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Dutch LDI: Make your LDI portfolio work harder for you

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Consider the Risks

All investing involves risk. If an investor is in any doubt as to the suitability of an investment, they should consult an independent financial advisor.

Risk to Capital

Investment markets are subject to economic, regulatory, market sentiment and political risks. All investors should consider the risks that may impact their capital, before investing. The value of your investment may become worth more or less than at the time of the original investment.

Manager Risks

Investment performance depends on the investment management team and their investment strategies. If the strategies do not perform as expected, if opportunities to implement them do not arise, or if the team does not implement its investment strategies successfully; then a strategy may underperform or experience losses.

Past performance is not a reliable indicator of future results and investments can lose value

Please refer to the risk section at the rear of this presentation for further information.

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Agenda

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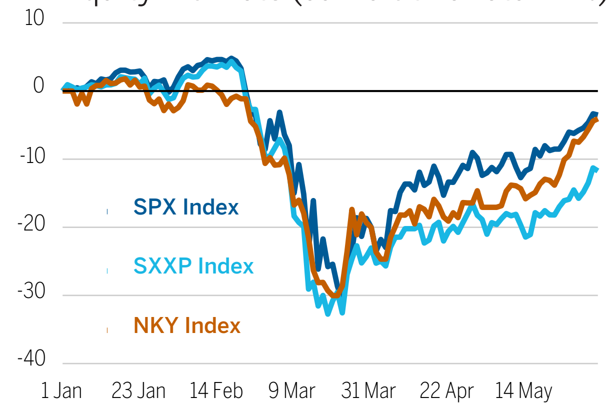
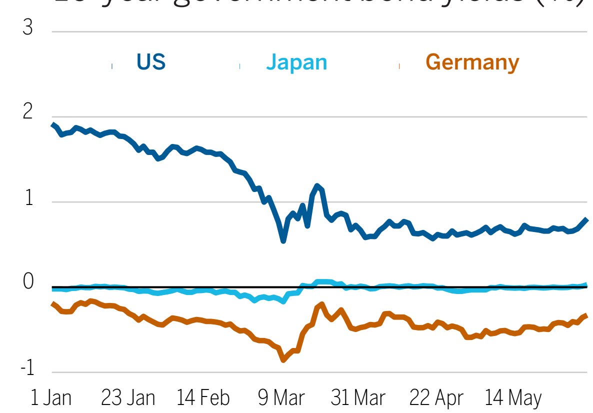
There's been a decade of beta
...but what happens now?

ETF[1]	Asset class	2008 – 2018 cumulative (%)	2008 – 2018 annualised (%)
SPY	US Large Caps	114.4	7.2
IWM	US Small Caps	106.4	6.8
EEM	EM Stocks	-2.6	-0.2
EFA	EAFE Stocks	4.1	0.4
PFF	Preferred Stocks	69.0	4.9
HYG	High Yield Bonds	69.2	4.9
LQD	Investment Grade Bonds	68.0	4.8
TLT	Long Duration Treasuries	84.2	5.7
TIP	TIPS	35.3	2.8
BND	US Total Bond Market	40.9	3.2
BIL	US Cash	3.9	0.3
EMB	EM Bonds (USD)	77.4	5.3
VNQ	REITs	86.1	5.8
GLD	Gold	47.0	3.6
DBC	Commodities	-52.7	-6.6
Highest return		SPY	SPY
Lowest return		DBC	DBC
% of asset classes positive		**87**	**87**

Equity markets (cumulative return %)[2]



10-year government bond yields (%)[2]



[1]Source: Morningstar | [2]Chart data: January 2020 – 4 June 2020 | Source: BloombergThomson Reuters | PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS. Indices are unmanaged and cannot be invested in directly.

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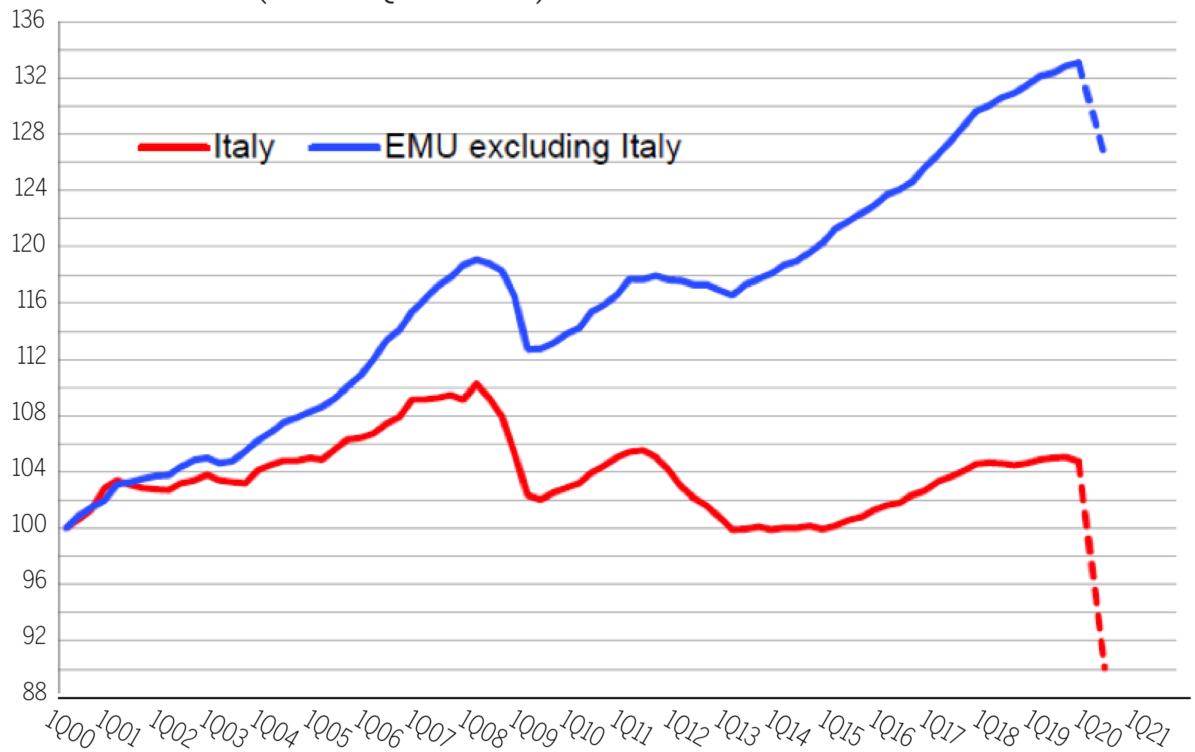
Market outcomes

Asset correlations are also under question

Level of GDP (Index 1Q99 = 100)[1]



[1]Chart data:Haver, Wellington Management Chart date range Jan 2020 - March 2020 | Forecasts used from March 2020 onwards |
PAST RESULTS ARE NOT NECESSARILY INDICATIVE OF FUTURE RESULTS.

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Dutch LDI Portfolio

Role in Client Asset Allocation

Reduce surplus volatility by allowing for increased matching allocation

Embed liability and FTK awareness in return generation

Make up losses from inaccurate hedging

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Potential alternatives

Which combinations could drive success?

Potential alternative portfolio asset allocations

		Current hypo mix (%)	Hedged Non-EUR HY (%)	Unhedged Non-EUR HY (%)	Overlay Hedge (%)	Asset hedge (%)	Equities (%)
Summary statistics	FI assets	41	50	50	41	50	37
	Liability hedge %	60	60	60	65	75	58
	FX exposure	20	20	22	20	15	22
	Required reserves	20.0	17.6	17.7	19.7	16.3	21.2
Assets	EUR Governments	23	25	25	23	31	21
	EUR Credit	15	15	15	15	16	13
	Non-EUR Credit	3	10	10	3	3	3
	EUR Equity	23	19	19	23	19	25
	Non-EUR Equity	17	12	12	17	12	19
	Other	19	19	19	19	19	19

Source: Wellington Management | For illustrative pur-poses only | Other hypothetical potential portfolio asset allocations are based on hypothetical reallocations in order to isolate effective increasing fixed income expo-sure, increasing currency exposure, increasing duration exposure, a mix of all of these, and finally decreasing equity and duration exposure. Required reserves are calculated based on Dutch regulatory framework. Assumptions were selected by Wellington Management and are for illustrative purposes only. This is not intended to be investment advice.

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Hypothetical results

Funded ratio relative to required reserves

Resilience: reduce duration mismatch, grow matching portfolio

Timing – wait for rate rise or risk outcomes?

Opportunity cost – how to retain any upside?

Change in solvency ratio

Potential alternative asset allocations	Funded ratio – required reserves	Eq up, rates up (%)	Eq down, rates up (%)	Eq up, rates down (%)	Eq down, rates down (%)	Eq/ rates up, EUR down (%)	Eq/ rates up, EUR up (%)	Eq/ rates down, EUR up (%)
	Current hypo mix	10.3	-3.1	-4.6	-14.7	11.7	9.0	-15.7
	Hedged Non-EUR HY	12.2	0.9	-2.7	-11.2	13.5	10.8	-12.2
	Unhedged Non-EUR HY	12.1	0.9	-2.7	-11.3	13.6	10.7	-12.4
	Overlay Hedge	9.6	-3.9	-3.4	-13.6	11.0	8.3	-14.6
	Asset Hedge	11.5	-0.1	0.5	-8.3	12.6	10.5	-9.0
	Equities	9.6	-5.0	-5.3	-16.2	11.0	8.1	-17.4

Source: Wellington Management | For illustrative purposes only | Funded ratio calculations are based on changes in the value of assets and liabilities under the relevant market scenario. The return is for a one year time horizon. The solvency ratio changes are made on the assumption that equities change by 10%, rates change by 100 bps and EUR changes by 5% Credit sector returns are approximated based on yield, changes in government bond yield, and changes in credit spread, which is assumed to be a function of equity market returns. The correlation between equities and credit spreads vary based on the credit quality of the asset. Liability return is calculated based on UFR curve at the beginning of the period and the changes in the UFR curve over the horizon. All government curves are assumed to move the same magnitude in a given scenario. | This illustration is considered hypothetical and is for illustrative purposes only. Based on various assumptions as of 23 May 2018 for various asset classes. Actual results may differ significantly from expectations. As the analysis relies upon assumptions and other expectations of future outcomes it is subject to numerous limitations and biases including subjectivity. | Additional information regarding assumptions used in this analysis are available upon request

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Improve stability, allow for growth

The case for active or semi-active

Stability across scenarios -> increase matching portfolio

Reduce impact of lower allocation to growth assets -> active LDI

Reduce impact of inaccurate hedging -> active LDI

For illustrative purposes only. The above characteristics are sought

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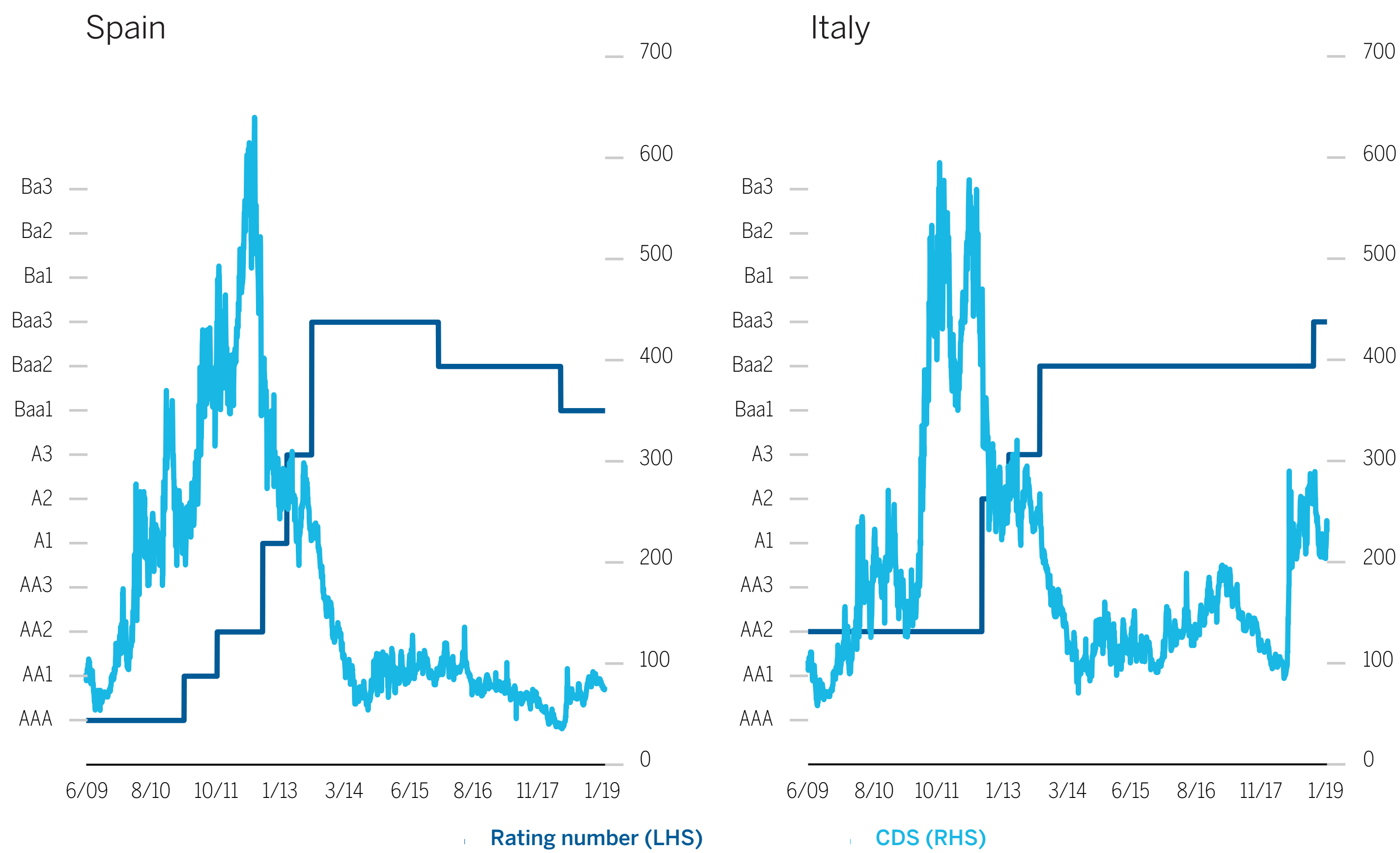
Market environment changes may prompt change in approach

Active: Opportunities	Passive: Risk
Country selection	Country selection
Duration and curve management	Duration and curve management
Sector and instrument selection	Instrument selection

Country selection opportunities

Rating agencies slow to react to market stress



Source: Bloomberg, Moody's | For illustrative purposes only | Charts data: June 2009 – February 2019

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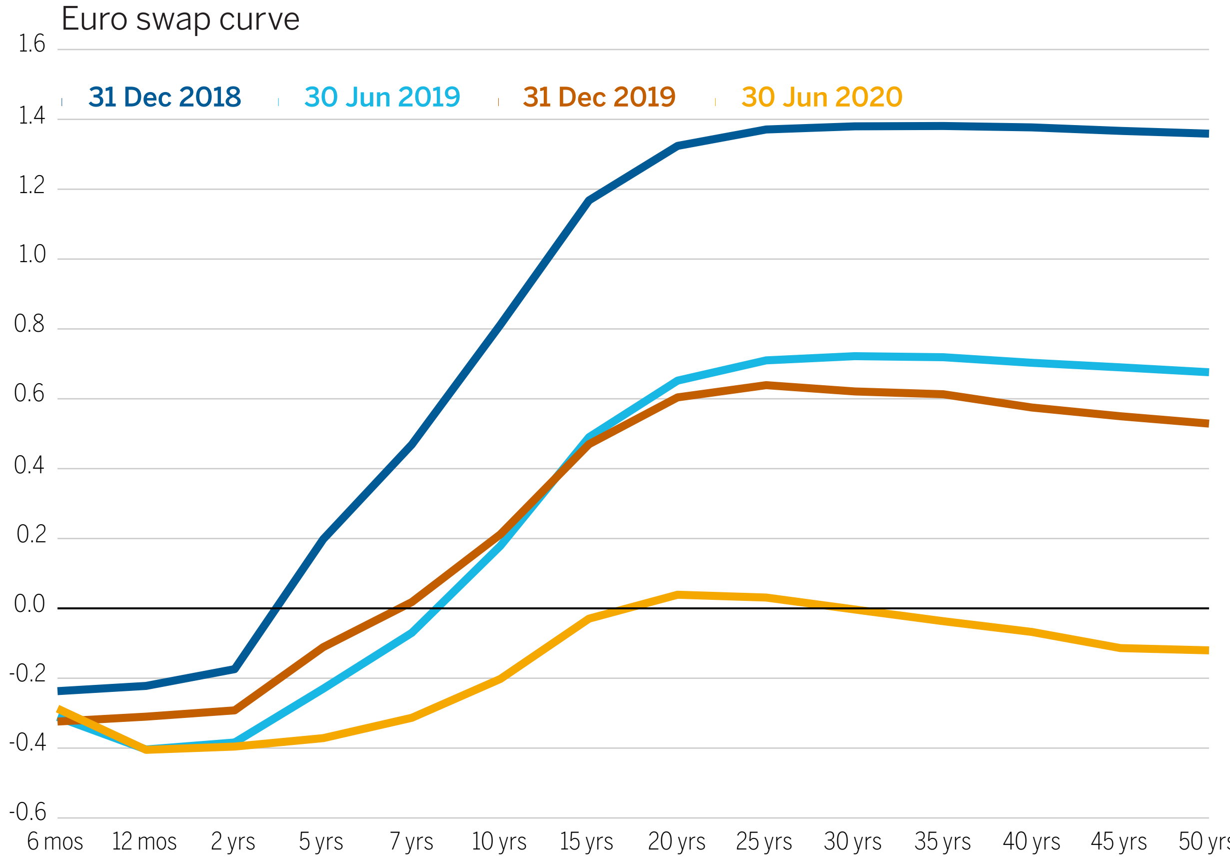
Duration and curve management opportunities

Duration-neutral yield curve positions can add value



Source: Bloomberg, Barclays | For illustrative purposes only | Chart data: June 2020

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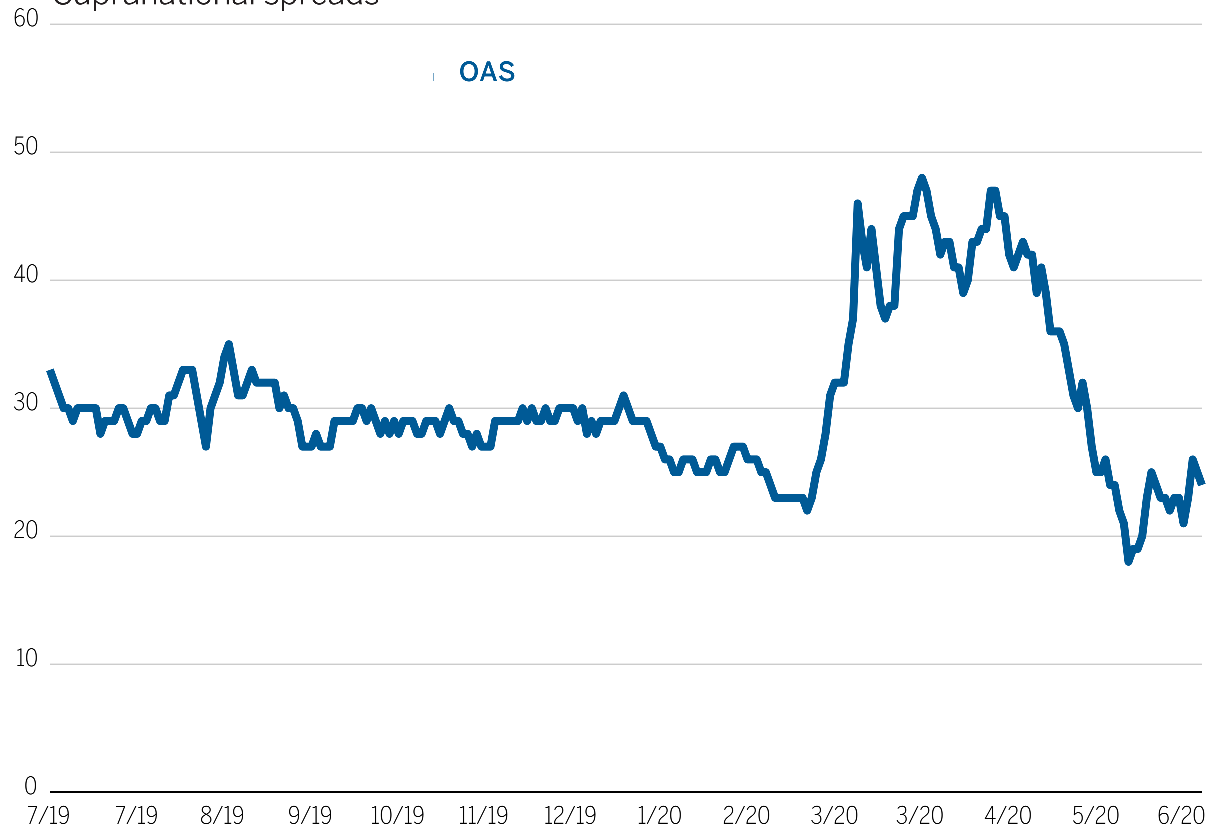
Sector and Instrument Selection Opportunities

Opportunistic allocation to capital efficient sectors can add value

Supranational spreads



Source: Bloomberg, Barclays | For illustrative purposes only | Chart data: 1 July 2019 – 29 June 2020

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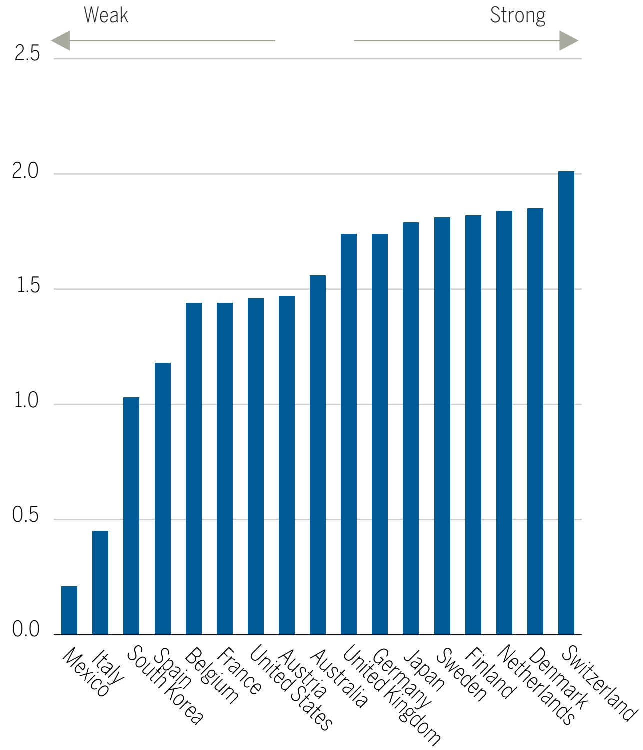
Why ESG matters to sovereign risk

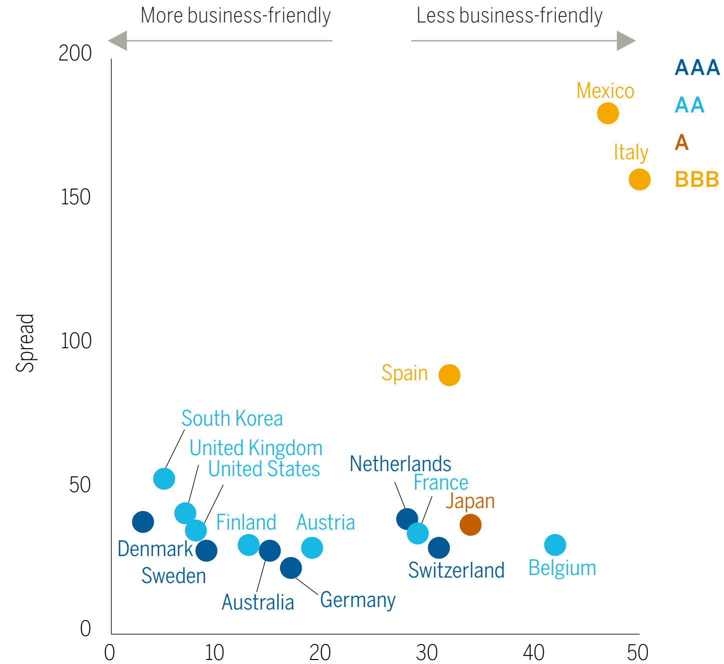
Ability and willingness to pay

Government governance affects willingness to pay



Sources: Wellington Management, World Bank Institute: The Worldwide Governance Indicators 2015 Update. Government effectiveness of selected economies.

Ease of doing business affects economic growth and therefore ability to pay



Sources: Wellington Management, The World Banks Ease of Doing Business Rank Ratings reflect the S&P long term foreign currency ratings. The spread reflects the 3-month average sovereign CDS (with a 5-year tenor) spread. Ease of Doing Business as of June 2016, ratings and credit spreads as at 11 November 2016.

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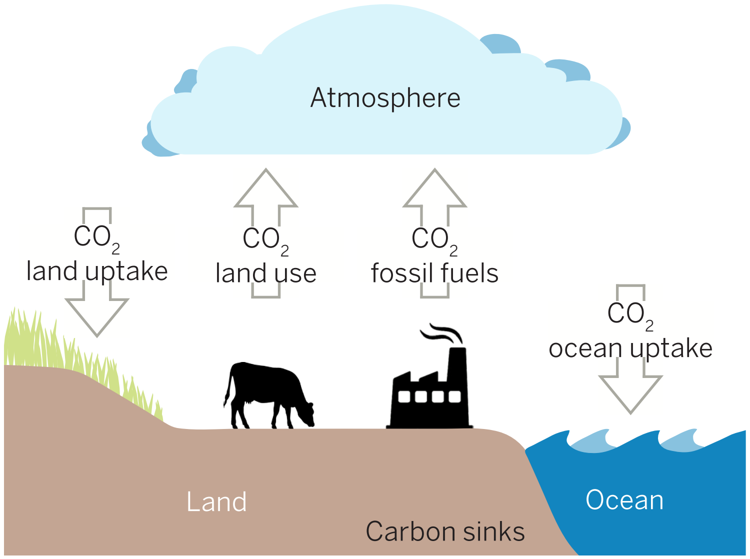
Climate cause & effect

Drives distinct fields of study

Cause



Higher emissions in atmosphere exacerbates physical risks

Effect

Chronic

Heat

Drought

Wildfire

Acute

Hurricanes

Flooding

Water access

Transition risks...

Policy & regulation
- Carbon pricing to reduce future emissions
- Carbon sinks to remove existing emissions

Technological disruption
- Renewable energy
- Electric vehicles

Litigation

Societal pressure & behavior

...drive need for mitigation

Physical risks...

Chronic risks are long-term shifts in climate patterns

Acute risks are event-driven and increasing in severity

Changing climate will impact regions at different paces and magnitudes

Impacts to: societies, economies, private & public spending, infrastructure

...drive need for adaptation

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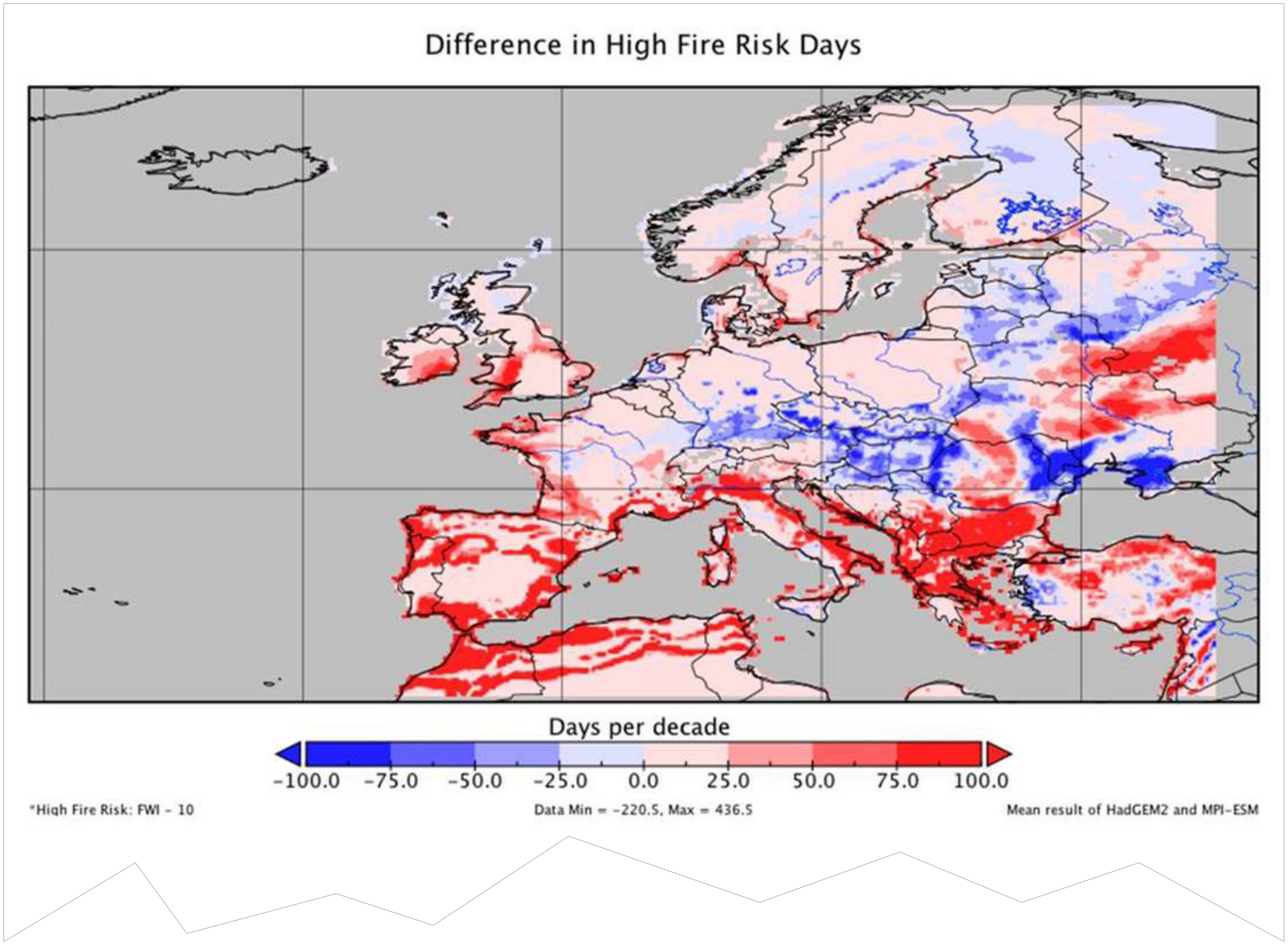
Managing financial risk from climate change

The importance of modelling wildfire risk



Source: Woods Hole Research Center, Wellington Management

Key takeaways

Increasing the allocation to matching assets can improve funded ratio stability

Allowing for a more active approach can capture opportunities, potentially manage risks and better align with FTK

ESG and climate considerations can and should be a part of the entire portfolio, including the matching allocation

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Case study: Country selection

Germany	Positive
Structure	Low levels of debt and strong liquidity are a positive, though contingent liabilities linked to rest of Euro Zone are worth monitoring. Political risk for Euro Zone is also a key factor.
Cycle	Muted inflation and subdued cycle, driven by soft global cycle and increased domestic saving. Potential growth estimates remain low, implying relatively limited upside to rates.
Valuation	Short end rates imply a long period of negative rates, exposing risks to the front end. The curve remains steep, with relatively better value in the long end.

Poland	Neutral/Negative
Structure	Large external debt ownership, as well as structural weaknesses are a concern, though low overall debt levels and stable momentum partly counteract this. Political risk in Euro Area and fiscal policy are key areas to watch.
Cycle	Cycle is relatively strong, and labour market is tight, so wage inflation is a potential risk
Valuation	While spreads are relatively attractive, they have compressed, and the yield curve is less steep than previously. Cycle, central bank and beta to EM are key risks.

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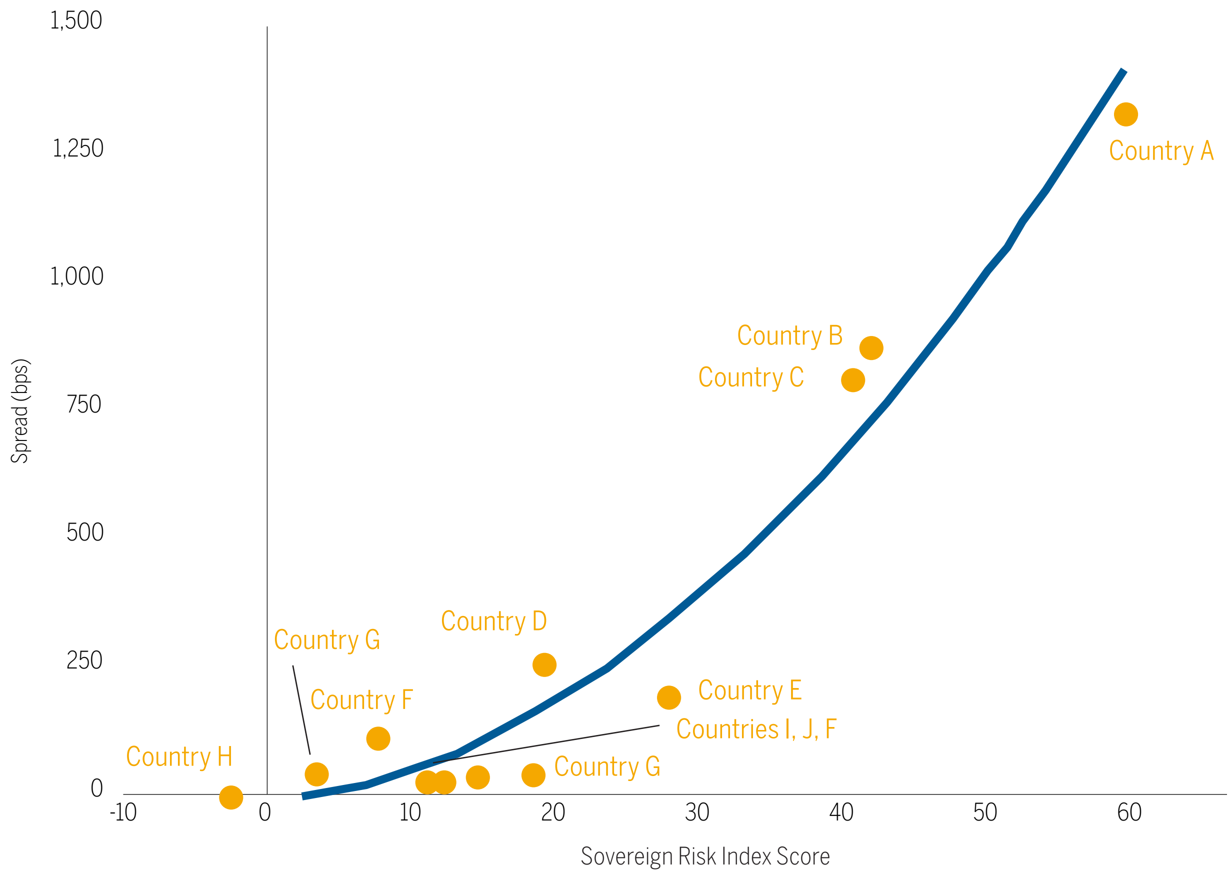
Research – Sovereign Risk Analysis Framework (illustrative example)

Valuation framework provides criteria to assess whether a country's spread looks too wide or narrow relative to fundamental factors



Source: Wellington Management | For illustrative purposes only. Not representative of an actual investment

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Dutch LDI Portfolio
Valuation framework

Our valuation framework is designed to analyze the fundamentals of a country's sovereign debt from a top-down and bottom-up perspective and to appropriately size and invest in bonds that offer both total return potential and capital preservation characteristics

Cycle valuation

Top-down analysis

Leverages proprietary cycle research

Focus on understanding the monetary impulse of a given sovereign issuer and risk of hawkish shift

Key inputs

PMI estimates

Financial conditions

Inflation and unemployment leading indicators

Other specific cycle leading indicators

Performance in risk off environment

Market valuation

Bottom-up analysis

Identify issuers and curve sectors that provide favorable risk/reward characteristics in the context of the cyclical backdrop

Key inputs

Liquidity

Hedged yields and cross currency basis

Curve shape, carry and roll down

Swap spreads

Real yields and inflation expectations

Forward rate expectations

Volatility

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