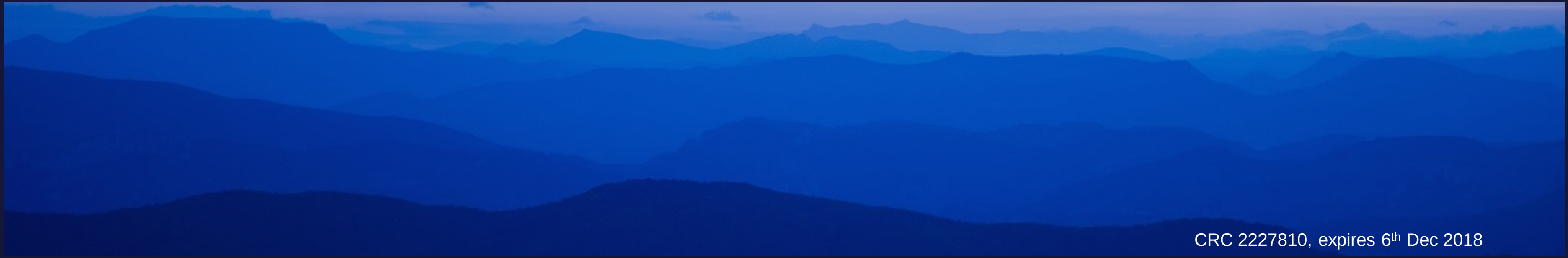
Morgan Stanley | INVESTMENT MANAGEMENT

Return/Risk considerations for the Return Portfolio

Informatietafel Bestuurders, Oegstgeest

6 September 2018

Helmut Cardon, European Pension Fund and Insurance Specialist



CRC 2227810, expires 6th Dec 2018

SECTION 1

Objectives and Practice of Return Portfolios

Dutch Pension Fund Return Portfolios

Rationale: Return Portfolio to generate excess return

- Pay for indexation
- Needed for Recovery Path

- Matching Portfolio:
  - Hedge interest rate risk in Liabilities
  - Follow Liability “returns”
  - Sometimes include ILBs/ILS to hedge real rates

Focus Return Portfolio Presentation

Role of reducing equity volatility, in economic and regulatory context

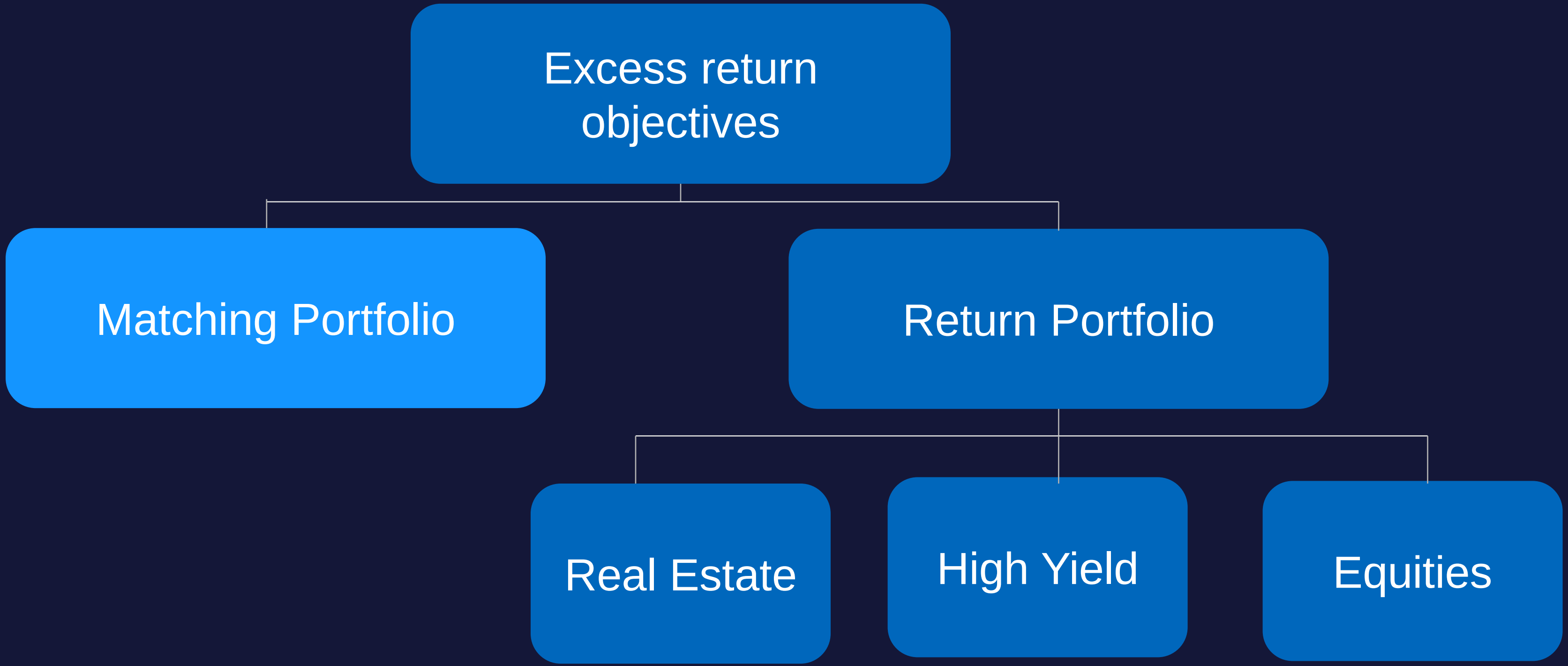
The views / opinions expressed are those of the author as at the time of writing, may not necessarily come to pass, are subject to change based on market, economic and other conditions, and do not necessarily represent those of Morgan Stanley

Dutch Pension Fund Matching and Return Portfolios

	Matching Portfolio	Return Portfolio
PMT	46%	54%
PME	50%	50%
ING	75%	25%
PGB	46%	54%
DSM	54%	46%

Source: annual reports 2017

Return Portfolio at PMT with 1.5% excess return target

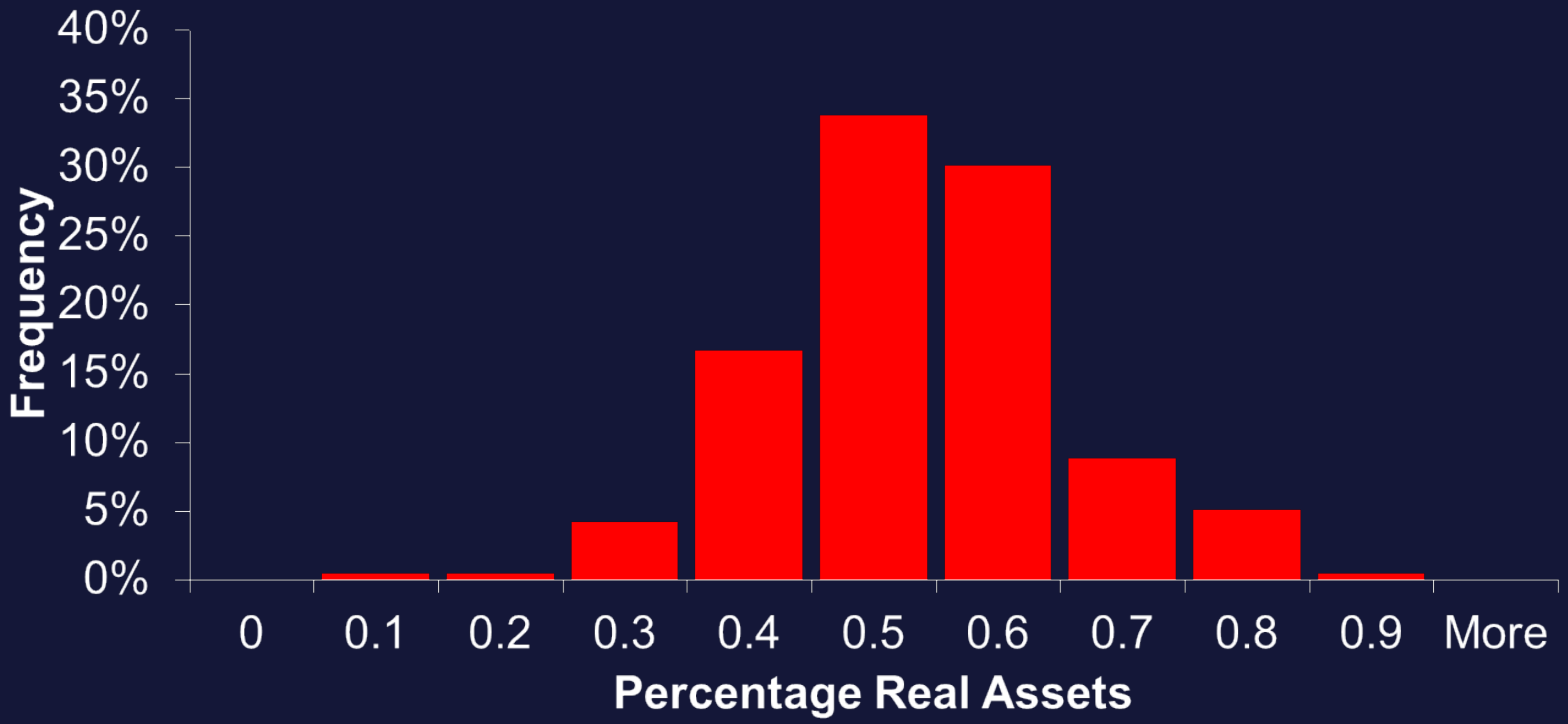


Source: PMT, Strategic Investment Framework 2015-2020, Dec-15

SECTION 2

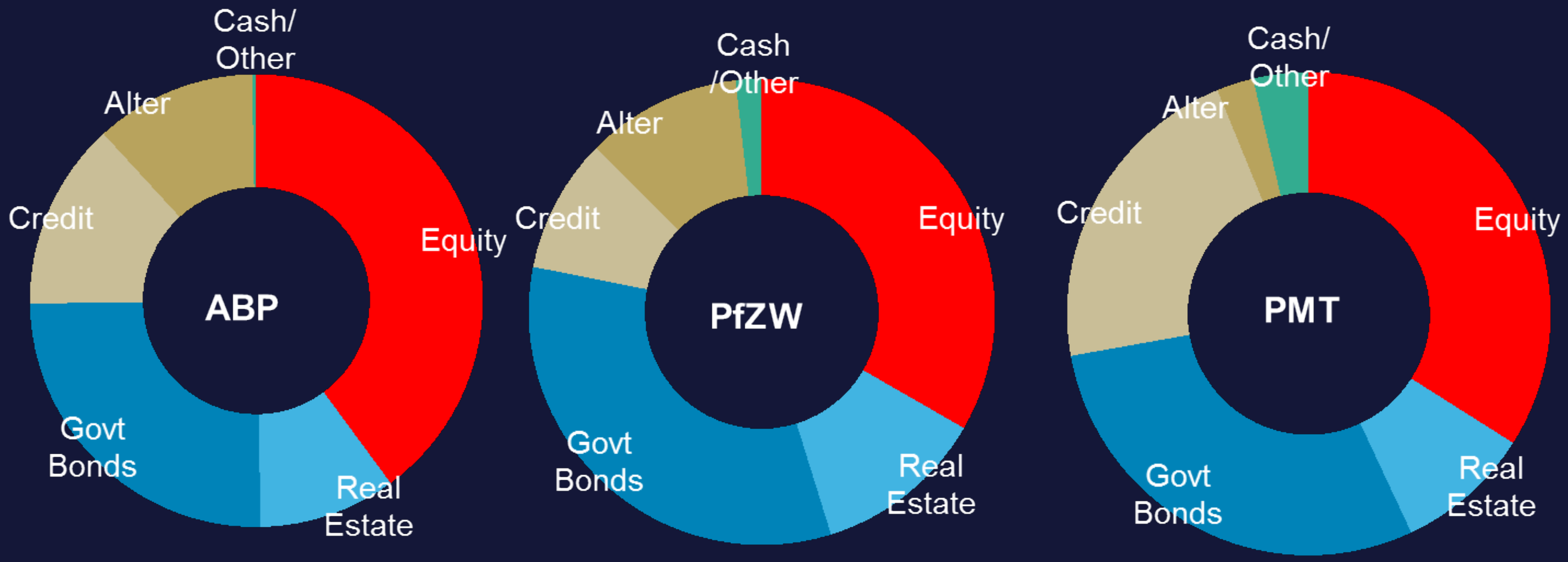
The Role of Equities

Dutch Pension Funds: High Allocations to Zakelijke Waarden



Source: DNB database for Dutch Pension Funds, Mar-18; MSIM in-house analysis Aug-18

Dutch Pension Funds: High Allocations to Equities



Source: annual reports ABP, PfZW and PMT 2017; MSIM analysis Aug-18

Morgan Stanley | INVESTMENT MANAGEMENT

SECTION 3

ALM and VEV (Vereist Eigen Vermogen)

Main driver for Return Portfolio/Equities is ECONOMIC

ALM:

- Pension Funds and Insurers prefer “economic optimisation”
- Downside risks analysed for short-, medium- and long-term horizons

FTK:

- VEV increasingly important consideration
  - May drive pension benefit reduction
  - Limits Asset Allocation freedom

The views / opinions expressed are those of the author as at the time of writing, may not necessarily come to pass, are subject to change based on market, economic and other conditions, and do not necessarily represent those of the Morgan Stanley

Comparing Strategic Decisions to manage the VEV impact:

Equities most substantial consideration

Change in allocation to asset class of Hedge Ratio	BY	LOWER VEV BY [BPS]
Hedge Ratio Rates	+1%	5 – 8
Equities	-1%	35 – 45
FX Hedge Ratio	+1%	0.5 – 10
Commodities	-1%	(0.5) – 2
A Corp	-1%	7 – 9
BBB	-1%	7 – 9
High Yield	-1%	13 – 16

Source: Morgan Stanley in-house analysis, Dec-15
Provided for illustrative purposes only and not intended to depict the performance of a specific instrument.

Role of Active Management: focus on the alpha

Active Management:

- Focus on the alpha
- Control the costs
- Risk and VEV addition:
  - Focus on the governance
  - Total Risk and VEV increase often limited

The views / opinions expressed are those of the author as at the time of writing, may not necessarily come to pass, are subject to change based on market, economic and other conditions, and do not necessarily represent those of the Morgan Stanley

Quantified Contribution of Active Risk (s10) to VEV

Net addition to VEV;

Typical examples

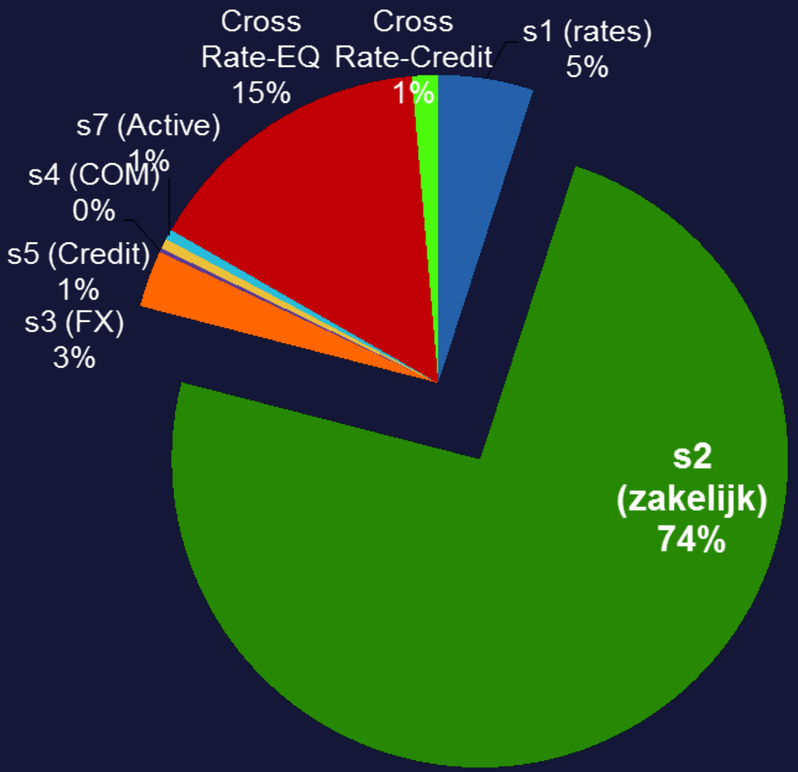
Risk	ABP	PfZW	PMT
s10	**3.1%**	0.6%	0.4%
VEV	**27.7%**	24.8%	20.4%
Verhoging VEV vanwege s10	***0.17%***	*0.007%*	*0.004%*

Note that the s10 and VEV numbers are from the 2017 annual reports; the estimated marginal impact on VEV increase is based on Morgan Stanley analysis, Aug-18

SECTION 4

Equities and Protected Equity

Composition of VEV



Equity Risk
now dominant for
average Pension Fund?

Source: Morgan Stanley analysis, illustrative data per Jun-15

Protected Equity Investing

Institutional Investors Are Examining Their Equity Allocations

Equity Markets hit historic highs?

Investors still want upside participation

Pension Funds may want VEV efficiency

Sensitivity to cost of protection

Equity Exposure

+

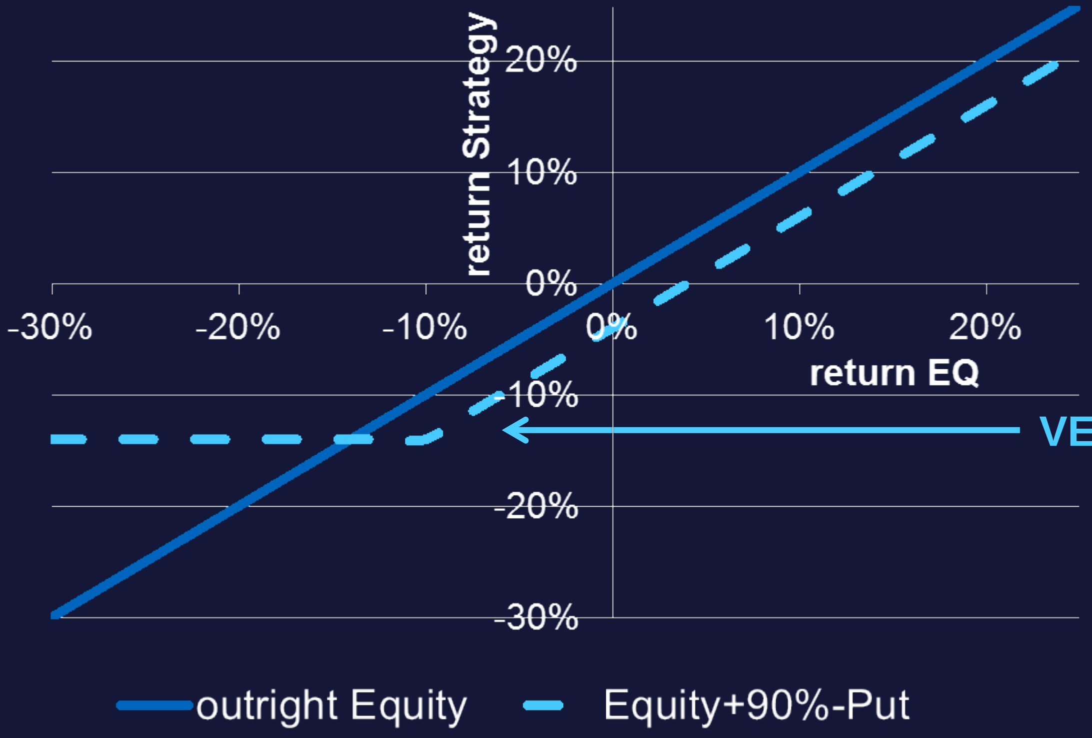
+Puts
(90%-strike)

+

Volatility Control

The views / opinions expressed are those of the author as at the time of writing, may not necessarily come to pass, are subject to change based on market, economic and other conditions, and do not necessarily represent those of the Morgan Stanley

Option Overlay Strategy



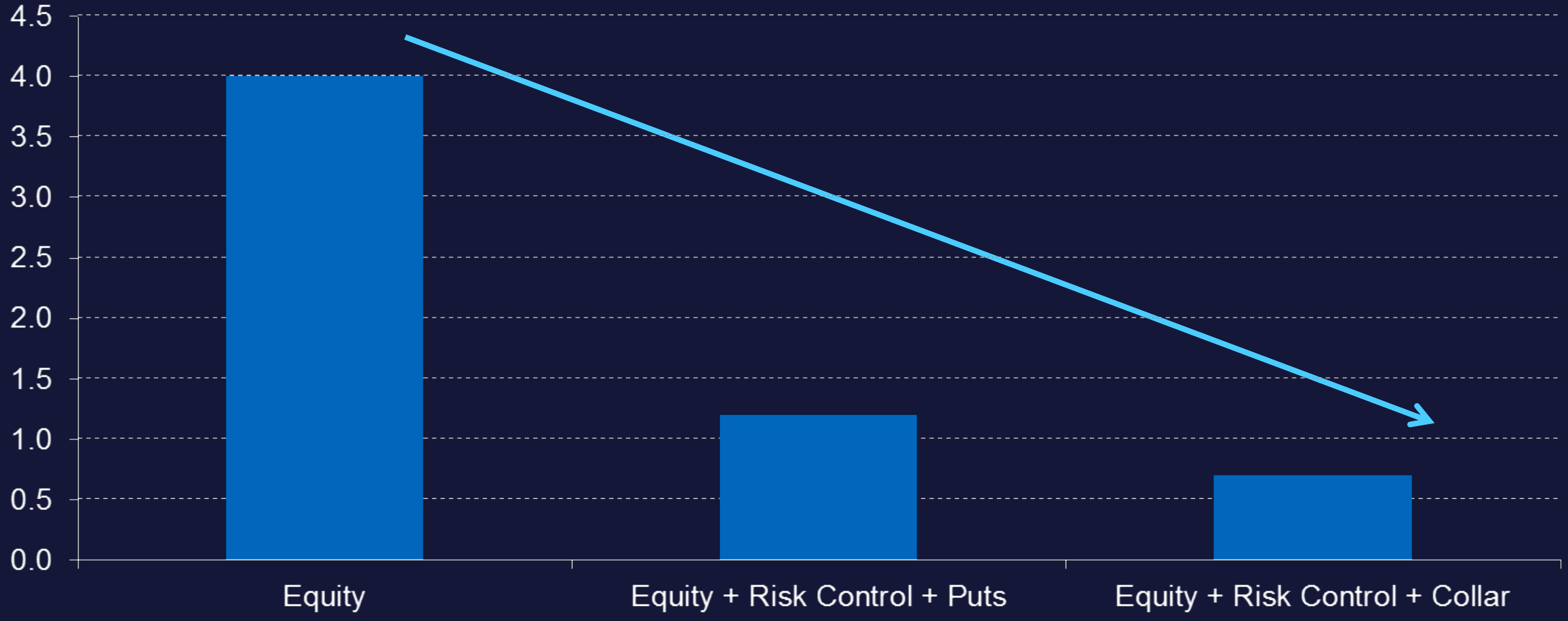
VEV goes down from 30% to ca. 14%

Outright VEV level = 30%

For illustrative purposes only.

Option Overlay Strategy

Impact on Protection Cost [% of underlying notional; annual]



For illustrative purposes only.

Capital Efficiency goes up in protected Equity

$$Economic\ Efficiency = \frac{Expected\ Return - Hedging\ Cost^{1}}{reduced\ economic\ risk}$$

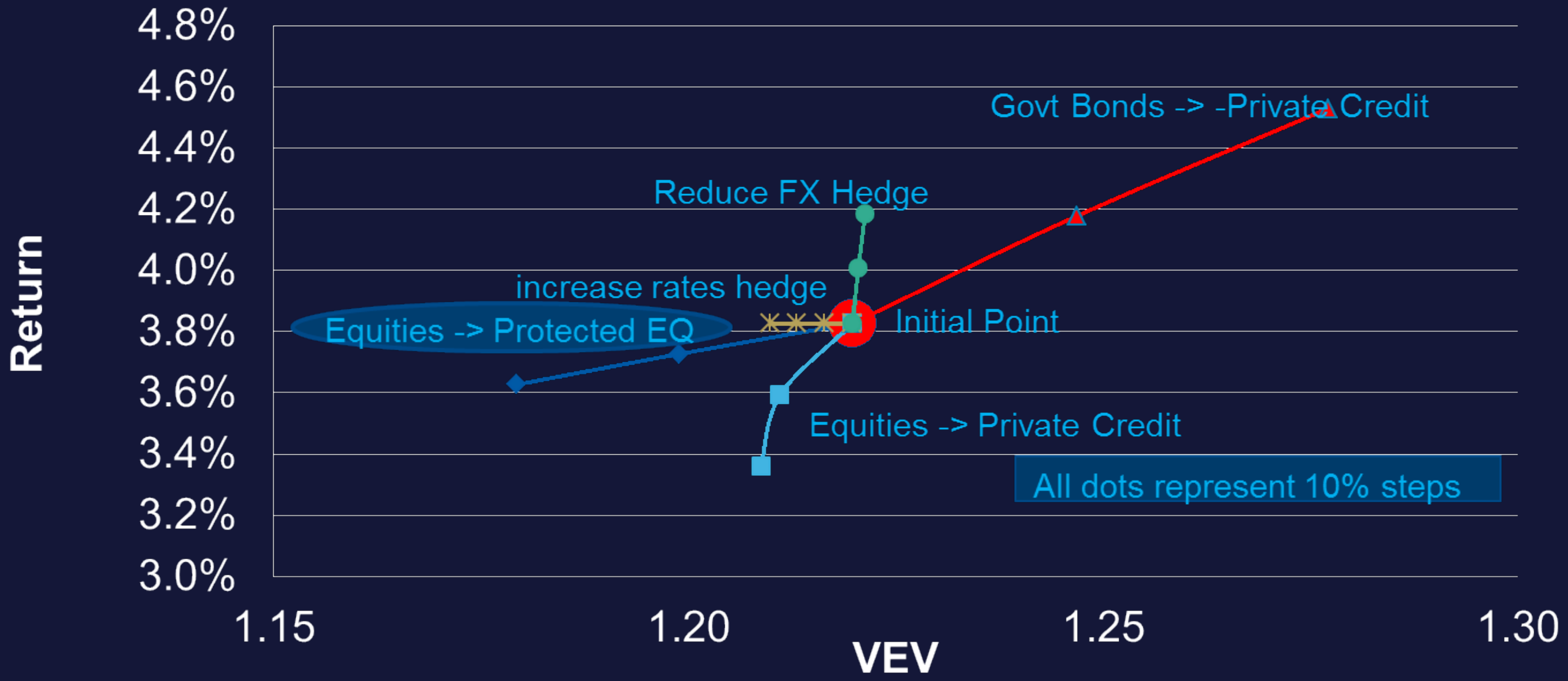
$$Capital\ Efficiency = \frac{Expected\ Return - Hedging\ Cost}{reduced\ VEV\ charge\ of\ ca.14\%}$$

1. Keep Expected Return on Equities up
2. Keep cost of hedging down
3. Attain VEV reduction

1. Note that hedging costs are defined as premium of options minus expected payoff

The above represents the views and opinions of MSIM as of the date hereof and not as of any future date. Market developments may cause reassessment of these views at any time, and, consequently, these views may change at any time.

Impact SAA on VEV and expected return



Source: Morgan Stanley in-house analysis, Dec-17

Provided for illustrative purposes only and not intended to depict the performance of a specific instrument

SECTION 4

Conclusions

Conclusions

Return Portfolio to generate excess return

- Main driver indexation ambition

Return Portfolio design considerations

- Largest return from Equity Risk Premium
- Alpha important; overall less impact on VEV
- New techniques for stabilisation equity returns available
  - “cheaper” (using risk control, also less pay-off)
  - Efficient from VEV perspective

The views / opinions expressed are those of the author as at the time of writing, may not necessarily come to pass, are subject to change based on market, economic and other conditions, and do not necessarily represent those of Morgan Stanley

Morgan Stanley Investment Management Team

Helmut Cardon

Insurance and Pension Strategy

helmut.cardon@morganstanley.com

Helmut Cardon is a European Insurer and Pension Strategy Specialist. His focus is on strategic asset allocation, risk management and regulatory developments. Helmut joined Morgan Stanley 12 years ago within the European Pensions Group, and prior to that worked with Shell International and Shell's Pension Fund. Helmut holds Masters degrees in Mathematics and Computer Science, both from Leiden University.

Pepijn Heins

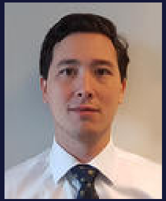
Head of Benelux Coverage

pepijn.heins@morganstanley.com

Pepijn is Head of the Benelux Sales team and is responsible for developing new relationships as well as maintaining existing relationships in the region. He joined Morgan Stanley in 2013. Before joining MSIM, Pepijn spent three years at Eaton Vance where he was Head of Business Development for Europe. Prior to that he was with Goldman Sachs Asset Management for nine years where he was responsible for Business Development in The Benelux. Pepijn started his career at Kas Bank in Amsterdam. He holds a Bachelor degree in Business Administration from Nyenrode University and a Masters in Economics from the University of Maastricht.

Shan Twan The

Benelux coverage



shan.twan.then@morganstanley.com

Shan Twan is a member of the Benelux client coverage team and is responsible for developing new relationships as well as maintaining existing relationships in the region. He joined Morgan Stanley in 2014. Before joining MSIM, Shan Twan spent six years at Towers Watson where he was an investment consultant advising investment committee of pension funds. Prior to that he worked as a hedge fund analyst at Steenman Asset Management. Shan Twan received an MSc in Business Administration from the Erasmus University Rotterdam and holds the Chartered Alternative Investment Analyst designation.

Important

For Professional Clients Only

This communication was issued and approved in the U.K. by Morgan Stanley Investment Management Limited, 25 Cabot Square, Canary Wharf, London E14 4QA, and regulated by the Financial Conduct Authority.

This communication is only intended for and will be only distributed to persons resident in jurisdictions where such distribution or availability would not be contrary to local laws or regulations.

The document has been prepared solely for information purposes and does not constitute an offer or a recommendation to buy or sell any particular security or to adopt any specific investment strategy. The material contained herein has not been based on a consideration of any individual client circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.

Except as otherwise indicated herein, the views and opinions expressed herein are those of Morgan Stanley Investment Management, are based on matters as they exist as of the date of preparation and not as of any future date, and will not be updated or otherwise revised to reflect information that subsequently becomes available or circumstances existing, or changes occurring, after the date hereof.

This communication is not a product of Morgan Stanley's Research Department and should not be regarded as a research recommendation. The information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

Any index referred to herein is the intellectual property (including registered trademarks) of the applicable licensor. Any product based on an index is in no way sponsored, endorsed, sold or promoted by the applicable licensor and it shall not have any liability with respect thereto.

All information contained herein is proprietary and is protected under copyright law.

Risk considerations

Past performance is not a guarantee of future performance. The value of the investments and the income from them can go down as well as up and an investor may not get back the amount invested. There can be no assurance that the strategy or investment vehicle will achieve its investment objectives.