



An introduction to iShares and ETFs for the Society of Actuaries in Ireland

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June 2015

Agenda

1 What are ETFs and why the growth?

2 How are institutional clients using iShares ETFs?

3 Current Themes

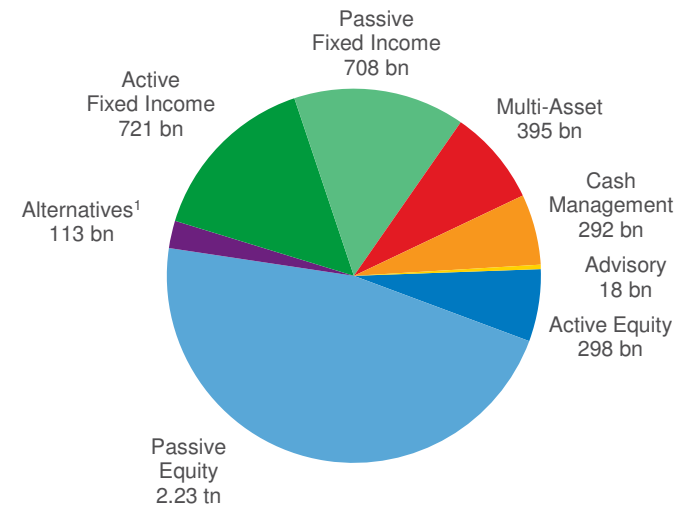
BlackRock Mission Statement

**Create a better financial future for our clients by building
the most respected investment and risk manager in the world**

BlackRock facts *

- ▶ Established in 1988
- ▶ NYSE: BLK
- ▶ \$4.77 tn assets under management
- ▶ More than 12,000 employees
- ▶ More than 1,900 investment professionals **
- ▶ Offices in over 30 countries
- ▶ 28 primary investment centers *
- ▶ Clients in over 100 countries
- ▶ Over 700 iShares® ETFs
- ▶ BlackRock Solutions® manages over \$15 tn in assets
- ▶ Financial Markets Advisory business managed or advised on over \$8 tn in asset and derivative portfolios
- ▶ Transition Management team partners with clients to save costs and reduce risks when changing investment exposures

\$4.77 trillion managed across asset classes



Assets as of 31 March 2015

¹ Includes commodity and currency mandates

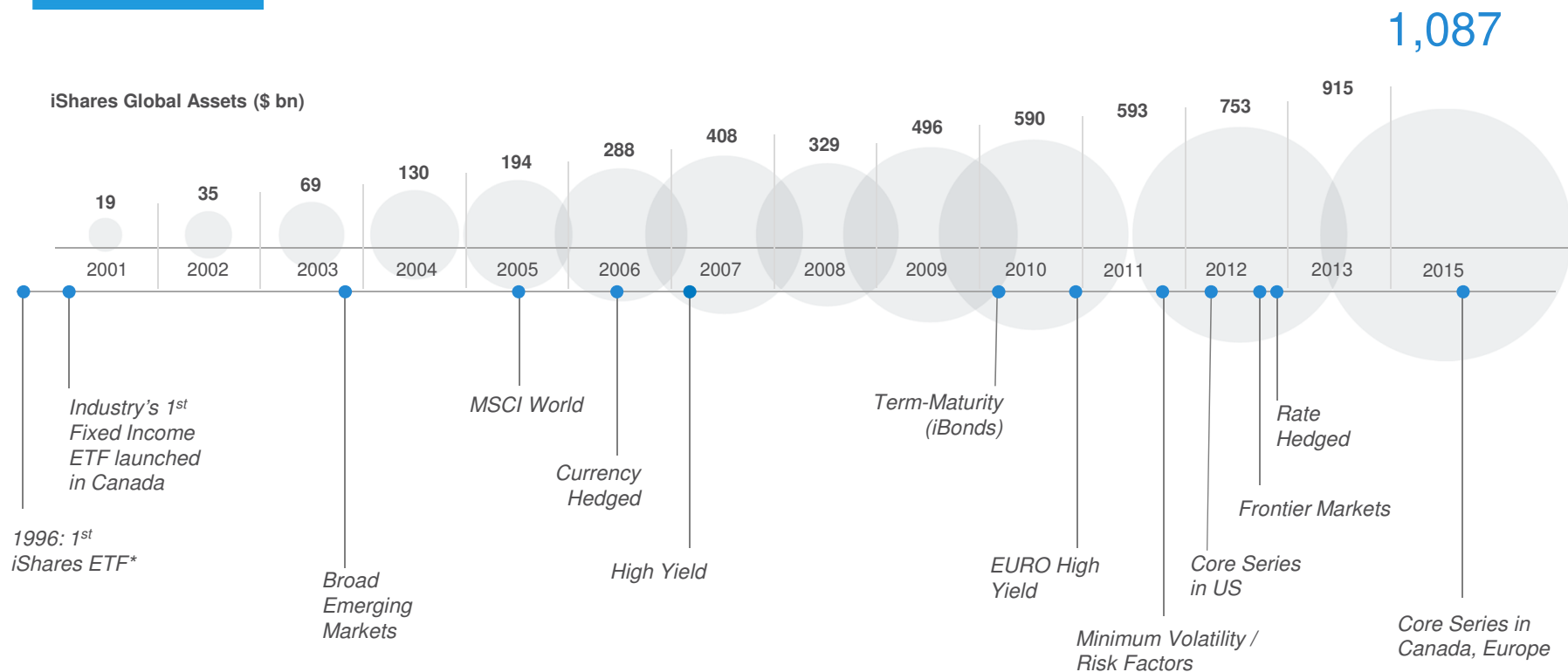
Source: BlackRock
* As of 31 March 2015

Trusted ETF Leader - iShares

1

TRUSTED
ETF LEADER

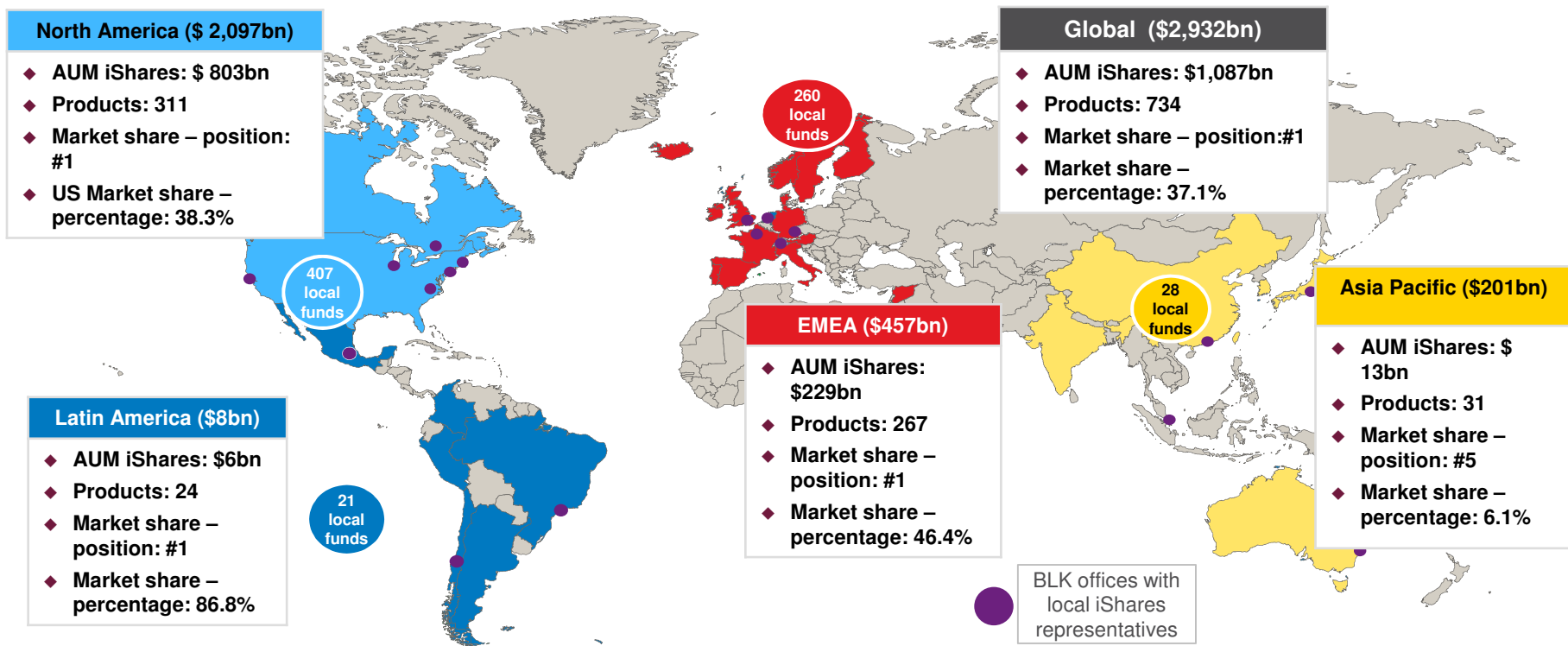
- ▶ Serves investors of all sizes—wealth managers, banks, asset managers, pensions, insurers, advisors, and personal investors
- ▶ Brings you more than a decade of ETF innovation and expertise
- ▶ The scale of iShares benefits you through indexing excellence, breadth of choice, and deep liquidity



*Originally branded WEBS

Source: BlackRock, Bloomberg. As of 31 March, 2015.

ETF Market Overview & iShares Market Position



Global ETP Providers Ranked by Assets (US\$bn)

Provider*	Mar-15 Assets	% Market Share	Mar-15 Net Flows	2015 YTD Net Flows
iShares	1,087.8	37.1	10.2	36.5
Vanguard	478.0	16.3	8.3	23.8
State Street	457.5	15.6	(4.4)	(25.8)
217 Others	909.3	31.0	22.0	60.7
Grand Total	2,932.6	100.0	36.1	97.2

Europe ETP Providers Ranked by Assets (US\$bn)

Provider*	Mar-15 Assets	% Market Share	Mar-15 Net Flows	2015 YTD Net Flows
iShares	229.0	46.4	3.6	15.2
Deutsche	57.0	11.5	1.3	4.0
Lyxor / Soc Gen	53.4	10.8	1.9	5.2
47 others	154.6	31.3	0.8	9.8
Grand Total	494.0	100.0	7.6	34.2

1: Data is as of March 31st 2015. Global ETP flows and assets are sourced using shares outstanding and net asset values from Bloomberg for the US, Canada, Europe, Latin America and some ETPs in Asia. Middle East ETP assets are sourced from the Bank of Israel. ETP flows and assets in China are sourced from Wind. Inflows for years prior to 2010 are sourced from Strategic Insights Simfund. Asset classifications are assigned by the BlackRock based on product definitions from provider websites and product prospectuses. Other static product information is obtained from provider websites, product prospectuses, provider press releases, and provider surveys. Market returns are sourced from Bloomberg. * Providers measured at parent company level. Source: BlackRock ETP Research, ETP Landscape.

What are ETFs?

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Familiar ground...best of both worlds

Like a tradable security

- ▶ Trading flexibility intraday on exchange

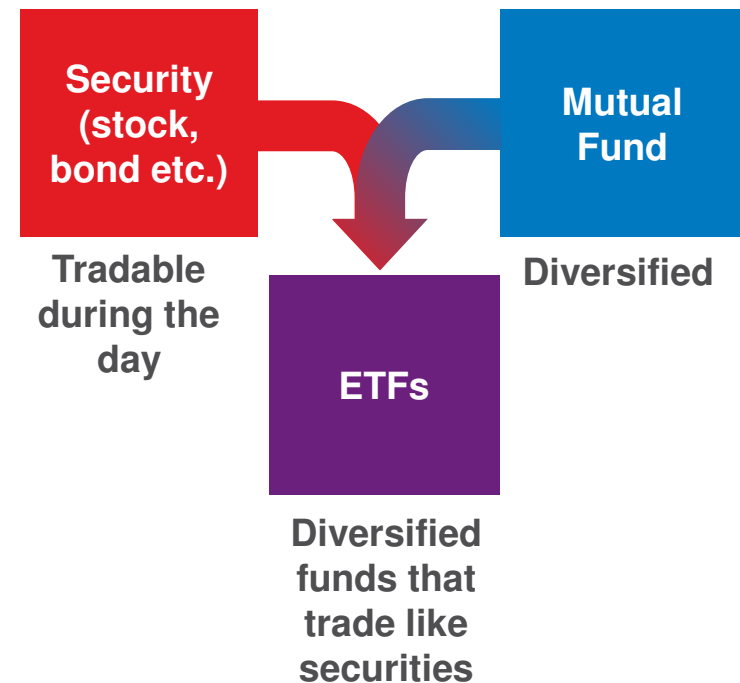
Like an index fund

- ▶ Constructed to track benchmark indexes
- ▶ Low expense ratios
- ▶ Low turnover

What sets ETFs apart?

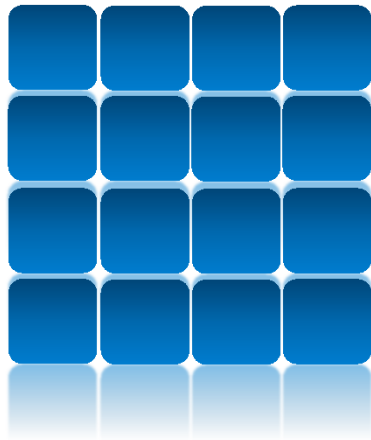
- ▶ The creation / redemption process enables the unique benefits of ETFs
- ▶ iShares ETFs on equities and fixed income underlying are all physically replicated. Client gets what he invests in

Two great investment ideas brought together



Full replication

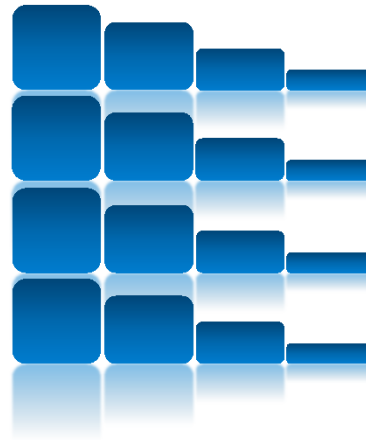
Exposure to each security in the index



- ▶ Most common and preferred method
- ▶ Full transparency and low tracking error

Optimisation

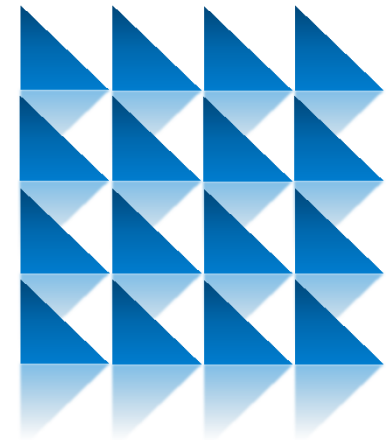
Exposure to a representative sample



- ▶ Practical for indices with lots of constituents
- ▶ May track index less accurately than full replication

Stratified sampling

Exposure to a representative sample

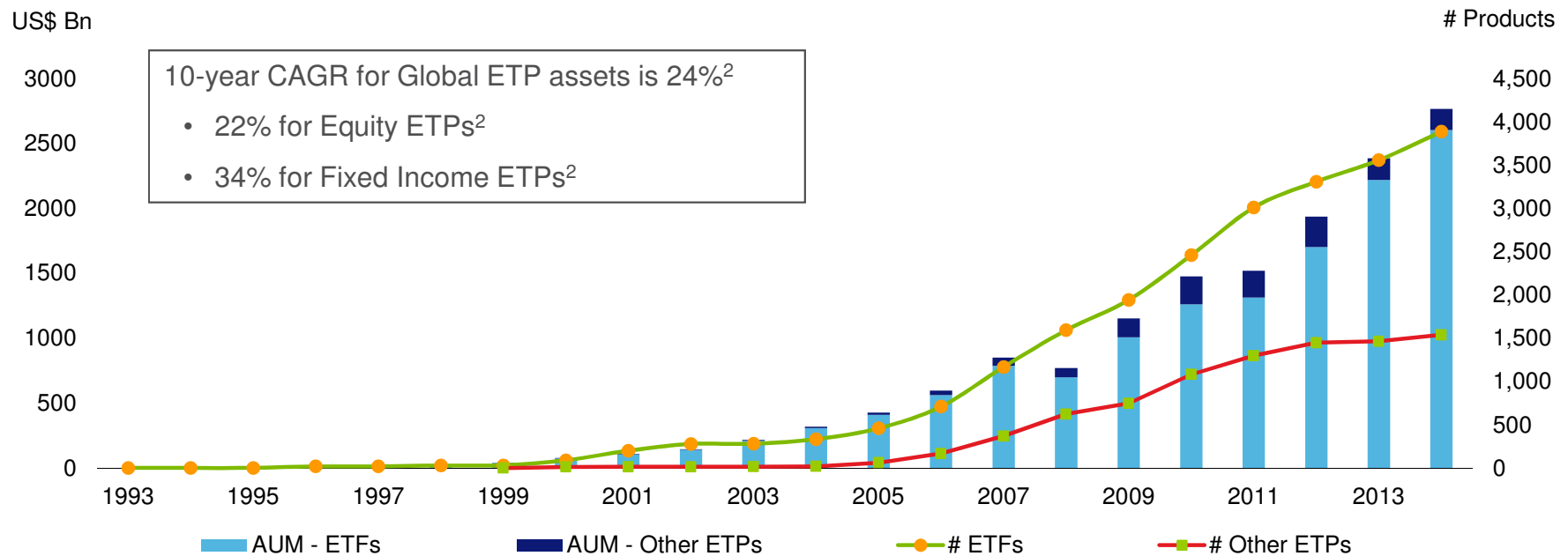


- ▶ For tracking hard-to-access markets (generally fixed income)
- ▶ Complex structure

Global ETP Market Growth

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Global ETP Market Growth



Notable statistics³

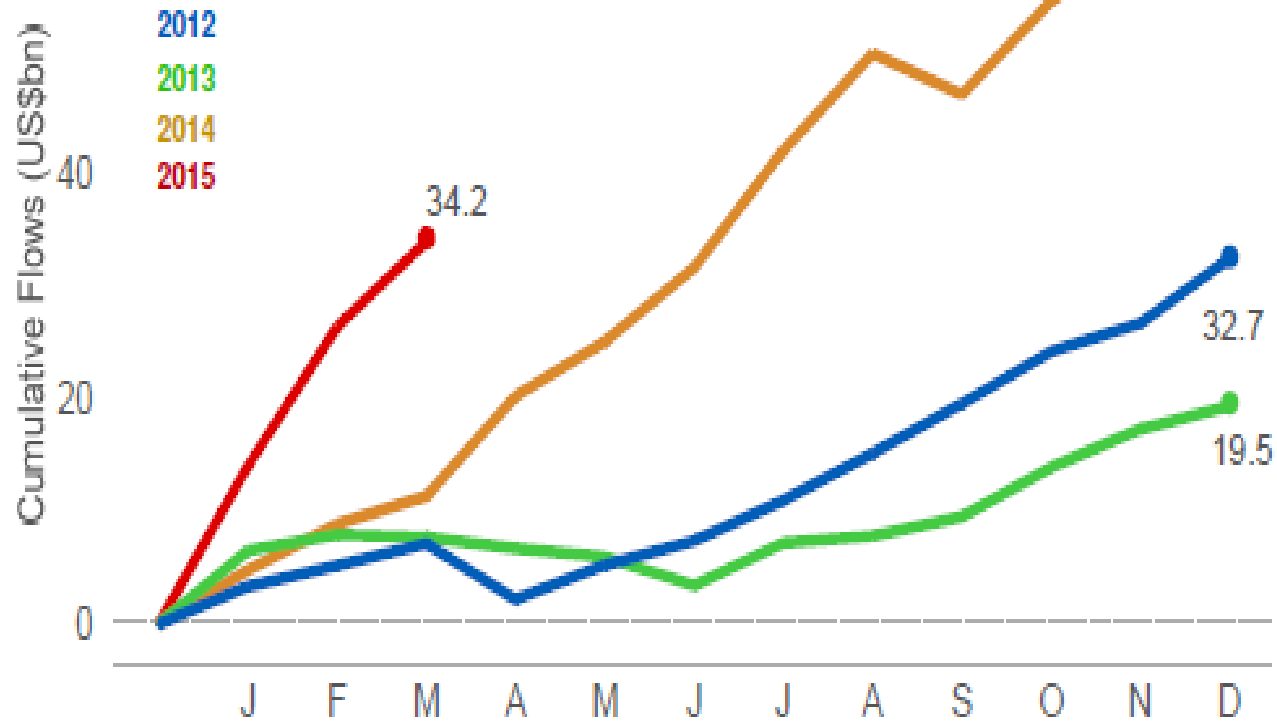
- ▶ The global ETP industry has grown from 357 ETPs with US\$ 319Bn in AUM in 2004 to over 5000 ETPs with US\$ 2.76Tn in assets under management (AUM) at the end of December 2014.
- ▶ When we consider the global ETP market today versus five years ago, the number of ETPs with over US\$ 1Bn in AUM has increased from 211 funds in 2009 to over 400 in December 2014, across all issuers.

1, "ETP" (or exchange traded product) as referred to above means any portfolio exposure security that trades intraday on an exchange. ETPs include exchange traded funds (ETFs) registered with the SEC under the Investment Company Act of 1940 (open-end funds and unit investment trusts or UITs) and certain trusts, commodity pools and exchange traded notes (ETNs) registered with the SEC under the Securities Act of 1933. Data is as of 31 December 2014 for Europe and 28 November 2014 for the US, Canada, Latin America, Israel, and some Asia ETPs. Some Asia ETP data is as of 31 October 2014. Global ETP flows and assets are sourced using shares outstanding and net asset values from Bloomberg for the US, Canada, Europe, Latin America and some ETPs in Asia. Middle East ETP assets are sourced from the Bank of Israel. ETP flows and assets in China are sourced from Wind. Inflows for years prior to 2010 are sourced from Strategic Insights Simfund. Asset classifications are assigned by the BlackRock based on product definitions from provider websites and product prospectuses. Other static product information is obtained from provider websites, product prospectuses, provider press releases, and provider surveys. Market returns are sourced from Bloomberg. 2. 10-year CAGR as of 31 December 2014 3. Source: BlackRock, Bloomberg

ETF growth is accelerating

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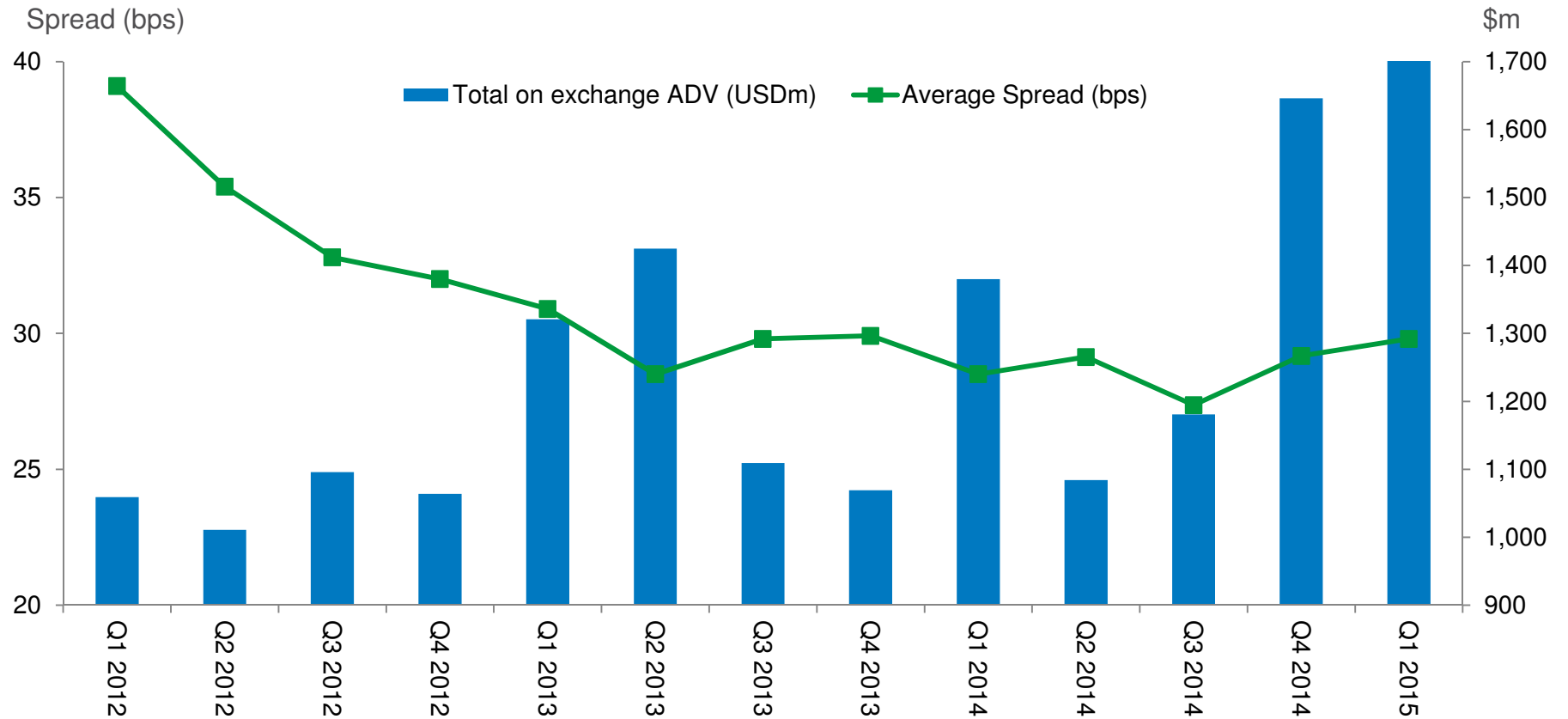
European ETP Industry Cumulative Flows by Year
2015 YTD Flows: \$34.2bn



Source: BlackRock, ETF Landscape. Data as at end March 2015.

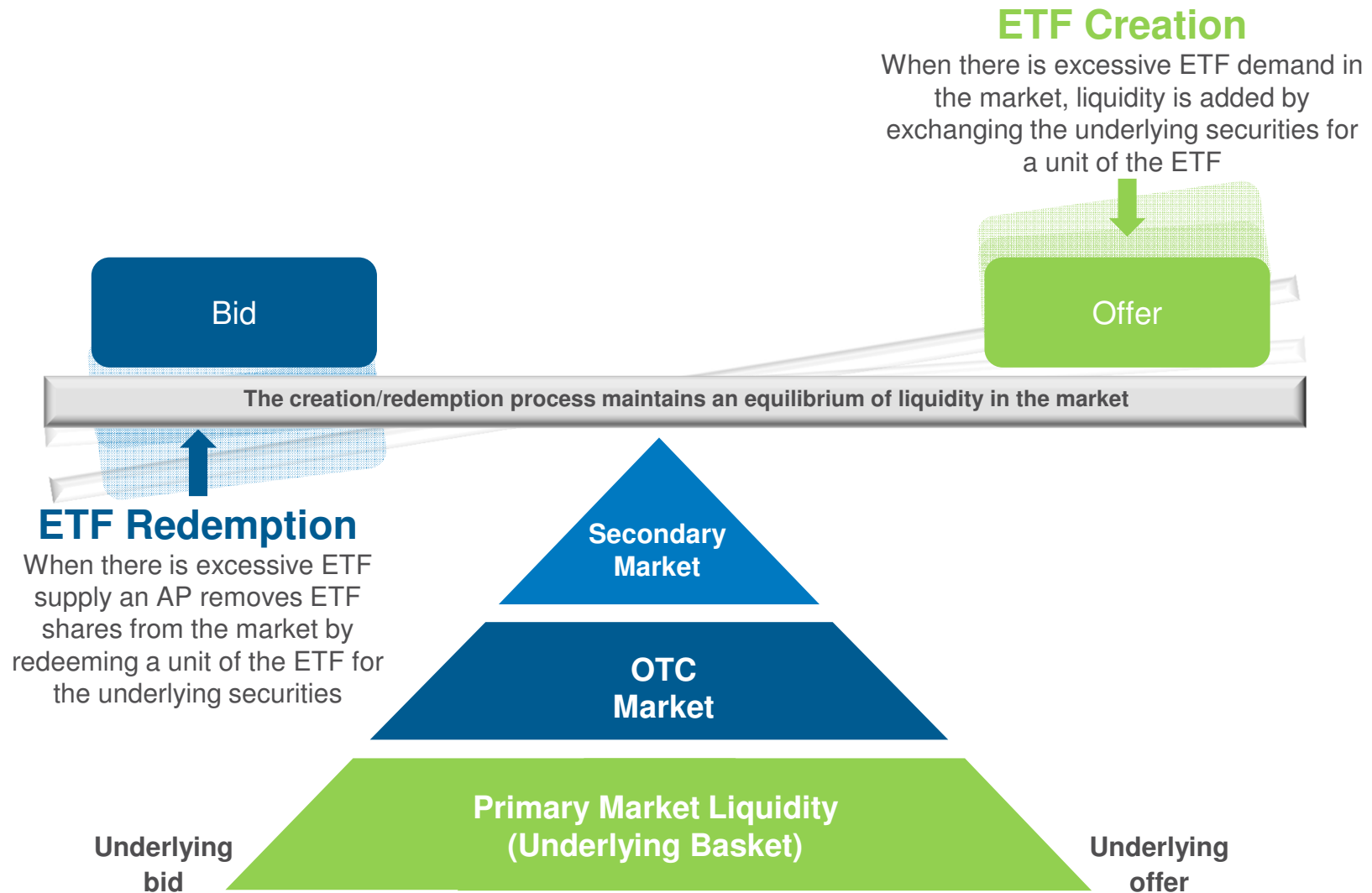
- ▶ European ETFs are **growing at record pace** YTD: + \$ 34 billion in Q1 2015 (+300% vs. Q1 2014)

iShares Europe bid-ask spreads and on screen on-exchange volume



► All European iShares exchange listings included in average spread and ADV figures

Source: BlackRock, Onetick, Bloomberg, April 2015

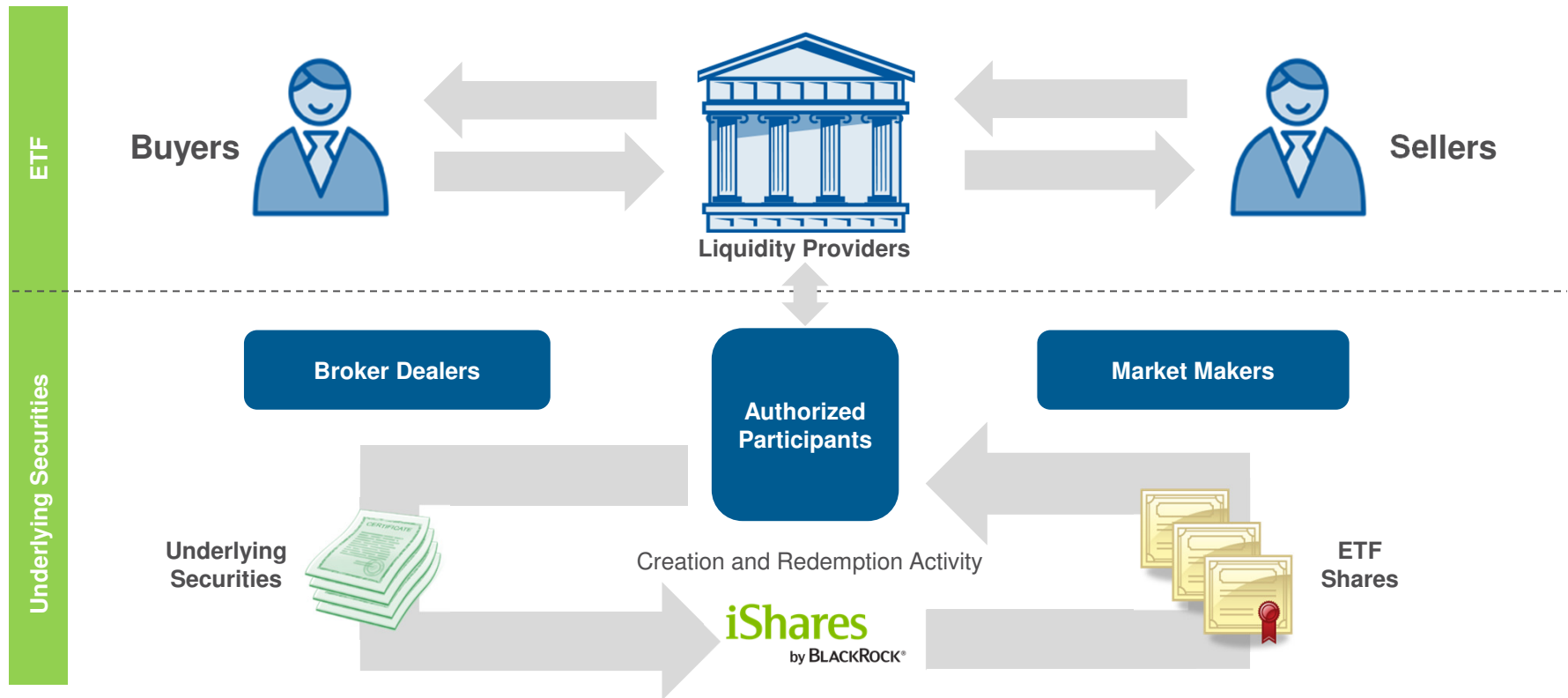


Shares of iShares Funds may be sold throughout the day on the exchange through any brokerage account. However, shares may only be redeemed directly from a Fund by Authorized Participants, in very large creation/redemption units. There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.

Market participants are behind the scene ensuring liquidity

1

Market participants will ensure that the liquidity exists in the ETF market by accessing the underlying securities to maintain the equilibrium of supply and demand.

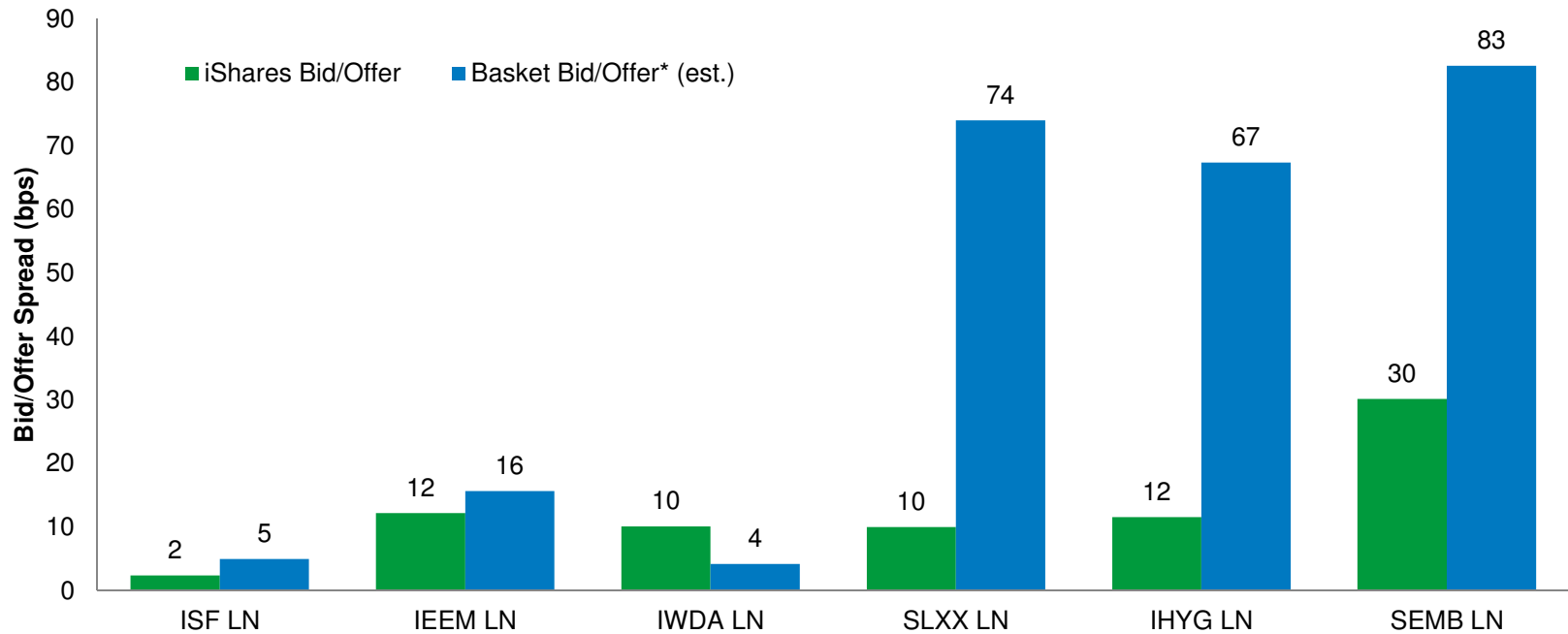


iShares Capital Markets sources the underlying liquidity and liquidity providers to enable best execution

iShares *European* ETFs offer low-cost, market access ...

1

iShares ETFs generally offer price improvement, making the ETF less expensive to trade than the underlying securities of the respective index



iShares Fund Name	iShares FTSE 100 UCITS ETF (Dist)	iShares MSCI Emerging Markets UCITS ETF (Dist)	iShares Core MSCI World UCITS ETF	iShares Core £ Corporate Bond UCITS ETF	iShares Euro High Yield Corporate Bond UCITS ETF	iShares J.P. Morgan \$ Emerging Markets Bond UCITS ETF
iShares ADV(\$ mn)**	68	45	28	14	38	39
iShares AUM (\$ mn)***	5,620	5,142	3,566	1,385	4,478	4,323

*Basket Bid/Offer spread refers to the underlying securities of the respective index

30-day average daily volume, as of 31 March 2015, aggregated across all exchange-based listings. *AUM data as of 31 March 2015

For Illustrative Purposes Only. Source: BlackRock, Bloomberg as of 31 March 2015

Agenda

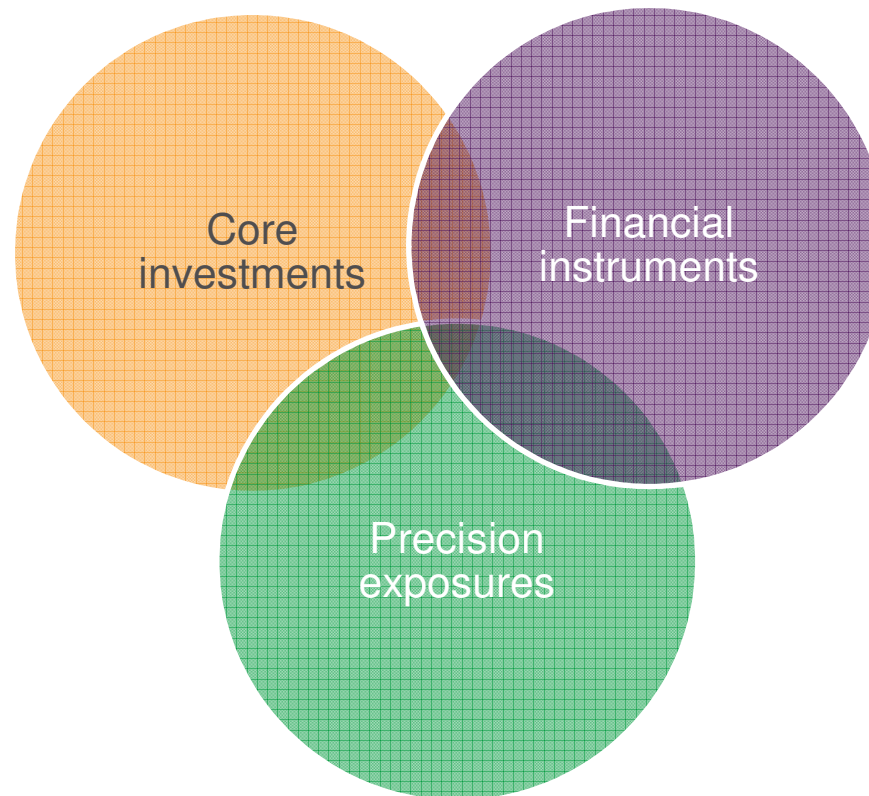
1 What are ETFs and why the growth?

2 How are institutional clients using iShares ETFs?

3 Current Themes

Product use segments

Low cost, broad building blocks for the core of client's portfolios



Highly liquid tools to enable **efficient** trading and market access

Easy access to **targeted** exposures to express a particular market view
Over 700+ iShares globally

As of March 24, 2015. Source: BlackRock.

How are ETFs being used by Pension Funds?

2

Greenwich Survey: Pension ETF Use



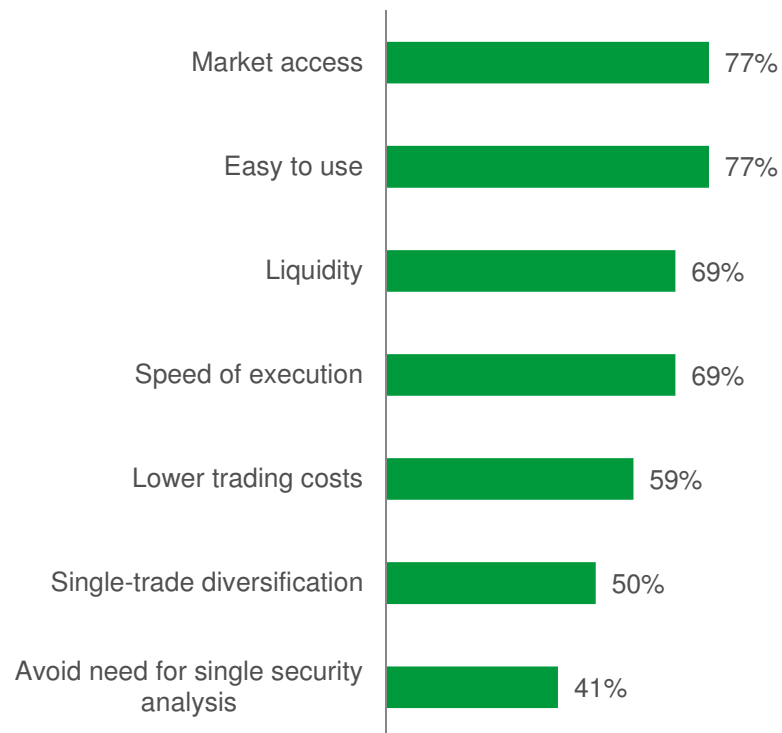
Source: Greenwich Associates and BlackRock. Note: Based on 83 responses: 33 pension funds, 29 asset managers, and 21 insurance companies. Source: Greenwich Associates 2014 European Institutions Rely on ETFs for a Broad Range of Uses Study

European pensions usage of ETFs expected to increase

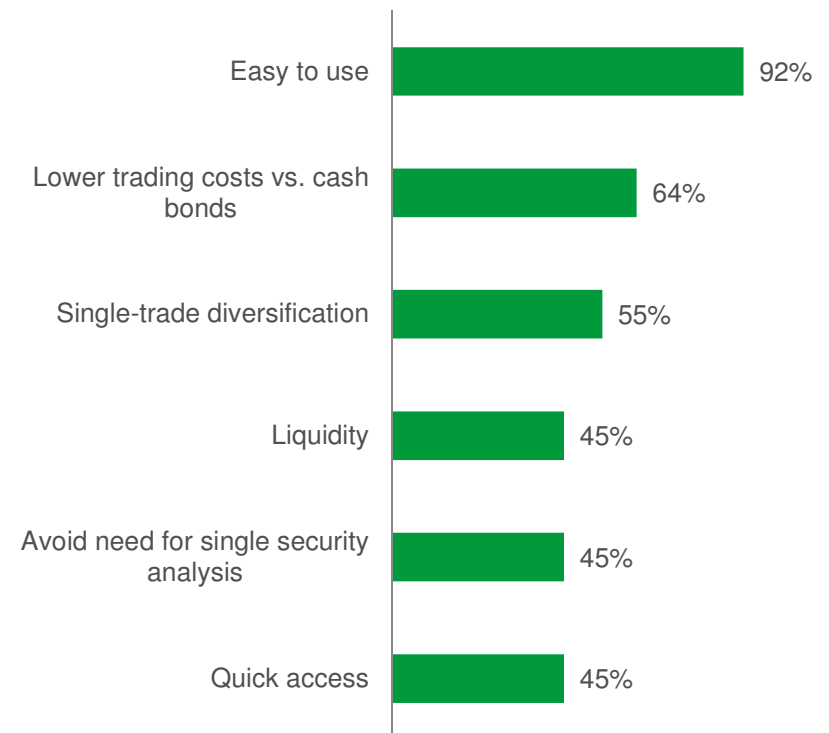
2

- ▶ We believe the benefits of ETFs will foster continued adoption of both equity and fixed income ETFs among European pensions
- ▶ Key benefits include ease of use, lower trading costs, single-trade diversification, and liquidity

Reasons for using equity ETFs



Reasons for using fixed income ETFs



Source: Greenwich Associates. ETFs: Broad usage increases amongst European institutional investors.

Institutional clients are using ETFs for a variety of reasons

2

Pension Funds iShares ETFs use

ACWI

\$780m of iShares MSCI ACWI ETF - in place of a basket of futures

EIMI

\$800m of iShares Core MSCI Emerging Markets IMI UCITS ETF – transition/interim beta

IHYG + SEMB

\$75m across iShares Euro High Yield Corporate Bond UCITS ETF & iShares J.P. Morgan \$ Emerging Markets Bond UCITS ETF - Core allocation

IUKP

\$45m of iShares UK Property UCITS ETF – alternative exposure

EPU + CSBR + EWC

\$55m of Canadian, Brazilian and Peruvian equities – niche exposures

Insurance iShares ETFs use

IS15

\$150m in an iShares Corporate Bond ETF for increased yield over gilts whilst decision on capital deployment was being made

IUSA

\$390m in iShares S&P 500 UCITS ETF as a tactical overlay

IBTS

\$100m flexible fixed income portfolio of active funds and ETFs

IBTS

\$750m in iShares \$ Treasury Bond 1-3yr UCITS ETF as a medium term long USD position vs EUR

FXC + IFFF + MCHI

\$255M in niche Asian exposures including MSCI AC Far East ex-Japan, China Large Cap and MSCI China

Source: Greenwich Associates and BlackRock. Note: Based on 83 responses: 33 pension funds, 29 asset managers, and 21 insurance companies. Source: Greenwich Associates 2014 European Institutions Rely on ETFs for a Broad Range of Uses Study

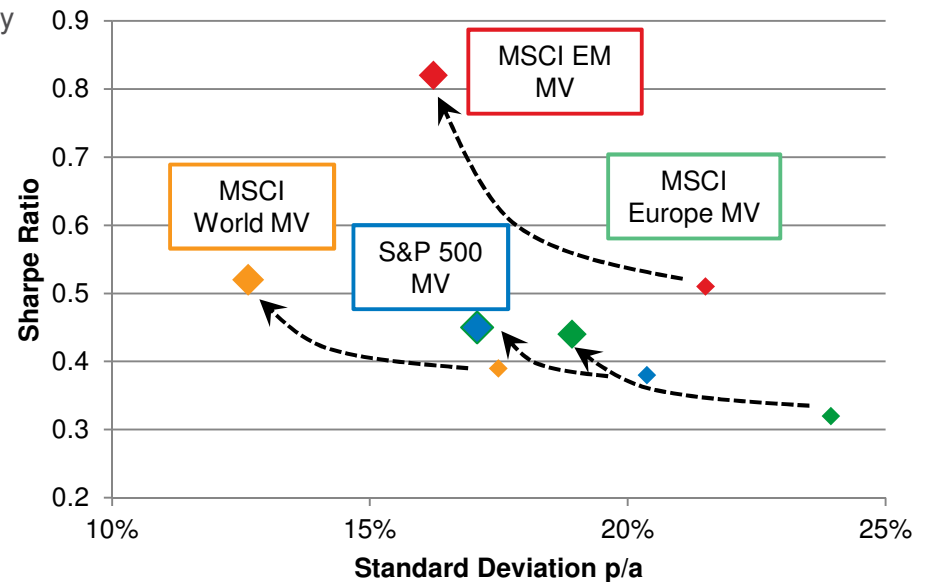
Client challenge & solution: Reduce portfolio volatility while retaining equity market upside potential

- ▶ The CIO of a pension plan sought to reduce the volatility of its \$1.7 billion global equity portfolio while not compromising long term equity market returns
- ▶ BlackRock educated the client on the minimum volatility anomaly - providing more return per unit of risk than market cap weighted portfolios
- ▶ The CIO replaced a portion of its standard market cap weighted equity allocation with iShares minimum volatility ETFs

Why ETFs?

- ▶ Cost and operational efficiency for periodic rebalancing
- ▶ Transparency of the underlying index's minimum volatility methodology
- ▶ Smart beta application for core portfolios

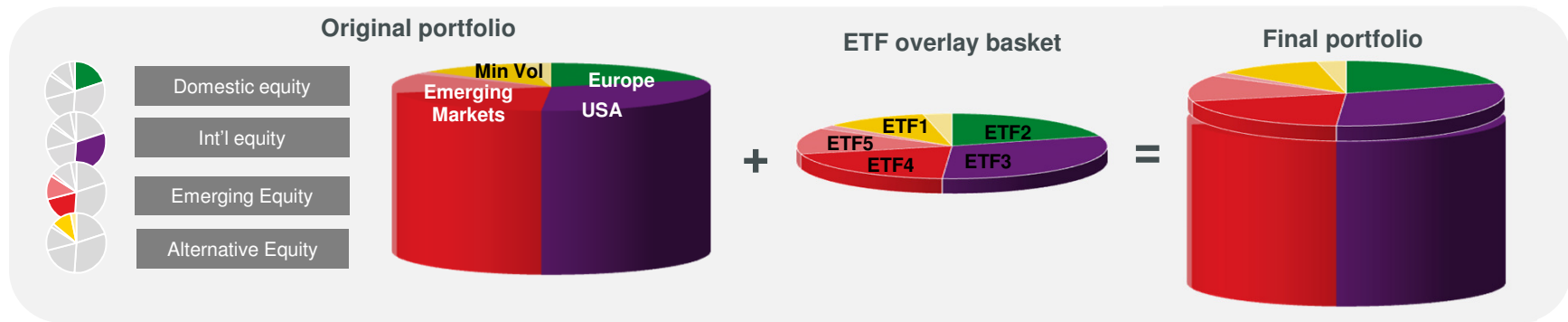
10Y analysis – Risk reduction and Sharpe ratios



Client type	Application
European Institutional Investor	<p>In January 2014, a European Institutional investor started looking at ways to absorb anticipated cash flows and manage rebalancing effects on the global equity mandate without compromising on exposure and costs.</p> <ul style="list-style-type: none"> • For 5% of the portfolio exposure, the client decided to use a selection of five Equity ETFs with exposures matching current core portfolio allocation • ETF overlay basket (liquidity sleeve) mirrors the client’s allocation policy.

Why ETFs?

- The ETF spread can be tighter than the spreads of the underlying securities or index funds hence offering low costs solution
- Use of ETFs enhances the ability to trade during periods of high stress or when underlying markets are closed
- Variety of ETF exposures allows to create an overlay solution/liquidity sleeve for a variety of portfolio exposures



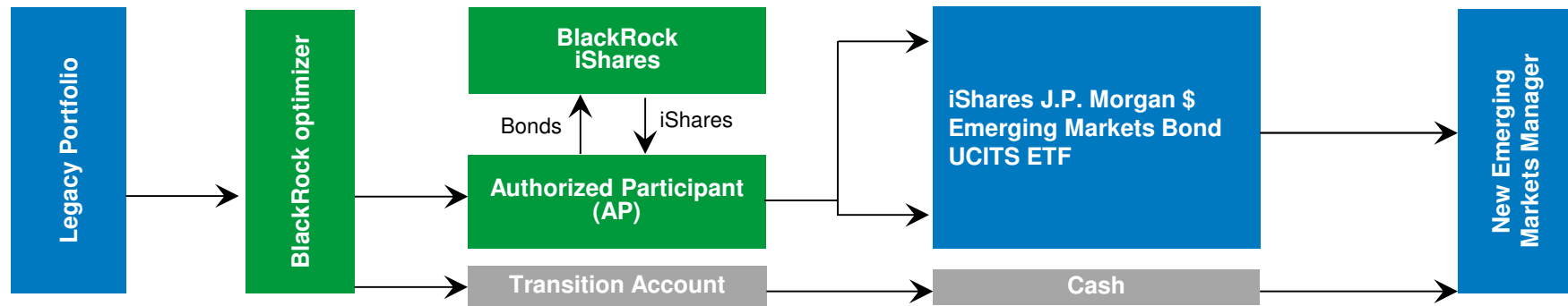
For illustrative purposes only.

Using ETFs as a tool in transitions

Client type	Application
EMEA institutional investor	<p>An institutional investor wanted to bring the management of their Emerging Markets bond portfolio in house. Their existing portfolio held over 200 line items and they were concerned about the liquidity of the underlying bonds.</p> <p>The client then delivered the ETF eligible bonds to an authorized participant (AP), who delivered the bonds to the iShares. Shares of the ETF were created and delivered to the client. The bonds mapped to the transition account were sold and cash was sent back to the investor.</p>

Why ETFs?

- ▶ Maintain liquid beta exposure while searching for new managers or rebalancing
- ▶ Manage inflows or outflows while balancing liquidity needs and market exposure
- ▶ Move in and out of positions intraday.



Agenda

1 What are ETFs and why the growth?

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3 Current Themes

Delta One Landscape Overview

Recent Trends

3

Financial Instrument Headwinds



Future

- ▶ Costs of holding and rolling futures have surged
- ▶ S&P500 annualised implied financing at Dec 2014 expiry of 100bps*



Swap

- ▶ Increased Swaps spread over the last 2 years
- ▶ Euro STOXX 50 TRS moved from 3M Euribor+10bps to +50bps over 2012-2015*

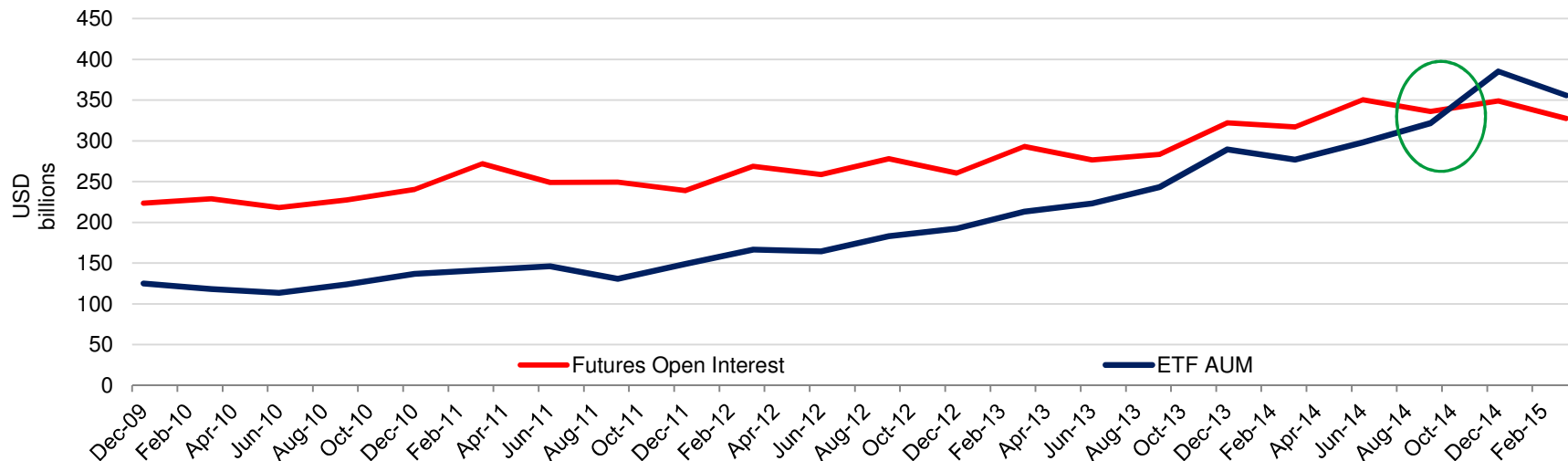
ETF Tailwinds



ETF

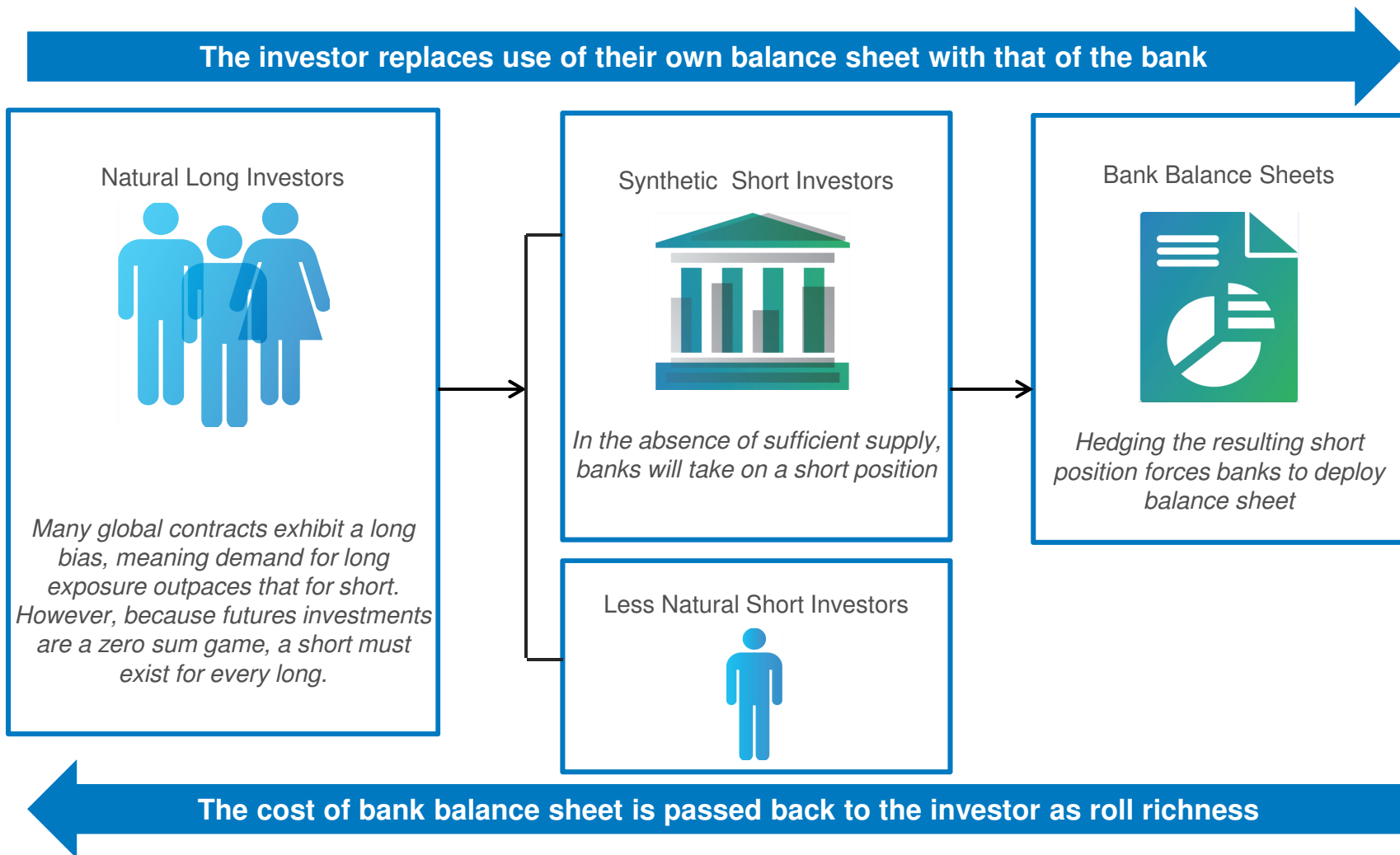
- ▶ Efficient access to Beta investments
- ▶ Lower management fees
- ▶ Higher liquidity, hence reduction in trading cost

Assets in S&P 500 ETFs now exceed S&P 500 open interest in Futures contracts



Source: BlackRock, ETP Landscape, Bloomberg, as at 31 March 2015. The Futures open interests was computed as the combined near month E mini and SP1 contract open interests multiplied by their respective contract values, referencing the relevant historic S&P 500 index values.

*Source: BlackRock, based on brokers' estimates. TRS is Total Return Swap. Data as at 31 March 2015.



ETF vs Futures Comparison – Total Cost of Ownership (TCO) perspective

Summary Conclusions

3

ETF is cheaper in the case of IVV
ETF is within 15bps cheaper in the case of CSPX

Long Holder, 1 Year Holding Period, assumes cash returns 3m rates

Exposure	ETF is cheaper (by more than 15 bps)	ETF + Future near parity (+/- 15 bps)	Future is Cheaper (by more than 15 bps)
MSCI World	●		
S&P 500	●	●	
Euro STOXX 50	●		
FTSE 100 INDEX	●		●
DAX INDEX	●		
FTSE MIB INDEX	●		
SWISS MARKET INDEX			●
NIKKEI 225			●
Topix	●		
South Korea			●
Brazil			●
Emerging Markets	●		

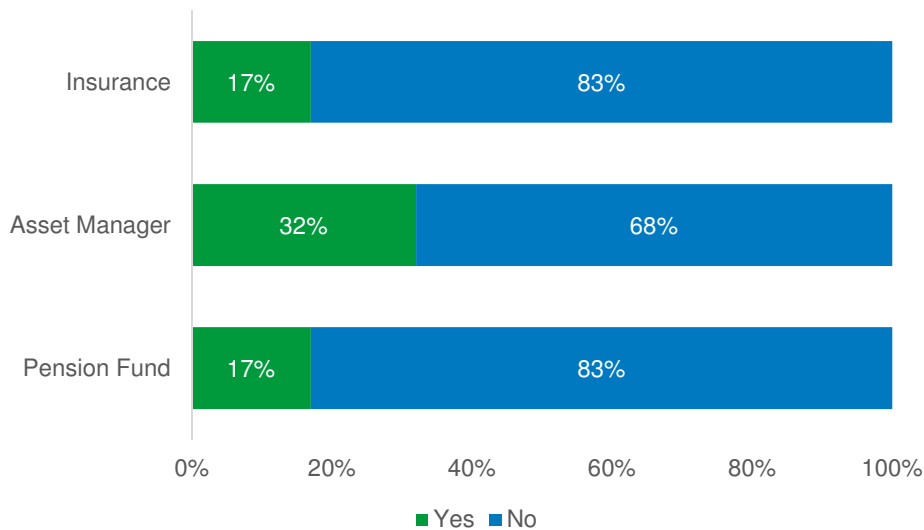
ETF is cheaper in the case of ISF with reduced TER

Sources: BlackRock, Bloomberg, as at 31 March 2015. Case study shown for illustrative purposes only. This is not meant as a guarantee of any future result or experience.

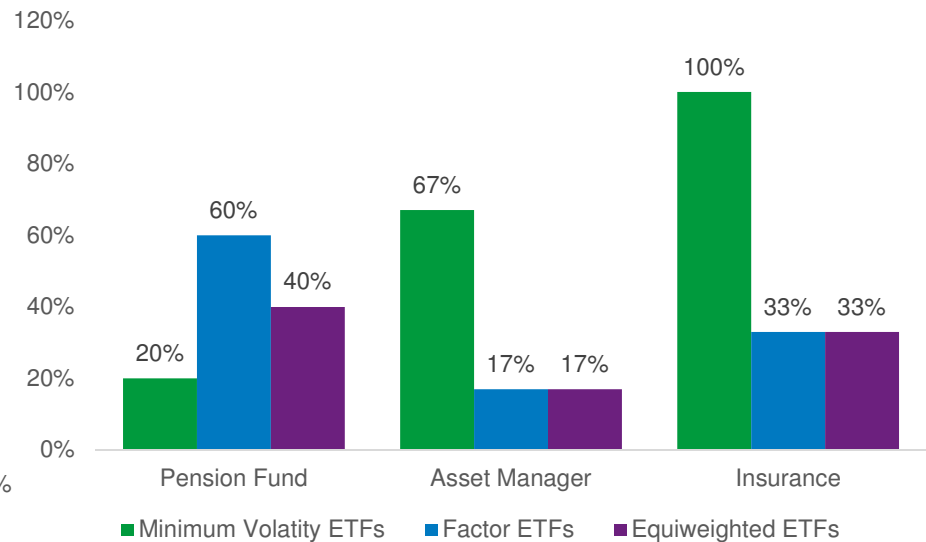
ETFs – A tool for innovation

- ▶ Institutional investors face the daunting task of hitting return targets in challenging markets, while at the same time minimizing risk and volatility within their portfolios.
- ▶ Pressure to achieve these often contradictory goals is creating demand for innovative investment products—including ETFs.
- ▶ Continued innovation in ETF structure will attract new institutional users in Europe and contribute to the growth of allocations among existing investors.

Use of smart beta ETFs



Smart beta strategies used by institutional investors

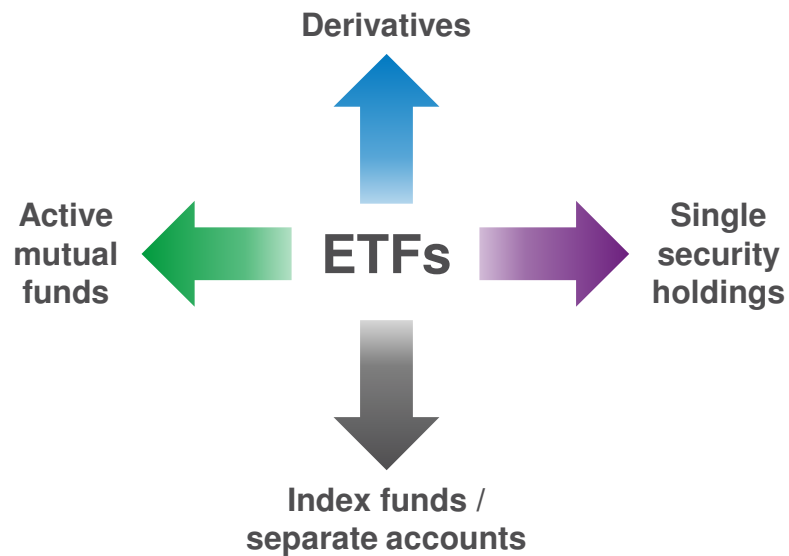


Note: Based on 16 responses: 5 pension funds, 8 asset managers, and 3 insurance companies. Source: Greenwich Associates 2014 European Institutions Rely on ETFs for a Broad Range of Uses Study

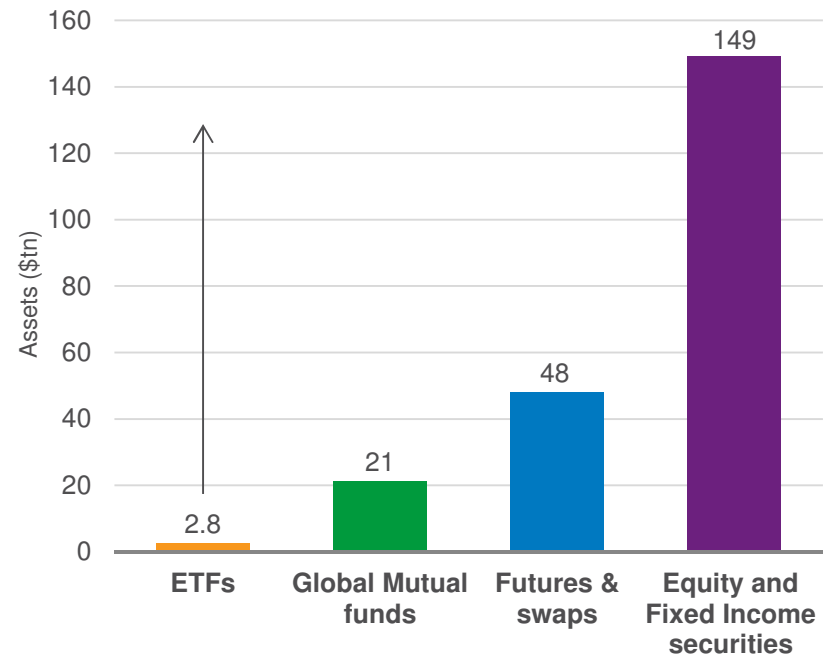
The competitive set is large – there is a huge runway for growth

3

ETFs compete against four financial instruments



ETFs small relative to growth potential



Source: Bank for International Settlements, Strategic Insight Simfund, BlackRock, Bloomberg. 12/31/2014

UK and Ireland Pension and Insurance Segment

Contact Details

For further information please contact us directly or see our website

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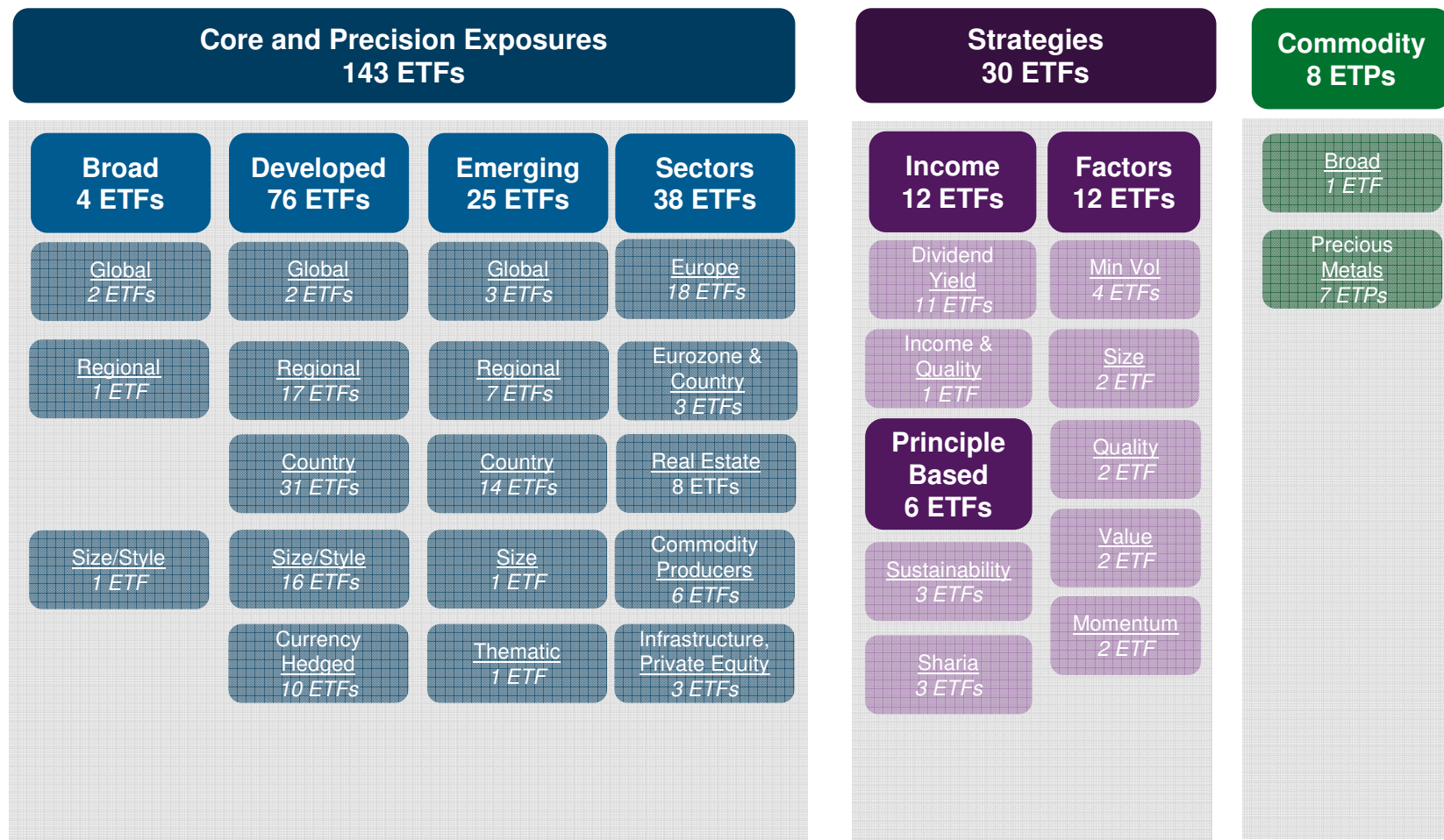
UK and Ireland Pension and Insurance
Segment

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Appendix

iShares European Product Offering – Equities & Commodities

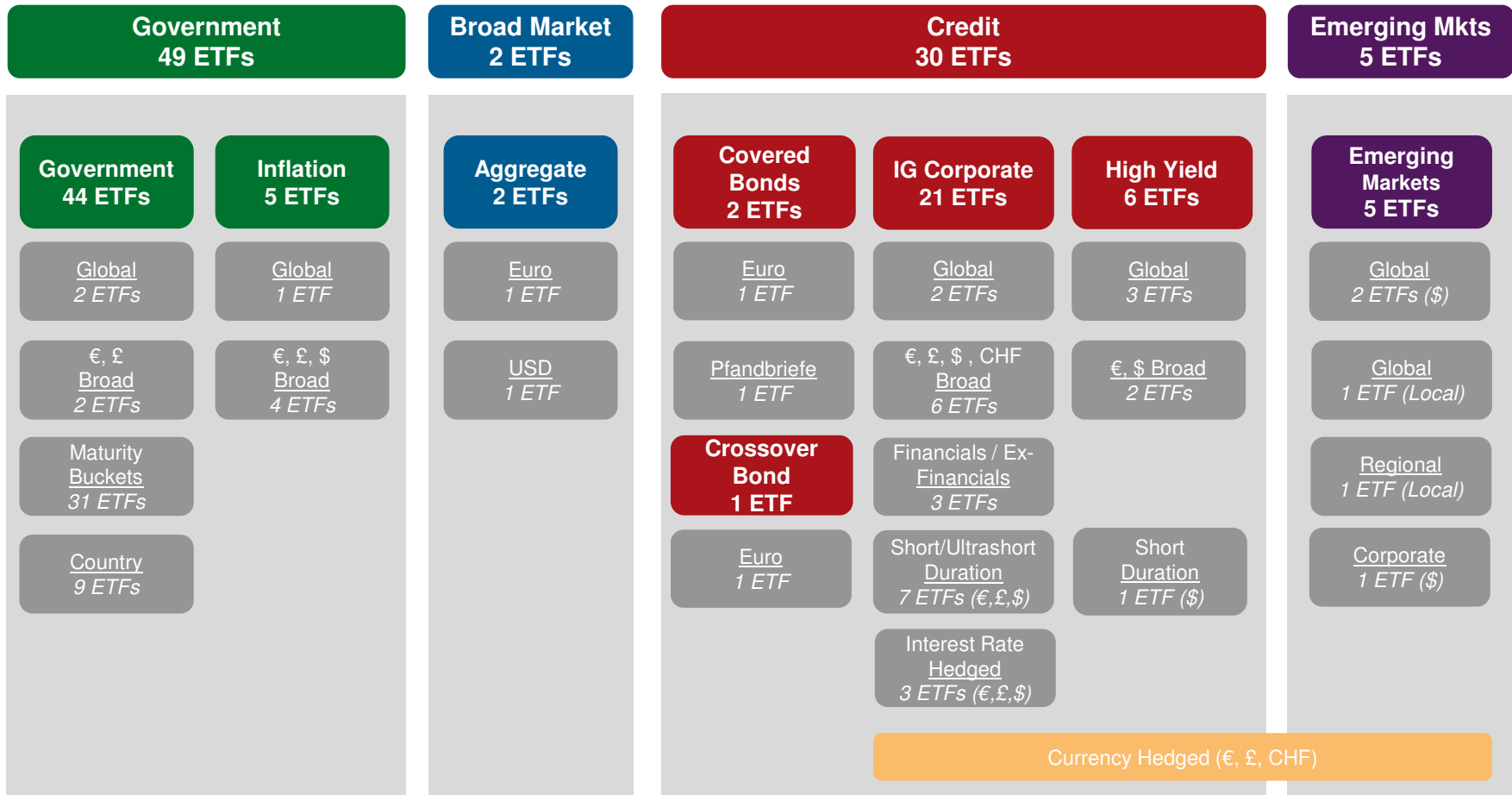


iShares offers a broad range of 175 Equity & 8 Commodity ETFs in Europe.

Source: BlackRock, as at March 2015

Note: European ETF offering. Not all above ETFs available in UCITS format

iShares European Product Offering – Fixed Income



iShares offers a broad range of 84 Fixed Income ETFs in Europe.

Source: BlackRock, as at March 2015
 Note: European ETF offering. Not all above ETFs available in UCITS format

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