BLACKROCK®

Illiquids under Solvency II

Strategic Investment Considerations for Insurers

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Head of Financial Institutions Group – EMEA

9. September 2014

Agenda

1) Blackrock's Insurance Asset Management
2) Economic Backdrop
3) Regulatory Backdrop
4) The case for Illiquids
5) Case Studies
   a) Private Equity to diversify portfolios
   b) Infrastructure debt to capture the illiquidity premium

BlackRock: Positioned to address Insurance Client Needs

Breadth of capabilities enables outcome-based solutions tailored to individual client objectives

$4.40 trillion in assets under management

Equity
$2.4 trillion

- Capabilities across investment styles: index, active fundamental, scientific and absolute return
- Global, regional and sector-specific investing

Fixed Income
$1.3 trillion

- Manage strategies across benchmark types and styles: index, fundamental, model-based and absolute return
- Specialized experts covering all market sectors

Alternatives
$115 billion

- Specialized capabilities across real estate, private equity, direct hedge funds, fund of hedge funds, infrastructure and renewable power
- Solutions-oriented approach extends to alternatives portfolio construction

Multi-asset
$353 billion

- Outcome focused: target-date, balanced risk factor, and liability-driven investing
- Asset-class agnostic perspective facilitates unbiased market views, advice, and portfolio solutions

Cash
$264 billion

- Recognized as ‘go to’ leader in credit and liquidity
- Flexible product range across multiple currencies

AUM As of 31 March 2014

Scalable services and infrastructure

Risk Management

- Centralized platform analyzes risk across asset classes
- Leverage for risk management, investment decision support and performance analytics

Advisory

- Advise public and private financial institutions on complex capital markets and balance sheet exposures
- Managed or advised on over $8 trillion in asset and derivative portfolios

Transition Management

- Partner with clients to help save costs and reduce risks when changing investment exposures
- Executed over 3,400 individual transitions with assets totaling $2.5 trillion over the past five years

Securities Lending

- Focus on research, technology and coordination with portfolio management functions that seek to deliver above market returns
- Covers securities in over 30 markets globally

Trading

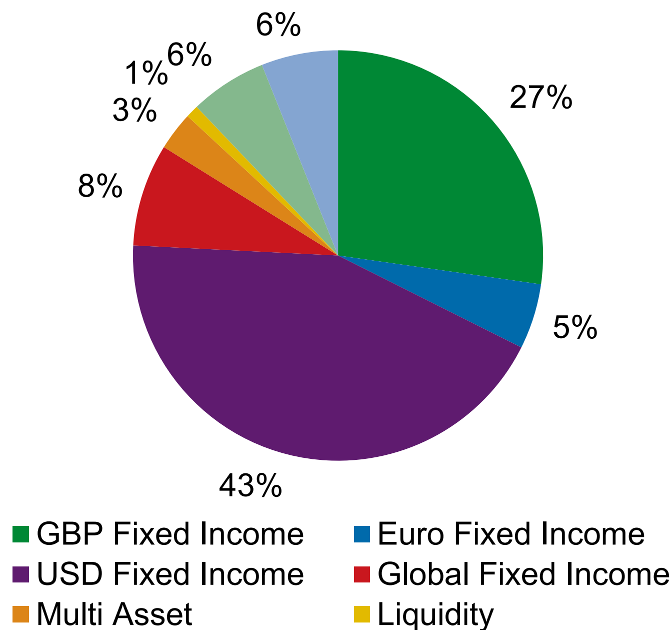
- More than 50,000 trades per day across equity, fixed income, cash, currency and futures
- 24-hour global coverage across seven trading desks

BlackRock's insurance business in EMEA

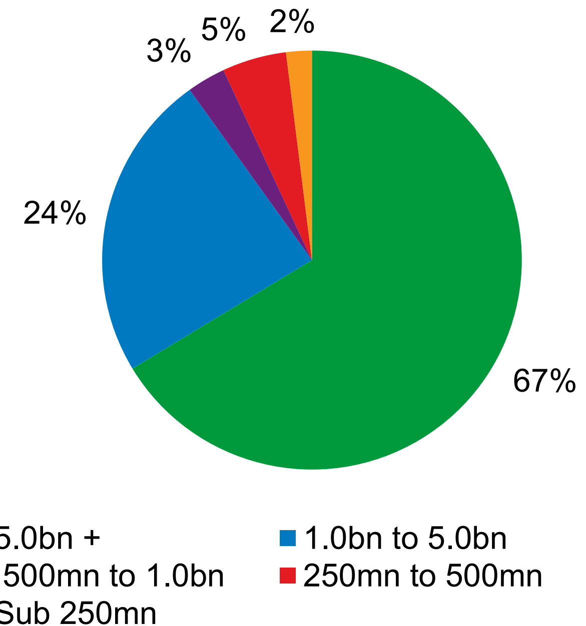
BlackRock partners with insurers to create customised investment programmes

- FIG EMEA manage $95.3 billion in unaffiliated general account assets for 55 insurers based in 13 countries across EMEA
- Provide risk management and investment accounting services to a number of European insurers through BlackRock Solutions
- Form a significant part of the Global Financial Institutions Group

AUM by asset class - EMEA



Client breakdown by size – EMEA (in $)

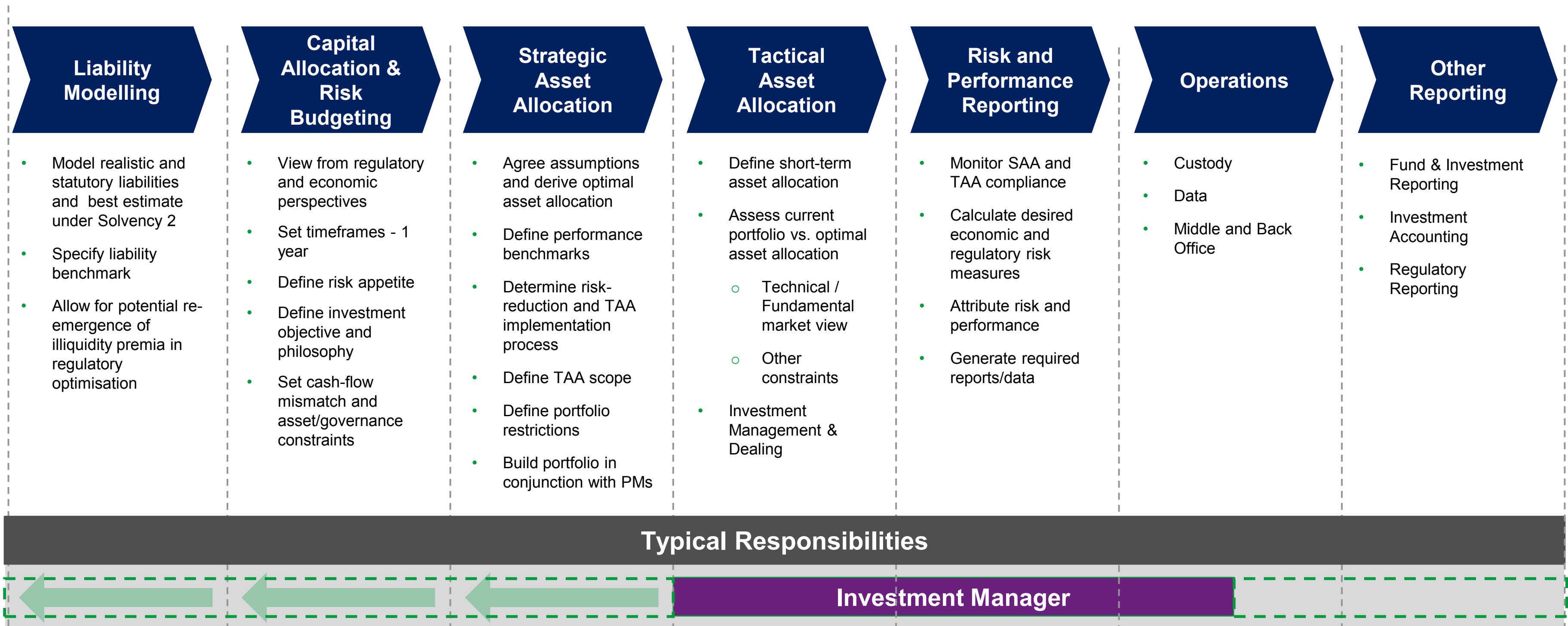


Approx. as of 31 March 2014; AUM may not include subadvisory, iShares® or other pooled vehicles
“Other” countries include Italy, Malta and United Arab Emirates

Insurance Investment Value Chain – BlackRock as Partner

Several large and highly successful insurance investment management outsourcing relationships exist at BlackRock

- Required functions can also be decomposed into key building blocks within an investment value chain
- Value chain framework provides flexibility to construct thoughtful operating models and successful strategic partnerships



BlackRock's insurance clients are demanding increasingly more involvement from BlackRock higher up in the Investment Management Value Chain in relationships that extend far beyond pure asset management services

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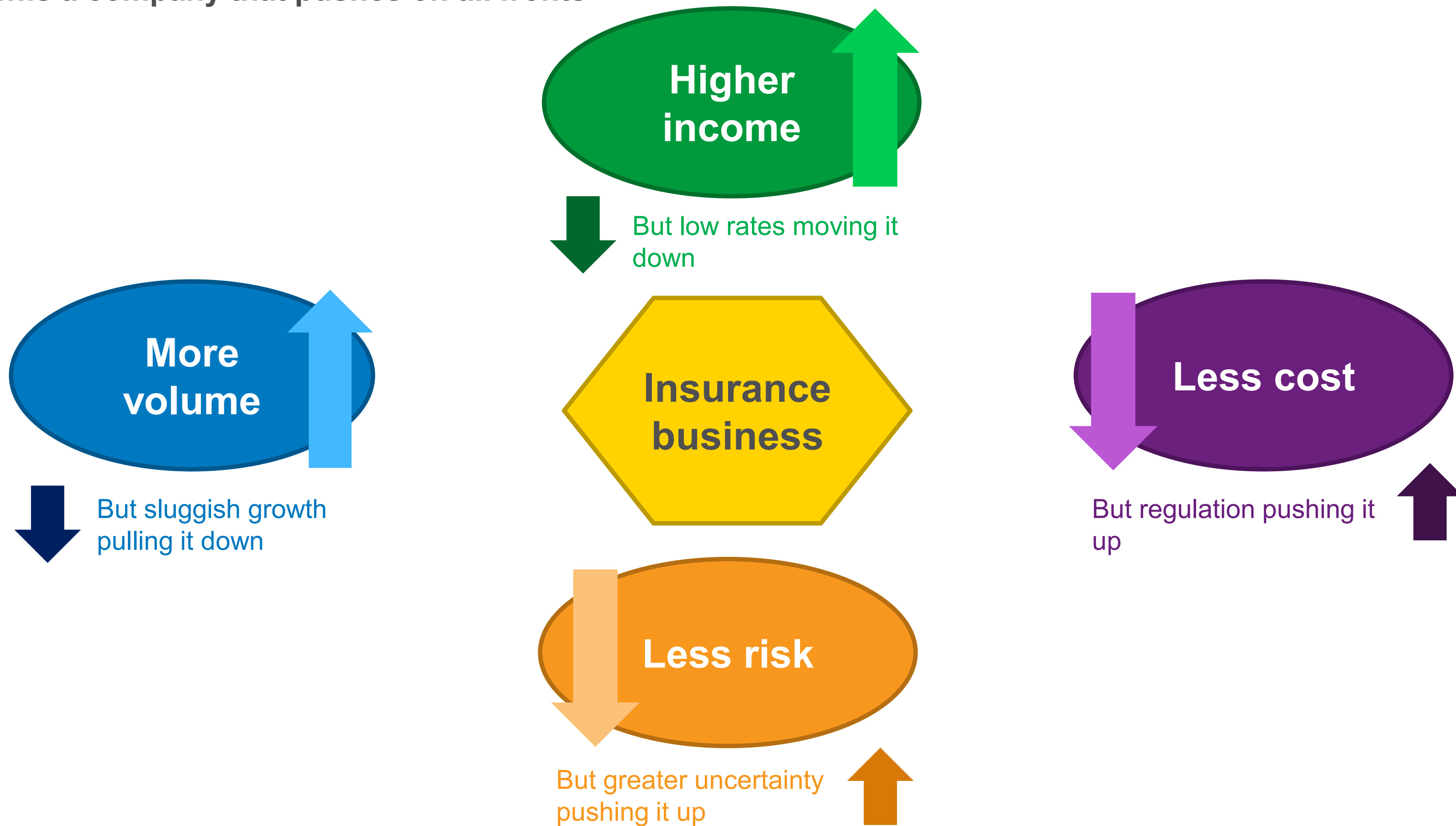
What Stakeholders Want…

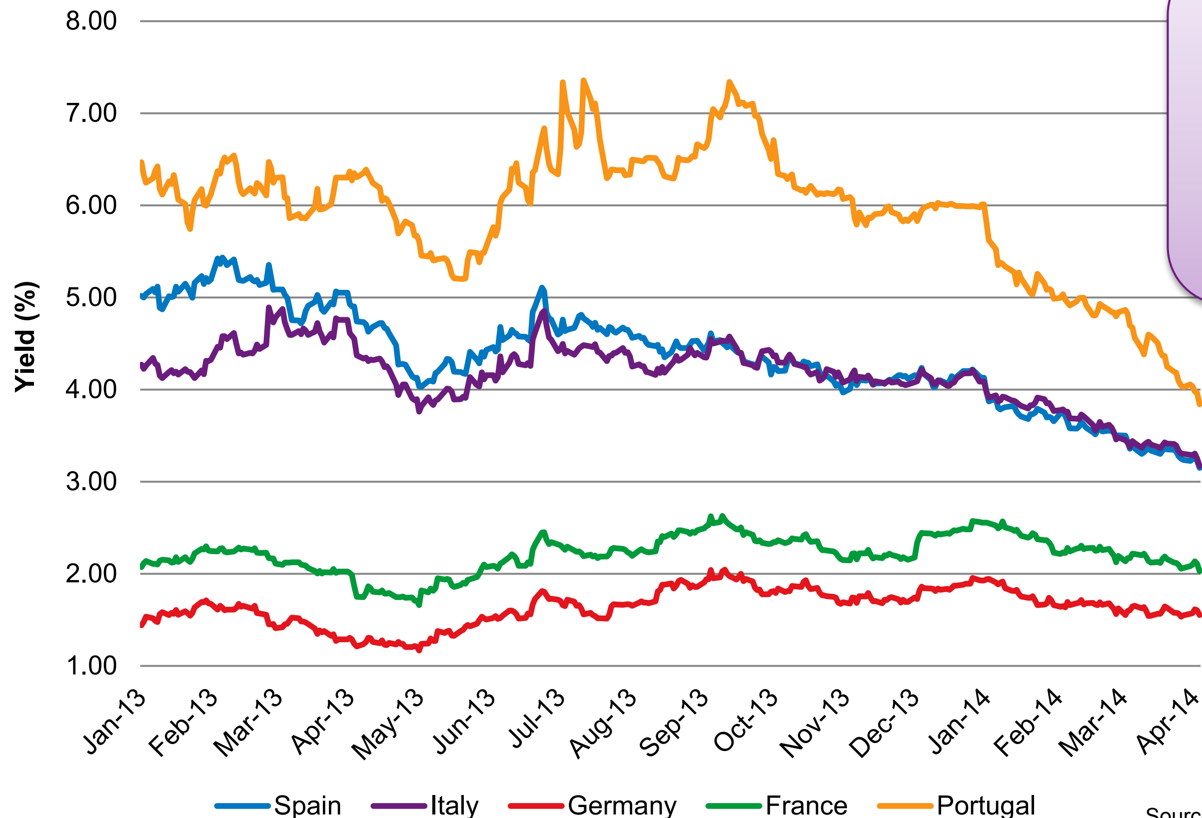
…is a company that pushes on all fronts



The world has been sliding towards 0%-interest

Source: Bloomberg.

Europe trending towards 0%-interest too… everywhere!



10 Year bond returns (8.9.2014)

- Germany: 0.94
- France: 1.26
- Italy: 2.27
- UK: 2.47

Source: Bloomberg.

Where will insurers find the yield to satisfy their liabilities?

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Solvency II is embedded in a world of regulatory uncertainty

A brave new world of regulatory change around the globe

Global

- International Association of Insurer Supervisors
  - Adopted set of Insurance Core Principals (ICPs)
- Common Framework For Supervision (ComFrame)
  - Framework for the supervision of Internationally Active Insurance Groups (IAIGs)
- Financial Stability Board (FSB) and G20
  - Globally Significant Financial Institutions (G-SIFIs)
  - Nine insurance companies identified
  - Held to higher standards, but no clarity as to what

US

- National Association of Insurance Commissioners
  - Solvency Modernization Initiative (SMI): critical review of insurance capital adequacy system
  - Own Risk Solvency Assessment (ORSA): Enterprise Risk Management framework (2015)
- Dodd-Frank Legislation
  - Creation of Federal Insurance Office (FIO)
  - Issued report on modernizing and improving insurance regulation in Dec 2013
- Financial Accounting Standards Board (FASB)
  - Desire convergence with IASB, but have diverged on Financial instruments and Contracts initiatives

EU

- Solvency II Implementation
  - Implementation expected beginning 2016
- Market Conduct Regulations
  - Focus on suitability, transparency and distribution
- International Financial Reporting Standards (IFRS)
  - IFRS 9: determination asset is carried at amortized cost or fair value
  - IFRS 4 Phase II: consistency of accounting and valuation of insurance contracts

Asia

- Higher standards required as Asia-Pacific is targeted as a high premium growth region
- Regulatory standards moving toward functional equivalence
- Market Conduct Regulations
  - Regulators are seeking to improve consumer confidence in the industry

Source: BlackRock 2014

The new wave of regulation will continue

Every large financial crisis has triggered substantial regulatory initiatives…

… and the aftermath of this crisis is (and will remain) no different

Nobody wants to be caught off guard again…

… so there is a lot of energy to put things right

Every new wave of regulation produces winners and losers…

… so competition is fierce

For key stakeholders in the reform process this is a chance to shine…

… so activism rather than cool objectivity is a constant danger

For many institutions this is the moment to increase their importance…

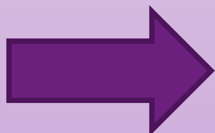
… so they will fight for a larger brief and bigger scope

The financial sector is very heterogeneous…

… but complex solutions do not "sell" well

The sources for new regulation are very diverse…

… but there is only limited coordination happening



Understanding this is important to situate regulatory and particularly Solvency 2 discussions over the longer time horizon

The confusing institutional landscape around insurance will persist

EU Commission Finance Ministry EIOPA HM Treasury AFM
UNEP FSB
CFTC WTO APRA CEBS UN US Fed Senate
Ecofin World Bank IMF FSA BIS G8 Joint Forum
Congress IOPS OTS FinMa CESR IASB OECD FIO
SEC UNCTAD FASB
EU Parliament BaFin BMA NAIC G20 IOSCO
J-FSA CIRC
MAS OSFI
IAIS CONSOB

General social and political reforms

Specific insurance reforms

Financial services reforms

Economic System

Insurance

Financial Services

Geneva Association
CRO Forum
PEIF GRF
EFSRT RAA ANIA AIA
IIS GNAIE NAMIC ABI UNESPA
CFO Forum PCI AMICE ICA Ins. Europe

Solvency II has an impact on competition

Solvency II is presenting opportunities and challenges for asset managers. Asset managers who recognise the opportunities and address the challenges early will have a competitive advantage over their peers.

Pillar 1 Quantitative Requirements

Opportunities

Creating bespoke products

Insurers will need tailor made products that reflect their risk tolerances and minimise capital requirements.

Challenges

Availability and quality of input data

Updated quantitative methodologies may require more detail on investment strategy and investments data from the investment manager which may require new processes with custodians and administrators.

Granularity of data and analysis

The regulation requires more detailed analysis of risks and sensitivities, which increases the volume of modelling data that needs to be processed by actuaries.

Different requirements

Different insurers are likely to have different information requirements for their models.

Pillar 2 Supervisor Review

Opportunities

Insurers will want to invest with managers that can evidence minimal operational risks.

Insurers are required to understand and manage all risks including outsourced activities.

Challenges

Evidencing risk management to clients

SAS70/SOC/AAF reports generally cover financial reporting risks, so evidencing risk management over investment risks will be a challenge (regular DD reviews are not likely to fulfil this requirement). Insurers need to quantify the risks embedded in the asset manager.

On-going risk management

Insurers will need to monitor asset managers and their products on an on-going basis.

Pillar 3 Market Discipline

Opportunities

Insurers need managers who can provide quality data in a timely fashion

Providing quality data in a timely fashion is a business imperative for attracting insurance business.

Challenges

Report delivery time and frequency

In general, the current report delivery timelines are not satisfactory for public disclosure requirements and the frequency does not allow the management to react quickly to changes in business or environment. Insurers will need quality data within days of quarter end to meet current proposed reporting requirements to regulators of 25 business days.

On-demand capability

A compliant insurer must be able to answer supervisor's queries promptly and provide supportive quantitative information.

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The triggers for insurance and illiquid investments

BlackRock's second annual insurance industry outlook

There is one key story in our view:

Insurers face an unprecedented challenge to their business models and profitability that is forcing them into new investments/asset classes.

Three challenges for insurers in 2014:

1. **Income**: A "low for longer" fixed income environment will drive insurers to reevaluate and ultimately relax certain investment guidelines. Insurers will realign their investment portfolios in order to earn adequate income, provide principal protection, and deliver diversified sources of return while managing correlation risk.
2. **Profitability**: Pressure to enhance shareholder value will compel insurers to become more efficient with their capital deployment. In response to this pressure, insurers will need to adjust their product lines, operational processes, capital allocations and investment portfolios in order to improve efficiency and maximize profitability.
3. **Regulation**: Changes in global regulatory regimes will force insurers to refine their business and investment strategies. Capital deployment, asset allocation and risk management are all likely to be impacted.

The good news:

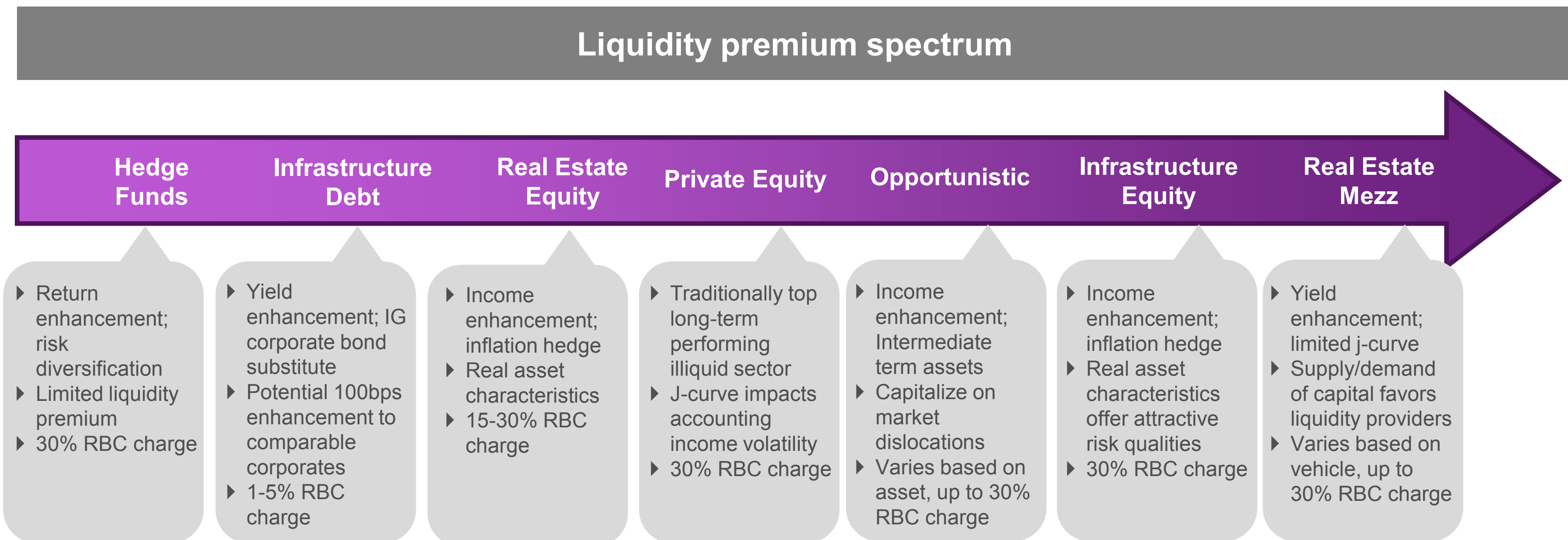
Politicians want insurers to be active as long-term investors and providers of infrastructure and venture capital

Insurers often maintain more liquidity than they need

Why illiquidity?

- Income enhancement and diversification
- Often complementary to insurance operating model
- Typically a well-compensated risk: Natural demand for liquid investments results in favorable supply/demand characteristics for providers of illiquid, long-term capital

Opportunities across liquidity spectrum, depending on insurer risk tolerance



Source: BlackRock 2014

Exploring greater illiquidity

Taking advantage of the illiquidity premium to generate alpha, produce income, dampen volatility and diversify portfolio

Select approaches:

Stratify liquidity needs

- Identify liquidity needs of liability structure
- Build different levels of liquidity needs
- Isolate layers of illiquidity

Increase illiquid allocations

- Create income and diversify from fixed income through allocations to:
  - Private equity
  - Real estate
  - Infrastructure
  - Opportunistic
- Capital constraints will be primary limitation on size of illiquid allocation

Create a diversified illiquidity portfolio

- Capital efficiency can be maximized through diversification within illiquid asset classes
- Integrate complementary risk factors
- Diversification to optimize j-curve

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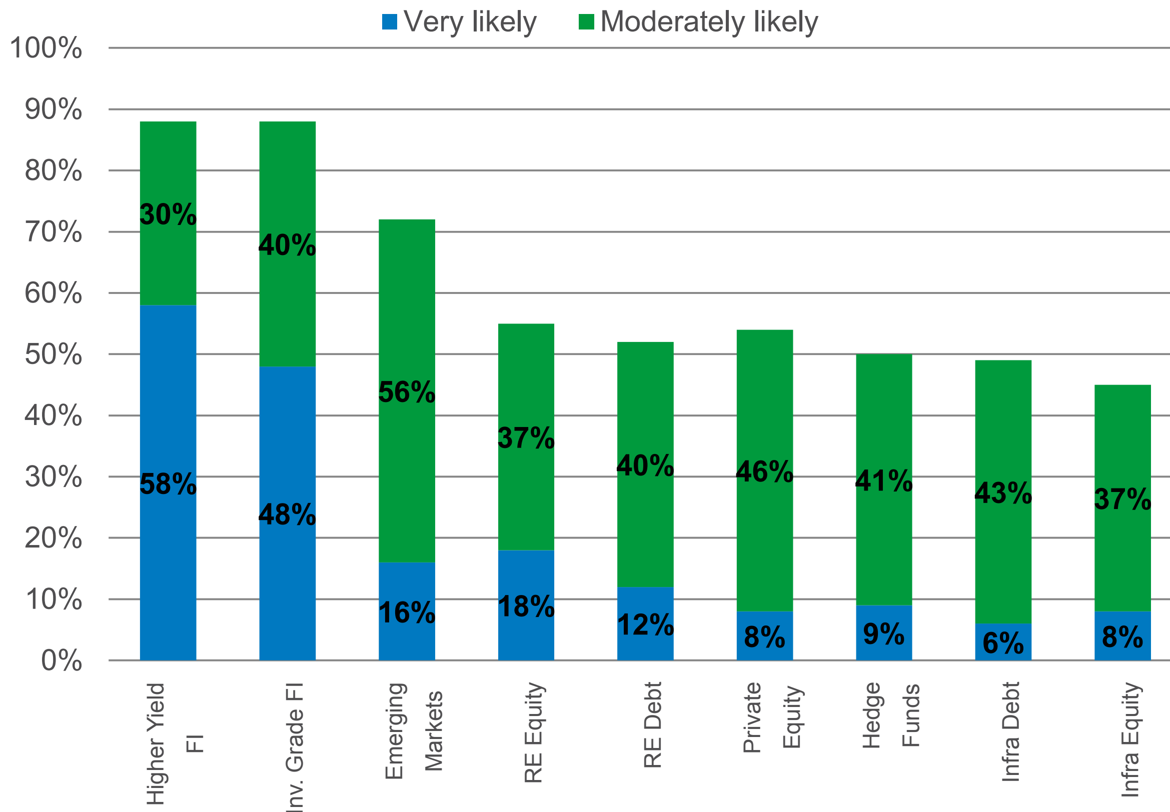
Smartly diversifying into new asset classes for additional returns

The current environment is forcing insurers to adapt their investment strategies

- **Insurers have increased their allocation to higher-yielding fixed income (73%) and less liquid instruments (68%)**



Insurers are looking for strategies that complement their existing portfolio

- Consider opportunistic strategies
- Evaluate illiquid assets with uncorrelated returns
- Consider the benefits of risk factor and asset class diversification
- Invest more to understand the risks they are taking

Source: BlackRock / 2013 Economist Intelligence Unit survey

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Solvency Capital Requirement (“SCR”) overview

The SCR

- Solvency II requires insurers hold a capital buffer to ensure continued solvency in stressed market conditions
- The capital requirement is defined as a 99.5% balance sheet VaR
- To calculate this capital buffer, insurers may implement:
  - Standard Formula
  - Internal Model, or
  - A partial internal model

The Standard Formula

- Allows insurers to calculate capital requirements without the need to develop complex models
- Comprises of a number of submodules representing a broad set of risks which affect the insurance balance sheet
- Reflects the way in which each risk affects both assets and liabilities

Standalone Standard Formula SCR charges

Standalone Capital Requirements vary by asset class:

- ‘Listed Equity’: 39% + Symmetric Adjustment
- ‘Other Equity’: 49% + Symmetric Adjustment
- Property: 25%
- Credit: varies, see chart

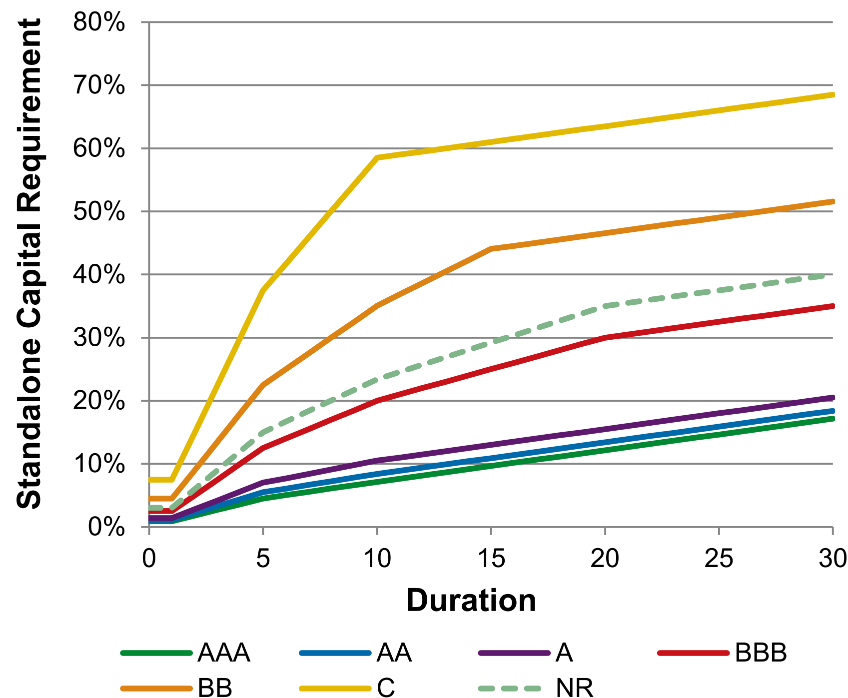
Alternative Assets

EIOPA has reviewed whether these charges should be modified for Alternatives, including:

- Private Equity (but not Venture Capital)
- SME Lending
- Infrastructure Debt and Equity

EIOPA concluded that there was no strong case to support lower standalone capital requirements for these assets classes.

Some asset classes (for example Private Equity) retain high standalone capital requirements.



- **The Standard Formula encourages diversification across a wide range of asset classes.**
- **This means that the marginal change in capital associated with investment in a new asset class may be significantly lower than the standalone charge.**

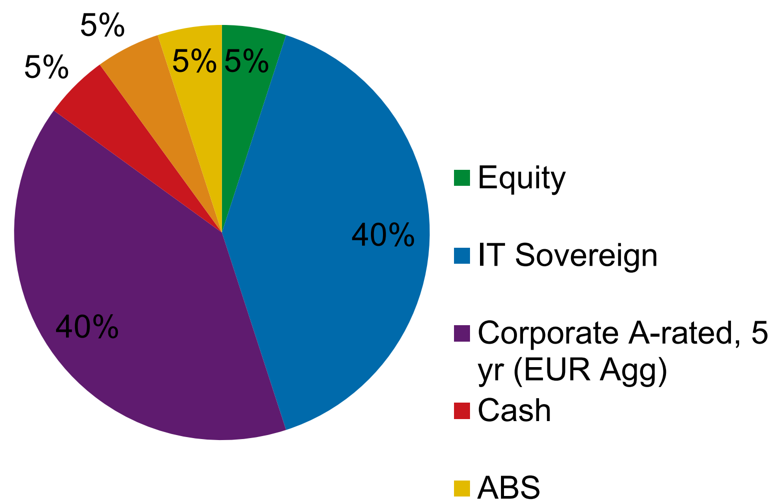
Marginal capital charges associated with Private Equity investment

Overview

- **The Private Equity capital charge (49%) is high compared with other asset classes on a standalone basis.**
- **To understand the overall SCR impact, Insurers must consider diversification effects across the balance sheet.**

- In the following slides BlackRock model the Market Risk Charge (“SCR_{Market}”) of asset portfolios.
- This measure allows us to model diversification between assets, and therefore the marginal change in SCR.
- BlackRock have constructed an illustrative base portfolio (shown right).
- To model the absolute SCR, BlackRock would need to aggregate across all other non-market SCR submodules.

Illustrative Insurance Portfolio



Marginal capital charges associated with Private Equity investment

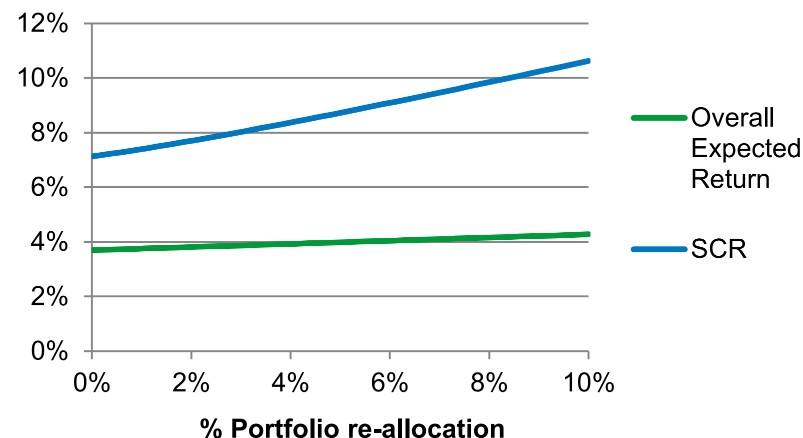
Overview

- We model **private equity investment** ranging from 0 – 10% of the total Balance Sheet, **funded through selling corporate bonds** from the illustrative portfolio
- This affects both the overall SCR_{Market} and the expected return:
  - The expected return increases from 3.8% to 4.3%
  - SCR_{Market} increases from 7.6% to 11.1%
- For small allocations, the marginal capital charge is less than 25% compared with the change in base charge of 42% (49% - 7%).

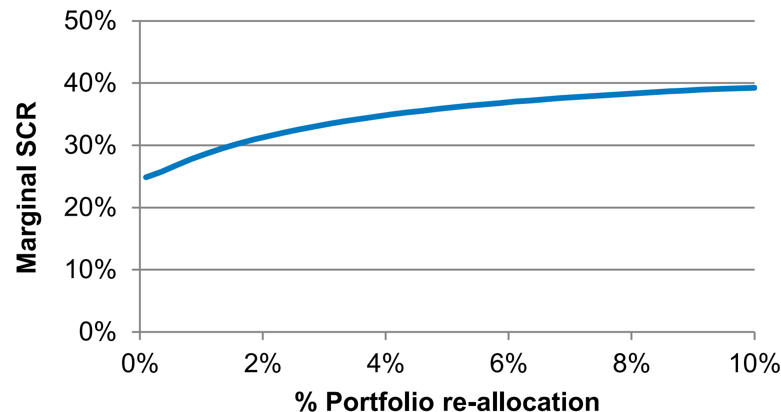
Summary

- Standalone capital requirements tell only part of the story
- The marginal capital requirements are a more appropriate measure.
- Depending on asset allocation the change in SCR associated with initial investment in private equity may be significantly less than the standalone charges

a) Standard Formula Total Market Risk and Expected Return



b) Marginal Private Equity capital requirement with increasing allocation

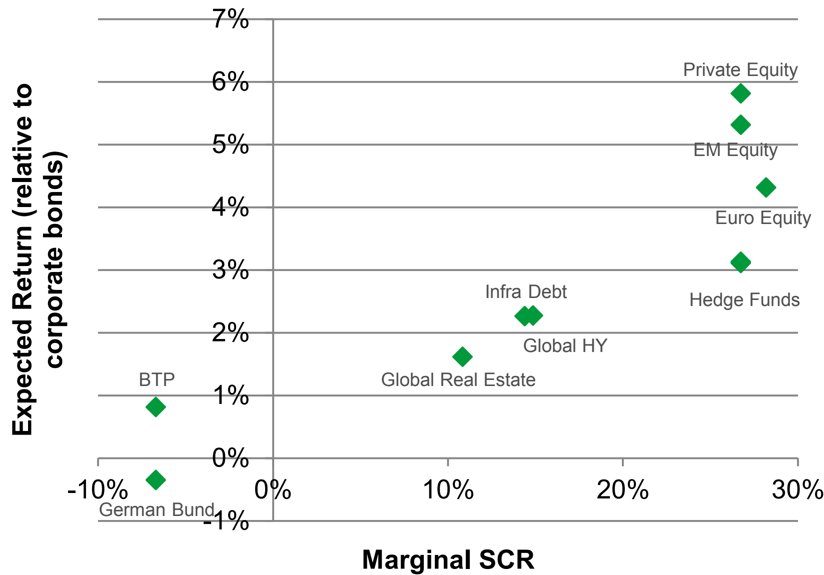


Marginal SCR and Relative Expected Return

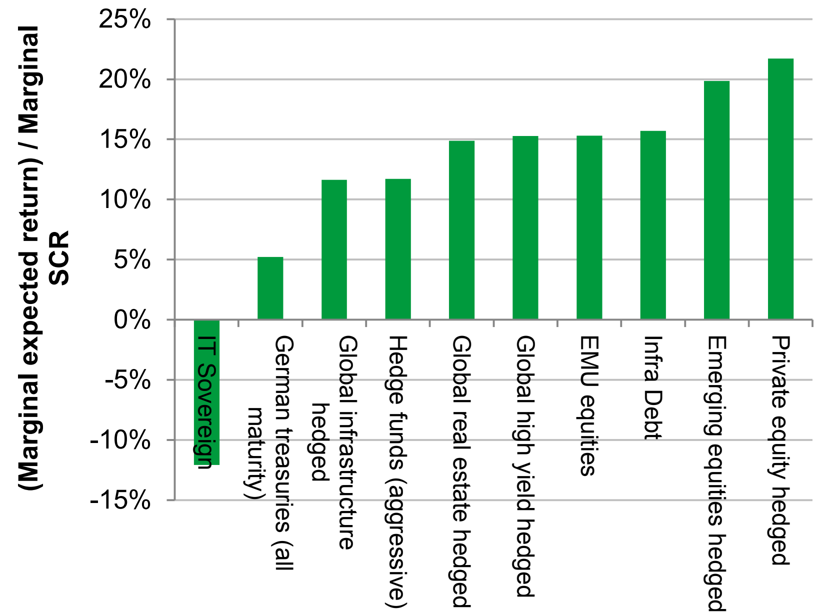
BlackRock has analysed the marginal impact selling a small allocation of corporate bonds (A rated, 5 year duration), and investing the proceeds in a new asset class

- This analysis is subjective, depending on the broad portfolio allocation and precise risk and return assumptions
- Return assumptions are derived from BlackRock Long Term Euro Assumptions

Marginal Expected Return / Marginal SCR requirement



Marginal return on capital



Reducing the SCR whilst maintaining expected returns

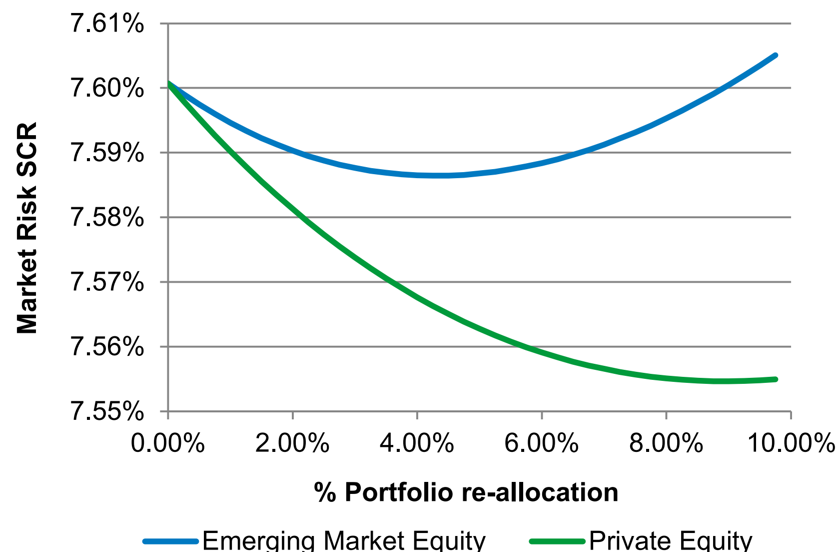
We detail how to reduce capital requirements whilst targeting the same expected return:

- Sell Corporate bonds;
- Investing in a blend of cash and a new asset class.

Case 1: Sell Corporate Bonds, Buy Private Equity

- BlackRock analysed selling of 0 – 10% of the portfolio value in corporate bonds
- In this analysis we purchased a blend of 82% cash and 18% Private Equity so as to maintain the expected return
- This reduces the SCR for allocations of up to 9% (1.6% Private Equity)

Balancing Cash and Alts. investments to minimise capital requirements for a given expected return



Case 2: Sell Corporate Bonds, Buy Emerging Market Equity

- BlackRock analysed selling of 0 – 10% of the portfolio value in corporate bonds
- In this analysis we purchased a blend of 83% cash and 17% Emerging Market Equity
- This reduces the SCR for allocations of up to 4.5% (0.8% Emerging Market equity), with allocations up to 9% all resulting in market risk charges lower than the initial portfolio.

Take-away from diversification exercise

Diversification effects reduce the *marginal* capital impact of investing in new asset classes

Insurers may see strong diversification effects when investing in new asset.

For initial allocations into diversifying asset classes, marginal capital charges can be significantly less than standalone undiversified capital requirement.

Strategic Asset Allocation can help insurers understand these effects

The analysis here considered diversification, capital requirements and risk for just a few investment strategies.

In order to understand the broader effects, economic strategic asset allocation may be augmented with regulatory capital measures.

Inputs are critical

BlackRock has made a number of assumptions which may materially impact the output of this analysis.

- Expected Return Assumptions
- Incorporating Liabilities
- PE assumed to be at 49% capital charge (and not the newly reduced venture capital charge of 39%)
- Solvency II has not yet been implemented.

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Infrastructure debt: Core characteristics

Asset characteristics

- **Essential Services**
- **Capital Intensive**
- **Long Life Span**
- **Low Business Risk**

Core target sectors

Energy incl. Power

Transport

Water/Waste

Social Infrastructure

Core target geographies

Northern & Western Europe (UK, France, Germany, Benelux, Scandinavia); North America

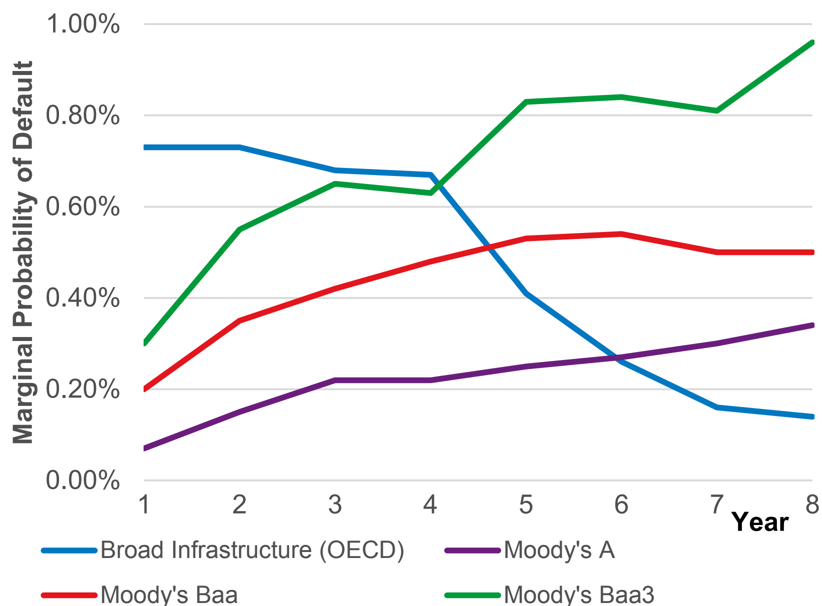
Investors benefits

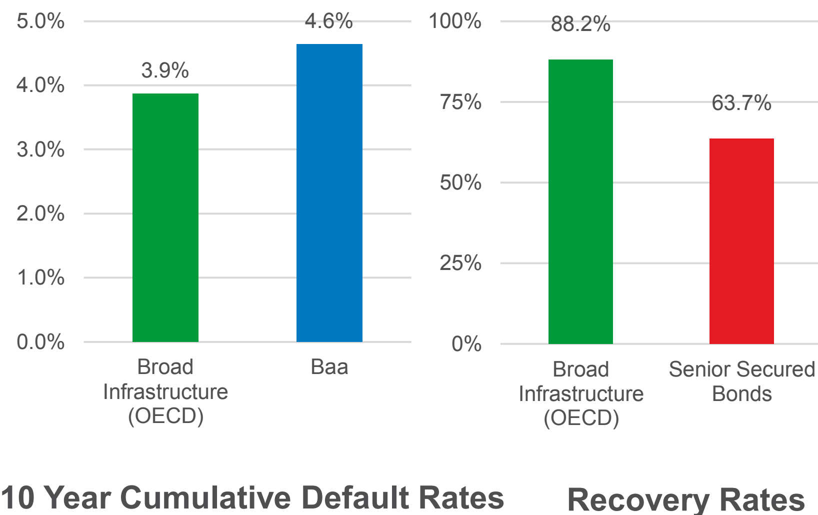
- **Steady Returns**
- **Cash Yield**
- **Long Dated Assets**
- **Diversification**

Attractive Risk Profile: Default Risk vs Corporate Bonds

Infrastructure Debt offers higher yields, lower default rates, and higher recoveries than comparably-rated corporates

- Credit quality improves with time unlike that of corporate debt which typically deteriorates
- Default probability for infrastructure debt approaches that of A or better rated corporate debt over time
- Provides sustainable credit diversification to a fixed income portfolio





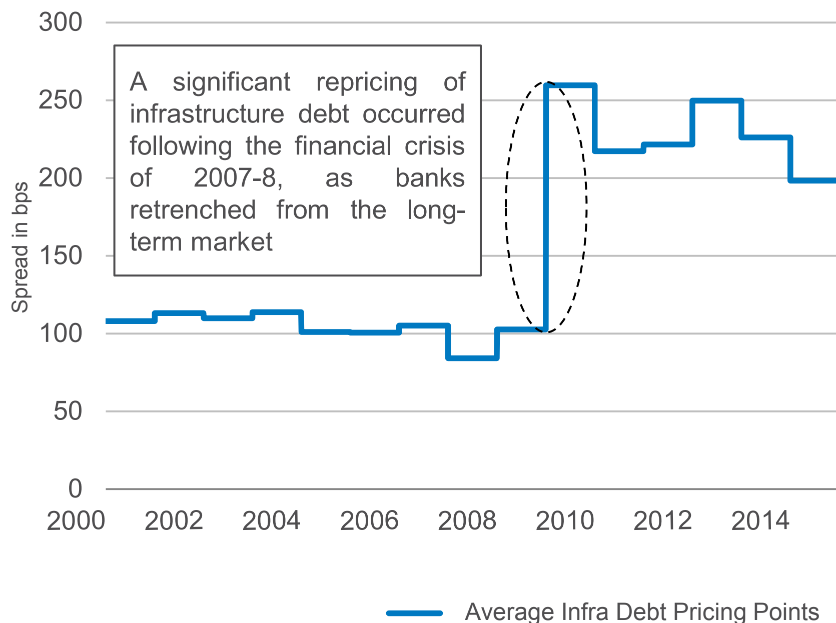
Notes:
1) Moody's "Default and Recovery Rates for Project Finance Bank Loans 1983-2011 Addendum."
2) Moody's "Annual Default Study: Corporate Default and Recovery Rates, 1920-2011"; Corporate default rates based on 1983 – 2011 and recovery rates based on 1987-2011.
3) Based on Moody's definition of "Broad Infrastructure", including social and transport assets as well as transmission and distribution financings.

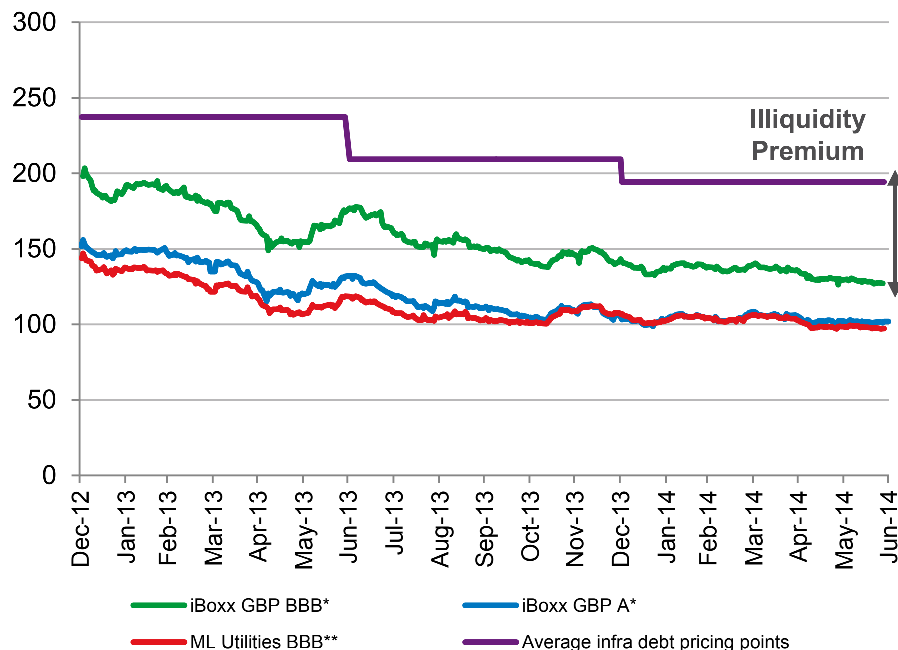
Attractive Private Debt Premium: Spreads vs Corporate Bonds

Opportunity to capture attractive spread/private debt premium vs. comparably rated bonds

- Despite tightening in the market, the liquidity premium compared to corporate credit indices has remained intact at 50-100bps compared to comparable corporate credit indices

Infrastructure debt spread vs. index spread





*iBoxx GBP Corporates BBB / A has been filtered to exclude names that are not senior. The representative individual names and the index are stated as asset swap spreads. **The ML utilities index is composed of the constituents of the Merrill Lynch BBB Utility index, excluding those not senior or not based in the Northern and Western European countries targeted by BlackRock (i.e , UK, France, Germany, Benelux and Scandinavia). The representative individual names and the index are stated as asset swap spreads.
Source: Bloomberg as at 30 June 2014

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