiative compiled by Freshfields Bruckhaus Deringer, one of the largest law firms in the world ("Freshfields Report").

Scope of Report was to determine to what extent (if any) asset owners could consider ESG issues in investment policy and management.

Key Developments in ESG Investing

Freshfields concluded that while different jurisdictions have different interpretations of fiduciary responsibility, this responsibility does not limit consideration to financial criteria alone.

- **Fiduciaries CAN consider ESG issues in decision making process.**

But, Freshfields went on further to observe that increased evidence supports the position that ESG factors can influence financial performance and that where there are value neutral options, preferences of beneficiaries should be taken into account.

- **Fiduciaries SHOULD consider ESG issues in decision making process.**

Key Developments in ESG Investing

Follow up report in 2009 focussed on the evolving nature of fiduciary responsibilities and ESG considerations and determines that;

- Asset Owners have a duty to have regard for ESG considerations
- IMAs should clarify expectations of the parties to the contract for ESG Issues;
- Institutional Investment consultants and asset managers have a professional duty of care to proactively raise ESG considerations with their clients

Key Developments in ESG Investing

UN PRI set up in 2006
Investor initiative in partnership with UNEP FI and UN Global Compact. Provides framework for institutional investors to publically commit to incorporating ESG issues into mainstream decision making and ownership practices.

Published set of 6 principles to help identify best practices amongst investors.

As of April 2013, over 1200 signatories representing US$ 34 trillion assets under management have signed up to the Principles. In some cases, before retaining an investment manager, institutional investors will inquire as to whether the manager is a signatory to the United Nations-supported PRI.

UK Stewardship Code in 2010
The Financial Reporting Council (FRC) has published the UK Stewardship Code (the Code), setting out good practice for institutional investors when engaging with the UK listed companies in which they invest.

6 Key Principles

- The UNPRI sets out 6 key principles;
- To incorporate ESG issues into investment analysis and decision-making;
- To be active owners and incorporate ESG issues into ownership policies;
- To seek appropriate disclosure on ESG issue by entities;
- To promote acceptance and implementation of principles by investment industry;
- To work together to enhance effectiveness in implementing principles;
- To report on activities and progress towards implementing the principles.

Expectations on Asset Owners

Exclusions
- Actively avoiding investment in certain stocks based on prescribed ethical guidelines

Voting
- Strategic voting to support particular ESG issue or bring about change in the company

Engagement
- Monitoring performance of investee companies

Integration
- Including ESG risks and opportunities into fundamental investment analysis

What is happening in practice?

To date, most of the interest in ESG Investing has been driven by European/US clients. However, expect that this will gradually feed through to Ireland.

Key trends developing;

- Incorporation of ESG guidelines into IPS;
- Proactive selection of UN PRI sWill only work with managers who have signed up to UN PRI;
- Incorporate ESG factors principally through exclusion lists;
- Adopt ESG focussed voting policies and seek same from asset managers;
- Adopt an active engagement policy with reference to the investment strategy and nature of the financial instruments being used;
- Seeking disclosure of activity and compliance with ESG guidelines.

What is happening in practice?

To date, most of the interest in ESG Investing has been driven by European/US clients. However, expect that this will gradually feed through to Ireland.

Key trends developing;

- ESG being raised as consideration by governance board;
- ESG consideration feeding into IPS;
- Proactive selection of asset managers who are UN PRI signatories and who have ESG policy;
- Incorporation of ESG factors principally through exclusion lists;
- Adoption of ESG focussed voting policies;
- Adoption an active engagement policy with reference to the investment strategy and nature of the financial instruments being used;
- Seeking disclosure of activity and compliance with ESG guidelines.

Summary

ESG is an evolving theme in investment markets which is likely to continue to develop and become more mainstream.

Increase focus by Asset Owners;

- question over the fiduciary responsibility of asset owners
- increasing evidence of the impact of ESG factors on investment performance
- pressure from key stakeholders and beneficiaries.

Expect further developments by Investment Industry;

- Increased demand for ESG disclosures by companies and analysis
- Increased regulatory and policy developments
- Increased demand for ESG compliant strategies by Asset Owners

THE IRISH HOUSING MARKET (AND WHY IT MATTERS)

Ronan Lyons, Trinity College Dublin

Society of Actuaries in Ireland

5 November, 2014

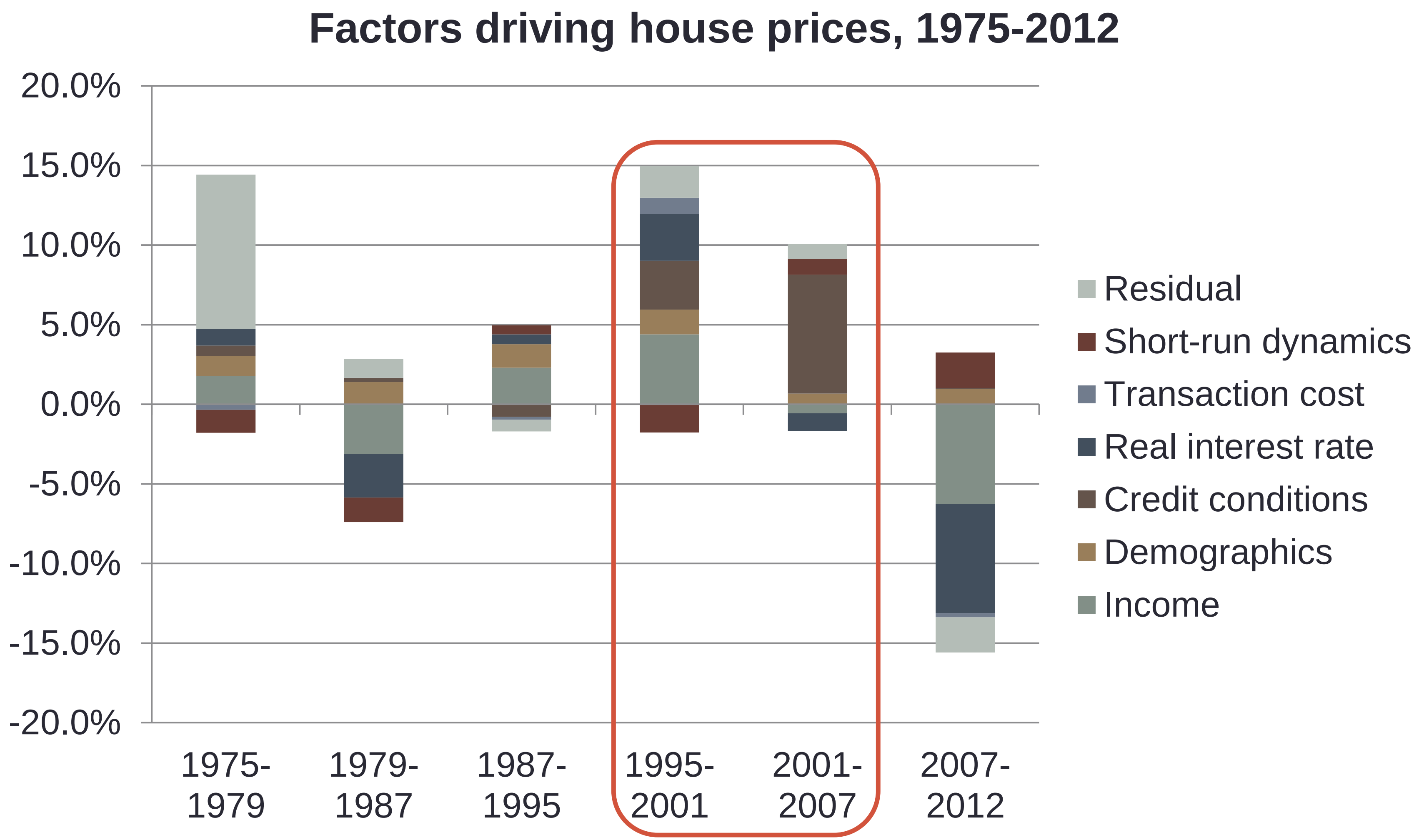
Five things matter for house prices

- House prices ultimately depend on a relatively small number of high level factors
- (+) Income per household
  - Captures earnings but also unemployment (# inco
- (-) Housing stock per household
  - Captures construction but also emigration
- (-) Number of people per household
  - Widest measure of demographics – from 3.8 in 1980 to 2.8 today
- (+) Credit conditions
  - Typical LTV for first-time buyers
- (-) "User cost"
  - (After-tax) mortgage interest rates, less expected price increases

"Fundamentals" [also affect rents]

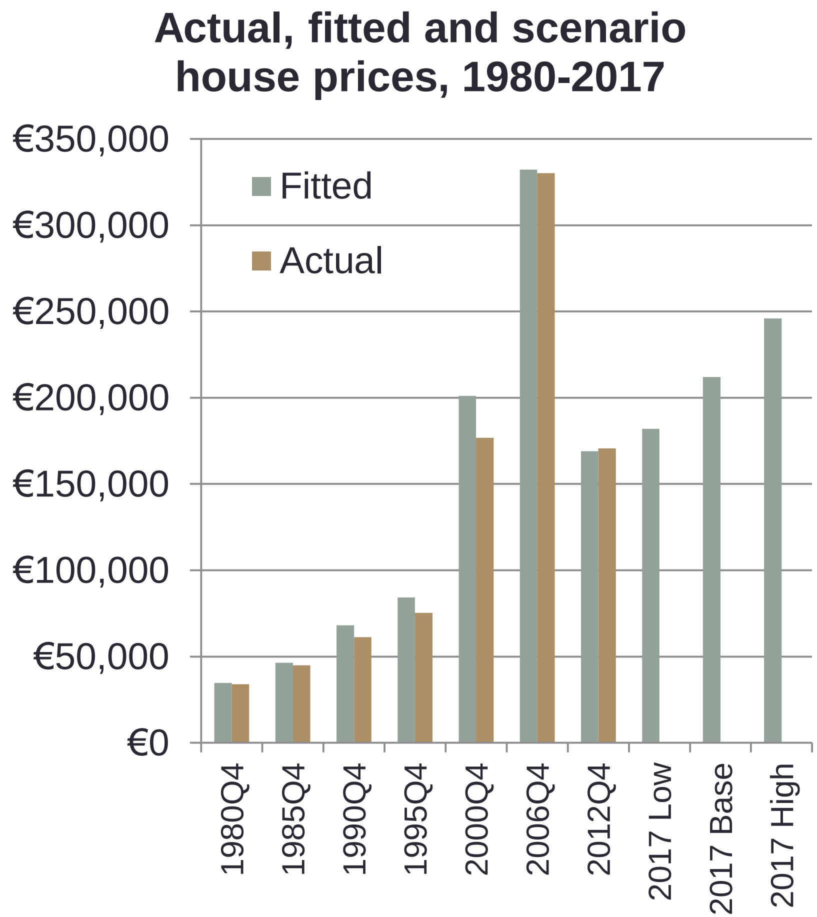
Asset factors [affect yield]

Helps us understand last 40 years

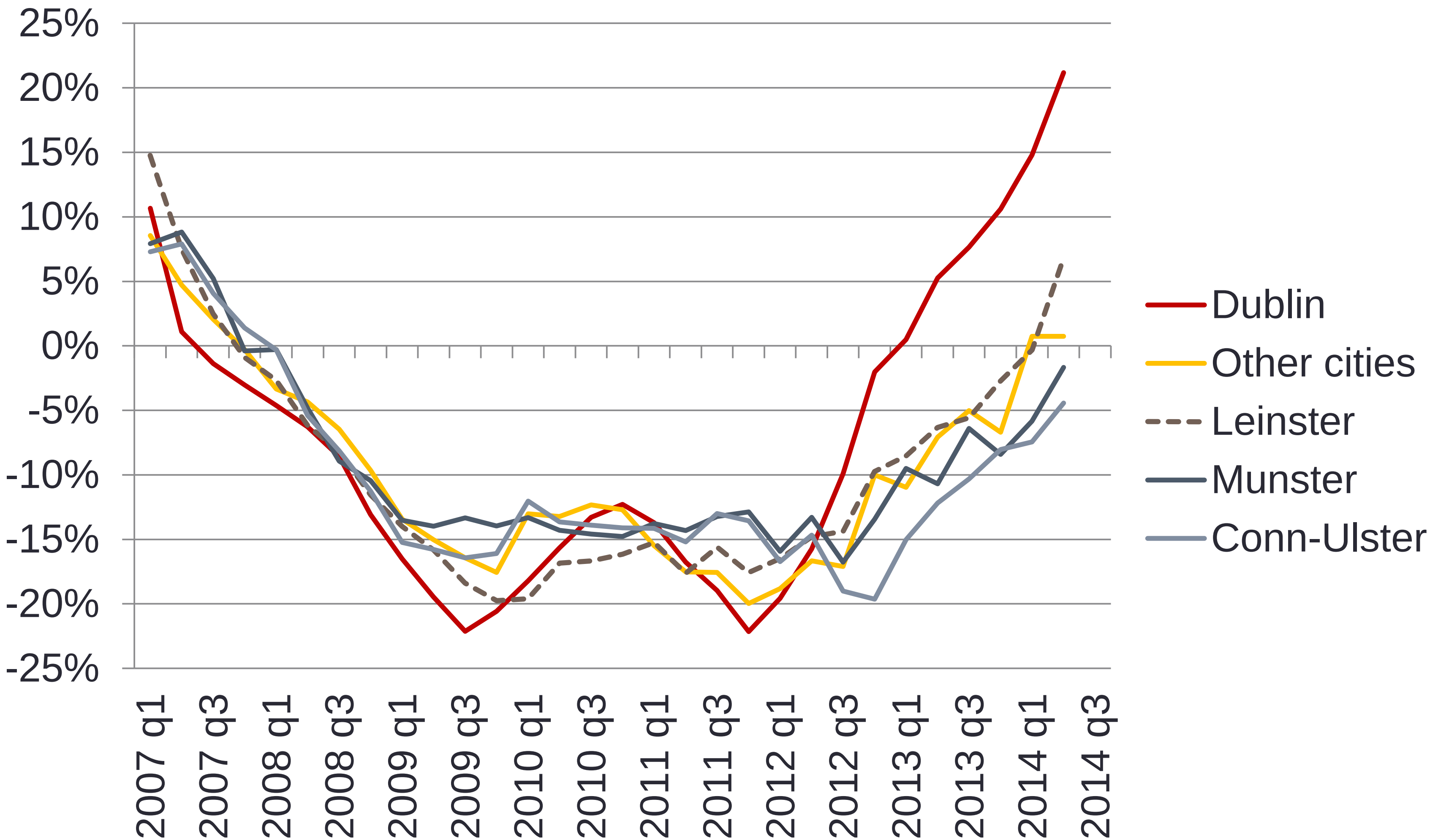


2012-2017 house price scenarios

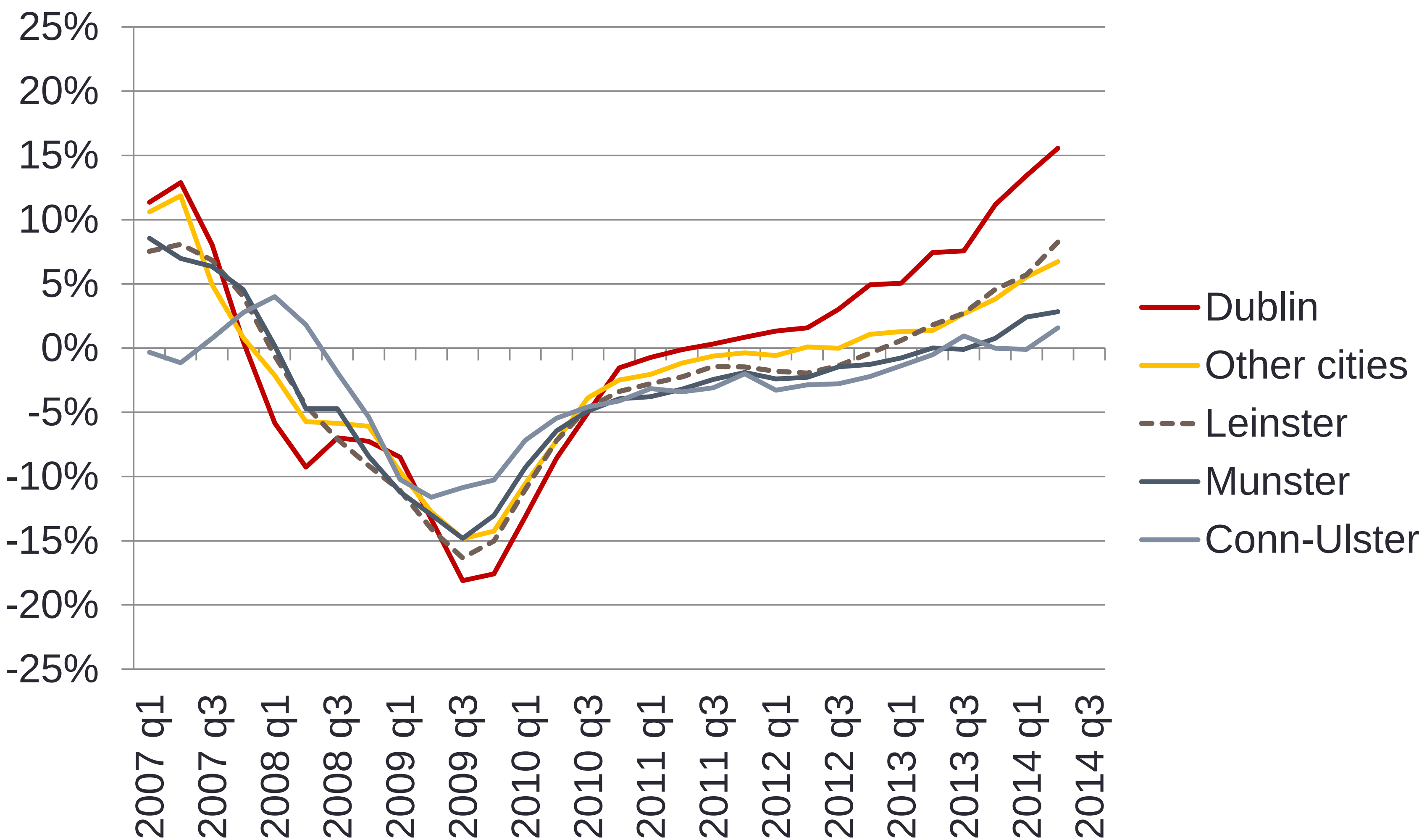
- Baseline scenario:
  - Average nominal house price increase of 5.2%
- High-growth scenario
  - Average nominal house price increase of 8.7%
- Low-growth scenario
  - Average nominal house price increase of 1.7%
- Underlying inflation assumption:
  - 2% – ECB misses targets, but growth in Ireland sluggish



Increase in prices driven by Dublin



Very similar pattern in rental market

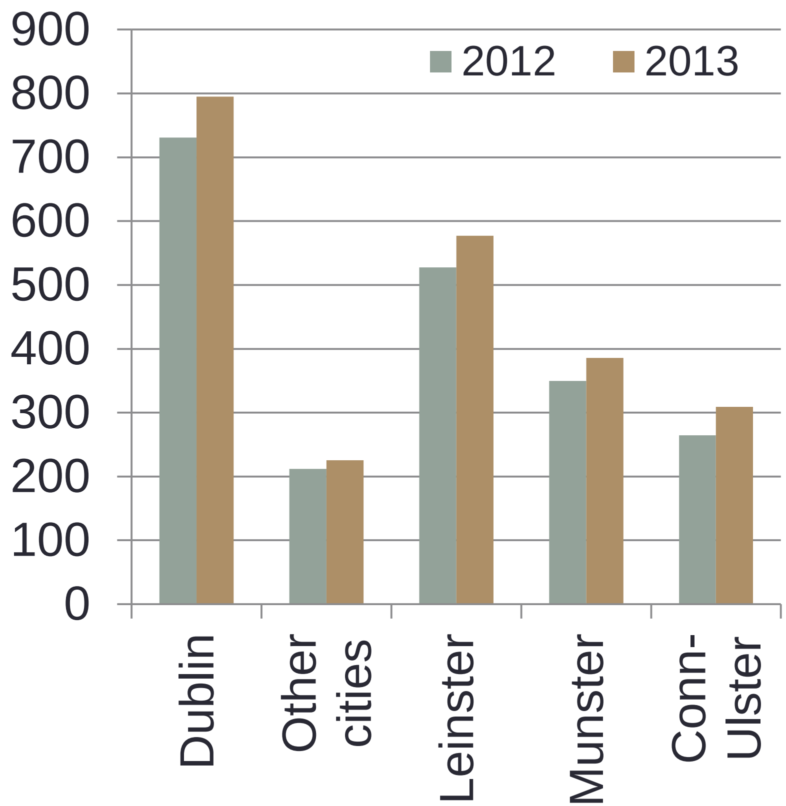


What does this mean?

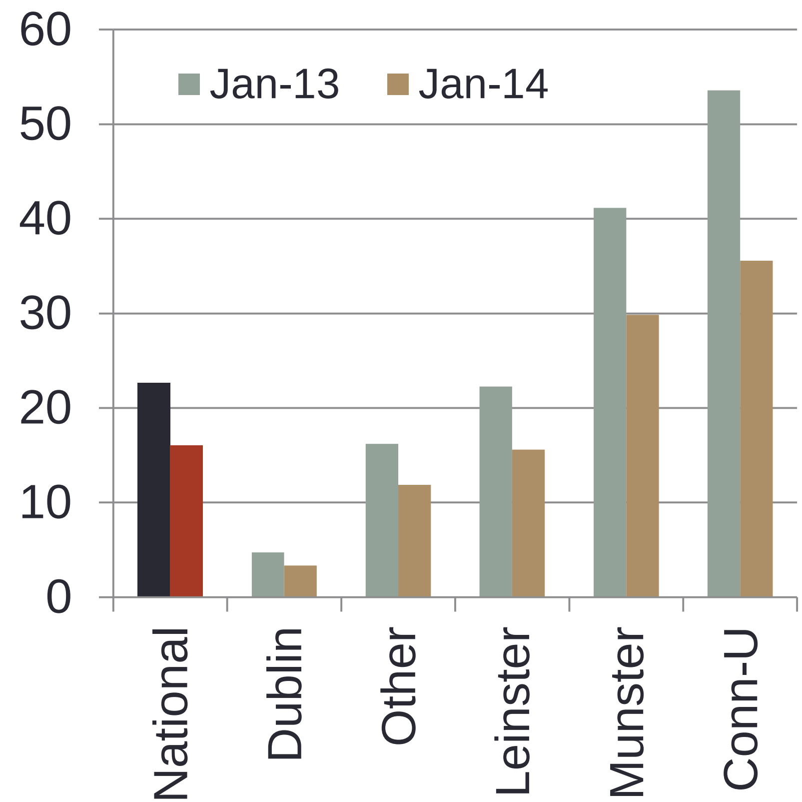
- This time *is* different to 2001-2007
  - Prices rose then while rents fell, so tied to asset factors
  - As asset factors are national, unsurprising that increases 2001-2007 were a country-wide phenomenon
- Now, however, prices and rents in Dublin are rising rapidly
  - While both are stable or falling in many parts of the country
  - Suggests that fundamentals – not asset factors – are driving current developments in the housing market
- Is it different to 1995-2001?
  - Prices then largely driven up by rising incomes
  - Prices now largely driven up by a lack of supply

3 months supply in Dublin vs. 3 yrs in Connacht

Average number of transactions per month, 2012-2013

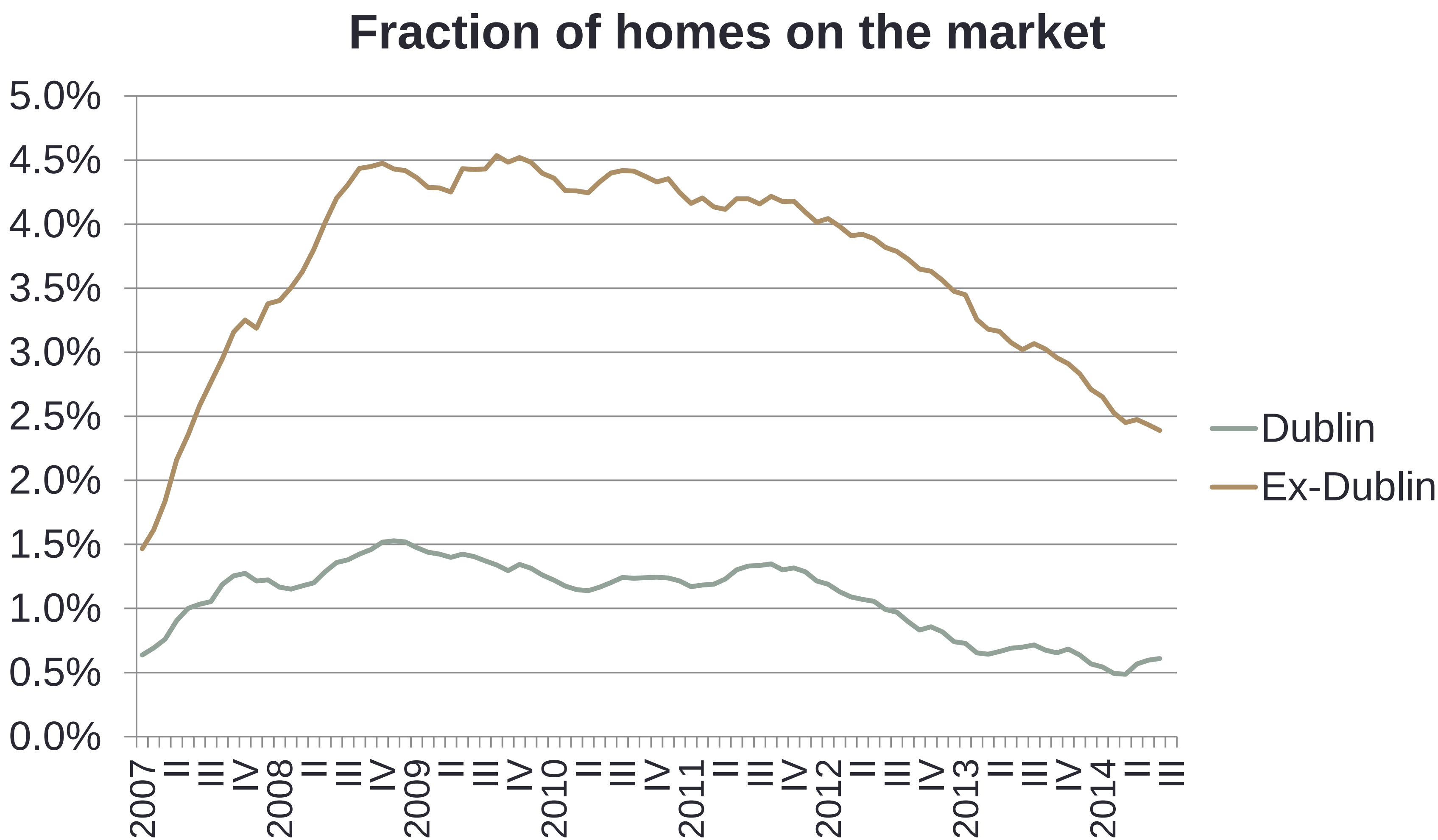


months supply on the market, Jan 1 2013/2014

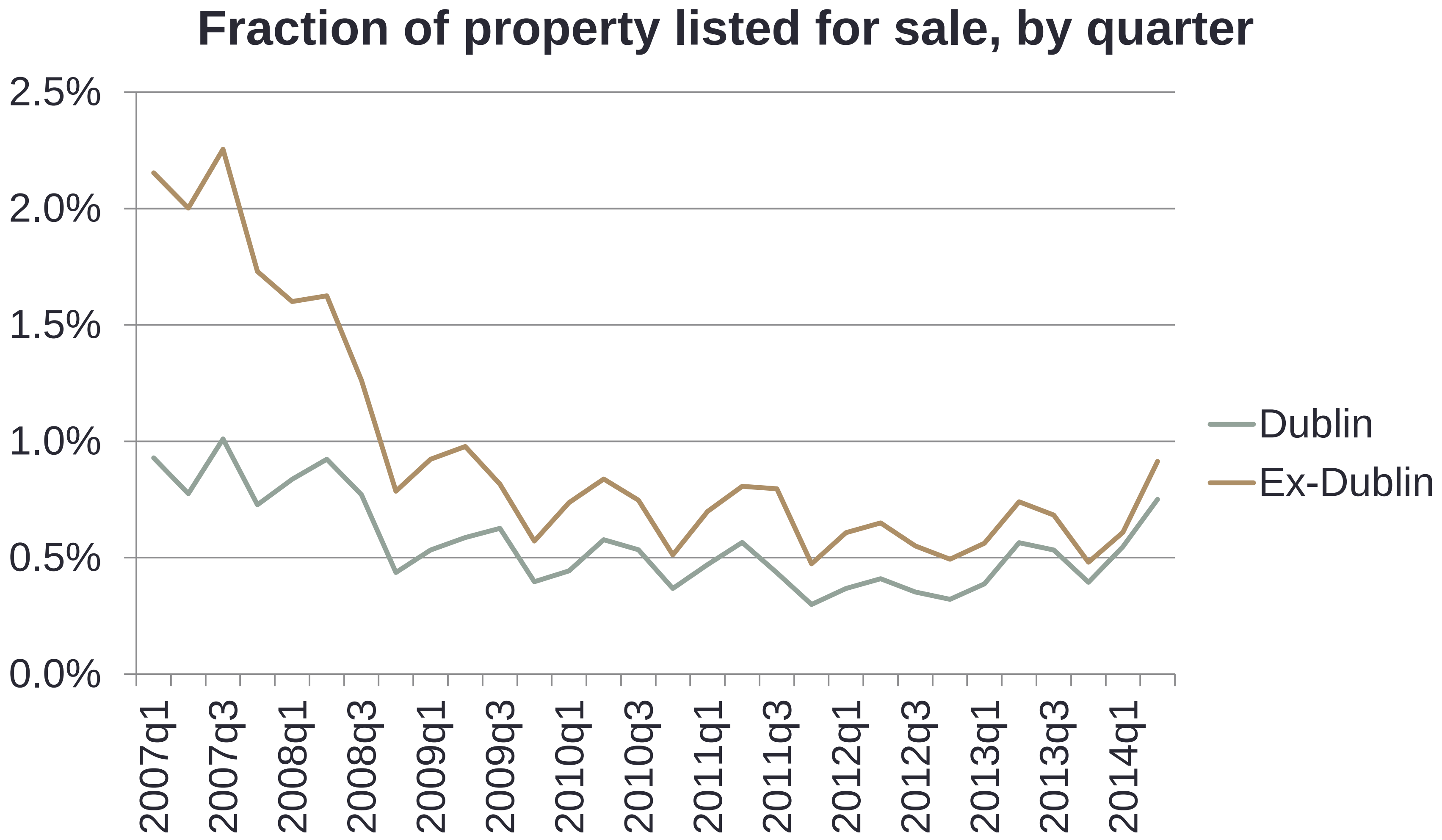


Source: Daft.ie, Residential Property Price Register

Dublin market starved of inventory

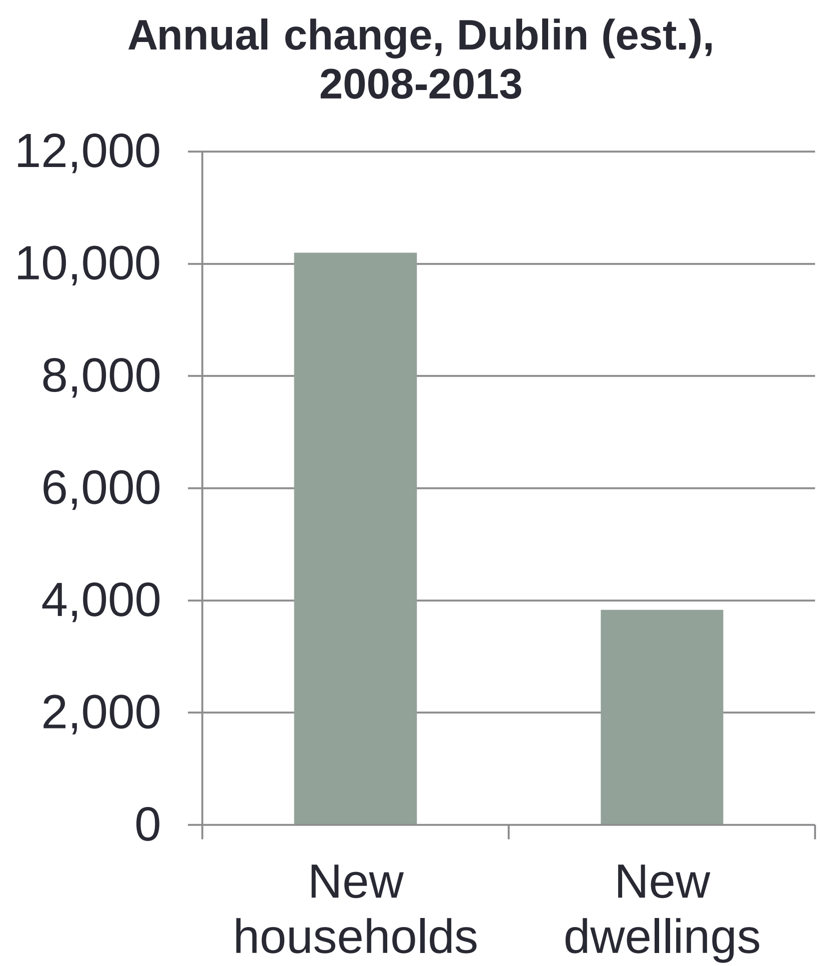


Recently, an uptick in new listings

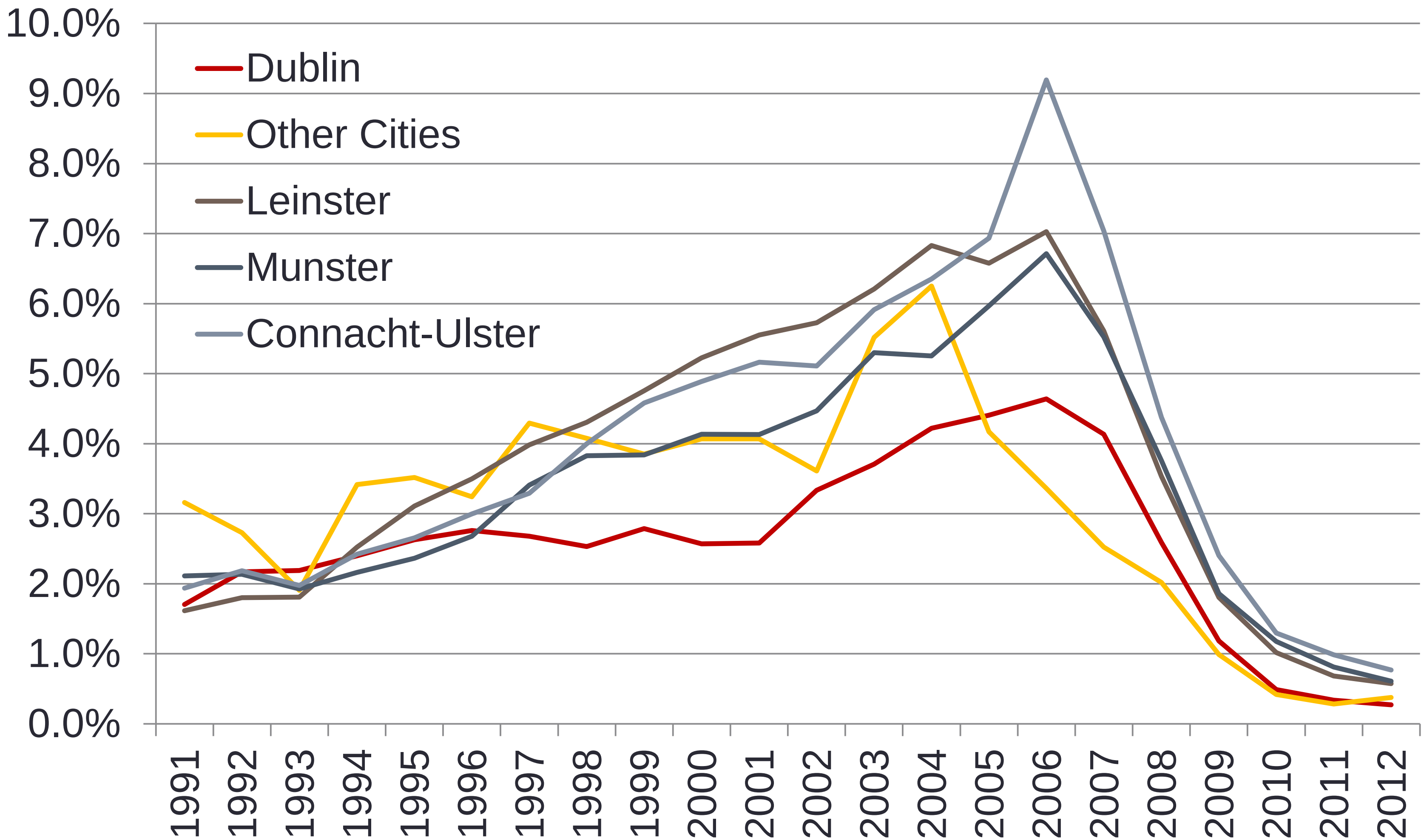


Demographic pressures in Dublin

- Since 2008, Dublin's population growing by 15,000-20,000 a year
  - 9,300 births to first-time mothers 2008-2013 + no-child households
- Between 2008 and 2013, Dublin's housing stock grew by just 23,000
  - Versus 60,000 new families
- A growing shortfall – with sprawl implications



Dublin completions are ~10% of last recession



Source: Census 1991-2011, DoECLG

Why the lack of supply?

- Like trends in prices, trends in quantities (new supply) come down to a small number of factors
- **Materials**: world prices (more or less)
- **Labour**: up to 40% of costs – and up to 50% more expensive than in Northern Ireland
  - Is there any political will to change this?
- **Capital**: very active in Ireland at the moment, but acquiring not developing
  - The residual factor – if it's not flowing in to construction, suggests an issue with the cost base
- **Space**: price of land and regulation
  - Set by government, directly and indirectly – but does it know this?

Housing policy – the nitty-gritty

- Spectrum from bottom-up (market) to top-down (planner)
- Currently overly planner-led
  - E.g. of north-facing units!
- Orientation and size restrictions: add ~€10k-€15k
  - DCC size req'ts 25-33% above DOE
  - Lift and parking requirements: a further €25k
- Including levies (vs. land tax), up to €50k per unit in unnecessary regulatory costs
  - Completely distinct from value-adding regulation (e.g. BER)

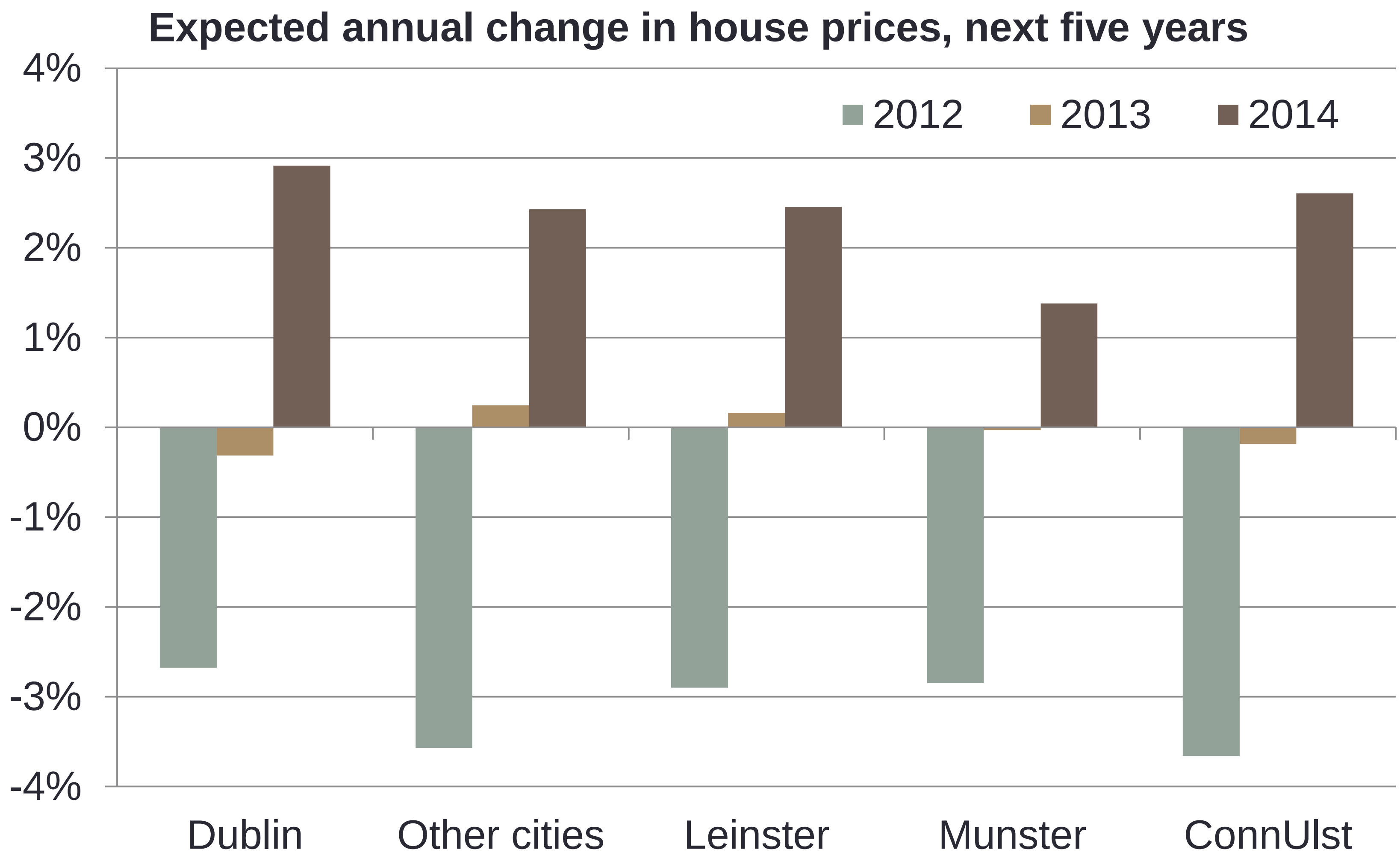
Dublin City Development Plan, Chapter 15

"The majority of apartments in a development must be dual aspect. … Where single aspect buildings are unavoidable, they should be designed to avoid exclusively northern orientation."

Should we worry about another bubble?

- Assessment above suggests that what we have is not a bubble (asset factors)
  - Rather it is down to fundamentals (a lack of supply, relative to demand) in certain parts of the country
- Diagnosis helps understand the best medicine
  - A bubble has two ingredients: excessive supply of credit, which empowers unrealistic expectations
  - Solving current price rises is about increasing supply of housing, not reducing the supply of credit
- Does this mean we should not worry about another bubble?
  - No – lesson of 1995-2007 is that a fundamentals-driven price increase can turn, over time, into a bubble

A significant change in expectations



Source: Daft.ie Sentiment Survey

Not a bubble… yet

The bad news

- Housing bubbles are based on credit and expectations
  - By these measures, Ireland does not have a housing bubble
- But to get unsustainable credit and expectations, you need years of significant house price increases
  - We are on our way there!

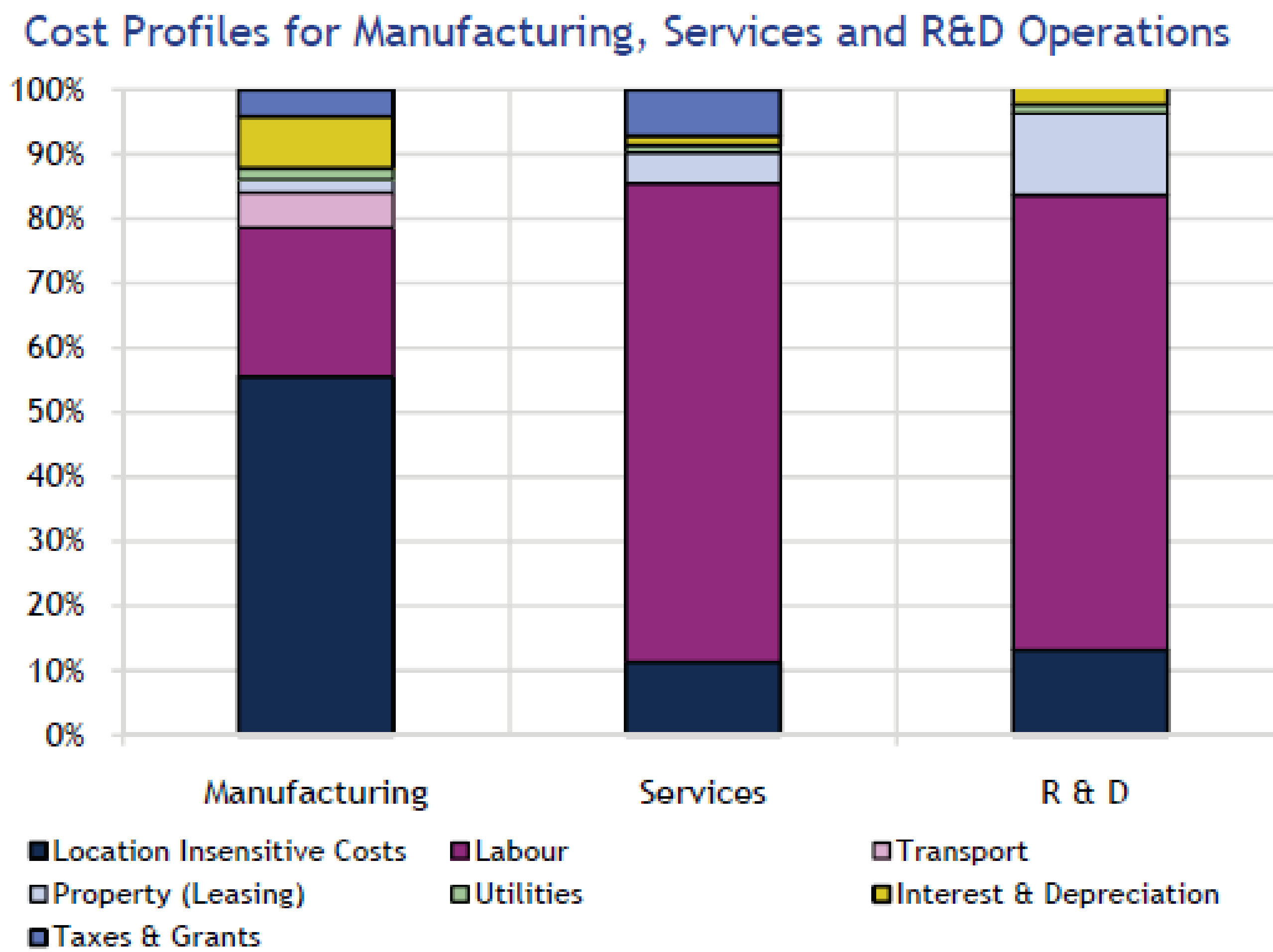
The good news

- It is entirely within the control of Government to stop another bubble
  - Reduce unnecessary regulatory costs – up to €50,000 a unit
  - Introduce a minimum deposit requirement – ideally 20%

Why does housing matter?

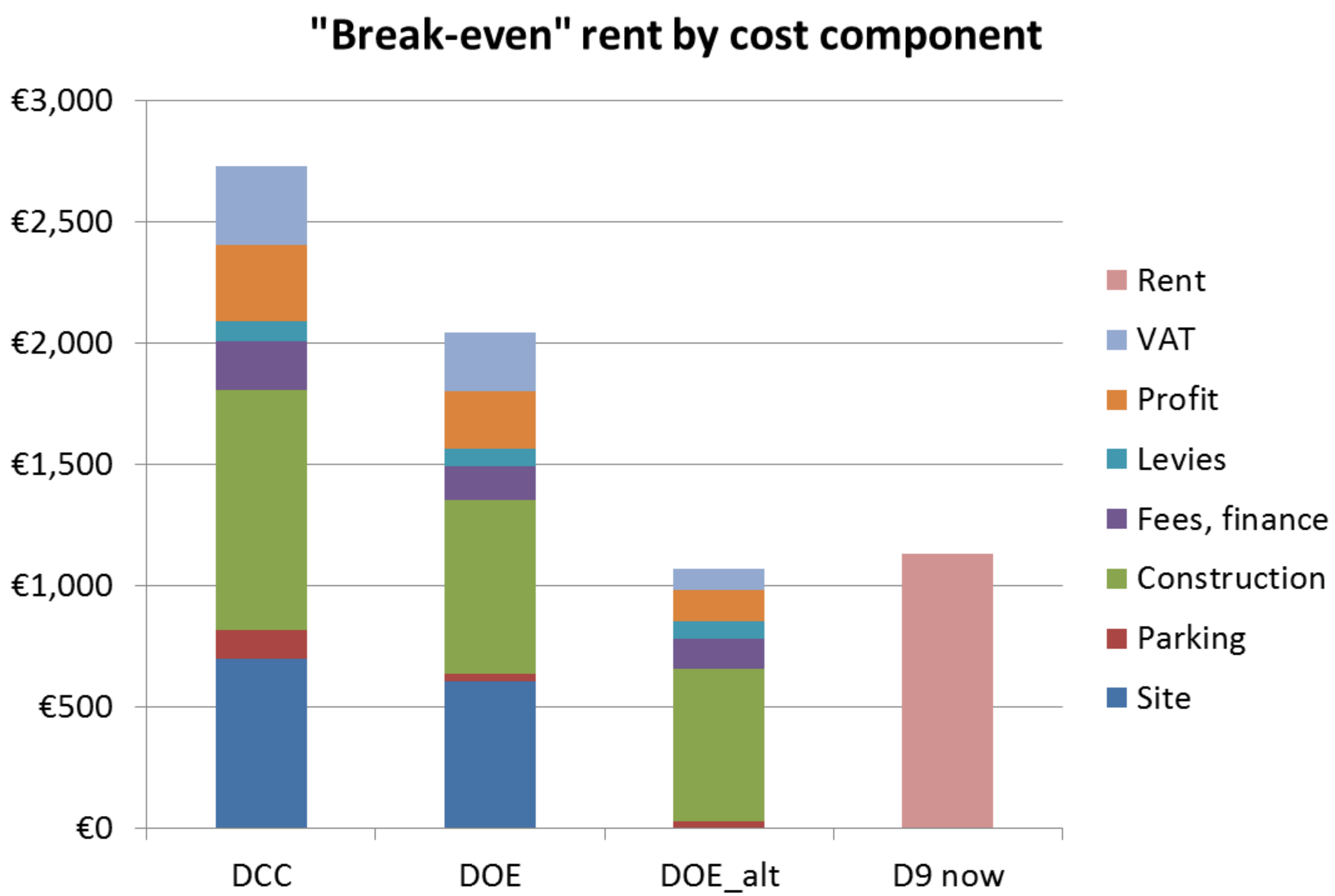
- So far, price of housing as an outcome
  - The price of housing responds to other factors, including the real economy/incomes, conditions in the financial and planning sectors
- Housing is also an input
  - Financial and planning sectors respond to housing (confidence)
  - Two main reasons why housing matters
- Housing as a human right: social housing
  - System to provide housing for those whose incomes are inadequate to cover shelter costs
- Housing as competitiveness: wage demands
  - Sustainably, no more than a third of disposable income should be spent on housing
  - How do rents/mortgage costs stack up against wages?

Increasing importance of rents in FDI



Source: National Competitiveness Council, 2012

Back to regulation…

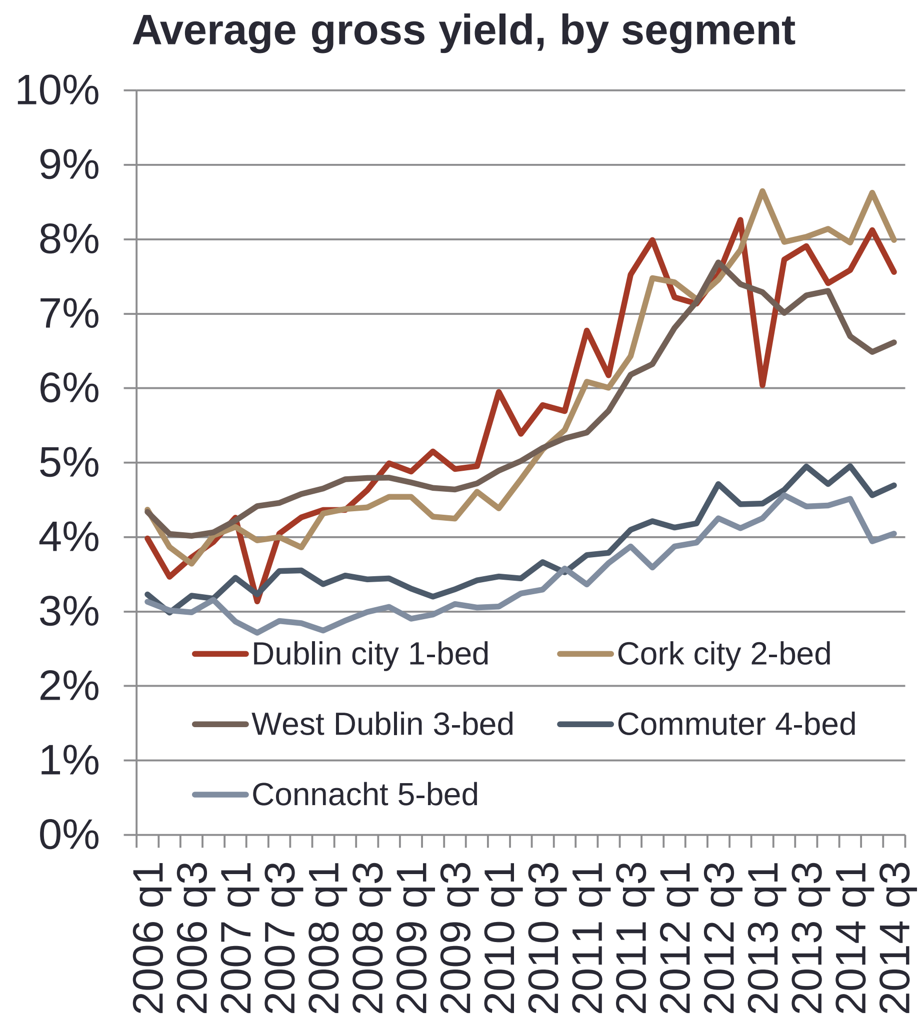


Focus on productivity in construction

- Construction is a labour-intensive industry
- If…
  - Labour is 40% of all costs for the average unit built
  - Housing is one third of workers' expenditure, and
  - Workers' wages are 3/4s of the cost base for FDI
- Then…
  - Building wages alone make up 10% of Ireland's competitiveness (0.40*0.33*0.75)
- If (politically) wages in construction are not coming down, then onus is on productivity per hour worked
  - Need to target an improvement of ~25% in output per hour worked

Recap: housing as an investment

- Single most important rule about housing:
  - It is a hedge against inflation
  - Not known for capital gains
- Beyond that, focus on:
  - (1) demand vs. supply [determines value of shelter as a service]
  - (2) credit and expectations [determine yield]
- Multiple equilibria world!



Thanks

- Thank you for your time!
- Looking forward to questions and comments
- ronanlyons@gmail.com