

April 2020



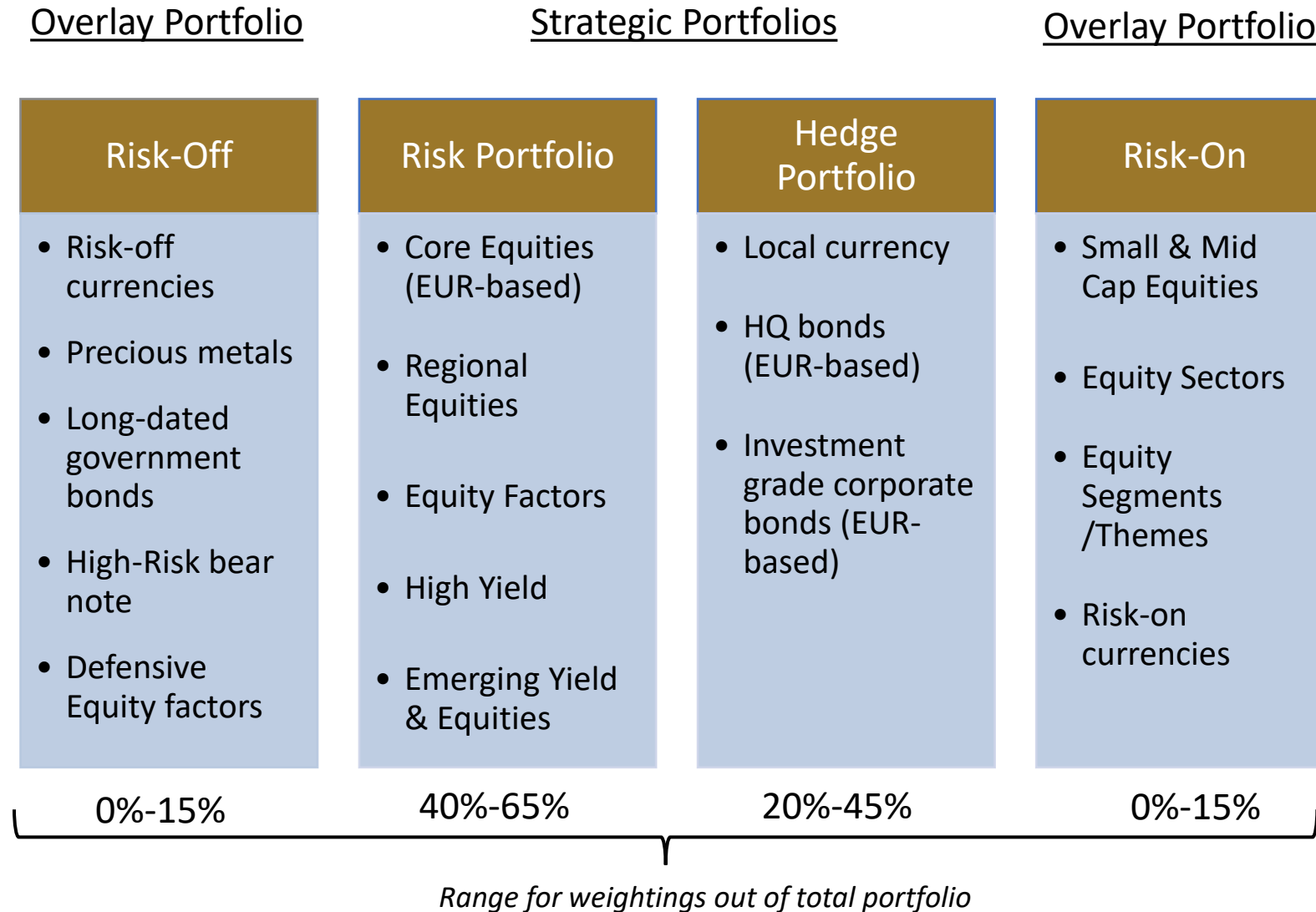
CAP-M

A dynamic allocation fund

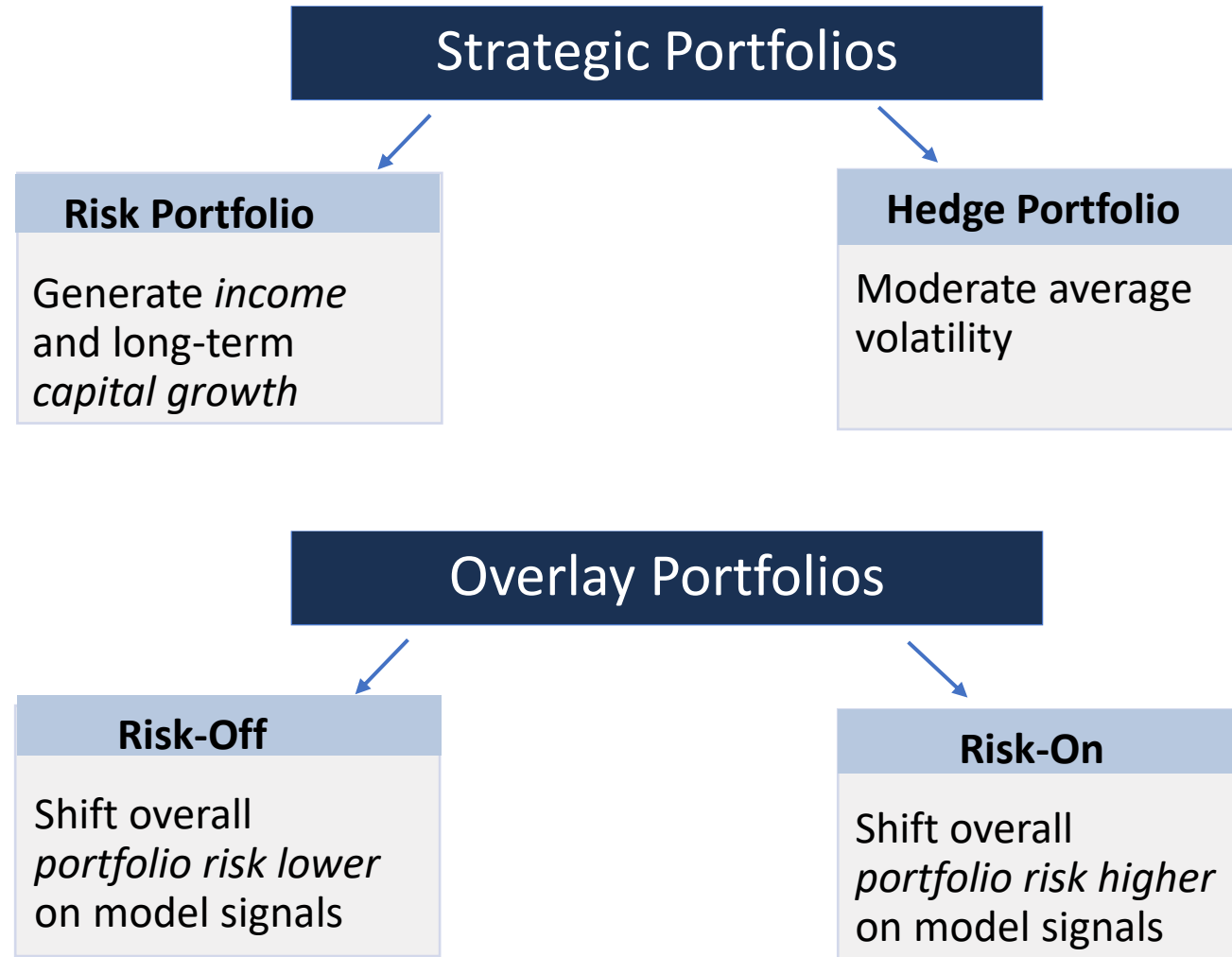
CAP

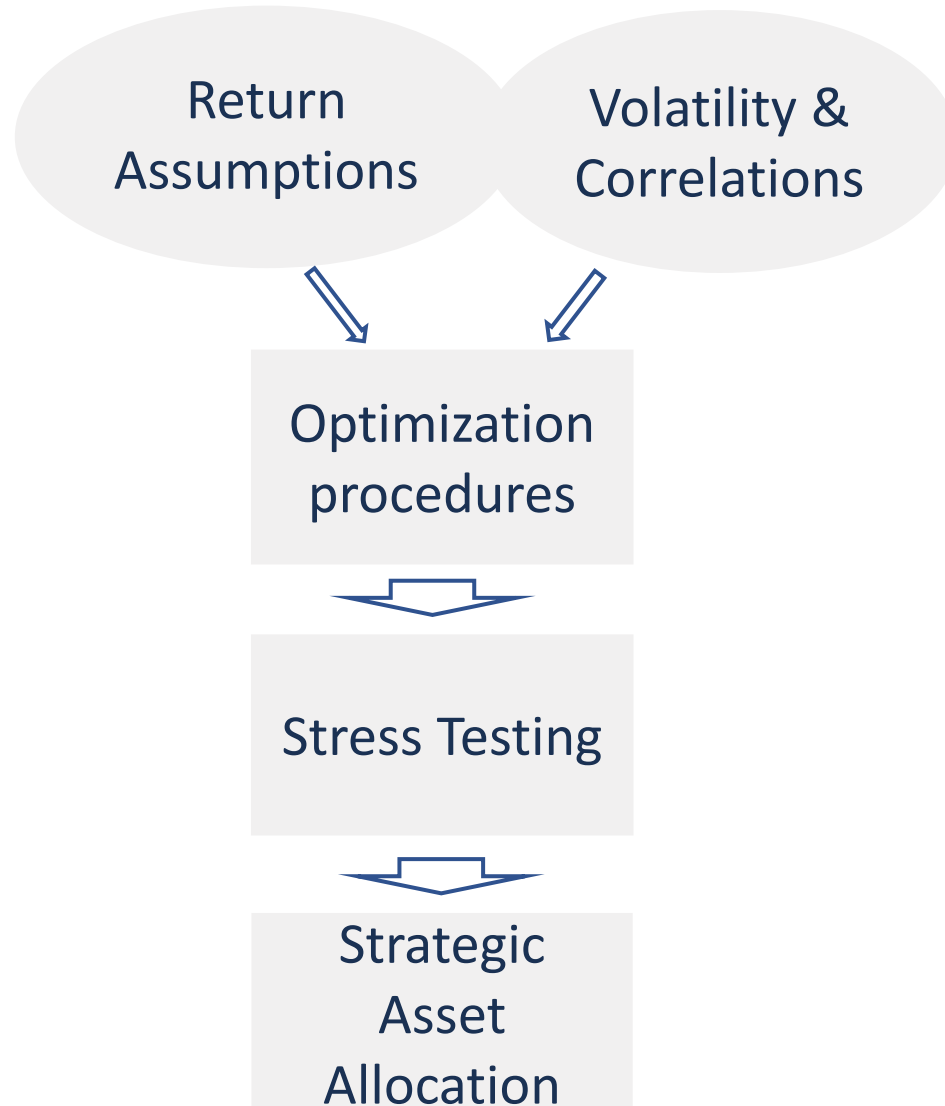
COPENHAGEN
ALLOCATION PARTNER

- ❑ Today's low interest rate environment is a major challenge for investors.
- ❑ The quest for yield has pushed many portfolios towards a greater exposure to *risk assets*. But traditional hedge assets have not sufficed to offset portfolio risk in stress situations, and *illiquid alternatives* have delivered only apparent diversification.
- ❑ Strategic asset allocation is a necessary anchor. But it must be combined with a dynamic overlay. We believe that flexibility and a disciplined, *model-based* approach are key to harvesting long-term returns in a sustainable way.
- ❑ The CAP-M portfolio is created through baskets of single securities, ETFs, and index funds. This ensures a high degree of *fund liquidity, pricing transparency, and cost efficiency*.



□ The CAP-M portfolio is divided into two *strategic* and two *overlay* portfolios

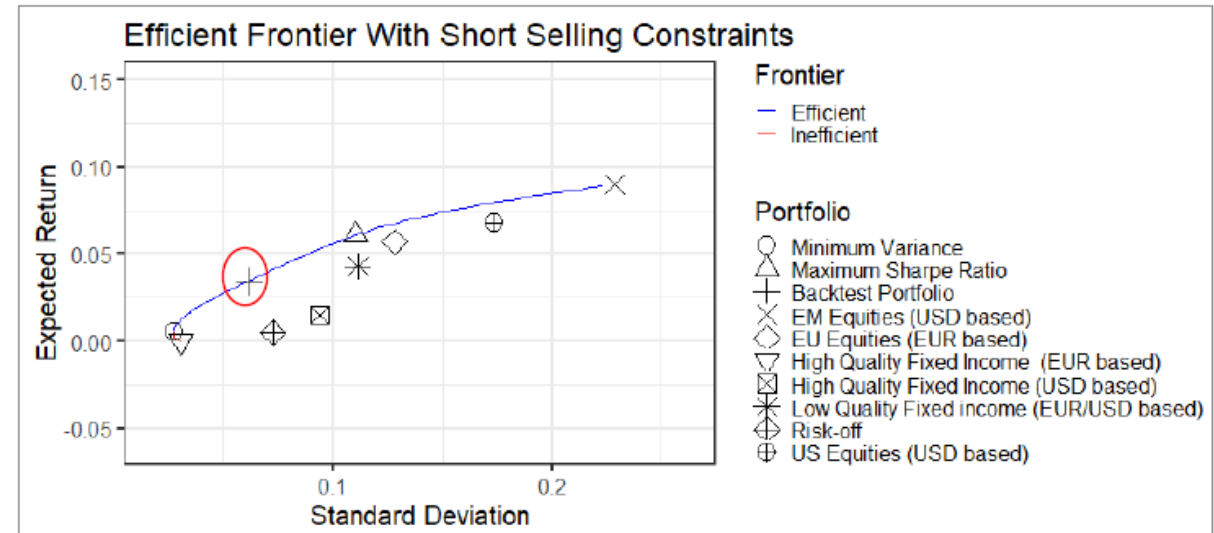


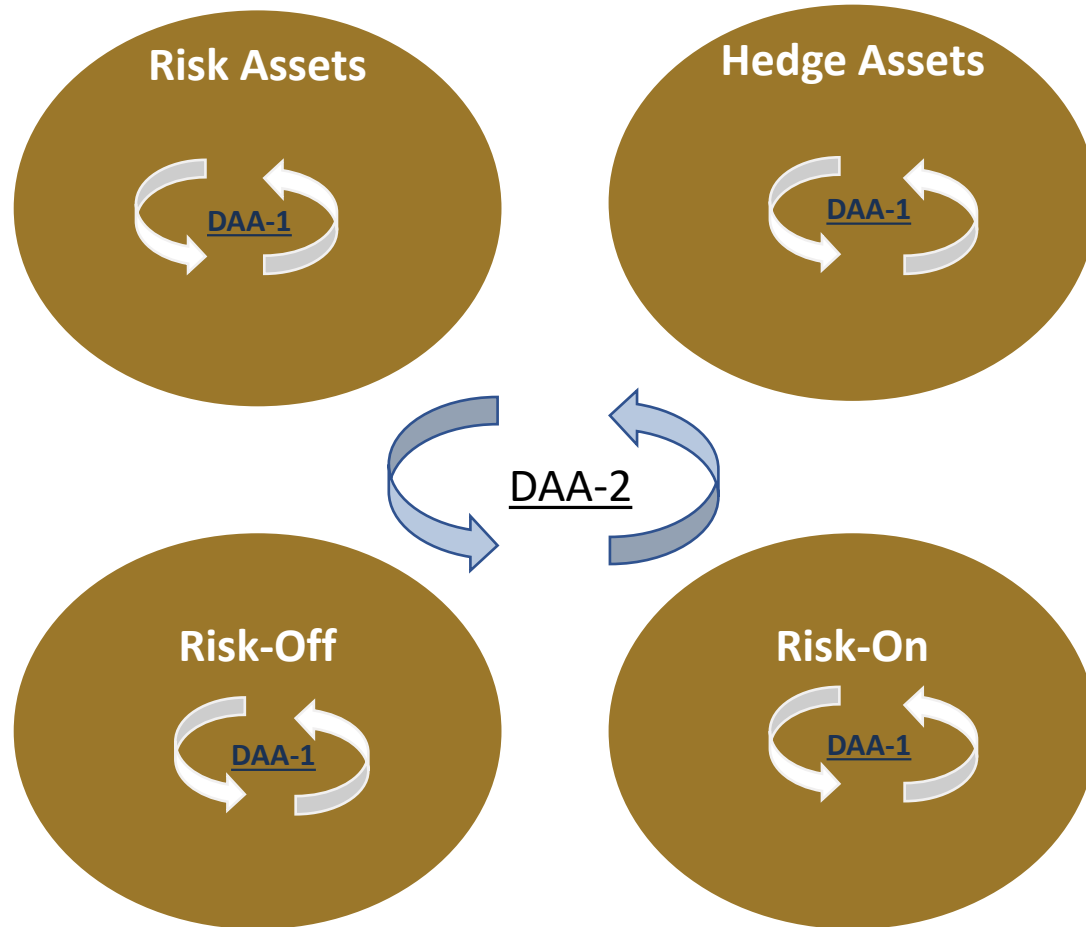


- ❑ Return assumptions for the coming five years are based on our macro-analysis and valuations.
- ❑ Correlations and volatility are based on historical data.
- ❑ We employ two separate optimization procedures to emulate different preferences.
- ❑ Stress-testing is employed to simulate extreme market scenarios and identify the best *ex-ante diversifiers*.
- ❑ The SAA is reviewed on a yearly basis and new information is included in the optimization.

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	EU High Quality Fixed Income (EUR)	US High Quality Fixed Income (EUR)	Risk-off portfolio (FX, Gold ect.) (EUR)	Global Low Quality Fixed income (EUR)	US Equities (EUR)	EM Equities (EUR)	EU Equities (EUR)
CAP-M SAA weighs	32.0%	3.0%	10.0%	15.0%	11.0%	9.0%	20.0%
Expected Avg. 5-year Return (%)	-0.5%	1.5%	0.25%	4.3%	5.8%	8.0%	6.5%
Markowitz optimization							
Strategies:							
Constr. Maximum Sharpe Ratio	0.0%	0.0%	6.6%	29.0%	19.3%	17.2%	35.8%
Constr. Minimum Variance	66.0%	7.3%	12.8%	0.0%	1.7%	0.3%	4.0%
Strategy - aggregated	33.0%	3.7%	9.7%	14.5%	10.5%	8.8%	19.9%





The dynamic overlay is based on monthly reviews of our DREX-models (Dynamic Return Expectations).

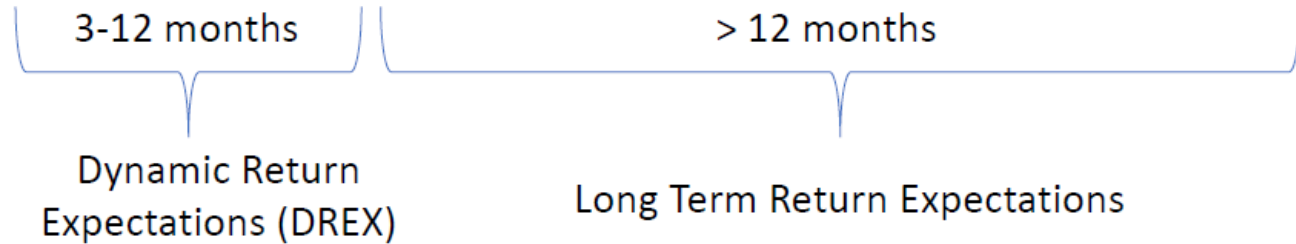
The Dynamic Asset Allocation (DAA) works on two levels:

1. DAA-1: Optimization process *within* each of our sub-portfolios
2. DAA-2: Optimization process *between* the sub-portfolios

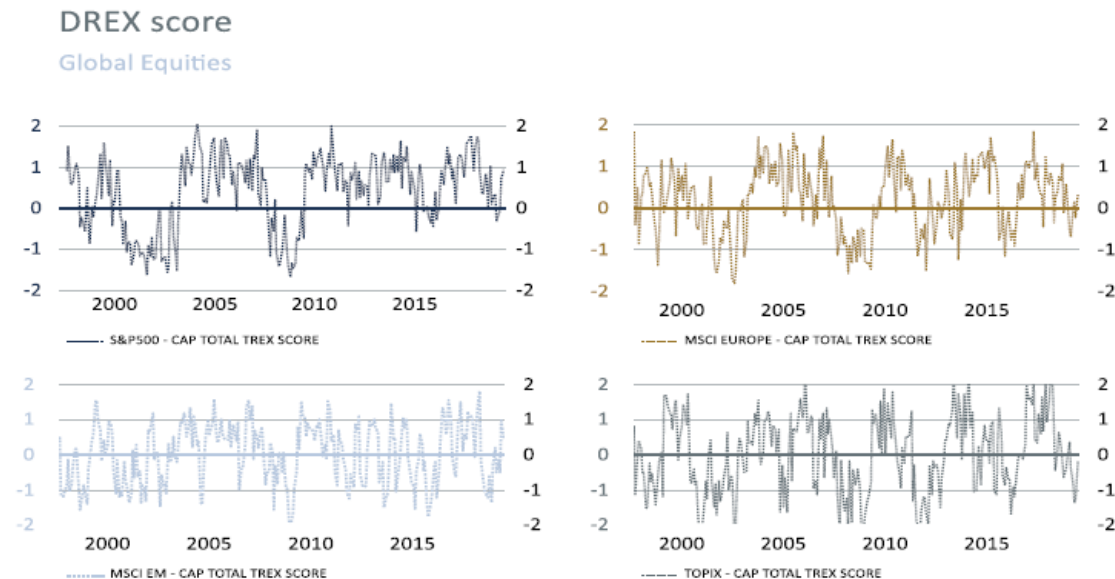
Stage II: Dynamic Return Expectation (DREX)

- ❑ Defining return expectations of investors is key.
- ❑ We model a set of short-to-medium-term return expectations via a systematic process.
- ❑ These work as a supplement to our long-term return expectations.

The CAPM model is typically used with only one-period (long term) return expectations. C.A.P uses a two-period set-up inspired by DCF modelling.



At the asset class level C.A.P uses DREX scores (DREX-1)



Source: Thomson Reuters Datastream, C.A.P

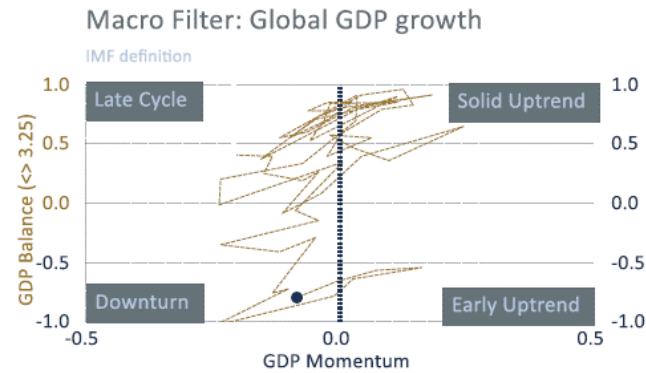
- ❑ An optimization process determines the composition of assets *within* each sub-portfolio: Low-Risk, High-Risk, Risk-Off, & Risk-On.
- ❑ Four sub-scores are computed:
 - Macro
 - Value
 - Carry/Earnings
 - Positioning
- ❑ The aggregated DREX-1 scores are constructed based on the ability of the sub-scores to predict individual asset class returns.
- ❑ As an example, our back-test for MSCI Europe shows that
 - The DREX-1 has the best predictive power over an eight-week horizon
 - The macro-score is the best predictor

Backtest Period	
Start Date	12/12/1997
End Date	9/21/2018

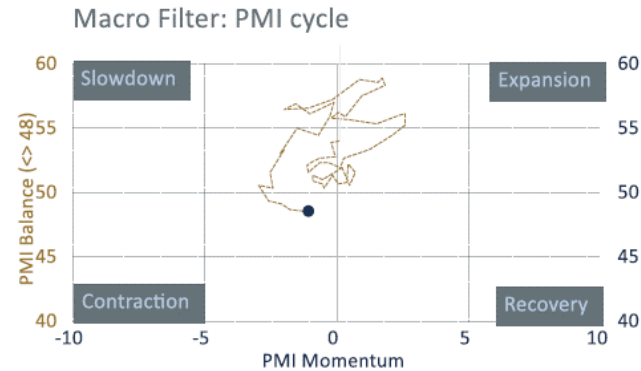
Backtest Specification	
Index	MSCI_EU

	[-2; -1.5[	-1.5; -1[	[-1; -0.5[	-0.5; 0[	[0; 0.5[	[0.5; 1[	[1; 1.5[	[1.5; 2]
Ann. Return 4 weeks								
Macro score	-0.41	-0.08	-0.05	0.03	0.18	0.18	0.14	0.01
Value score	-0.42		-0.02		0.12		0.10	-0.13
Earnings score	0.05		0.04		0.23		-0.07	0.18
Positions score	0.01		-0.03		0.10		0.06	0.05
Total	-0.41	-0.13	-0.07	0.04	0.10	0.15	0.11	0.10
Ann. Return 8 weeks								
Macro score	-0.30	-0.11	-0.04	0.06	0.12	0.16	0.15	0.10
Value score	-0.37		0.02		0.07		0.12	-0.11
Earnings score	0.02		0.00		0.16		-0.02	0.19
Positions score	0.01		0.01		0.08		0.05	0.07
Total	-0.45	-0.14	-0.09	0.05	0.13	0.11	0.14	0.15
Ann. Return 12 weeks								
Macro score	-0.25	-0.05	-0.05	0.04	0.13	0.14	0.15	0.07
Value score	-0.35		0.04		0.05		0.12	-0.07
Earnings score	0.04		0.00		0.16		-0.01	0.16
Positions score	-0.02		0.00		0.07		0.06	0.10
Total	-0.27	-0.10	-0.07	0.04	0.07	0.10	0.13	0.16
Ann. Return 26 weeks								
Macro score	-0.07	-0.02	-0.07	0.04	0.10	0.11	0.15	-0.01
Value score	-0.27		-0.07		0.06		0.10	-0.02
Earnings score	0.06		0.00		0.07		0.04	0.08
Positions score	-0.07		0.04		0.07		0.05	0.08
Total	-0.14	-0.02	-0.08	0.00	0.06	0.12	0.10	0.12

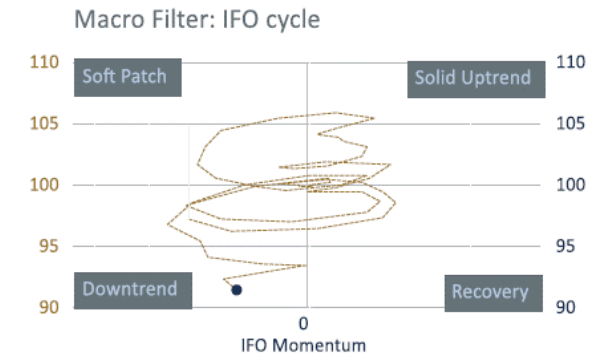
- ❑ DREX-2: Our Investment climate input is a portfolio of indicators.
- ❑ The individual four-phase climate indicators are calibrated and selected according to their ability to predict the return on High-Risk assets over a short to medium-term horizon.
- ❑ Key indicators are shown below.



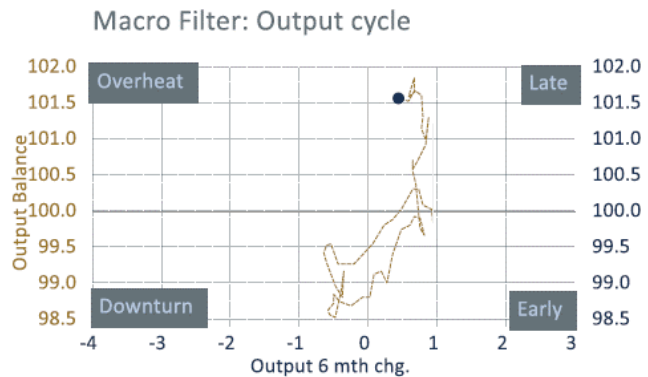
Filter scores: Early Uptrend (2), Solid Uptrend (1), Late Cycle (0.5), Downturn (-2)



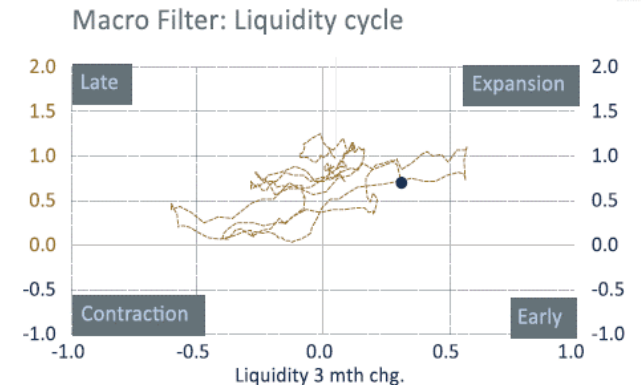
Filter scores: Recovery (2), Expansion(1), Slowdown (0), Contraction (-2)



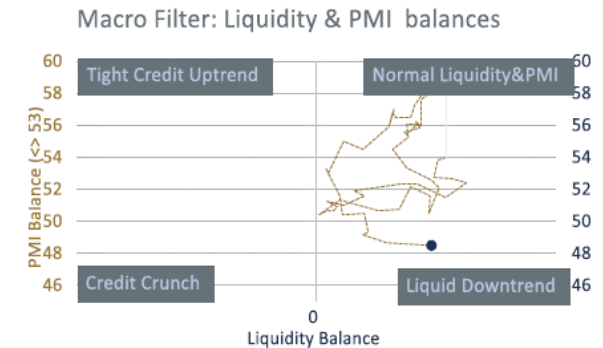
Filter scores: Recovery (2), Solid Uptrend (1), Soft Patch (0.5), Downturn (-1)



Filter scores: Early (2), Late (1), Overheat (0), Downturn (-2)



Filter scores: Early (0), Expansion(2), Late (1), Contraction(-2)

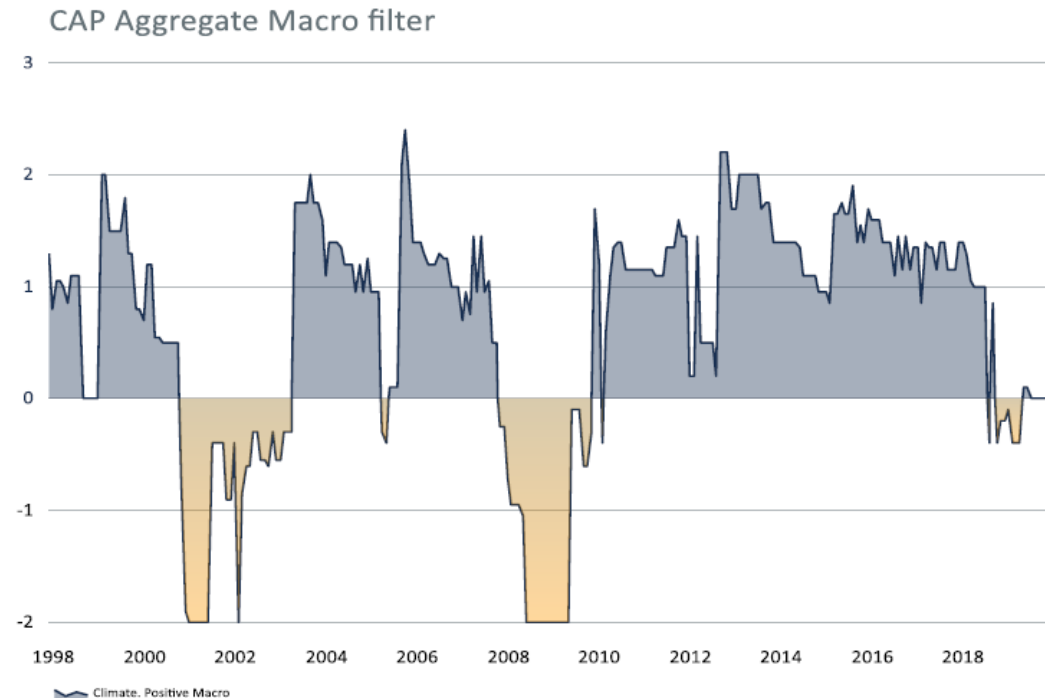


Filter scores: Liquid Downtrend (2), Normal L&PMI (1), Tight Credit Uptrend (0), Credit Crunch (-2)

- ❑ DREX-2 is our dynamic allocation tool used to allocate *between* our sets of sub-portfolios.
- ❑ Composition of our aggregated Macro filter: Positive Macro is found via a back-test of the power to predict the short-to-medium return for High-Risk assets of each of the individual four-phase climate indicators.

CAP Aggregate Macro Filter & different climate indicators

	[-2; -1.5[	[-1.5; -1[	[-1; -0.5[	[-0.5; 0[	[0; 0.5[	[0.5; 1[	[1; 1.5[	[1.5; 2]
Ann. Return 8 weeks								
US Output Gap			-0.01		0.01		0.07	0.15
Global CLI 6mth	-0.23		-0.08		0.11		0.15	0.06
Global CLI - CAP	-0.21					0.13	0.11	0.26
PMI/Liquidity	-0.13				-0.02		0.14	0.18
Total Aggregate	-0.29		-0.07	-0.01		0.01	0.14	0.29
Ann. Return 12 weeks								
US Output Gap			0.01		0.00		0.07	0.14
Global CLI 6mth	-0.18		-0.09		0.11		0.15	0.03
Global CLI - CAP	-0.18					0.12	0.10	0.24
PMI/Liquidity	-0.12				-0.04		0.12	0.20
Total Aggregate	-0.28		-0.05	0.01		0.01	0.12	0.27





Changes in market
sentiment

CAP-M Approach

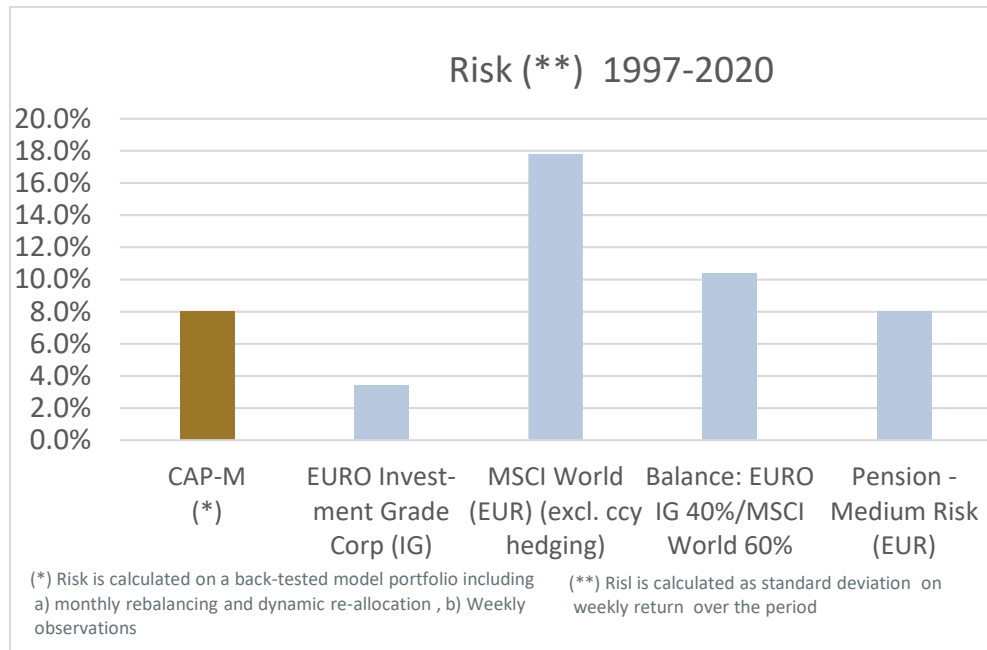
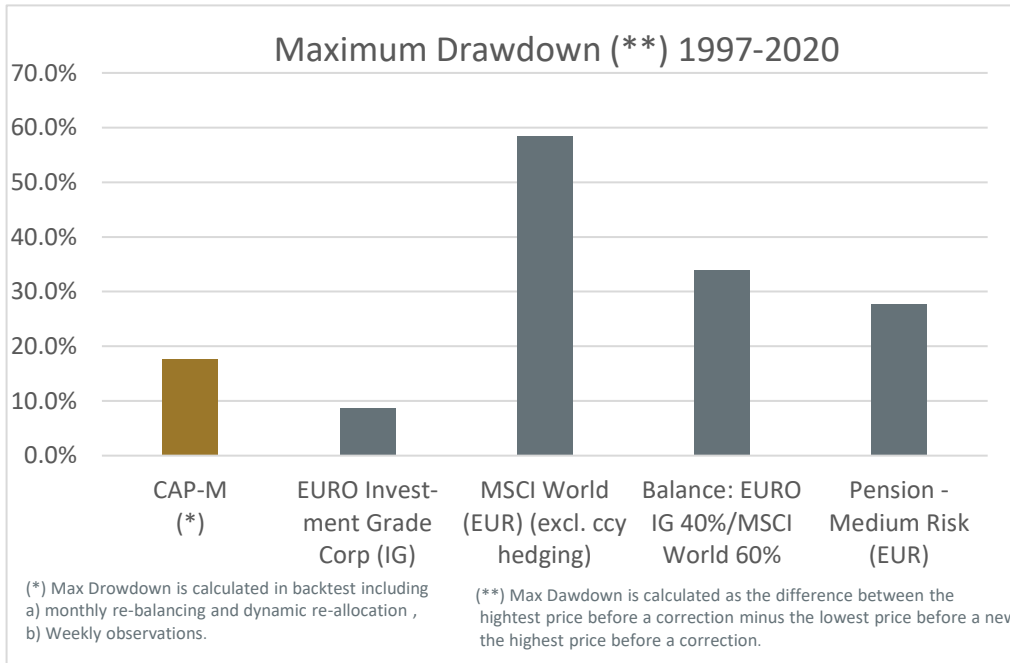
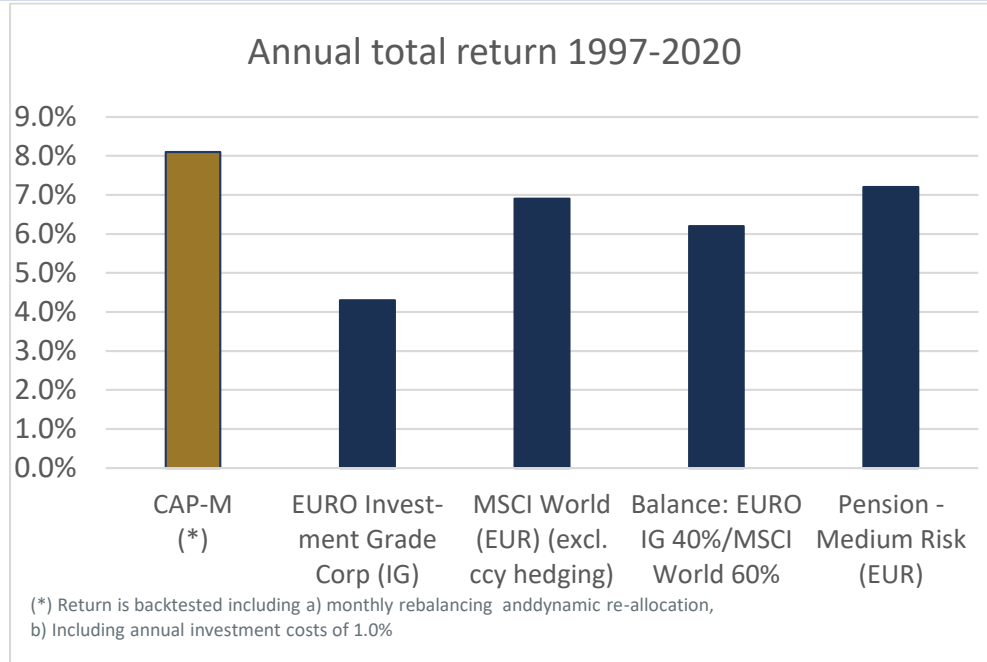


Overall asset
class score =>
Dynamic
weighting

- There is no shortage of short-term qualitative information and focus on single data points.
- This input can impact short-term market sentiment considerably, but its degree of “noise” can mislead the decision process.
- This is the key motivation for an *integrated, model-based* approach.
- The relevant data for each asset class are processed as whole, producing scores which provide the key input to our dynamic weightings.

The CAP-M risk profile is similar to that of a medium-risk pension plan in terms of volatility, and maximum drawdown.

But the dynamic overlay of the CAP-M gives it a higher return potential.



- ❑ Back-testing over recent years confirms that the CAP-M approach can deliver a competitive return and lower correlation with both stocks and bonds.

1997-2020	CAP-M (*)	EURO Invest- ment Grade Corp (IG)	MSCI World (EUR) (excl. ccy hedging)	Balance: EURO IG 40%/MSCI World 60%	Pension - Medium Risk (EUR)
Annualiseret					
Return (TR)	8.1%	4.3%	6.9%	6.2%	7.20%
Sharp	0.74	0.40	0.22	0.30	0.52
Risk	8.0%	3.4%	17.8%	10.4%	8.0%
VaR95	-11.7%	-4.2%	-26.4%	-30.0%	-10.5%
Max Draw Down	17.7%	8.6%	58.5%	34.0%	27.6%
Bond Corr	-7%	57%	-13%	-21.0%	-10%
Equity Corr	73%	20%	100%	91.0%	86%

(*) Model-portfolio performance

Source: C.A.P

The CAP-M Fund: Performance since Inception



CAP-M kl n



- ❑ CAP-M is a long-only, top-down *dynamic asset allocation fund*.
- ❑ It invests exclusively in *liquid assets* and has a practically infinite *scalability*.
- ❑ The CAP-M risk profile is comparable to that of a standard balanced fund, but its dynamic overlay gives it a better return potential.
- ❑ The DAA of the fund is an overlay to its SAA. This overlay reduces:
 - *Correlation* with equities and fixed income.
 - *Down-side* risk in distressed markets.
- ❑ The DAA process is based on proprietary quantitative models. It works in two stages and gives rise to monthly portfolio adjustments.
- ❑ Back-testing shows a significant contribution to return from the DAA.

Invest with us

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Portfolio details

Fonddetaljer:

Andelsklasse CAP—M, kl n

FT-n r. 11200.010.002

SE-n r. 40338322

ISIN—kode DK0061137536

LEI—kode (for afd.)8945001EYN3CC3R52C105