

Hoe bouw je een portefeuille met aantrekkelijke en stabiele rendementen?

IPFOS Informatietafel Bestuurders, 6 April 2023

Belangrijk om robuuste portefeuilles te bouwen

Verbetering “risk-adjusted” rendement

- Hoger rendement voor minder risico

Risico is niet alleen volatiliteit

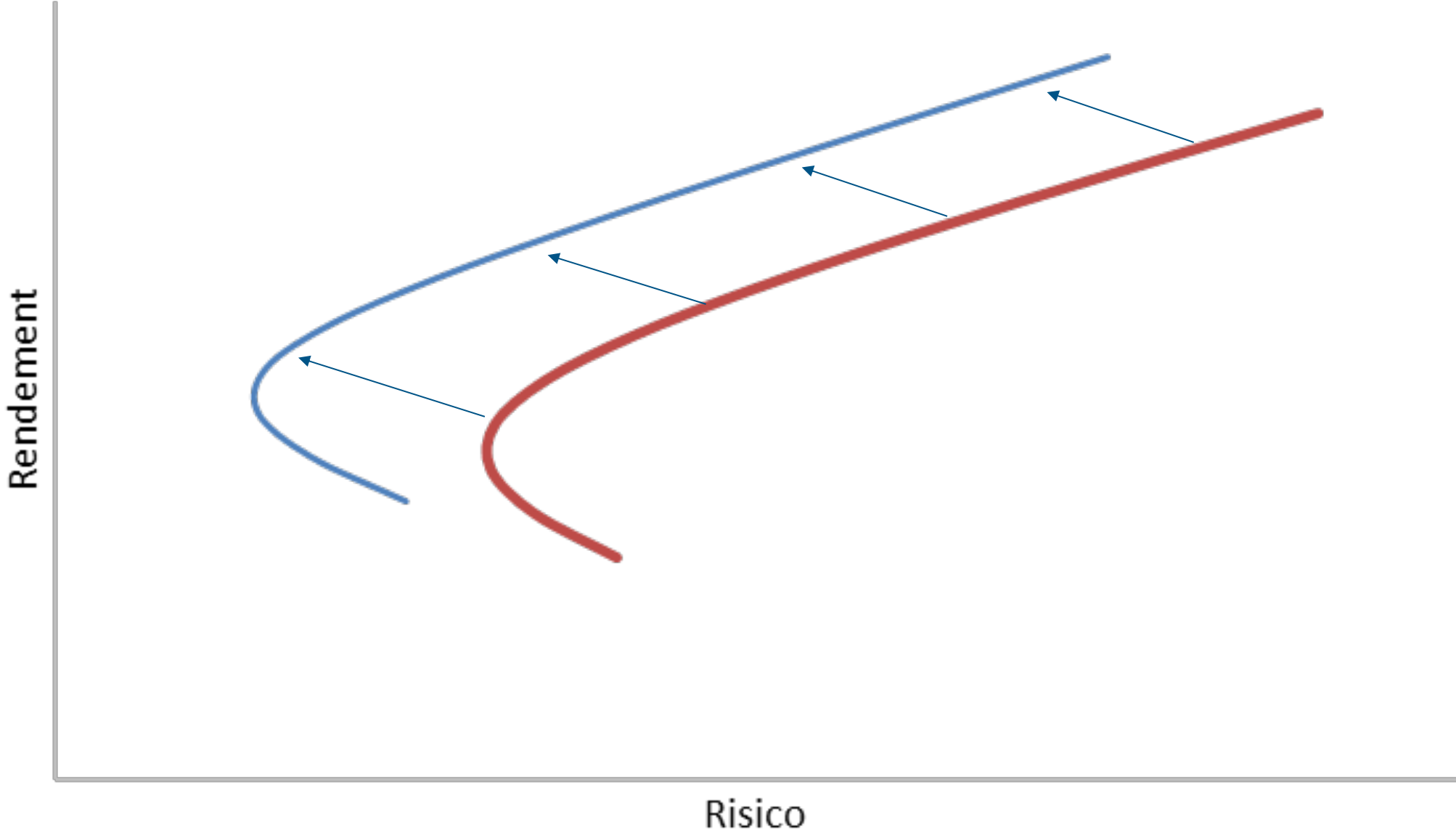
Andere risico dimensies:

- Inflatie risico
- Staart risico

Nieuw pensioencontract

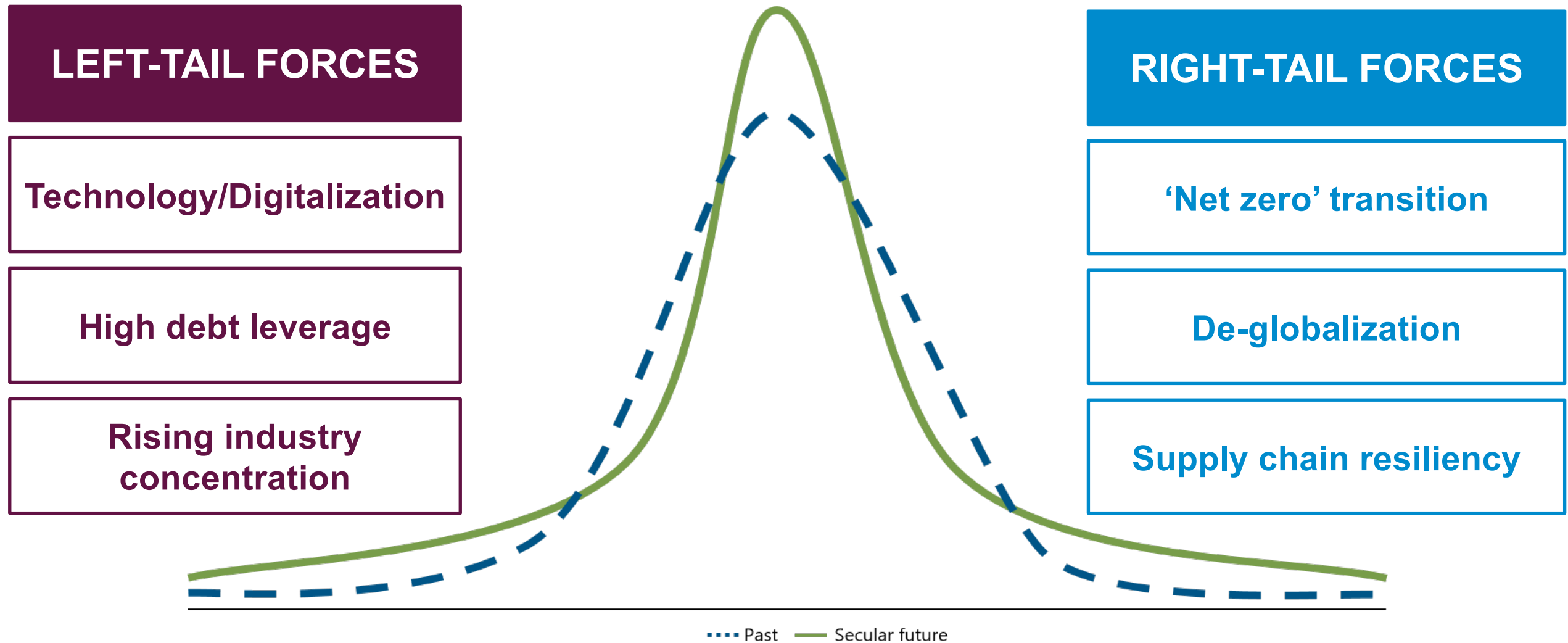
- Gerealiseerde rendementen werken direct door in waarde toegekende pensioenbesparingen en (geprojecteerd) pensioen

Verbeter risico-rendementsverhouding



Risico is niet alleen volatiliteit: Inflatie

Het post-Financiële Crisis tijdperk van lage, stabiele inflatie ligt waarschijnlijk achter ons



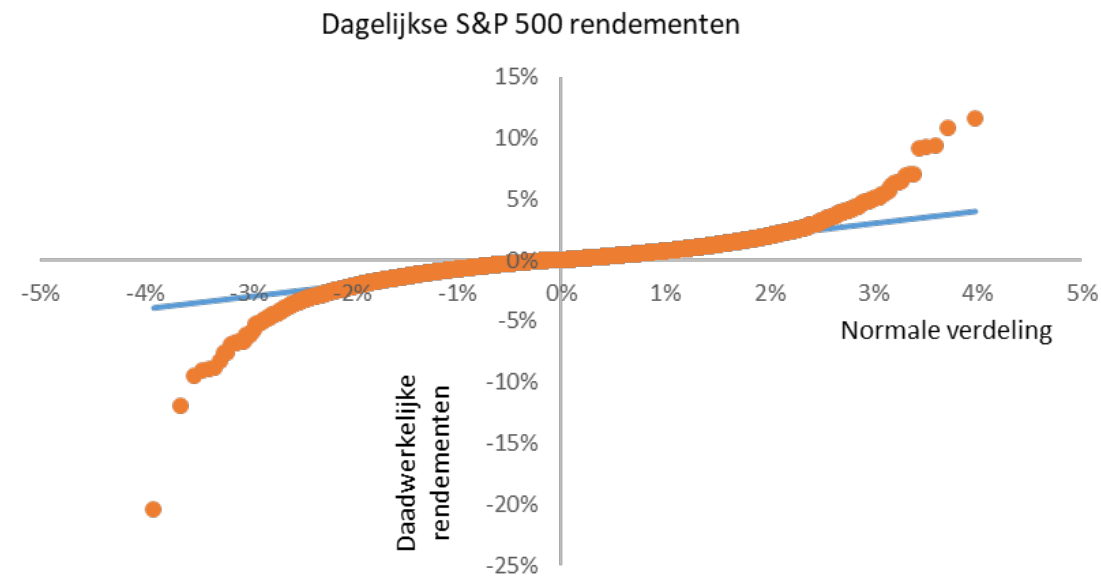
As of 28 February 2023. SOURCE: PIMCO.

The views and expectations expressed are those of PIMCO. There can be no guarantee that the trends mentioned above will continue. Statements concerning financial market trends are based on current market conditions, which will fluctuate. For illustrative purposes only.

Staart risico

Extreme uitkomsten komen veel vaker voor dan risicomodellen voorspellen

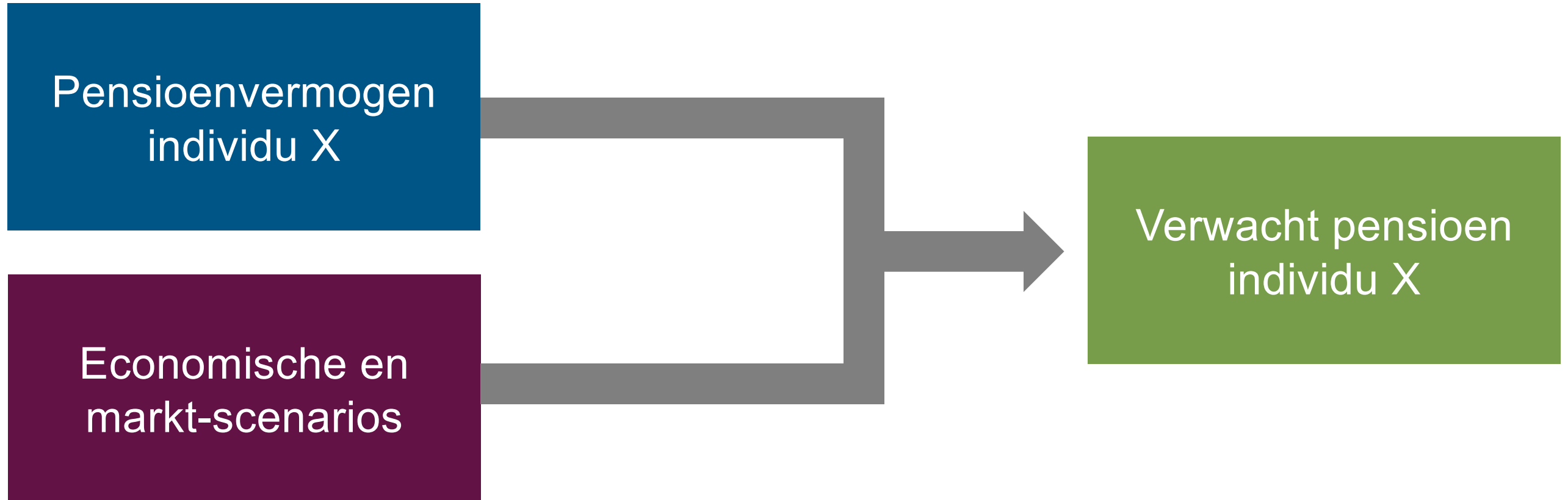
Dagelijkse data S&P500 (1950-2023, 18.935 handelsdagen)		
Verandering groter dan	Normale verdeling (verwacht)	Daadwerkelijk
1%	6.008 dagen	3.902 dagen
3%	51 dagen	276 dagen
5%	1 dag	57 dagen
7%	Eens in 1.5 miljard jaar	19 dagen



Source: PIMCO, Bloomberg, as of 17-Mar-2023. Example for illustrative purposes only

Nieuw Pensioencontract

Directe relatie tussen rendement en (verwacht) pensioen

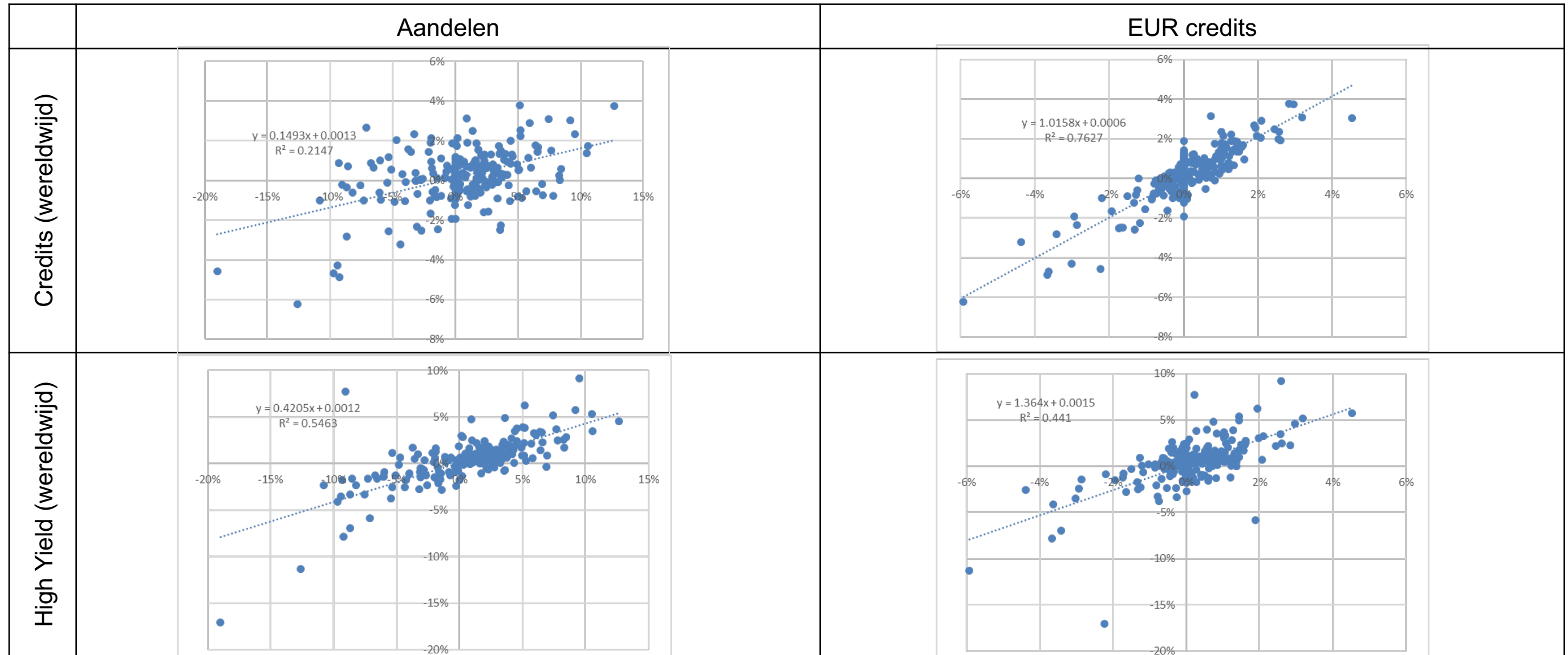


Substantiële daling van opgebouwd vermogen zal doorgaans leiden to substantiële daling (verwacht) pensioen

Source: PIMCO. Example for illustrative purposes only

Hoe maak je portefeuilles robuuster? - "Diversification is the only free lunch"

Meestal ruimte voor meer diversificatie, maar "beta" doorgaans positief



Source: PIMCO. As of 28-Feb-2023. Based on monthly data since 2003. Equity returns based on S&P500 total returns, Euro Credit based on Bloomberg Barclays EUR agg credit index. Global credit based on Bloomberg Barclays global agg credit index – EUR hedged. Global High Yield returns based on ICE BB-B constrained global developed market index – EUR hedged

Diversification is the only free lunch

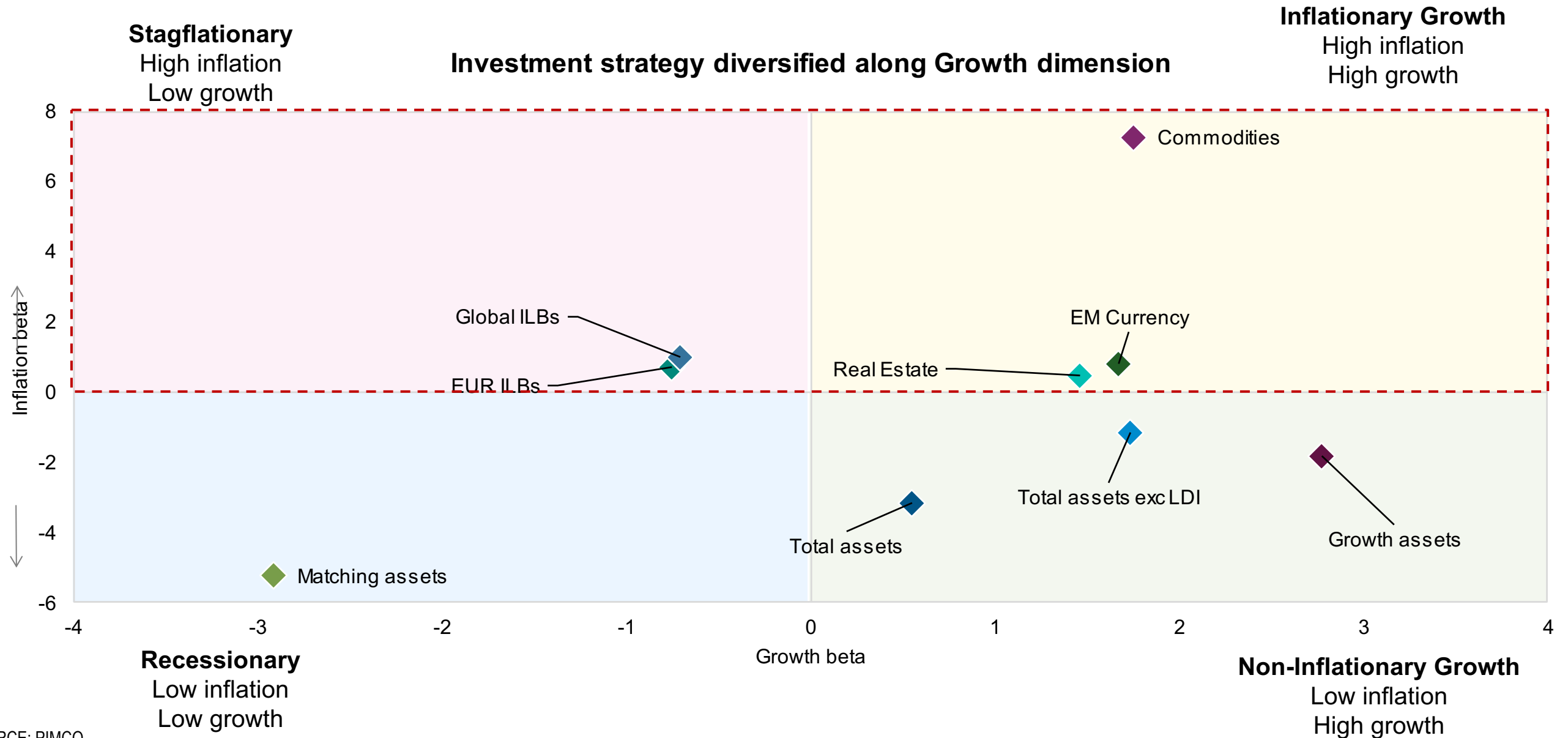
Alpha is beste "diversifier" – lage correlatie en lage/geen beta

	Aandelen	EUR credits
Emerging Market Debt	<p>Scatter plot showing the relationship between Emerging Market Debt (Y-axis, -20% to 10%) and Aandelen (X-axis, -20% to 15%). The regression line is $y = 0.3584x + 0.0025$ with $R^2 = 0.3302$.</p>	<p>Scatter plot showing the relationship between Emerging Market Debt (Y-axis, -20% to 10%) and EUR credits (X-axis, -8% to 6%). The regression line is $y = 1.4372x + 0.0024$ with $R^2 = 0.4074$.</p>
Alpha	<p>Scatter plot showing the relationship between Alpha (Y-axis, -2.0% to 2.0%) and Aandelen (X-axis, -20% to 15%). The regression line is $y = 0.2471x + 0.0008$ with $R^2 = 0.1635$.</p>	<p>Scatter plot showing the relationship between Alpha (Y-axis, -2% to 2%) and EUR credits (X-axis, -6% to 6%). The regression line is $y = 0.2471x + 0.0008$ with $R^2 = 0.1635$.</p>

Source: PIMCO. As of 28-Feb-2023. Based on monthly data since 2003. Equity returns based on S&P500 total returns, Euro Credit based on Bloomberg Barclays EUR agg credit index. Emerging Market debt based on JPM EMBI Global index – Euro hedged. Alpha based on before fee alpha of GIS Global Bond Fund

Macro risico dimensies: economische groei en inflatie

Portefeuilles vaak goed gediversificeerd in groei, maar niet in inflatie dimensie



SOURCE: PIMCO

Defensieve strategieën kunnen portefeuilles robuuster maken

Voorbeeld: Trend following

What is Trend-following (or time-series momentum)?

- Follows price trends through long and short positions
- Trend signals generated systematically by computer models
- Trades across global asset classes

Why do markets trend?

Market inefficiencies

- Slow diffusion of new information into securities prices
- Hedging and fund flows
- Portfolio de-risking

Behavioral anomalies

- *Disposition effect*: tendency to hold losers and sell winners
- *Anchoring*: tendency to under-react to new information
- *Confirmation bias*: favor data that confirms current views
- *Representativeness*: Recent changes represent new consensus

Is trend-following defensive?

- Historically, trend-following has performed strongly during equity-market drawdowns

How has trend following performed?

	SG Trend*	Equity***
Return (p.a.)	6.0%	4.7%
Volatility (p.a.)	13.6%	15.8%
Correlation	-0.09	

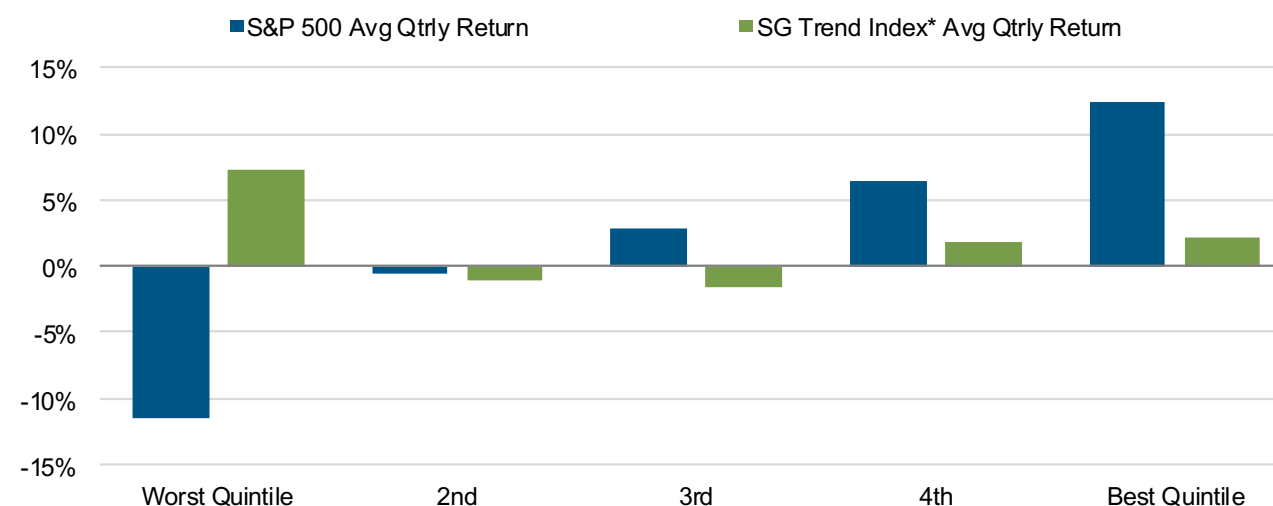
SOURCE: PIMCO, Bloomberg. As of February 2023.

*Formerly Newedge Trend Index. Renamed as of January 2016. Refer to Appendix for additional index, investment strategy and risk information ***MSCI World Index TR USD.

Past performance is not a guarantee or reliable indicator of future results. For illustrative purposes only. Refer to Appendix for additional investment strategy and risk information.

The SG Trend Index* averaged +7.3% during the worst 20% of quarters for the S&P 500

Quintiles of historical S&P 500 quarterly returns



Average outperformance across 10 worst quarters in S&P 500 Index since 2000: +22.5%

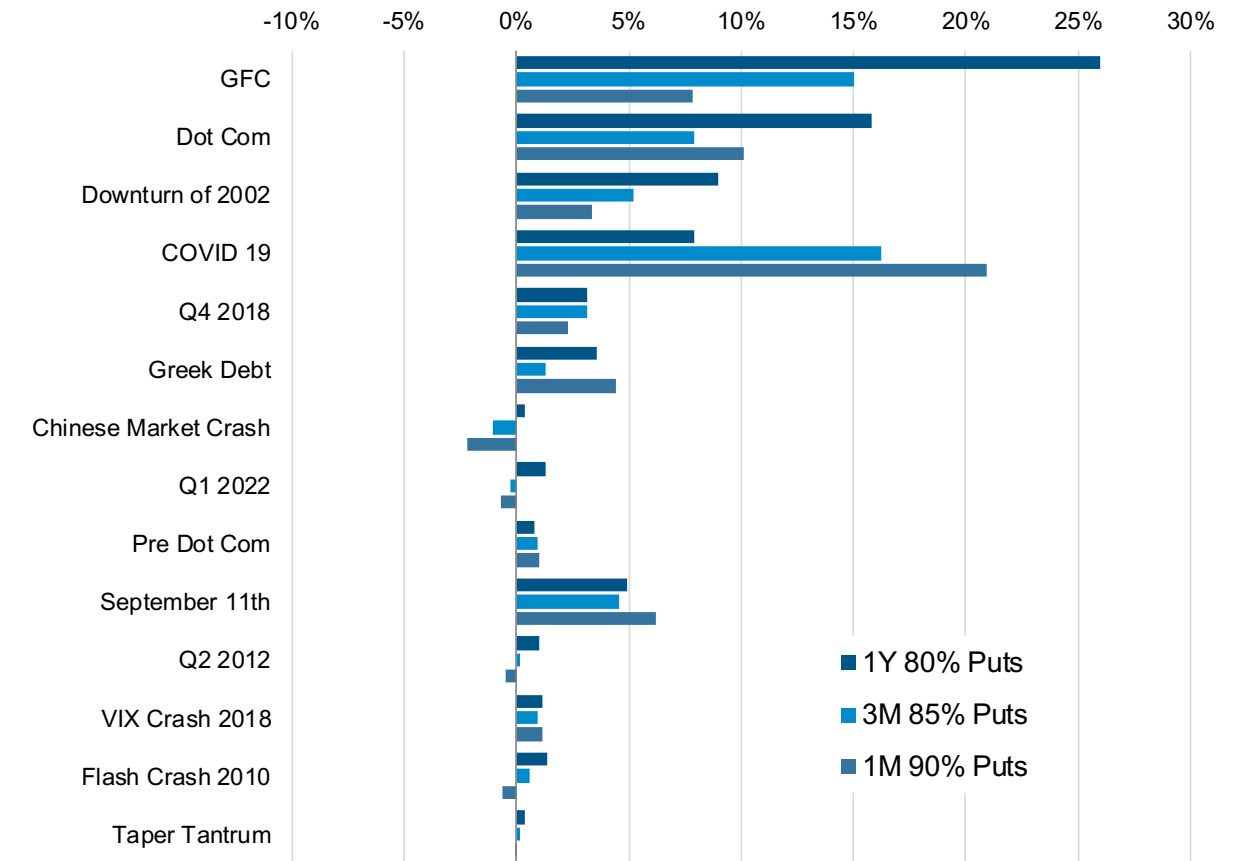
10 worst quarters for S&P 500 since 2000	S&P 500	SG Trend*	Difference
Q4 2008 Global Financial Crisis	-22.6%	12.7%	35.2%
Q1 2020 COVID-19	-20.0%	2.3%	22.3%
Q3 2002 U.S. Accounting Scandals	-17.6%	18.0%	35.6%
Q2 2022 2022 Selloff	-16.4%	9.6%	26.0%
Q3 2001 9/11	-15.0%	3.9%	18.9%
Q3 2011 Taper Tantrum, Euro Crisis	-14.3%	2.4%	16.7%
Q4 2018 Slowing Global Growth	-14.0%	-5.1%	8.9%
Q2 2002 Tech Bubble	-13.7%	15.8%	29.6%
Q1 2001 U.S. Recession	-12.1%	10.6%	22.7%
Q2 2010 U.S. 'Flash Crash'	-11.9%	-3.1%	8.8%

Tail Risk Hedging: effectieve bescherming in scherp dalende markten

Voorbeeld: aandelen index put opties

- Investors generally buy put-based tail protection to hedge against deep, extended drawdowns
- Protection payouts in drawdowns can be used to help avoid the need to sell assets at depressed price to provide liquidity or fund obligations
- 1-year puts are often preferred as they have outperformed in the deeper drawdowns (e.g., GFC, Dot Com, etc.)...
- ... and can do so with less premium spend than equivalent shorter-dated options.
- In practice, performance may be further improved through careful active monetization schemes

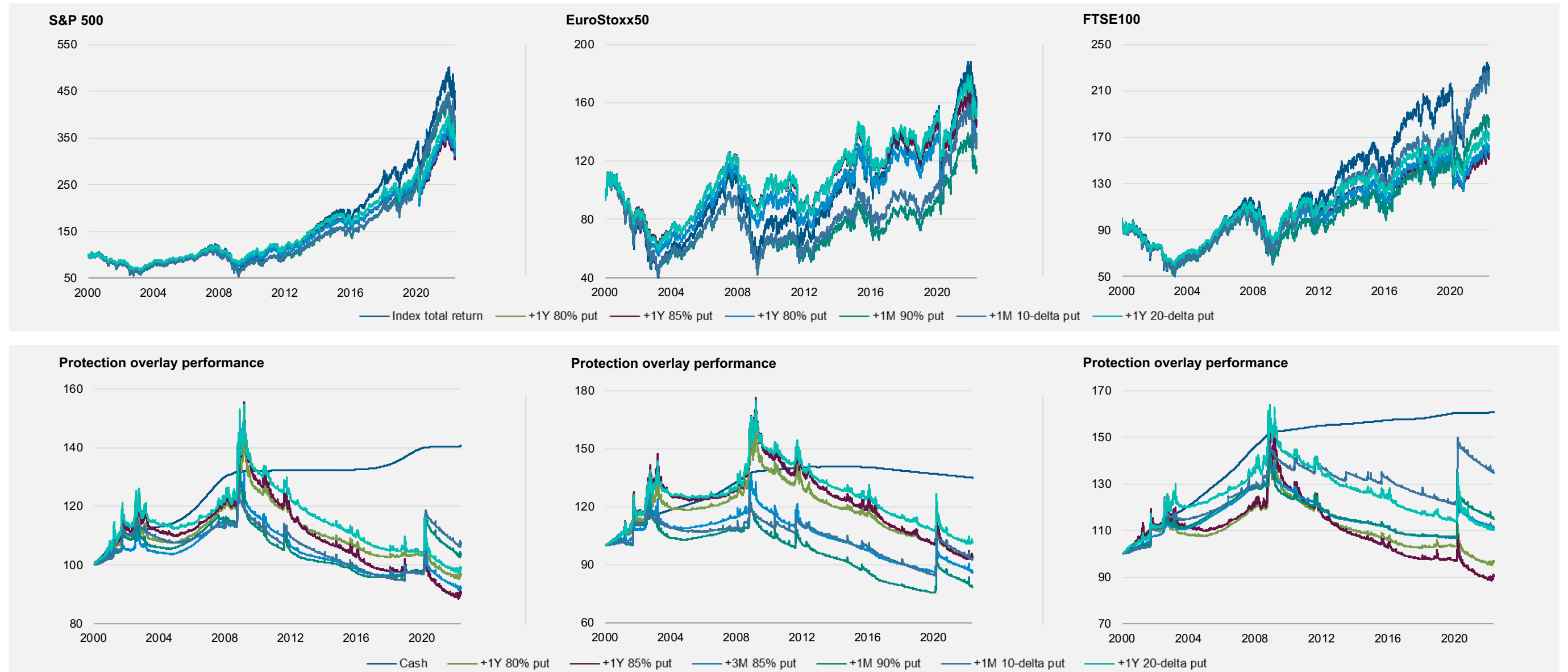
Simulated drawdown performance of put-based protection on S&P500



Source: PIMCO, Bloomberg. As of 30 September 2022

Hypothetical example for illustrative purposes only. Refer to Appendix for additional hypothetical example, index, investment strategy, and risk information.

Maar passieve put optie strategieën hebben rendement gekost



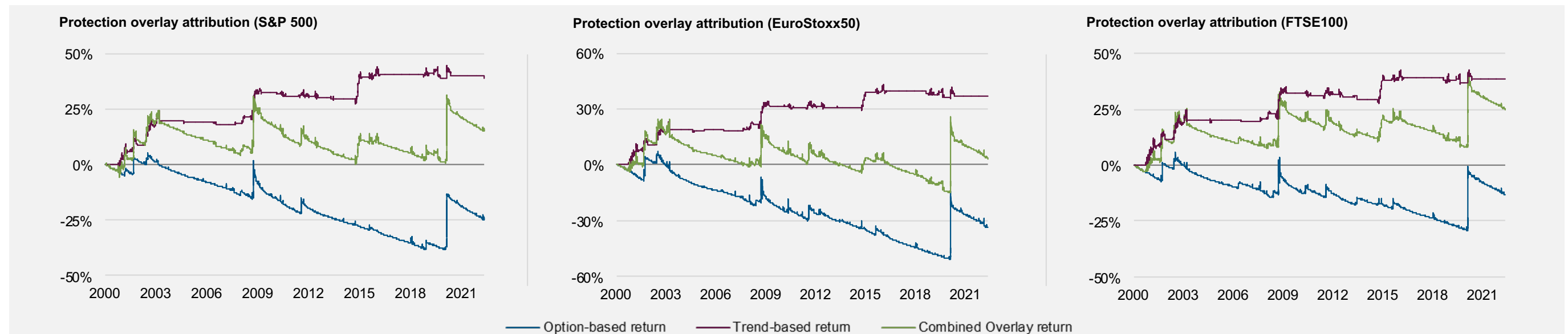
Source: PIMCO, Bloomberg. As of 30 September 2022

Hypothetical example for illustrative purposes only. Refer to Appendix for additional hypothetical example, index, investment strategy, and risk information.

Kunnen we Trend-Following en Tail Risk Hedging combineren?

Hypothetisch rendement van combinatie Trend-following / Put Overlay

- **Trend following** can have strong defensive characteristics; but can fail to mitigate drawdowns in sudden sell-offs
- **Put-based tail hedging** should provide more reliable protection due to the contractual nature of the option payoff
- However, **effectiveness of longer-dated put protection is highly dependent on trend**
 - This is less the case in using shorter-maturity (e.g. 1-month) options
- **Using short-dated options constant in delta** can result in protection that is *more* effective when markets are trending up
- Such protection can naturally complement the defensive properties of trend-following



Source: PIMCO, Bloomberg. As of 30 September 2022

Hypothetical example for illustrative purposes only. Refer to Appendix for additional hypothetical example, index, investment strategy, and risk information.

Samenvatting en Conclusies

Robuuste portefeuilles essentieel

- Beste besteding van risicobudget
- Focus op verschillende risico dimensies
- Voor vertrouwen in nieuwe pensioensysteem

Diversificatie blijft belangrijk

- Wereldwijde strategieën
- Opkomende markten
- Private markten
- Alpha
- Defensieve strategieën (bijv. Trend following)

Expliciete bescherming toevoegen?

- Beleggingscategorieën met positieve inflatie beta: Inflation-linked bonds (ILBs), Commodities, Onroerend Goed
- Optie strategieën zijn effectief om staartrisico's af te dekken, maar kosten vaak rendement
- Interessant om trend following en optie-bescherming te combineren