

Danske Formuesforvaltning Proces, events & Outlook

Danske Bank Asset Management, Solutions

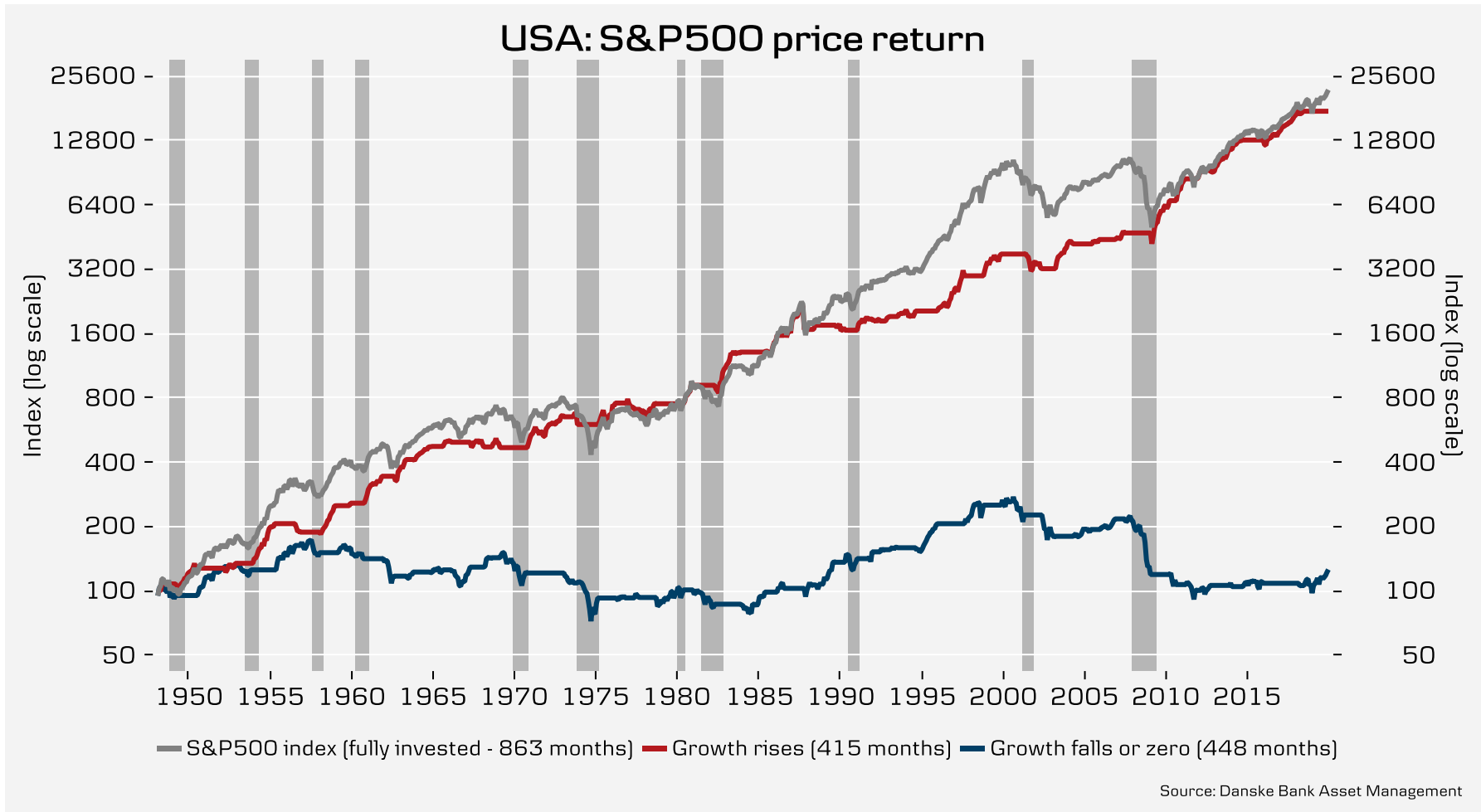
Macro & TAA

Bo Bejstrup Christensen (Chief Portfolio Manager)

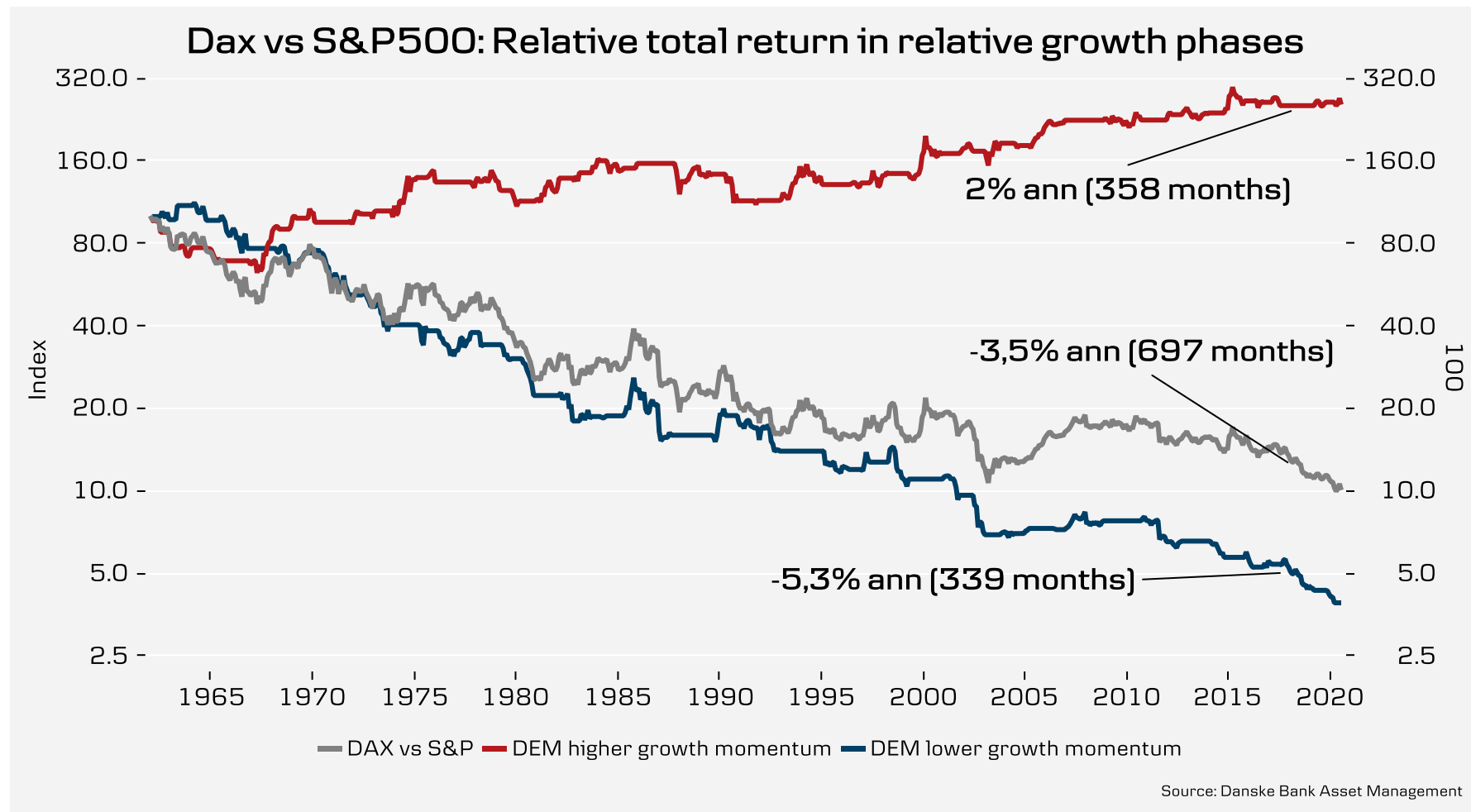
September 1st 2020

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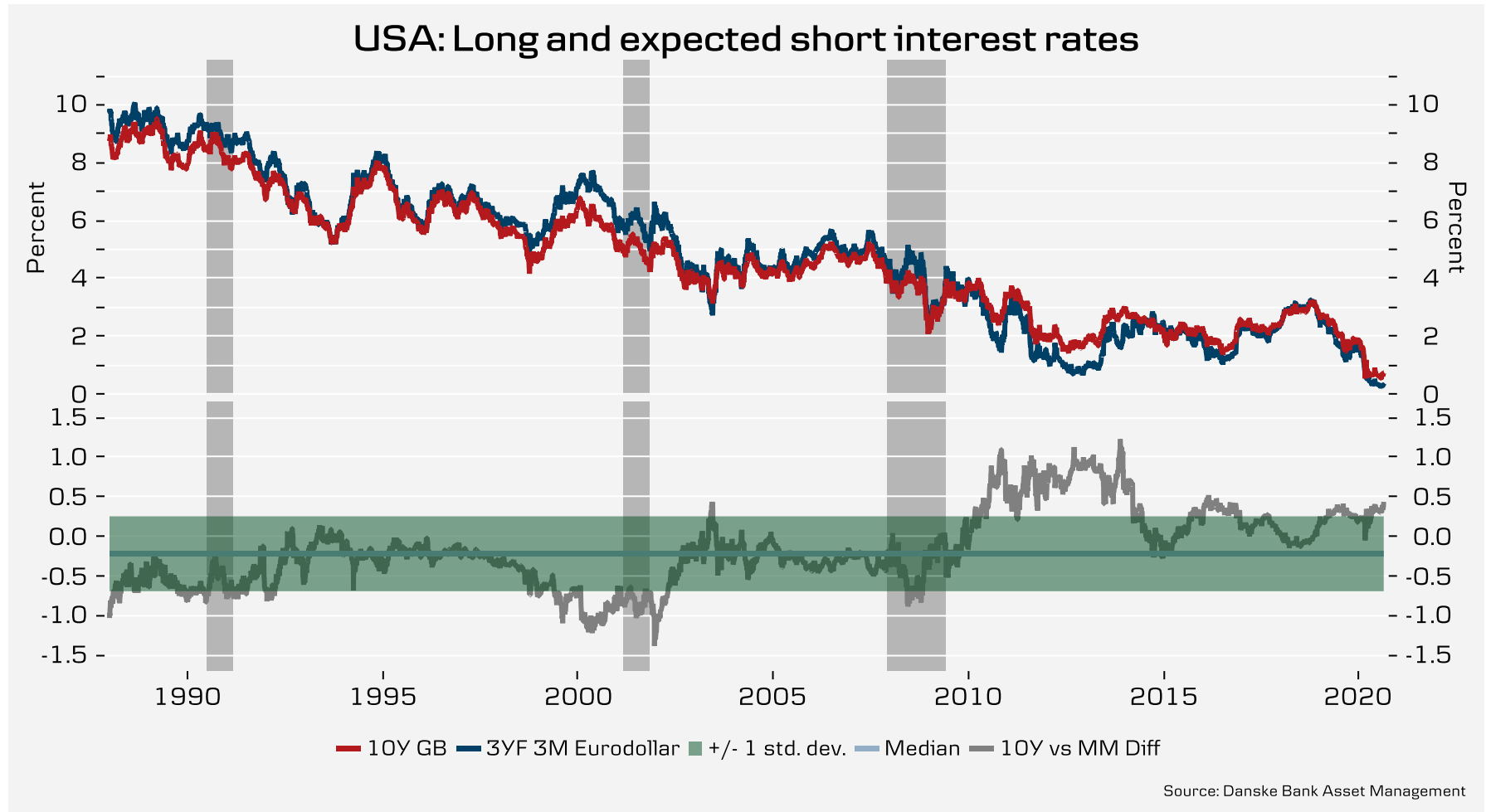
Why we are "top down macro" investors. We earn the equity risk premium when growth rises.



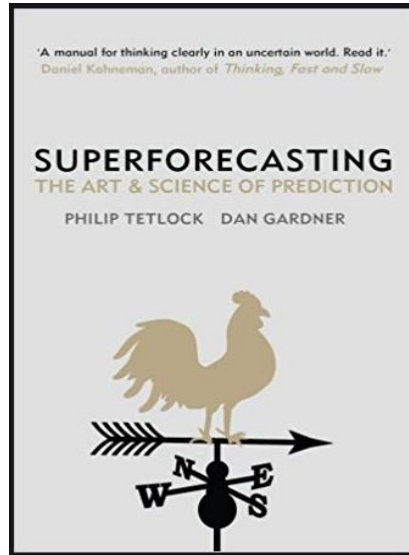
The focus on (relative) growth momentum also applies to (relative) equity returns. Finally...



...get the short term central bank view right and we get (most) of the long end of the curve right.



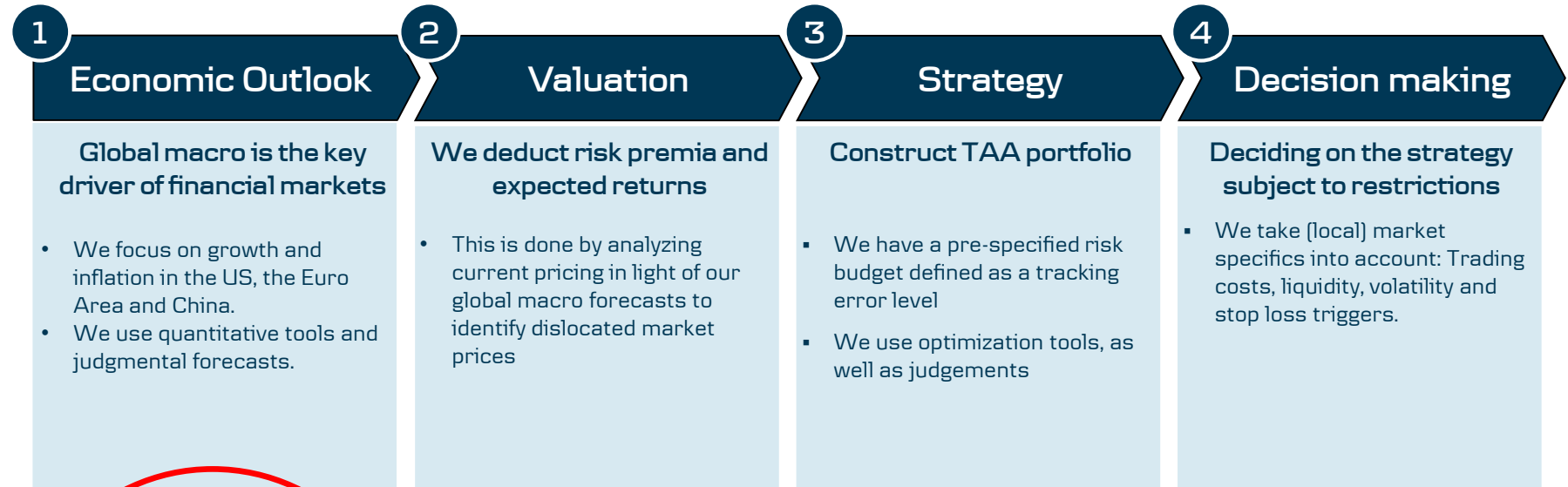
The foundation of our TAA philosophy & proces



- A "manual" for a scientific/evidence based approach to "forecasting"
- Based on 40+ years of empirical work evaluating actual forecasters
- "Normal" people forecasting basically anything you can think of
- Superforecasters...:
 - ...are analytical, open-minded, structured, always ready (and able) to change view i.e....
 - ...they are "System 2" thinkers as per Daniel Kahneman
 - ...update and challenge their conclusions & forecasts *constantly*
 - ...apply *probabilistic thinking*
 - ..."Fermi-nize" the problem i.e. decompose the forecasting problem into parts
 - ...start with an "outside view" (e.g. what can history/precedent tell us) as an anchor and...
 - ...complement with an "inside view" (proprietary analysis & view)
 - ...*react* accordingly at short notice
 - ...improve their results when working together in "superforecaster teams"
- Key features of our current TAA process – we...:
 - ...update all key forecasts (growth, inflation, CB policy, etc) frequently (currently daily)
 - ...update main asset class return forecasts (at 12M) frequently (currently daily)
 - ...analyze & implement portfolio implications as needed (typically minor adjustments) based on Black-Litterman optimization and several judgmental adjustments.
- This is not "a model" – this is a framework managed by people (every day)

TAA Investment Process

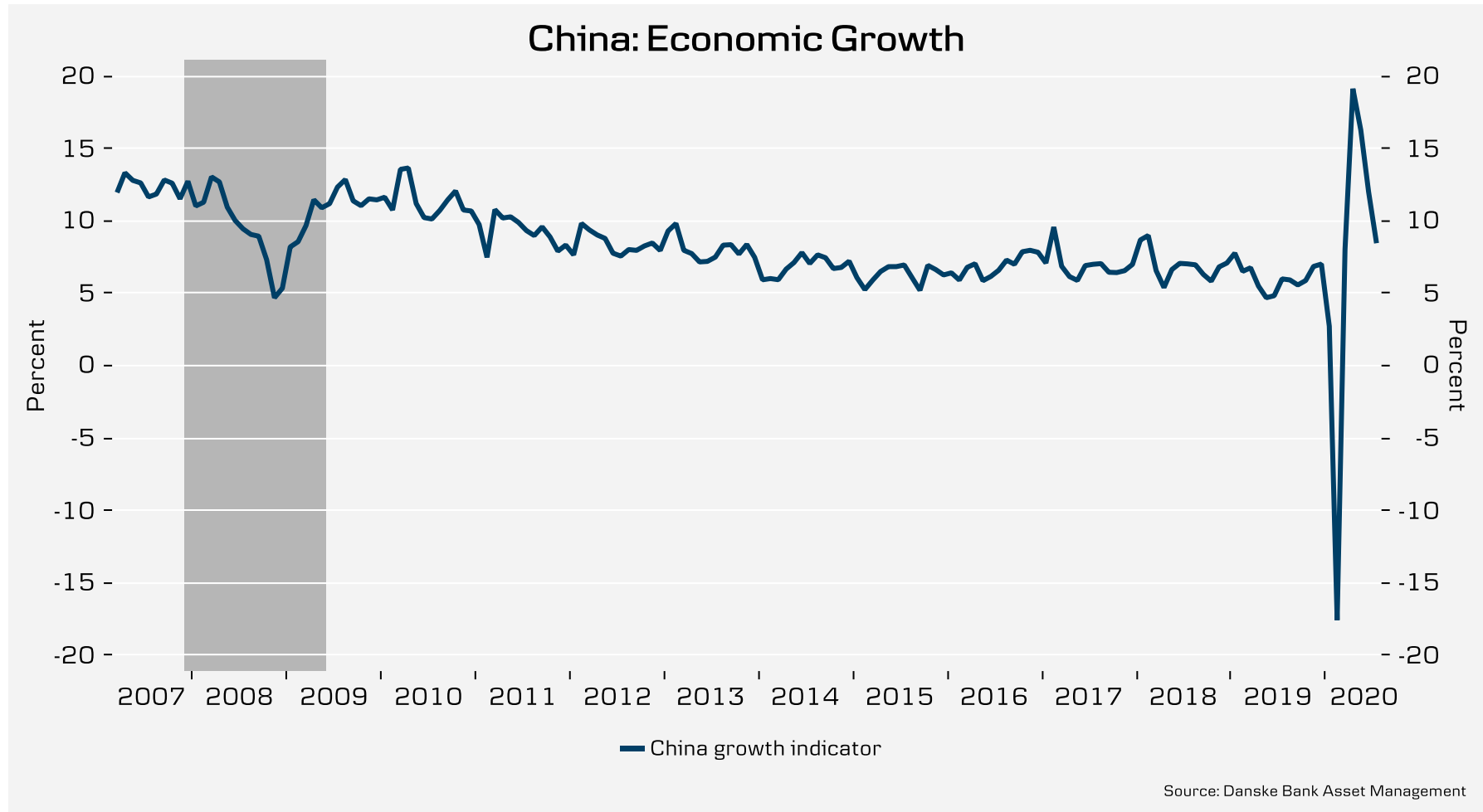
From outlook to a TAA portfolio – step 1



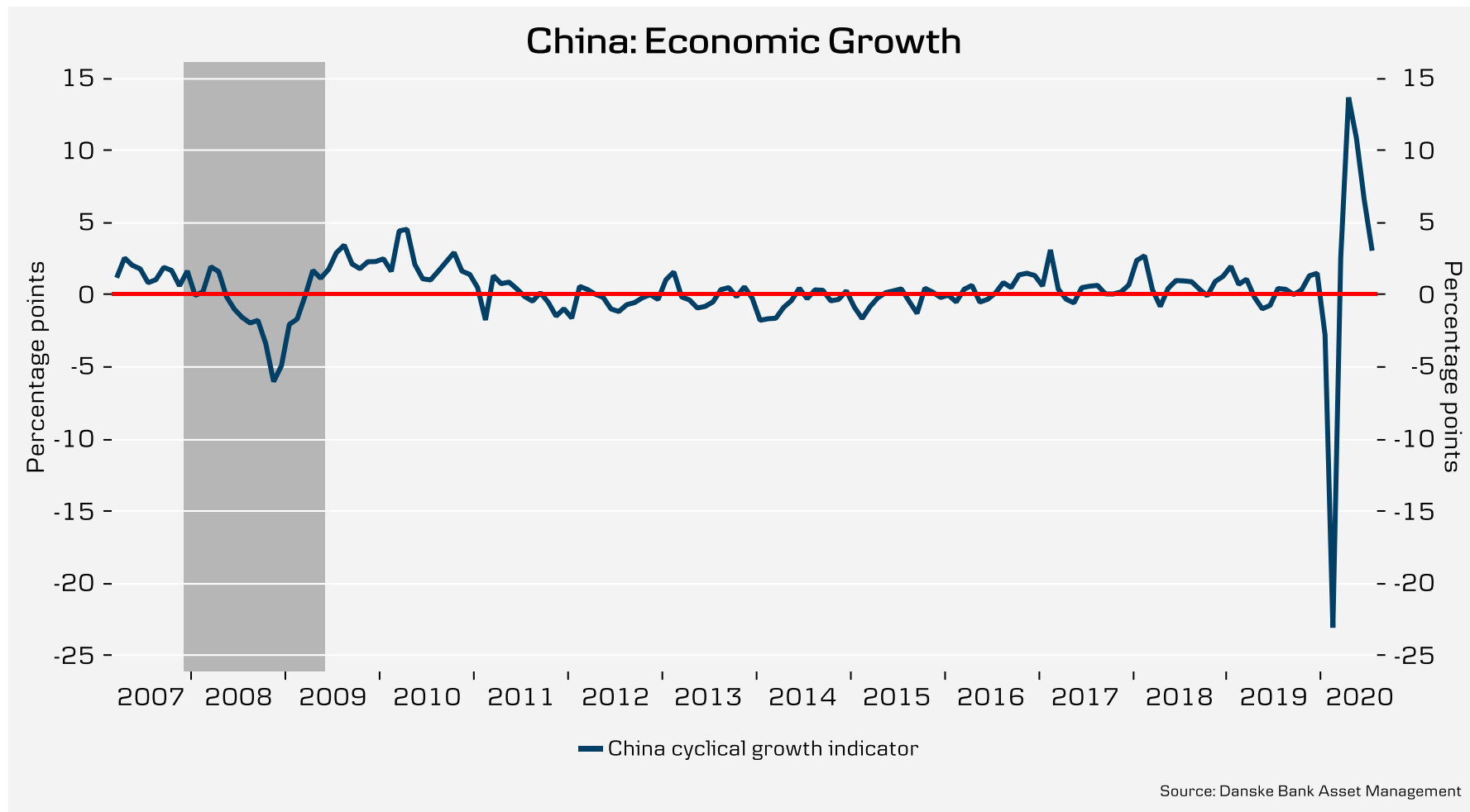
Examples

- Quantitative indicators:
Current & future growth
Underlying & future inflation
- Judgemental adjustment:
Corona/Covid-19, Brexit, US vs China trade war, etc.

Case study: China. We use quantitative analysis to assess what growth is right now.



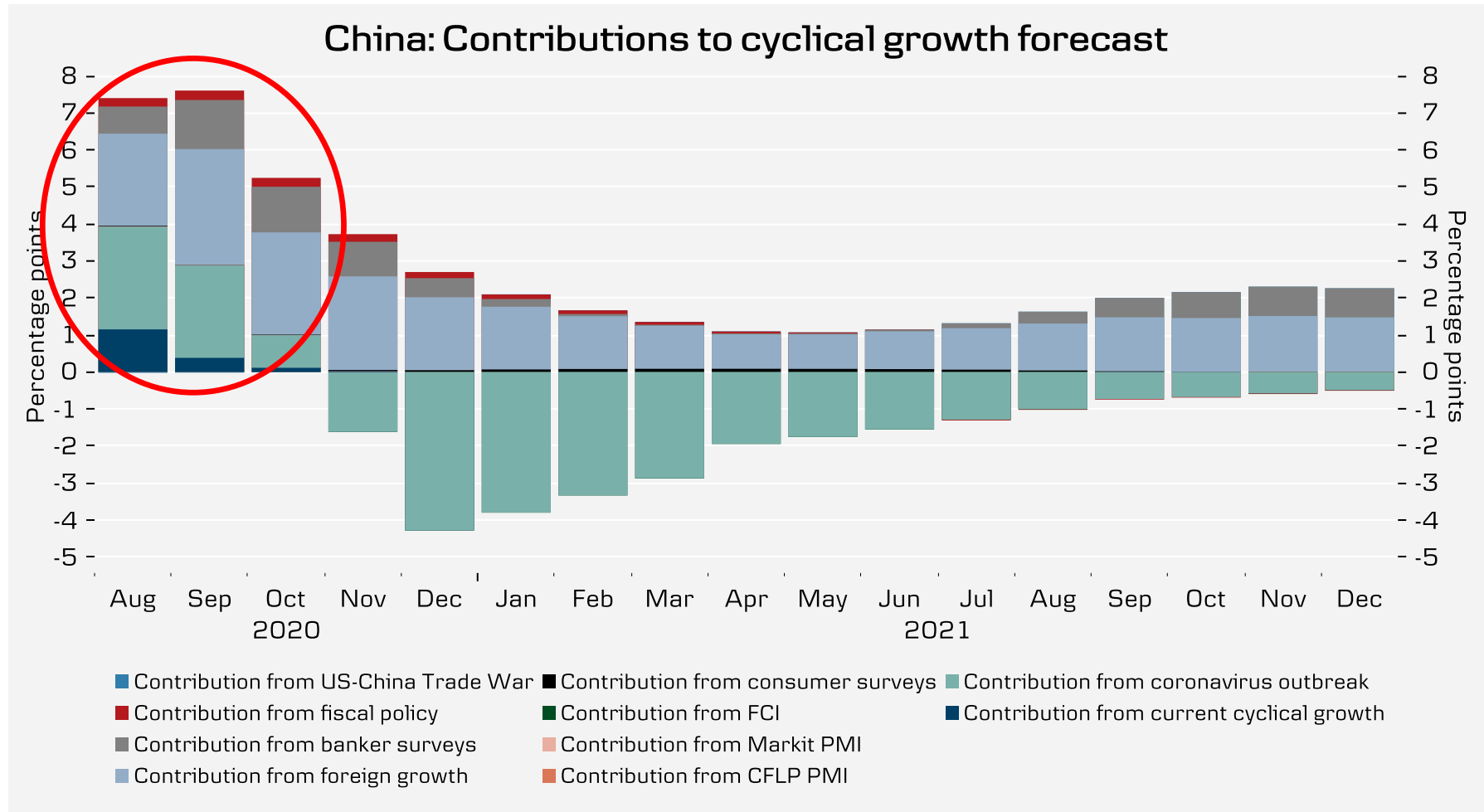
We assess current growth against our view of long term trend growth and then we assess what factors can boost and/or...



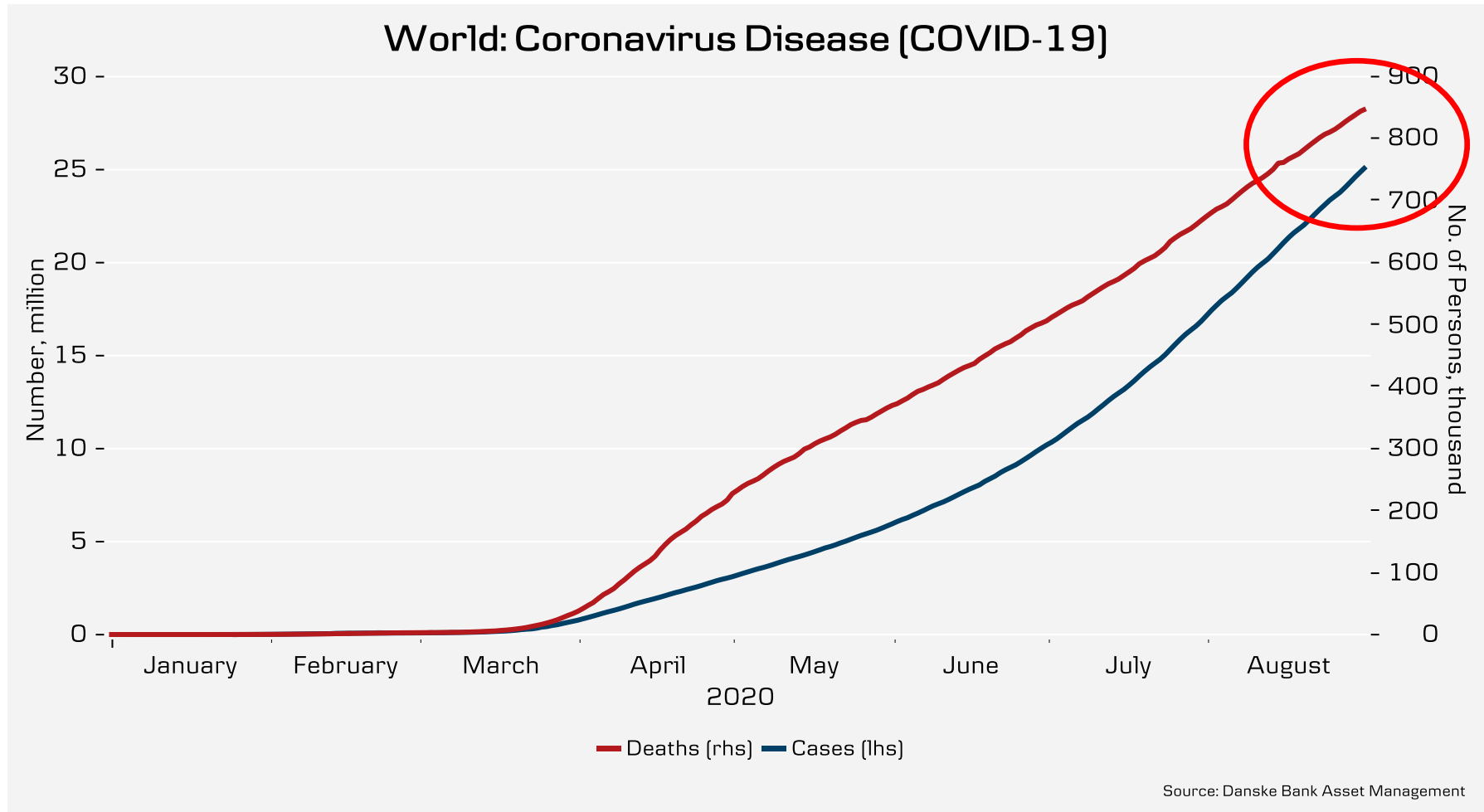
...reduce growth. The US/China trade war is an example of a “judgmental adjustments”. During 2020 however...

Trade war scenarios, outlook for tariffs and impact on China growth outlook				
Scenarios	Details	Probability	Tariffs	Expected Tariffs
Agressive Escalation	$(270+200+50)*25\%$	5%	130,00	6,50
Moderate Escalation	$(200+50)*25\%+270*15\%$	10%	103,00	10,30
Status Quo	$(200+50)*25\%+110*7.5\%$	64%	70,75	45,28
Moderate De-escalation	$(200+50)*25\%$	12%	62,50	7,50
Vague Deal*	$(250+187,5+125+62,5)/4*25\%$	8%	39,06	3,13
Peace/Complete Resolution	0	1%	0	-
Expected outcome		100%		72,71
Import Elasticity				-2,13
Import Share				30%
FX Impact				-0,10%
The Partial effect on GDP				-0,45%
GS General equilibrium				-0,11%
Average of the two				-0,28%
*Describes the scenario in which USD 62,5bn of goods is removed from the tariff list every 3 months over the coming 12 months				

...something else has dominated entirely. Basically...



...we had to throw everything out the window and start from scratch. True to “Superforecasting style”, we...



Economic outlook: COVID-19

...start(ed) with an outside view: Possible COVID-19 pandemic scenarios and associated effects on DM GDP. We...



Estimated economic effects of historical pandemics:

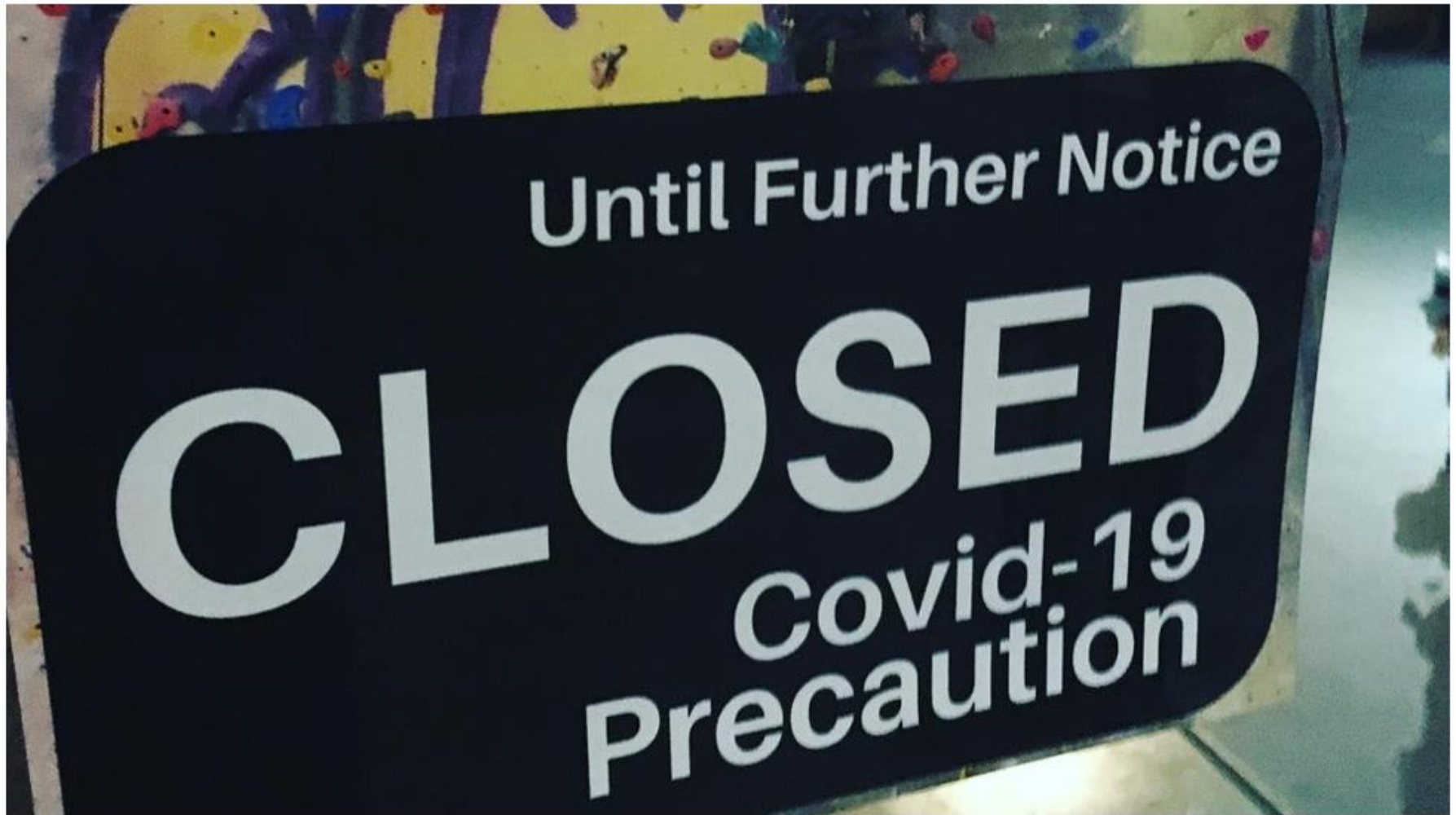
	Years	Total deaths (% of world population)	Total deaths (millions, scaled by today's population)	Growth impact (first year)
Hong Kong flu	1968-1969	0,021%	1,668	-0,70%
Asian flu	1957-1958	0,218%	16,916	-2,00%
Spanish flu	1918	1,090%	84,698	-4,70%
S04 US	-	0,074%	5,729	-2,00%
S05 US	-	0,184%	14,299	-4,80%

Source: Burns, Andrew, Dominique Van der Mensbrugghe, and Hans Timmer. *Evaluating the economic consequences of avian influenza*. World Bank, 2006

Pandemic scenarios for COVID-2019:

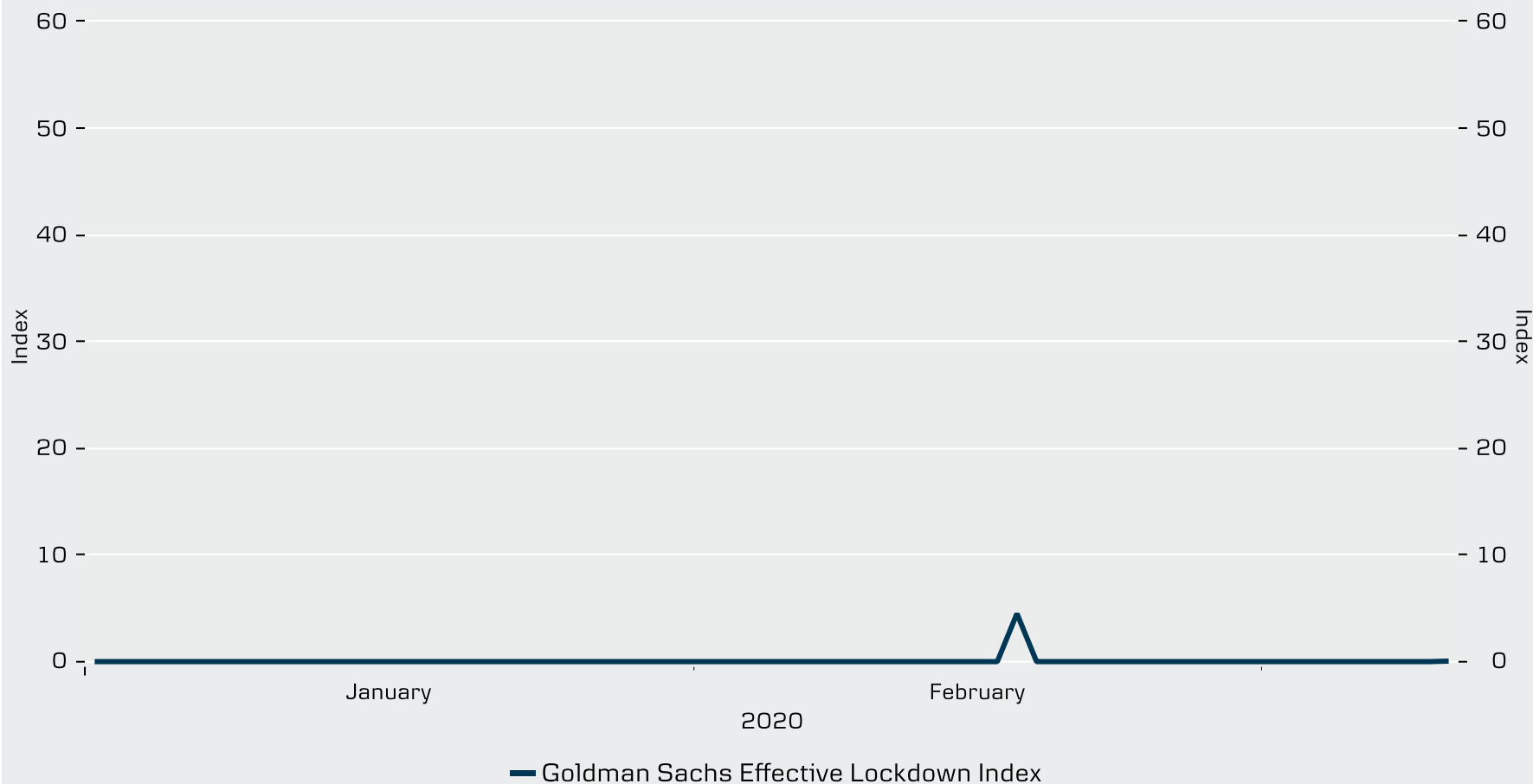
	Fraction of world pop. infected	Infection-fatality rate	Total deaths (millions)	2020 growth impact
Mild/mild	20%	0,28%	4,272	-1,89%
Mild/moderate	20%	0,53%	8,155	-2,95%
Mild/severe	20%	0,78%	12,039	-3,59%
Moderate/mild	40%	0,28%	8,544	-3,02%
Modrate/moderate	40%	0,53%	16,311	-4,32%
Modrate/severe	40%	0,78%	24,078	-5,49%
Severe/mild	60%	0,28%	12,816	-3,72%
Severe/moderate	60%	0,53%	24,466	-5,55%
Severe/severe	60%	0,78%	36,117	-7,28%

...had to complement that approach with an "inside View" as...



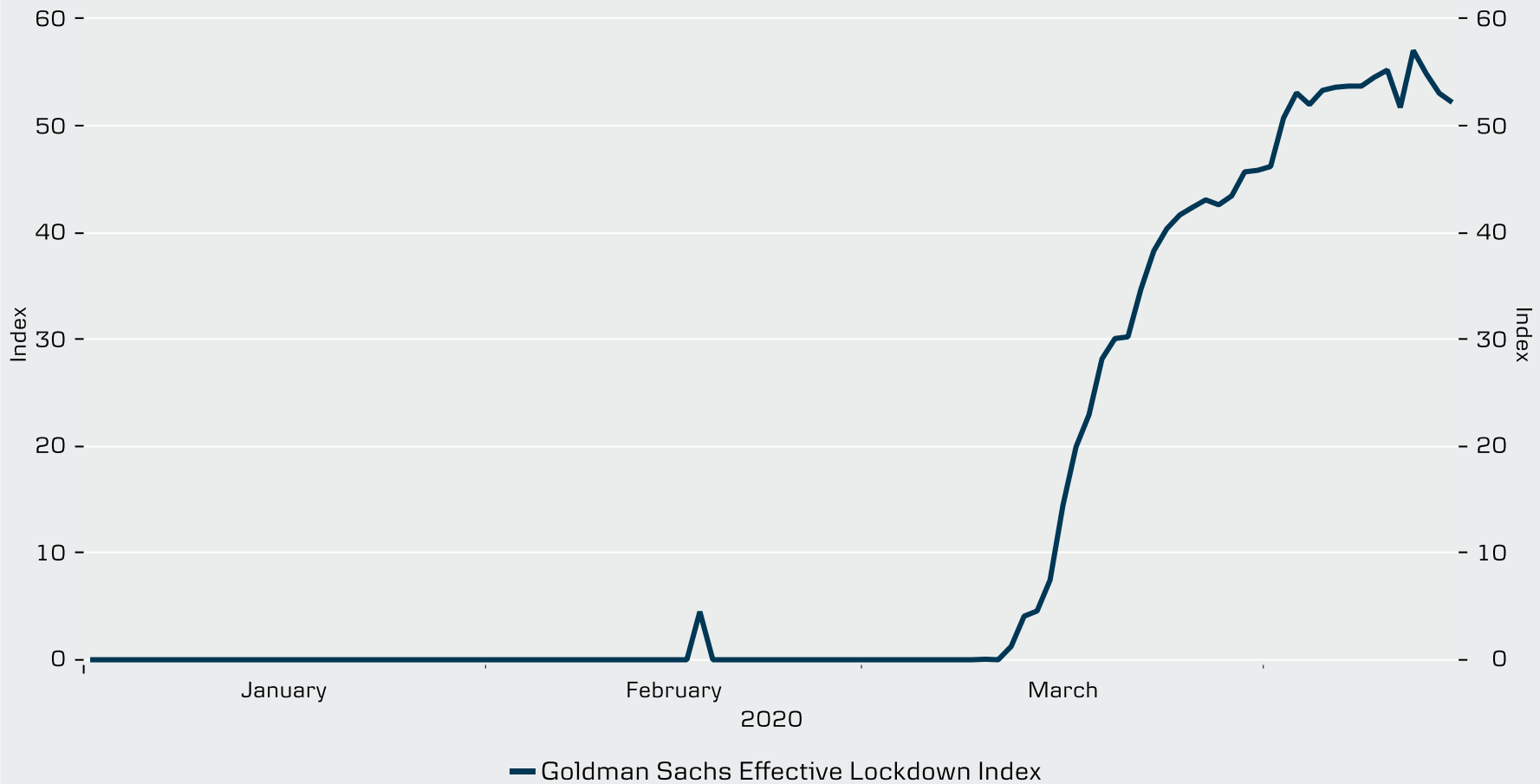
...the world...

United States: Effective Lockdown Index

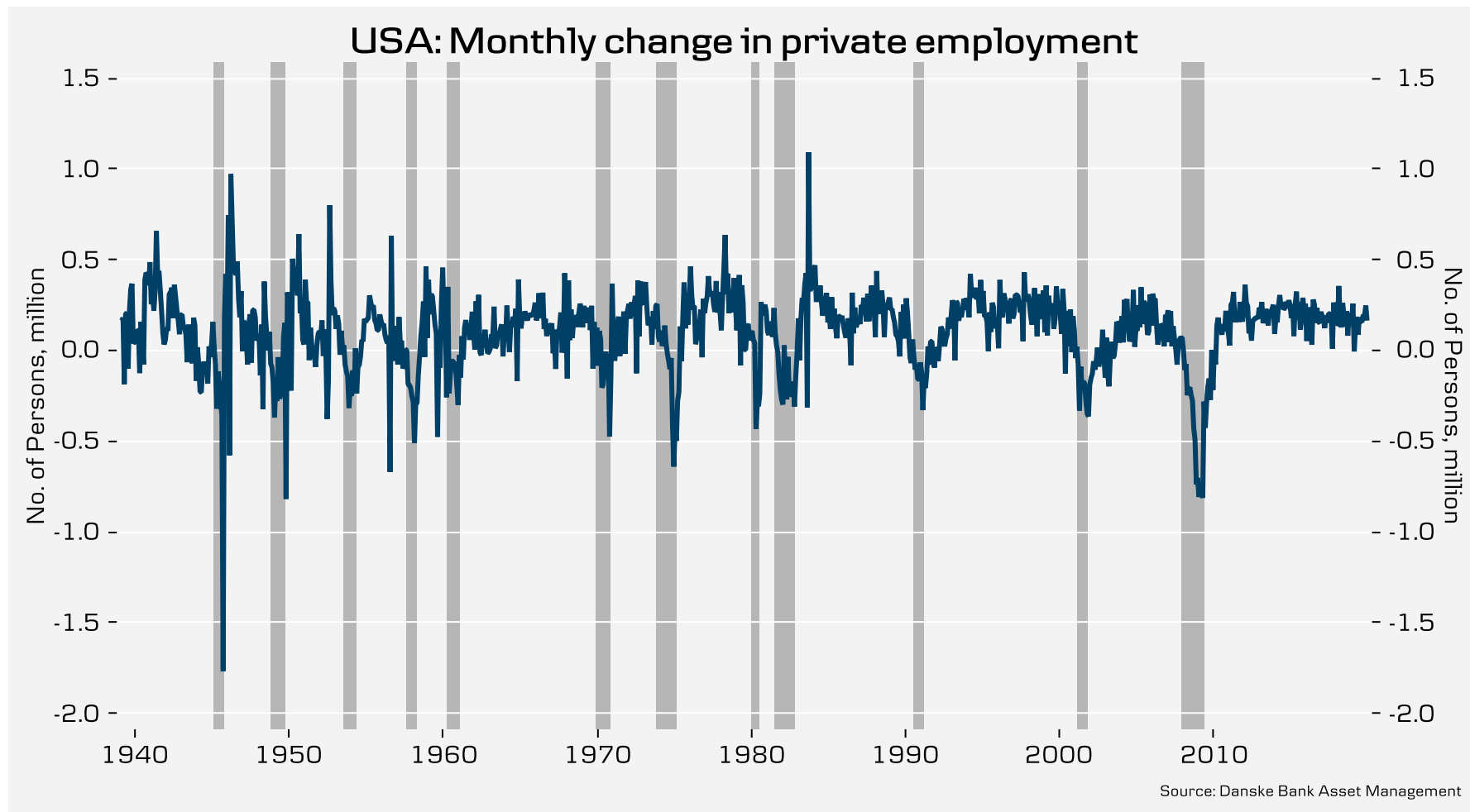


...decided on a "Hammer & Dance" strategy. Large parts of the global economy...

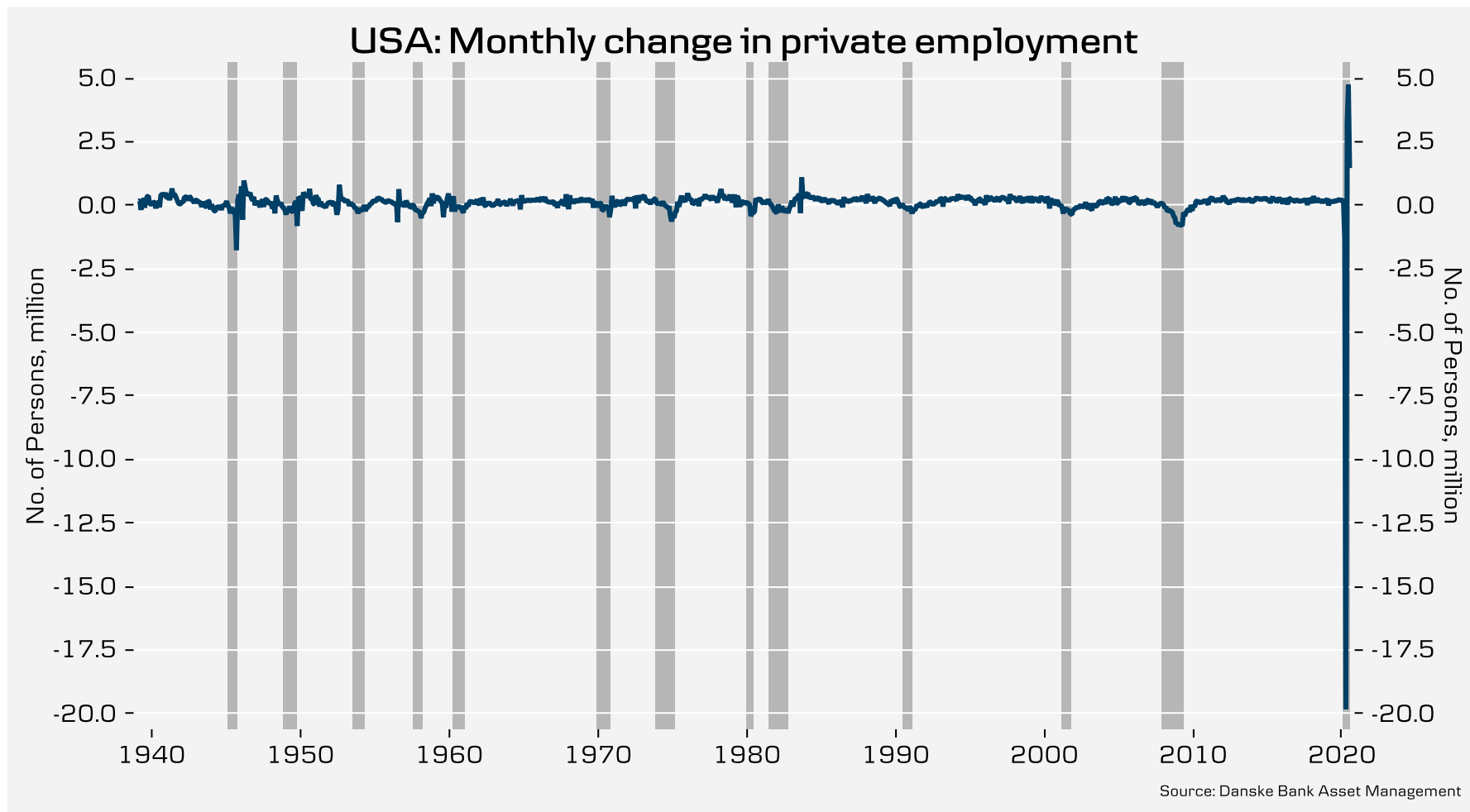
United States: Effective Lockdown Index



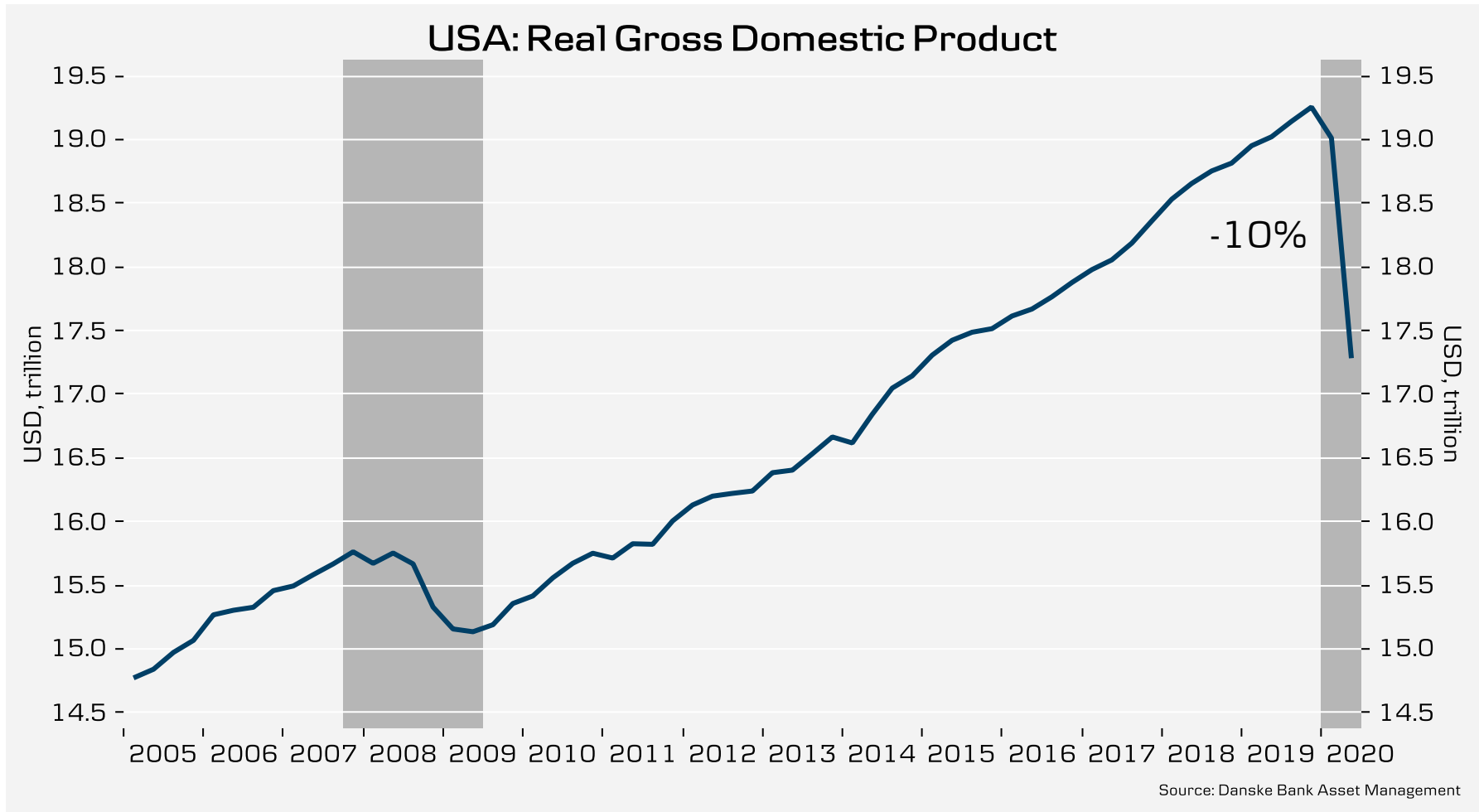
...were closed...



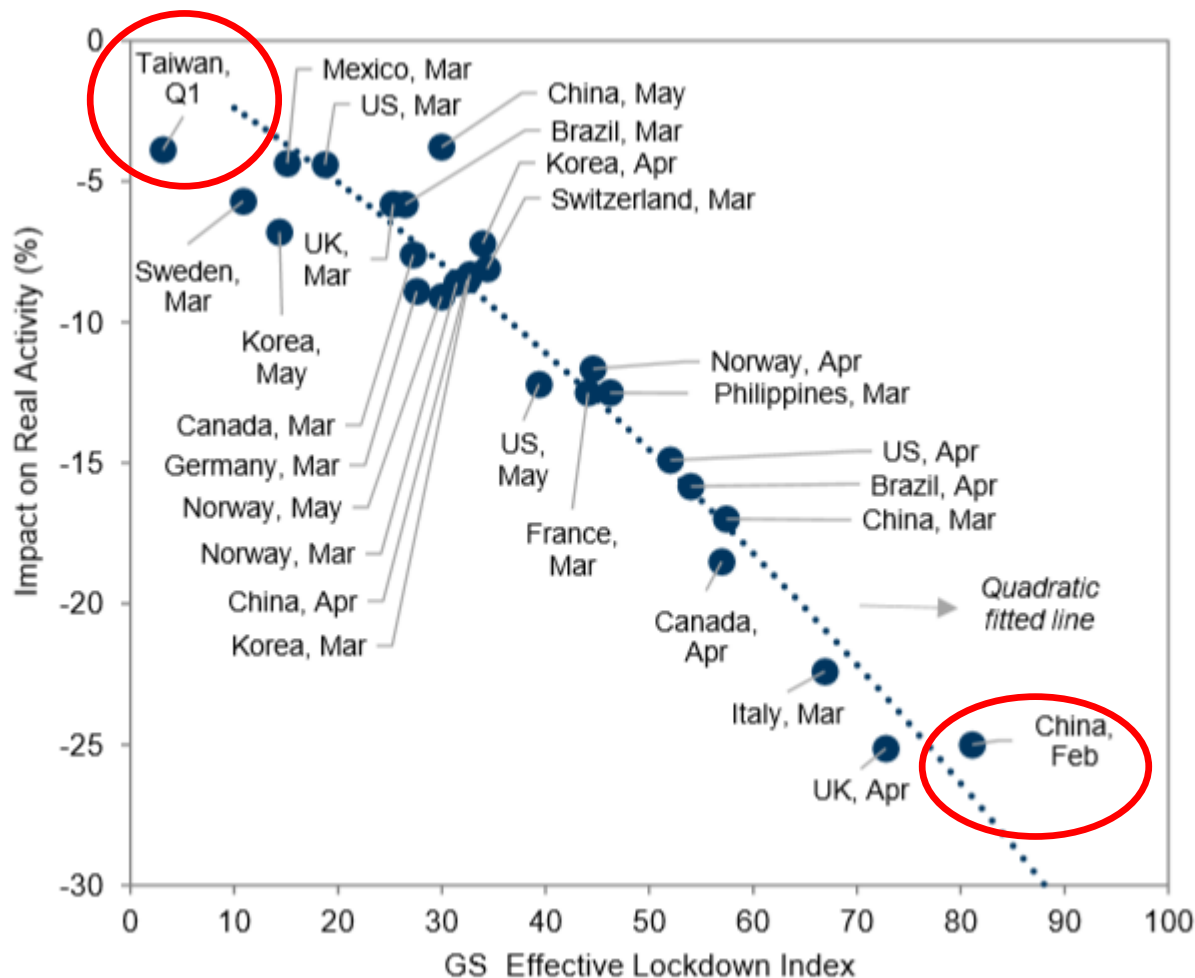
...down over night, causing the worst recession...




...the world has seen this side of WWII. What next?



In some ways this recession is simple – the more authorities closed down, the harder the hit to economic activity. We thus...



...had to think about how the virus spreads and...



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[Social Sciences](#) > [News](#) > Why wearing a face ma...

24 August 2020

Why wearing a face mask during the COVID-19 pandemic should be mandatory

COVID-19 A new study by Robert Böhm investigated effects of mask policies on stigmatization and behavior.



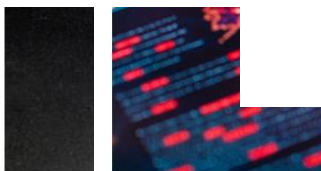
Mandatory mask wearing –

Yes or no?

Face masks have become a symbol of the current pandemic in many countries around the globe. Wearing a mask is considered one of the most effective measures to curb the spread of the disease. Yet, it is voluntary to wear a mask in some countries, whereas others, such as Germany, have made it mandatory. In fact, it has been heatedly discussed whether mask wearing should be mandated.

Positive S
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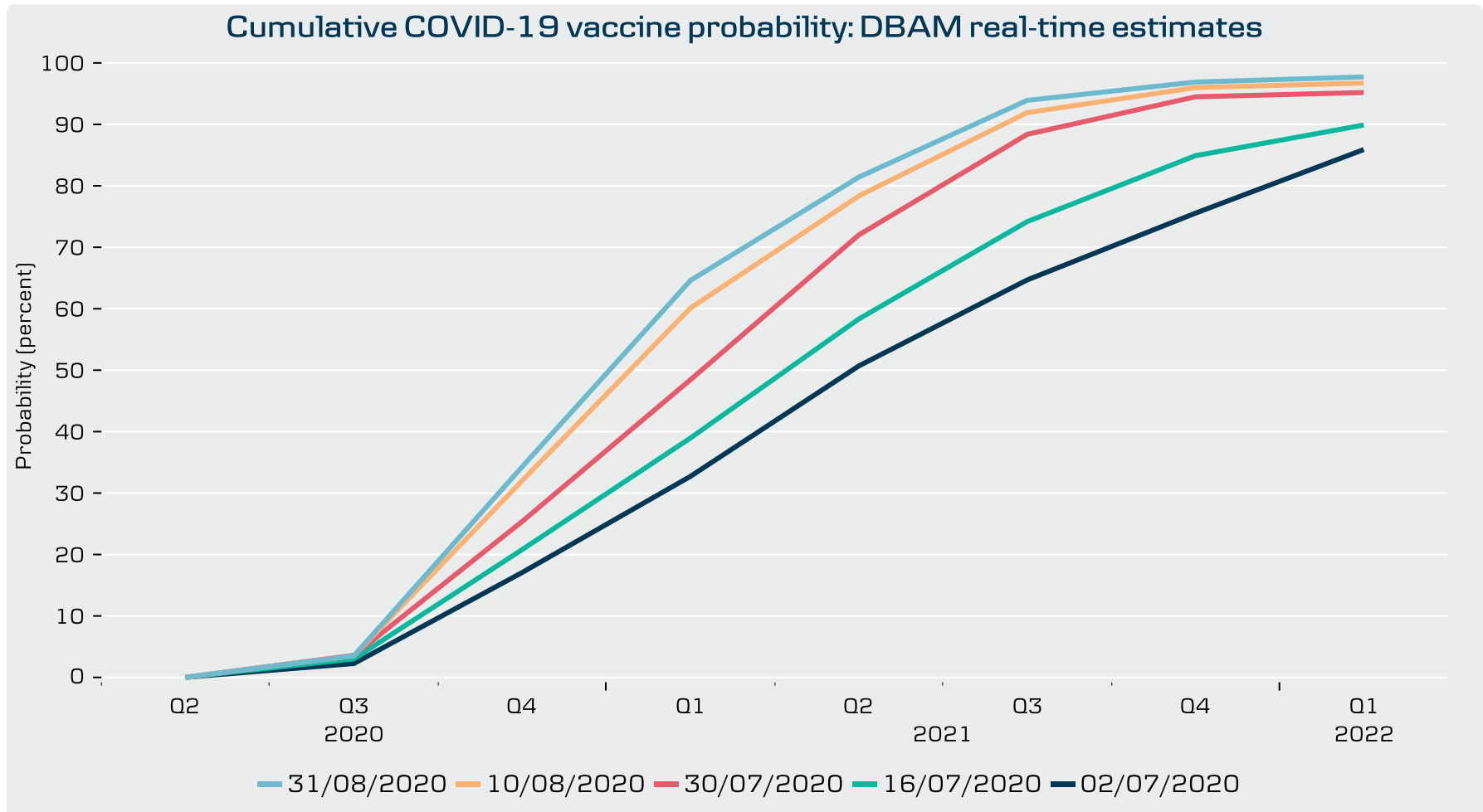
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Workers from

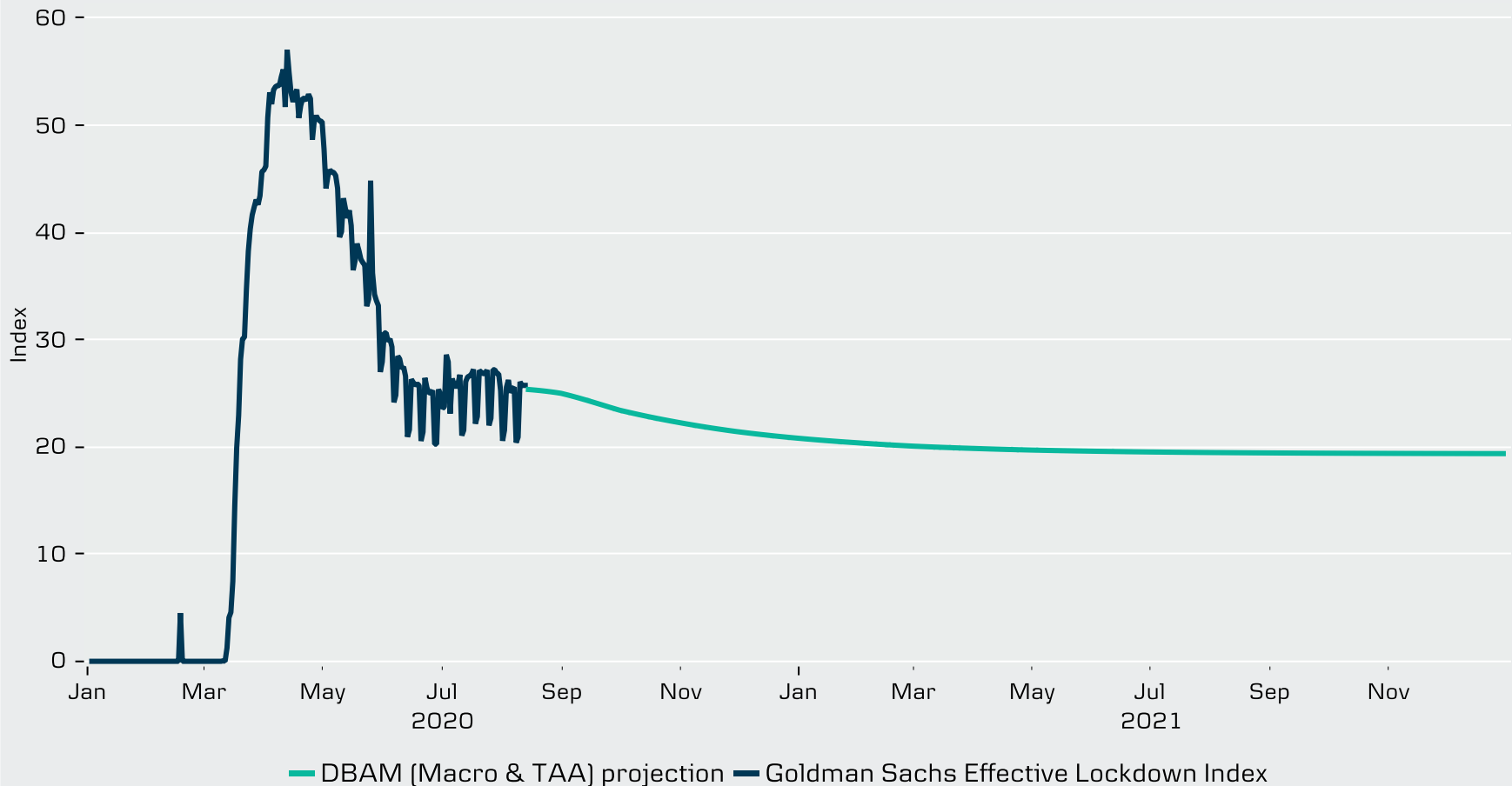
NASA

...about how quickly a vaccine will be available. Given these (and other) inputs...



...we map out an expected path of lockdowns. Combining our projections with...

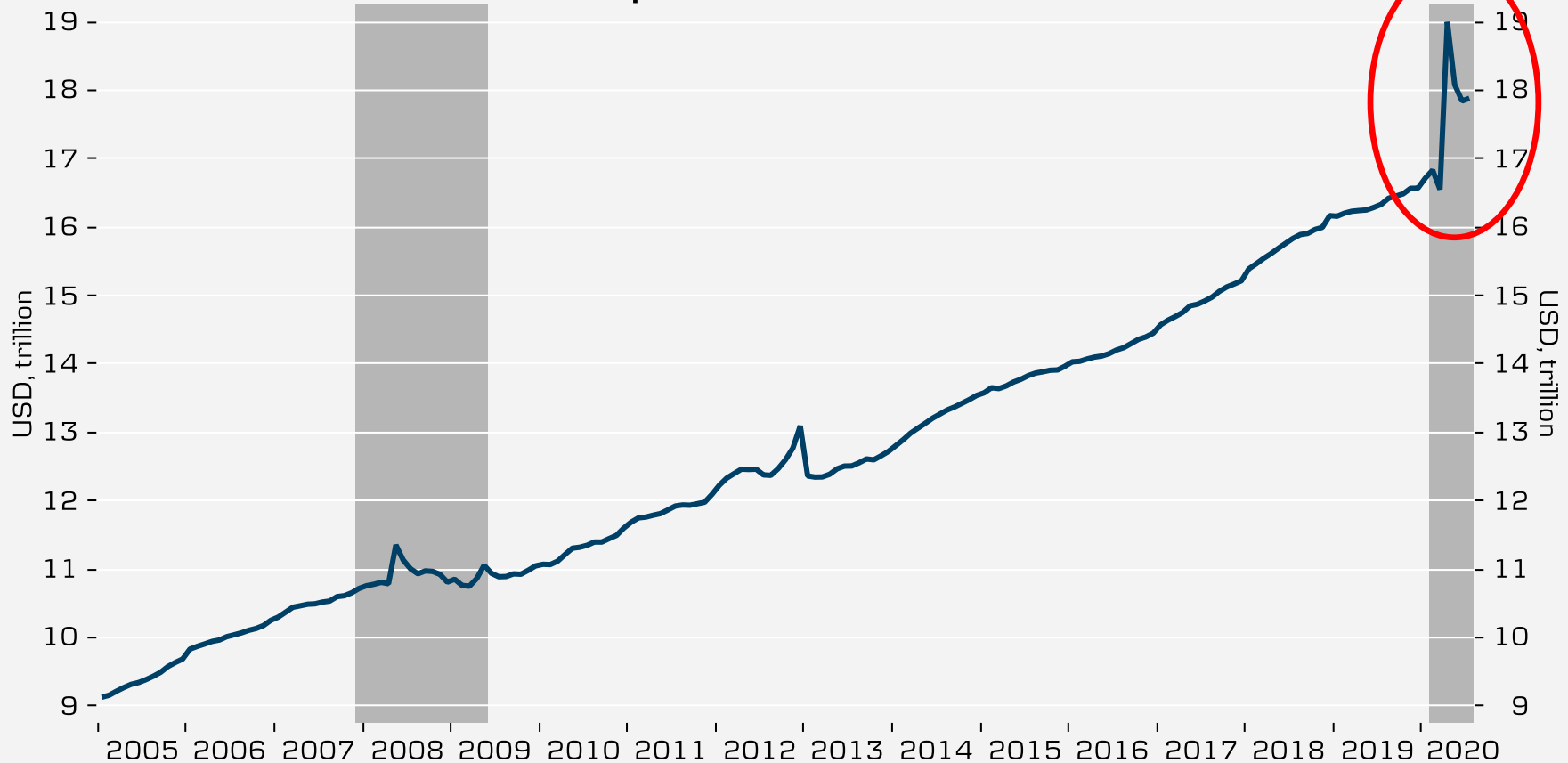
United States: Effective Lockdown Index



...our assessment of the policy response we arrive at projections for economic...

COVID-19, GENERAL INFORMATION, PAYROLL

USA: Disposable Personal Income



Source: Danske Bank Asset Management

...activity: Inside-view approach: Combining economic estimates using different approaches (US example continued)



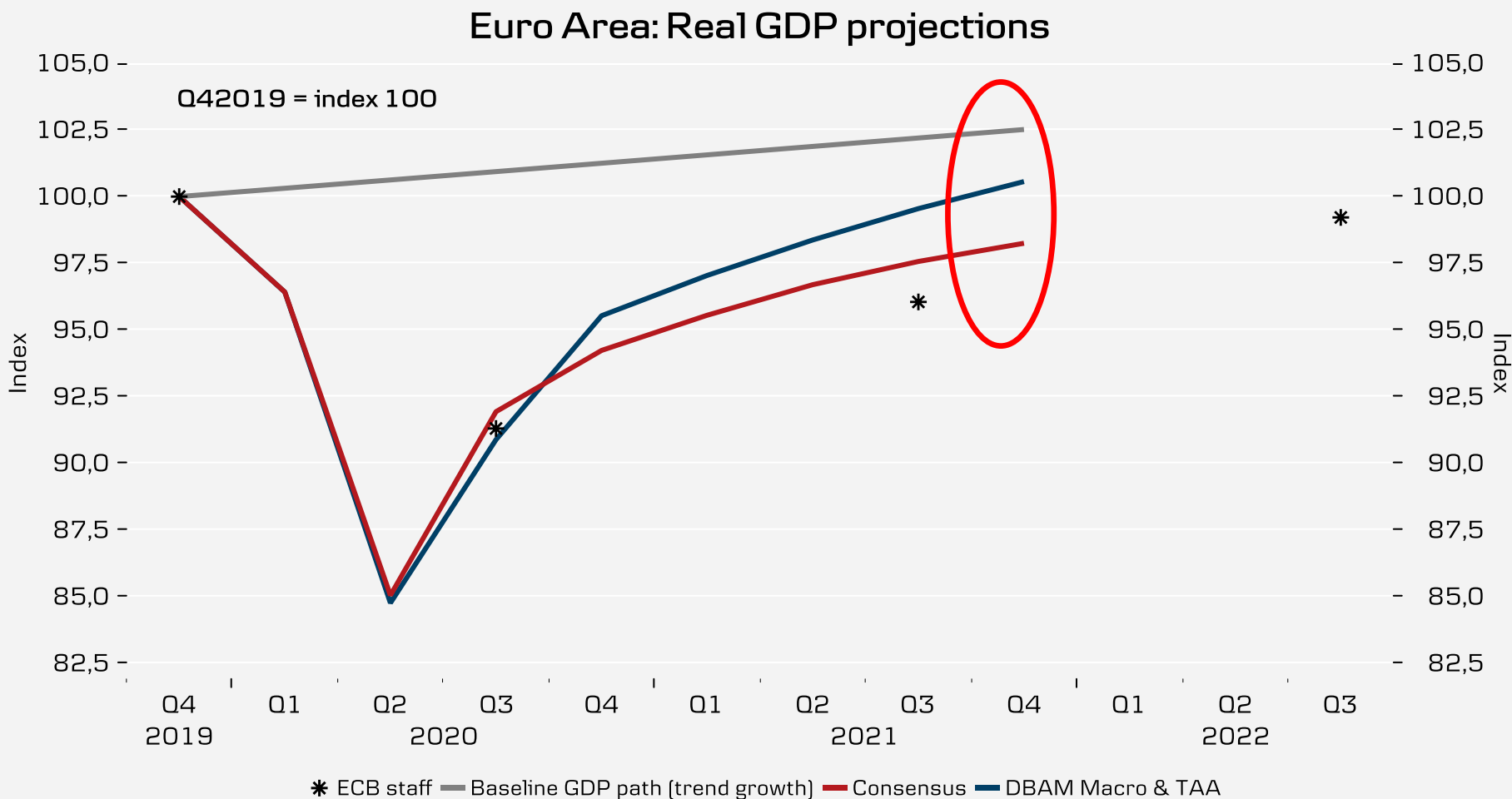
Final 2021Q2/2019Q4 estimates

2021Q2/2019Q4 growth impact	
"Outside view"	-1,59%
"Inside view"	-0,08%
Sell-sider forecasts	-4,84%
Weighted average	1,92%

Final estimated activity path

	Final estimate (deviation from baseline)	Baseline	Total	Total change (QoQ)
2020Q1	-1,80%	0,54%	-1,26%	-1,26%
2020Q2	-11,12%	1,09%	-10,15%	-9,00%
2020Q3	-6,83%	1,64%	-5,31%	5,39%
2020Q4	-4,08%	2,19%	-1,98%	3,51%
2021Q1	-2,97%	2,61%	-0,44%	1,57%
2021Q2	-1,99%	3,03%	0,98%	1,42%
2021Q3	-1,15%	3,45%	2,26%	1,27%
2021Q4	-0,52%	3,88%	3,34%	1,05%

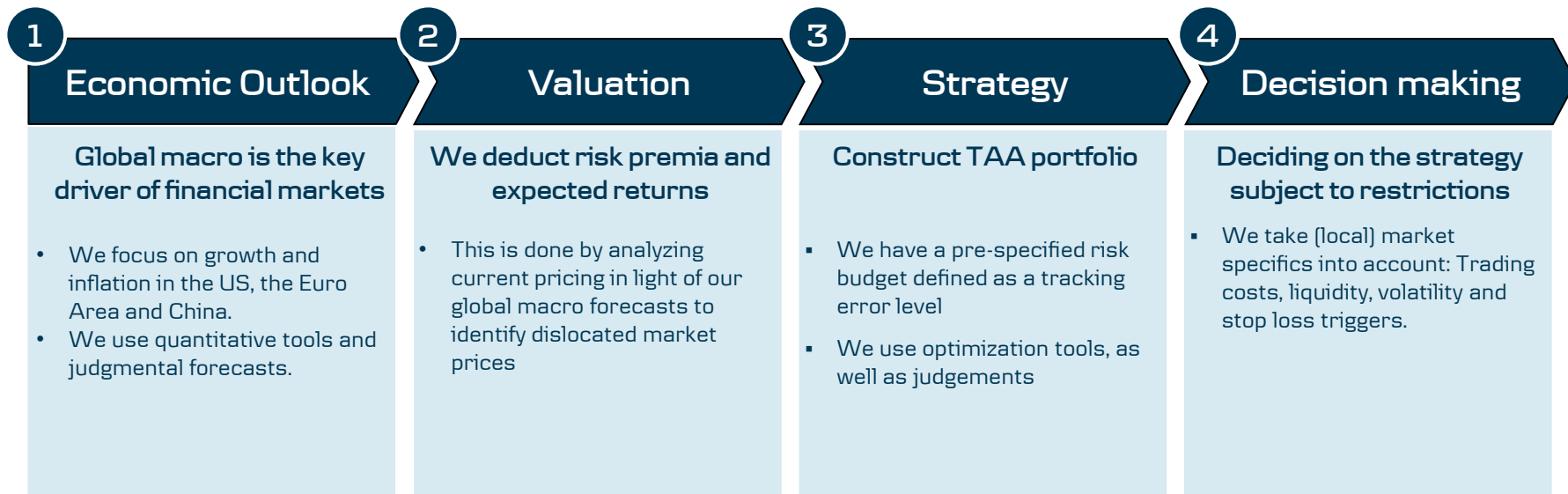
We use the same approach for the Euro Area and end up with a relatively optimistic scenario for economic activity.



Source: Danske Bank Asset Management

TAA Investment Process

From outlook to a TAA portfolio – step 2



Examples

- Quantitative indicators:
Current & future growth
Underlying & future inflation
- Judgemental adjustment:
Corona/Covid-19, Brexit, US vs China trade war, etc.

Example



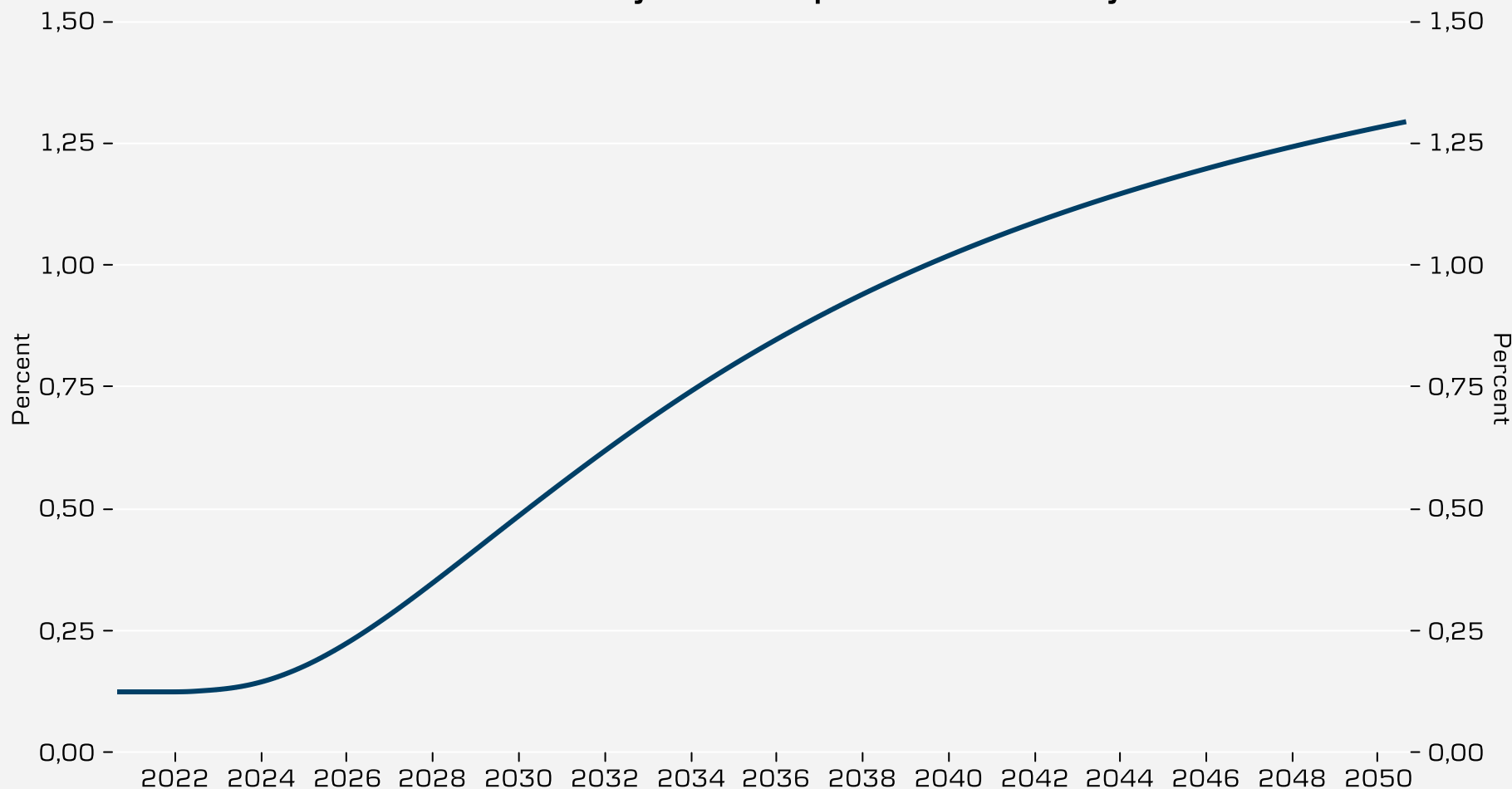
- Equities**: Based on the sales exposure of each market, we map growth and inflation to expected earnings. We use expected earnings to calculate a fair price for each market.

US monetary policy outlook

Given our growth, inflation and central bank forecasts, we can now estimate the forward looking yield curve...



United States: Treasury zero-coupon risk-neutral yield curve

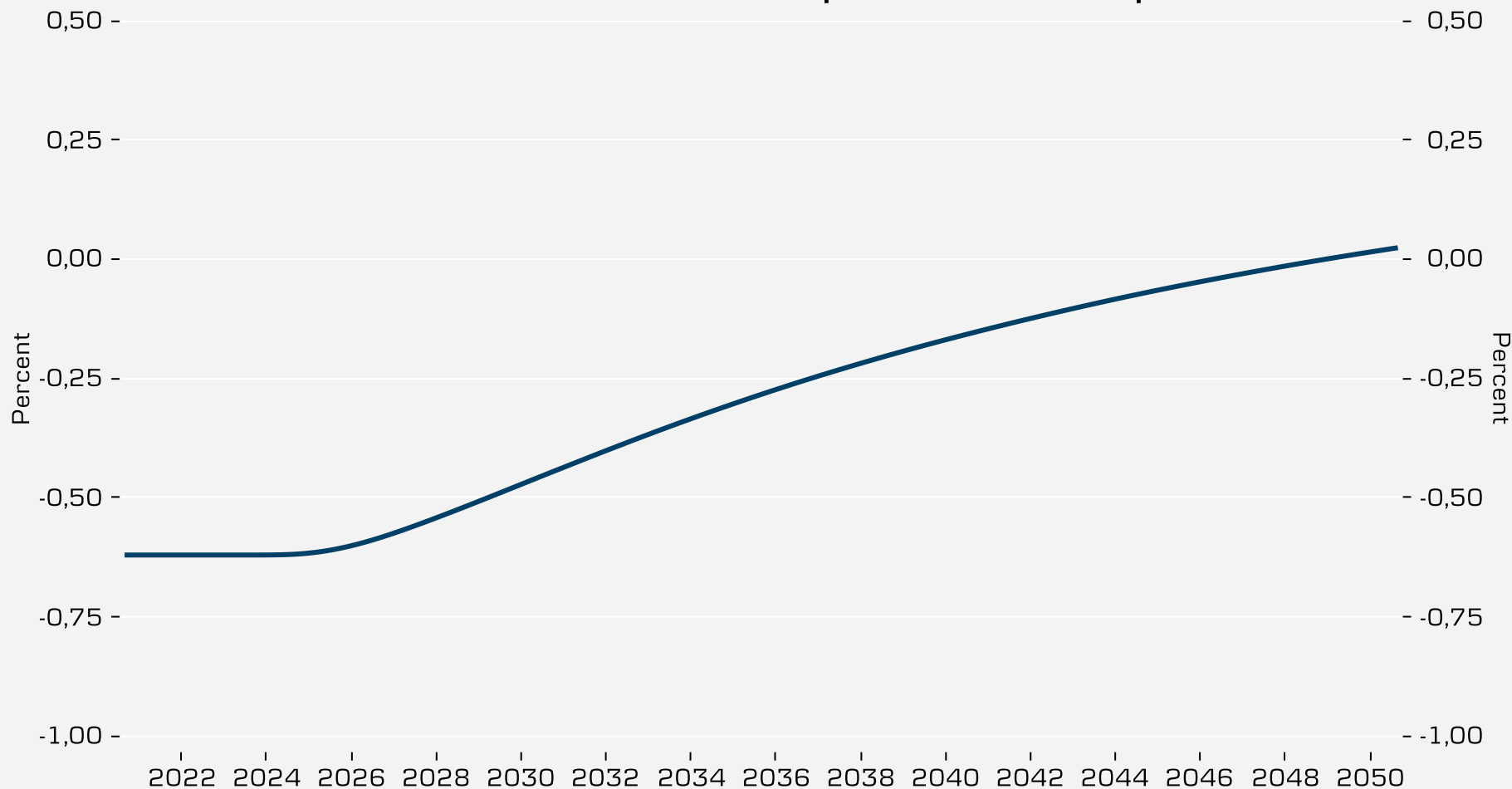


EA monetary policy outlook

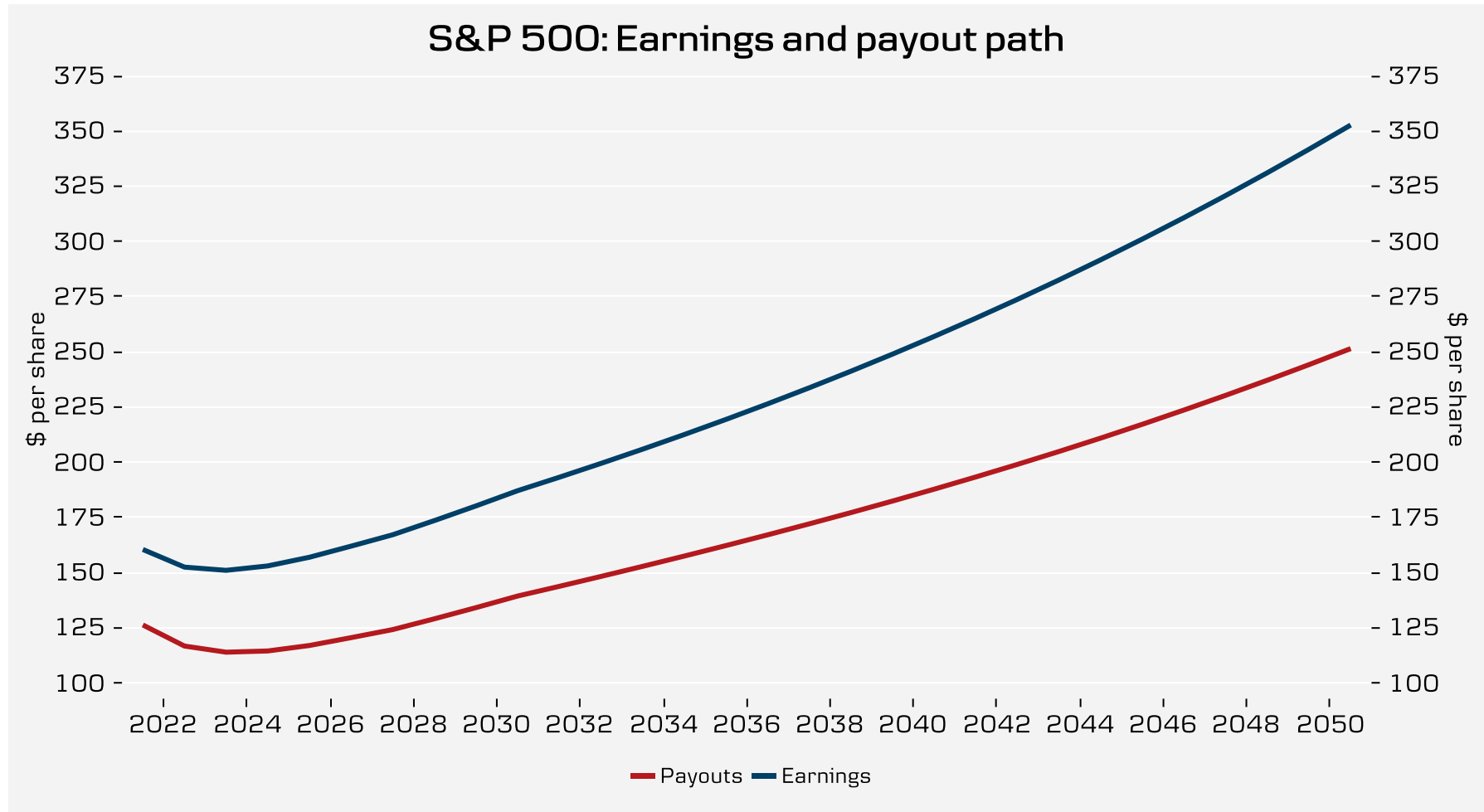
...in the US & Europe. These...



Euro Area: German bund zero-coupon risk-neutral spot curve



...are used to discount the estimated future earnings stream of global large cap equities.



Expected equity returns

All of this ultimately gives us 12 months ahead return estimates across all main asset classes: Equities as example below

Market	BBG Ticker	12M EPS Growth	Forward Earnings Yield	Payout Ratio	Payout Yield	Payout Roll	Impact From Interest Rate Changes	Funding Cost	Excess Carry
USA Large Cap	SPX Index	25,0%	4,6%	78,8%	3,6%	2,6%	-0,93%	0,1%	5,1%
EMU Large Cap	SX5E Index	34,1%	3,5%	71,2%	2,5%	3,9%	-0,57%	-0,6%	6,5%
EM Large Cap	MXEF Index	24,0%	6,2%	48,3%	3,0%	4,0%	-1,00%	0,1%	5,8%

Market	BBG Ticker	Current Equity Risk Premium	Required Rate of Return	Changes in ERP from Mean Reversion	Changes in ERP from Macro Shocks			Total Valuation Change
USA Large Cap	SPX Index	4,4%	4,1%	2,0%	3,44%	0,22%	1,86%	7,5%
EMU Large Cap	SX5E Index	6,0%	5,3%	3,0%	2,03%	0,45%	1,51%	7,0%
EM Large Cap	MXEF Index	5,0%	4,8%	1,6%	3,46%	0,31%	2,57%	7,9%

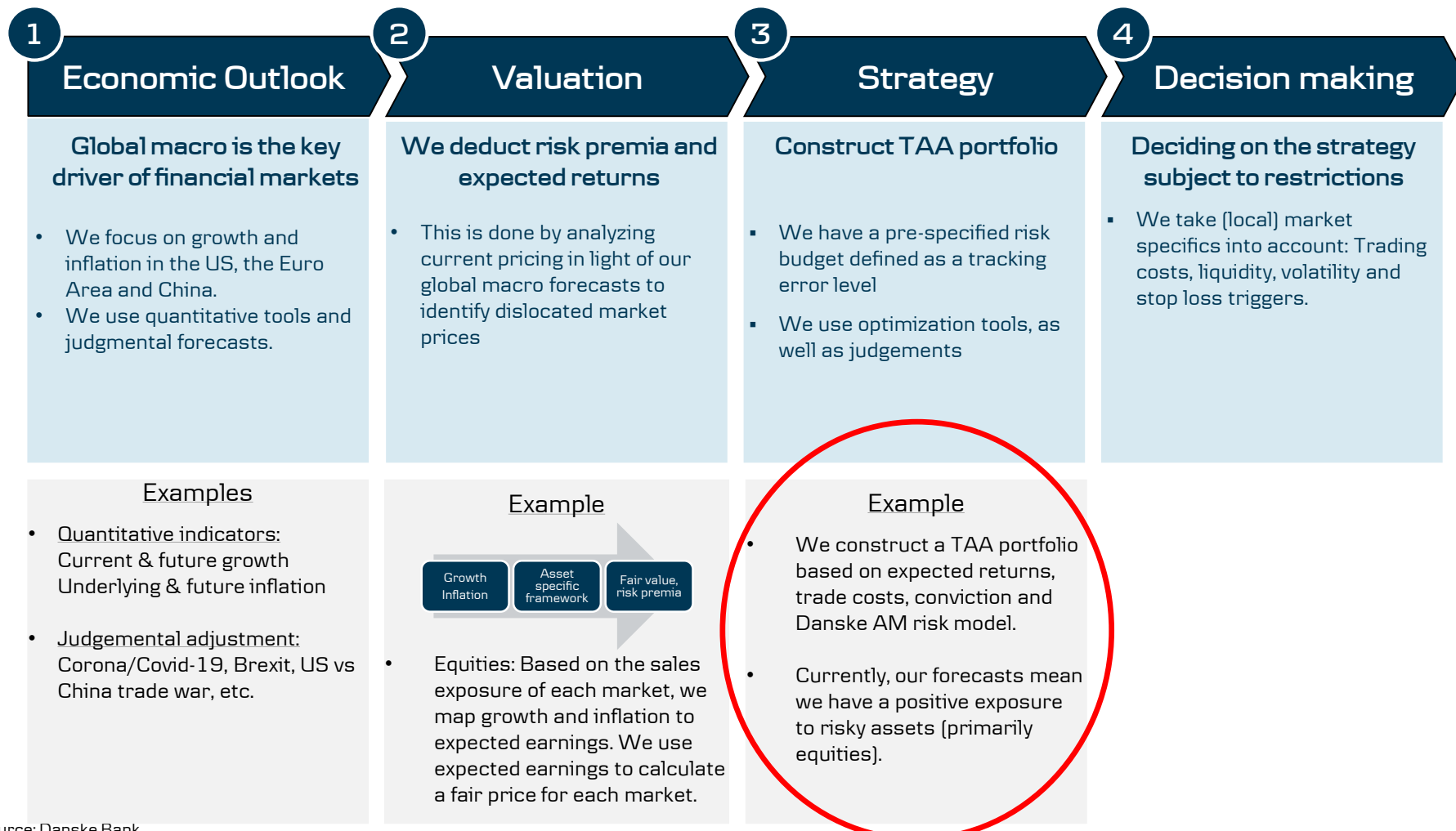
Market	BBG Ticker	Current Price Level	Excess Carry	Valuation Changes	Excess Return	Unconditional Volatility	Sharpe Ratio
USA Large Cap	SPX Index	3484,55	5,1%	7,5%	12,69%	16,0%	79,3%
EMU Large Cap	SX5E Index	3331,04	6,5%	7,0%	13,50%	20,0%	67,5%
EM Large Cap	MXEF Index	1117,22	5,8%	7,9%	13,74%	20,4%	67,3%

Note: undated example

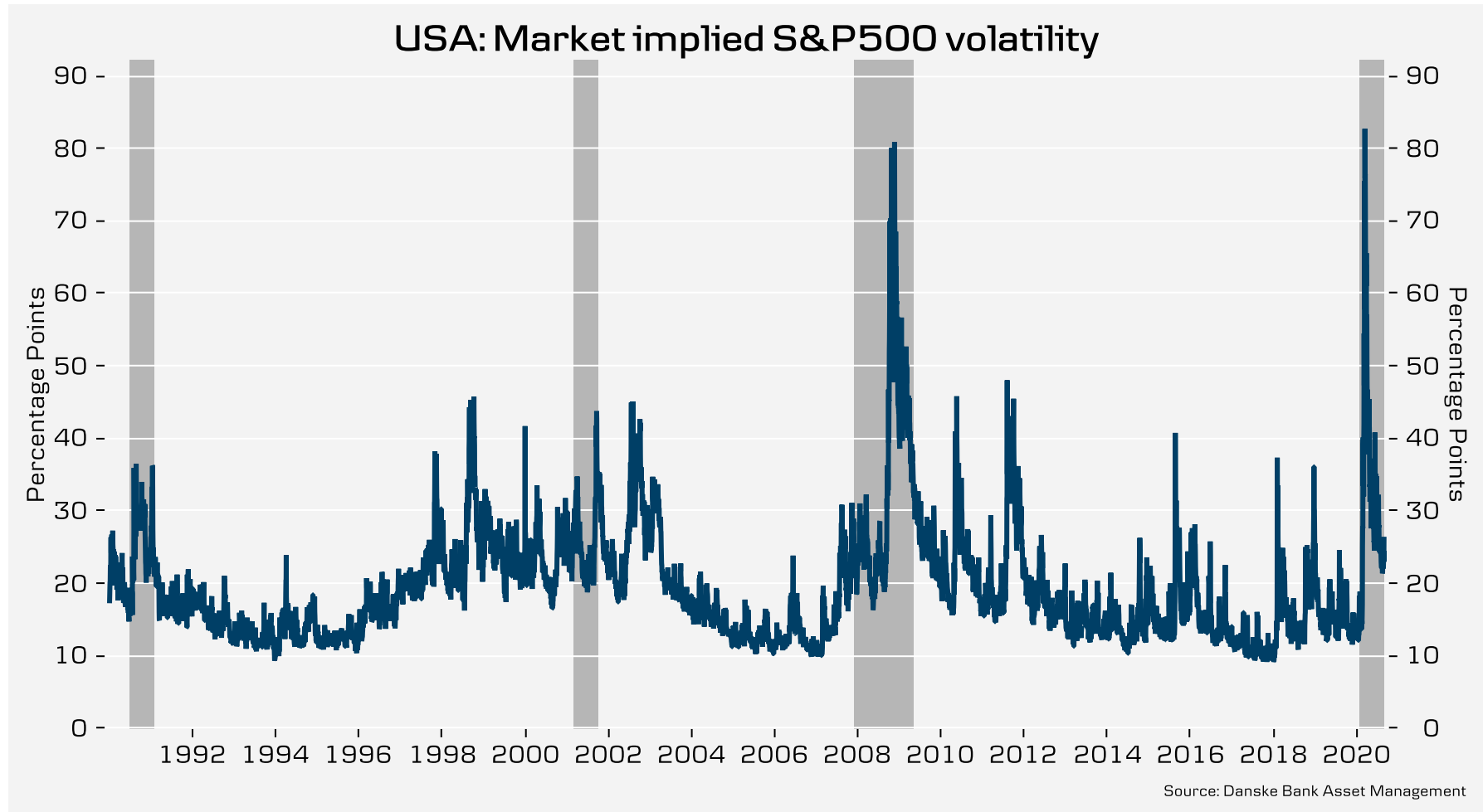
Note: We have estimates for Equities, Rates, US & EU duration & FX.

TAA Investment Process

From outlook to a TAA portfolio – step 3

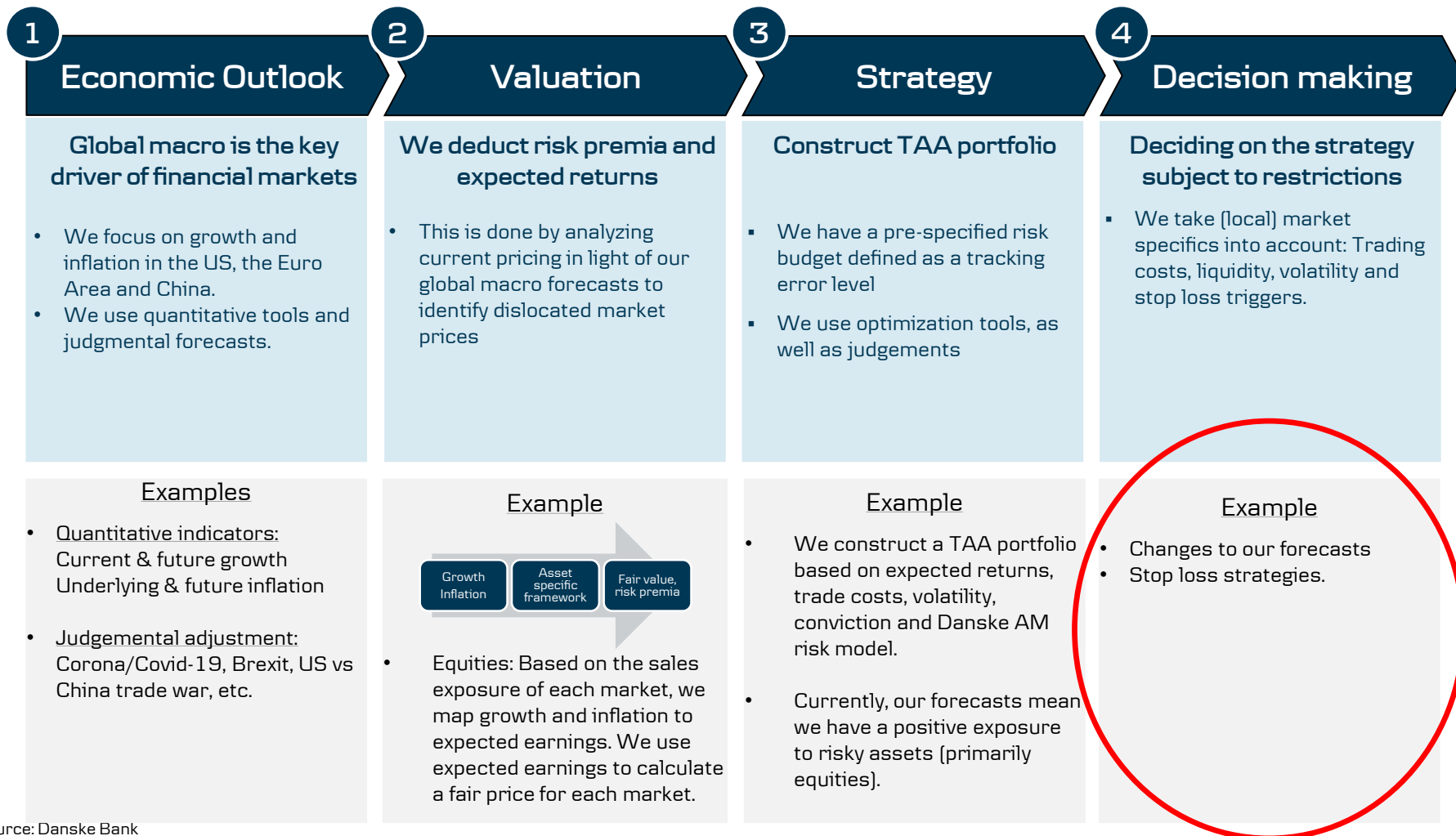


Some times "uncertainty" is higher than normal – this automatically impacts how much risk we are willing to take.



TAA Investment Process

From outlook to a TAA portfolio – step 4



In conclusion

- Summing it all up:
- The TAA proces is:
 - Structured
 - Qualitative & quantitative
 - Updated and reassessed constantly
- The outlook:
 - We are optimistic about the global growth outlook
 - We are *more* optimistic than consensus
 - We expect US & Euro Area interest to stay low for a very long time
 - Overall we expect risk assets to perform well especially...
 - ...equities.
 - What "event" comes next?

What does the future hold? The key will be Congress but Covid-19 will dominate this for now.



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