

Longview on Friday & The Week Ahead

The “**Longview on Friday**” is a round-up of Longview research, views & trade ideas.

Longview Economics is an independent macro & markets research firm.

‘**The Week Ahead**’ section is a summary of key events & data points to watch in the coming week.

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“Equity Pullback – What’s Next?”

S&P500 candlestick shown with 50 & 200 day moving averages



Recession Concerns – Brewing

“Consumer Angst Is Striking All Income Levels... ..Signs of weakness are showing up in spending on everything from basics to luxuries...”

Source: WSJ article, available [HERE](#)

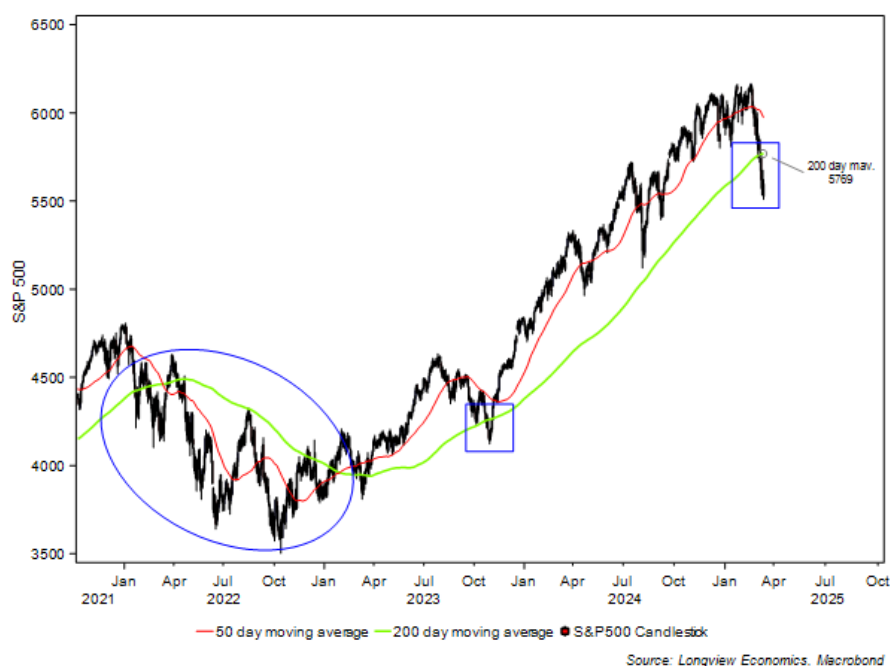
“Airlines see lower customer demand, cut back financial expectations — here are the companies hurting the most”

Source: New York Post article, 12th March 2025, available [HERE](#)

At the start of this year, almost no one in markets thought that a US recession was likely. Opinion, and market prices, though, have been moving rapidly – particularly this week.

Trump’s comments at the weekend were clearly unhelpful (he refused to rule out a recession). More importantly, though, recession concerns were fuelled this week by more tariff announcements, negative comments from various retailers and airlines (see above), and more soft economic data (e.g. Tuesday’s NFIB report).

FIG 1: S&P500 candlestick shown with 50 & 200 day moving averages



Most importantly, in that respect, **price drives opinion** (when it should be the other way around). On Monday the S&P500 broke below its 200 day moving average (and is now down 10.6% peak to trough), see FIG 1.

All of which begs a number of questions: Has the primary trend in equities changed? And, if it’s merely a SELL-off, how long will it last? What’s really driving this pullback? Is it the start of a bear market, perhaps like 2022? Or is late summer/early autumn 2023 a better template for today? And – which parts of the market will emerge as the ‘winners’ later this year?

Below we address two of those questions: (i) “[what’s driving this pullback?](#)”; and (ii) “[how long will it last?](#)”.

Yesterday we hosted a **webinar** titled: “Pullback Underway – What’s Next? A.k.a An Update on 1-4 Month Tactical Views”, which focussed on many of those questions. A recording of the webinar is available for clients. If you would like the link and password for the recording, please email research@longvieweconomics.com.

What’s Driving This Pullback?

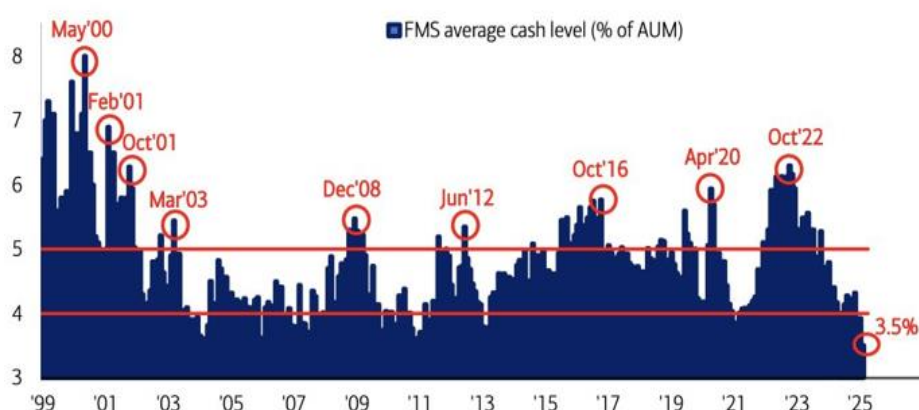
A combination of **three key factors** have set the stage for the current pullback in US equities. They were also the primary reasons that we moved defensive in our tactical equity portfolio (in early February, see our Tactical Equity Asset Allocation No. 253, 3rd February 2025: ‘Tactically Cautious (for now) a.k.a. Macro Risks Rising; Models Largely on SELL’) and in our strategic portfolio (initially on 23rd December in our Quarterly Global Asset Allocation ‘Risks Rising – (Start) Reducing Risk Exposure in Strategic Portfolio a.k.a. Stay OW (for now) BUT at Reduced Position Size’, and more fully in early February in our (Strategic) Global Asset Allocation Alert: ‘Reduce Risk in Strategic Portfolio a.k.a. US Pullback Risks Rising’).

In particular:

1. **The US equity bull run had grown tired.** As FIG 1 shows, the uptrend in the S&P500 had endured for 2 ¼ years, with no meaningful correction/pullback. In that time, investors’ portfolio positioning became increasingly crowded into ‘LONG risk’ positions. That was highlighted, for example, by the BAML survey published in February – showing that cash levels had fallen to a **15 year low**.

Chart 1: FMS cash levels at 15-year lows

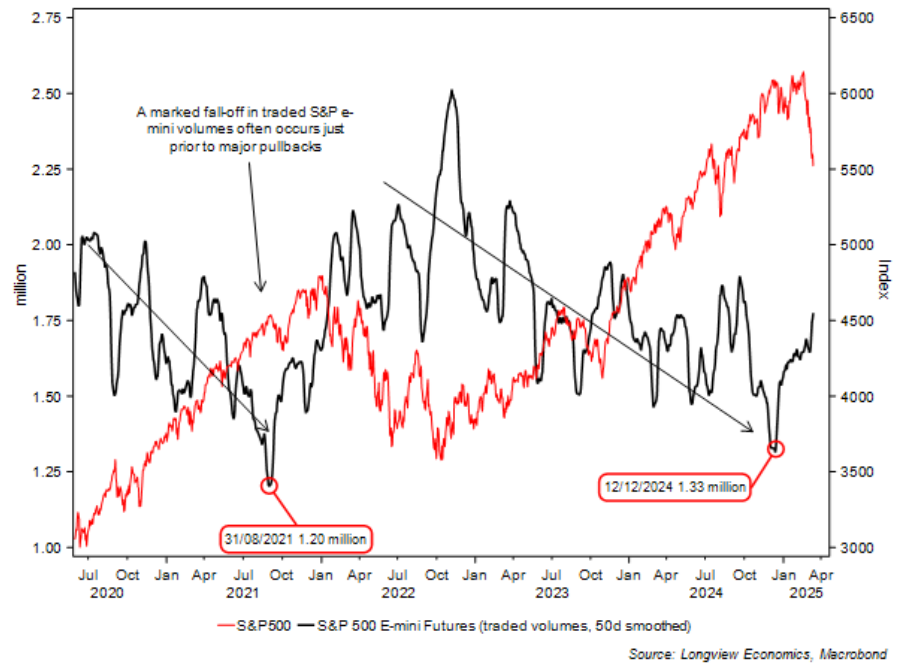
BofA Global FMS average cash level (%)



Source: BofA Global Fund Manager Survey

As such, buyers became exhausted, and participation trended down/fell to low levels. That fall in participation was illustrated, for example, by falling volumes, which is typical ahead of major stock market corrections (FIG 2).

FIG 2: S&P500 e-mini contract volumes (1st & 2nd contracts) vs. S&P500



2. Our SELL-off indicator generated a warning signal in early February. That model is shown in FIG 14 in the appendix below and is designed to warn of waves of risk aversion in global markets. It triggers a signal after phases of persistent risk seeking behaviour (i.e. which last for 20+ trading days). In other words, at the start of this year, near term euphoria/exuberance had emerged/risen to high levels. That typically precedes pullbacks in equity markets (see Tactical Equity Asset Allocation No. 254, 5th March 2025: [‘Pullback Underway → & Likely Enduring a.k.a. ‘Relief Rally’ Expected near term \(But Temporary\)’](#) for detailed analysis).

3. The Trump agenda is exposing the soft underbelly of US growth.

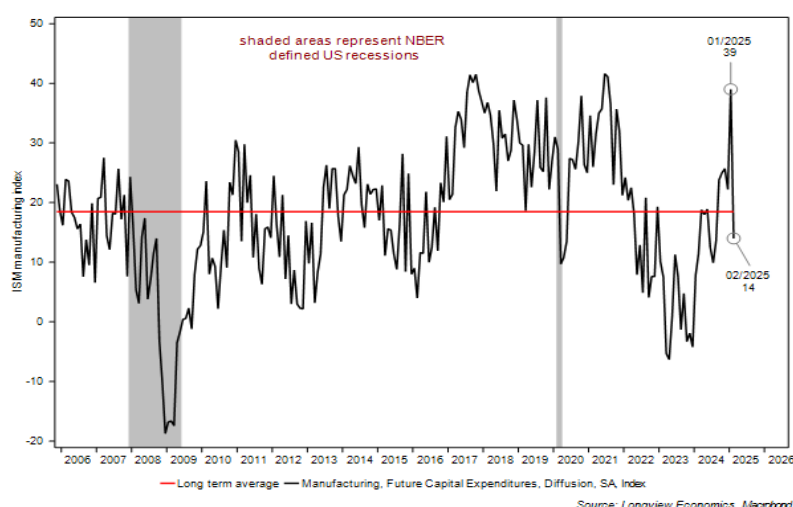
In particular, **under Biden**, US economic growth had been largely driven by significant fiscal loosening (principally via four key support packages*). That support has been a mix of direct government spending coupled with loans and grants. Illustrating the impact of that support, most of the growth in US jobs in the past 12 months has been government spending (that is - job creation has been mostly happening in the government, or in government linked sectors like healthcare, see FIG 15 in the appendix).

*Those packages include (i) the American Rescue Plan Act (ARPA); (ii) the Infrastructure Investment and Jobs Act (IIJA); (iii) the CHIPS and Science Act; and (iv) the Inflation Reduction Act (IRA).

Under Trump, those fiscal taps have been turned off. That is, Trump was quick to sign executive orders, freeze government hiring, and cancel various government support measures (e.g. loans and grants under the IRA and so on). Given a backdrop of reasonably tight money (see recent Longview on Friday: [‘Equity Pullbacks; US Mid-Cycle Slowdown Risks; Pricing Trump’s Economic Agenda; PLUS the Outlook for Gold’](#)), therefore, signs of weakness in the US economy have accelerated. Housing activity has fallen to record lows on certain measures (e.g. see pending home sales); the jobs market has deteriorated further (e.g. see FIG 16 in the appendix); while the initial optimism on the Trump election win has all but gone/reversed (e.g. see last months’ rapid fall in capex plans, FIG 3).

As such, and while there's little evidence for a US recession, the soft patch thesis is materialising, as we laid out in December (for detail see 18th December '24 Quarterly Asset Allocation "[US Mid Cycle Slowdown Expected \(2025\)](#)").

FIG 3: Philly Fed capex plans shown with long term average (& US recession bands)

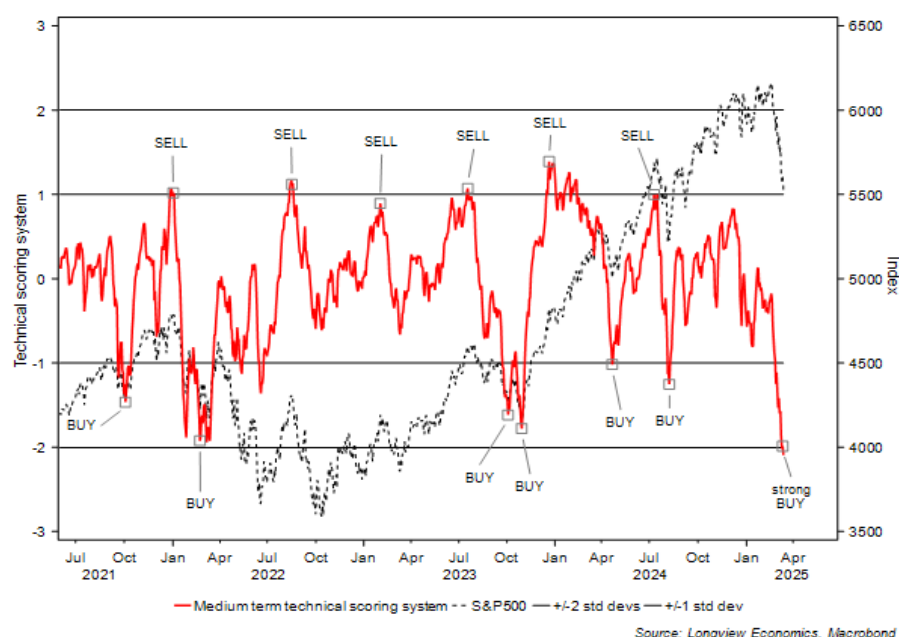


How Long Will It Last?

Most pullbacks follow a three wave pattern. That is, there's an initial pullback (wave 1), that's followed by a relief rally/short squeeze (wave 2), and then there's a final leg lower, with equity indices often breaking below the lows from wave 1 (i.e. wave 3). In bear markets, when the down trend is dominant/persistent, SELL-offs often consist of five waves instead of three.

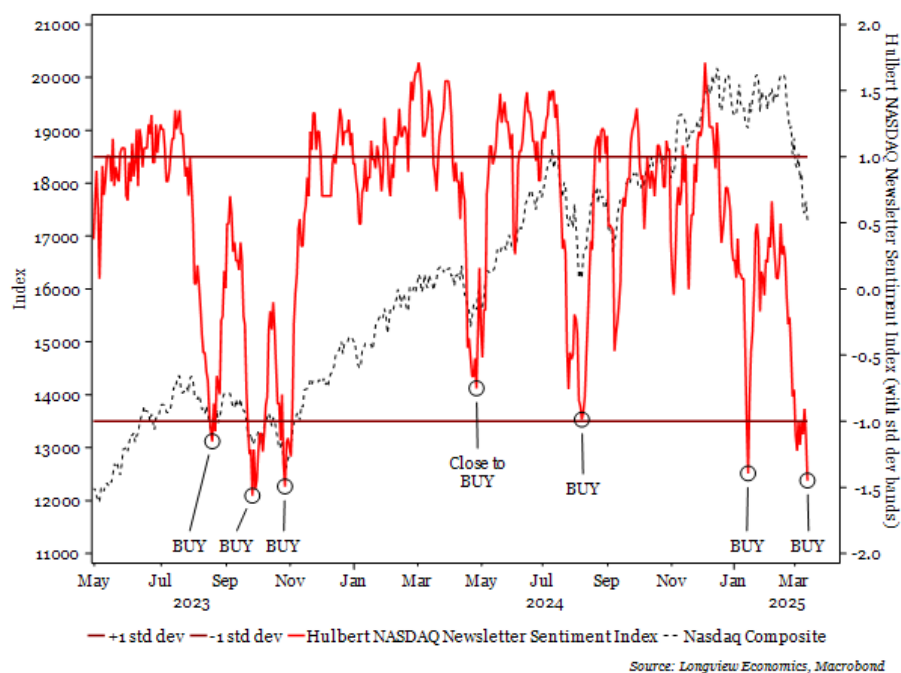
At this juncture, and on some measures, 'wave 1' is advanced, and markets appear poised to enter a wave 2 relief rally (in which it's likely that 50-60% of the losses from wave 1 will be retraced). Our medium term technical scoring system (a technical price based indicator), for example, is back on strong BUY...

FIG 4: Medium term technical scoring system vs. S&P500



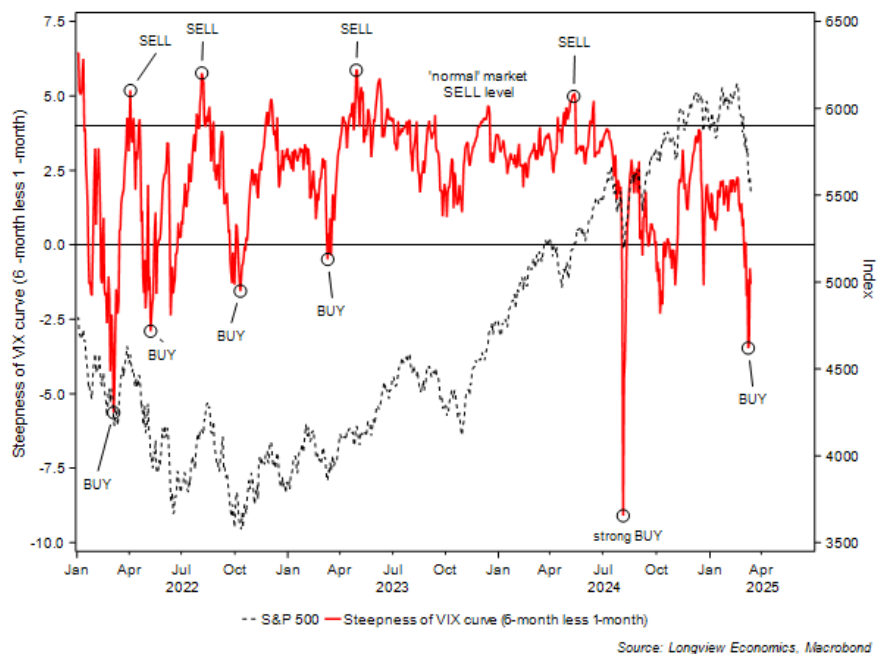
....Sentiment readings are bearish (a contrarian BUY signal)...

FIG 5: Hulbert NASDAQ Newsletter Sentiment Index



....while the VIX volatility curve has become deeply inverted (also typically a BUY signal – FIG 6).

FIG 6: Steepness of VIX curve (6 month less 1 month VIX futures) vs. S&P500



On those (selected) measures, 'wave 1' is probably advanced. **Overall, though, there's likely to be more downside in this pullback**, either in this current wave of selling – or in 'wave 3'.

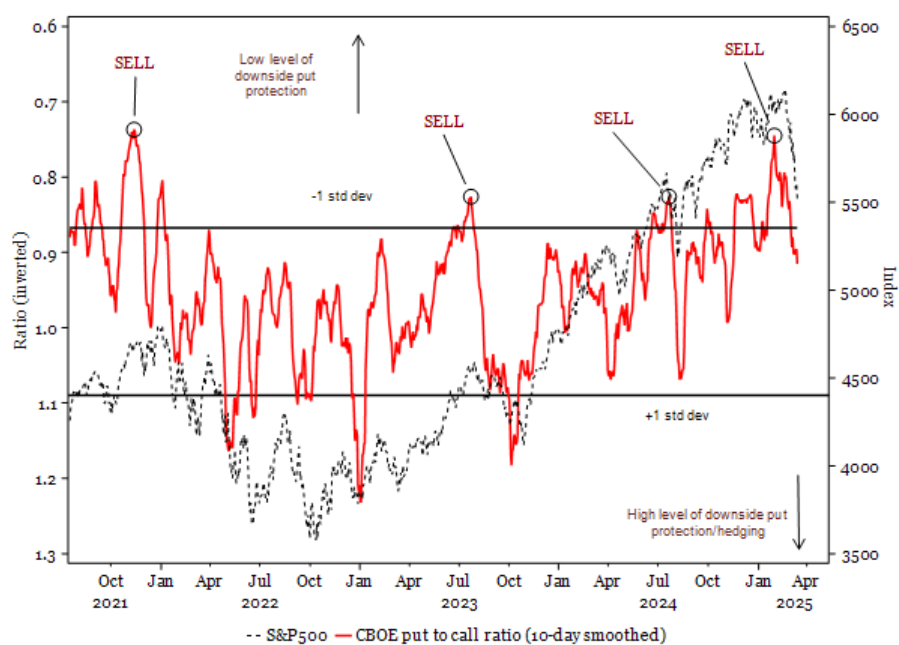
There are two key reasons for that.

First, a ‘full washout’ of risk is the normal behaviour that should be expected after a long/persistent (now tired) bull run. As noted above, this year’s pullback started after an enduring (2.5 year) uptrend, in which bullish sentiment had become extreme; valuations had become excessive/expensive (across US large cap sectors, not just growth stocks); and cash levels had reached a 15 year low. There was also high levels of euphoria about the AI theme (and leveraged products built around that theme, e.g. leveraged LONG Nvidia ETFs etc.). A significantly large, enduring pullback (lasting several weeks, if not months), is therefore probably necessary for that excess/bullish positioning to properly unwind.

Second, this pullback is likely to persist until there are across the board signs of ‘washout selling’ (i.e. capitulation). As shown in FIGs 4 – 6, there are some signs that this pullback is over-extended. As of yet, though, that’s not clear and broad based.

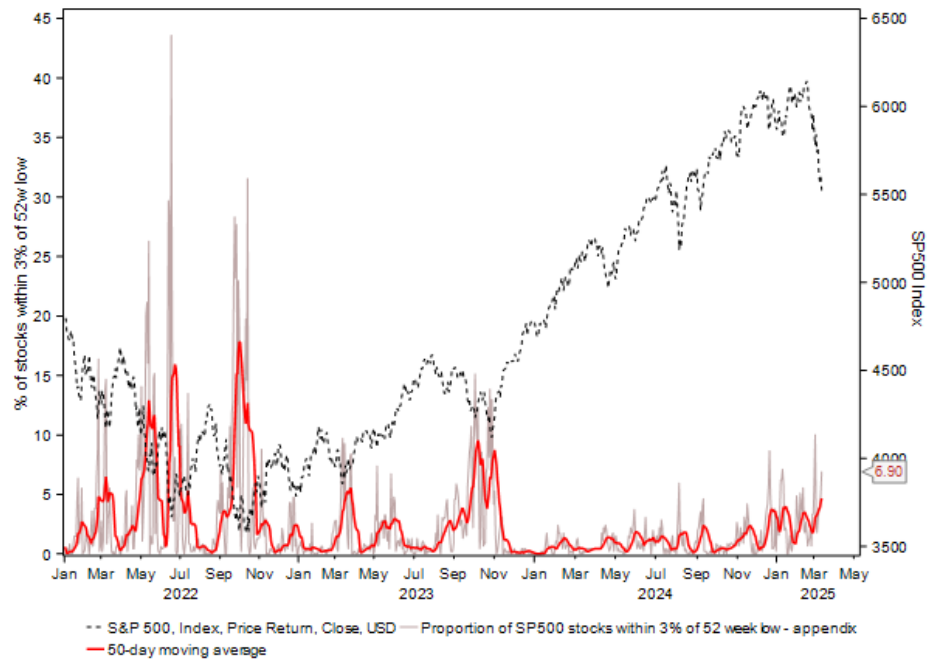
There is still, for example, a lack of downside put protection in portfolios – e.g. with the medium term (10 day smoothed) put to call ratio still **close to SELL** (FIG 7)...

FIG 7: CBOE put to call ratio (10 day smoothed) vs. S&P500



...and little evidence of indiscriminate/broad based SELLing of US stocks (FIG 8)....

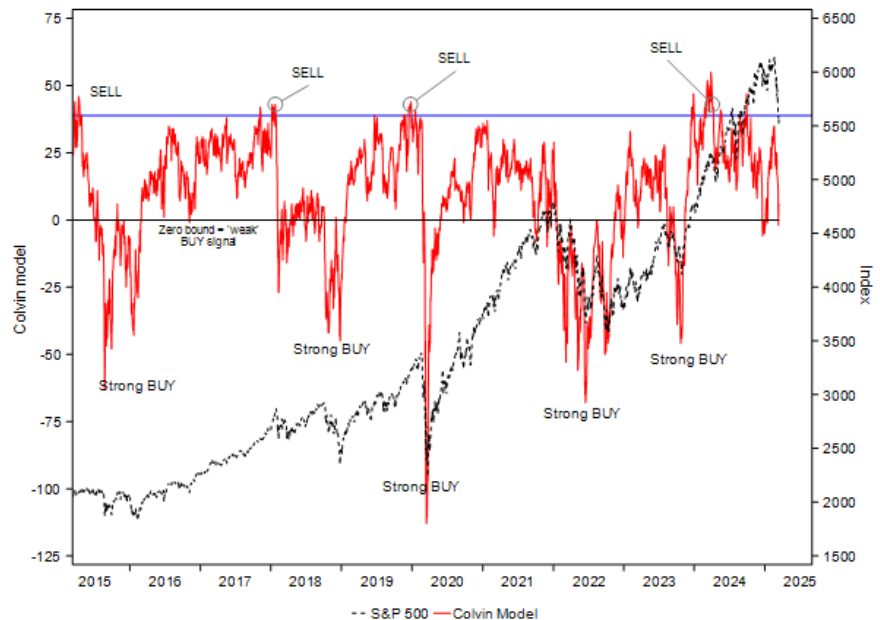
FIG 8: Percentage of US stocks within 3% of their 52-week lows vs. S&P500



Source: Longview Economics, Macrobond

...the Colvin model** is likely to generate a strong BUY signal at some stage in this pullback (from a 'weak BUY' signal currently, FIG 9)...

FIG 9: Colvin Model vs. S&P500**

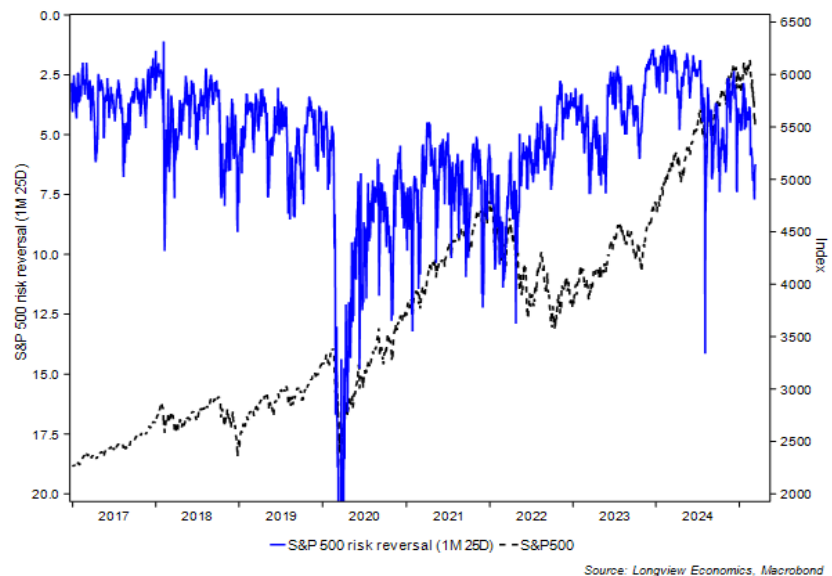


Source: Longview Economics, Macrobond

**This indicator measures the overextended nature of multiple key asset prices across the globe.

...While the risk reversal*** for the S&P500 is not especially extreme (and therefore not signalling high levels of fear/panic in the options market).

FIG 10: S&P500 skewness* (risk reversal, 3 months, 0.25 delta) vs. S&P500**



***Which compares the 'strike vol' of calls and puts with the same delta.

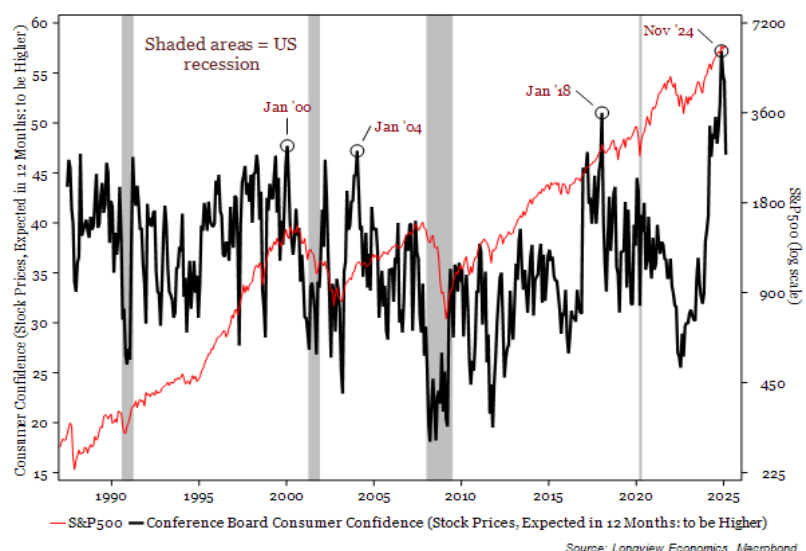
The 2018 Parallel

This pullback probably, therefore, has further to run; will likely consist of three waves (it may have five); and is being driven by a combination of both (i) positioning and technical factors (on the back of a tired bull run), as well as (ii) key macro challenges.

Those macro challenges include, most importantly, the transition **away from fiscal support** (with Trump turning off the fiscal taps) and **towards monetary support**. Markets are a key part of the mechanism for generating the switch to monetary easing (a process which usually requires weakness in risk assets and notably lower yields/rates).

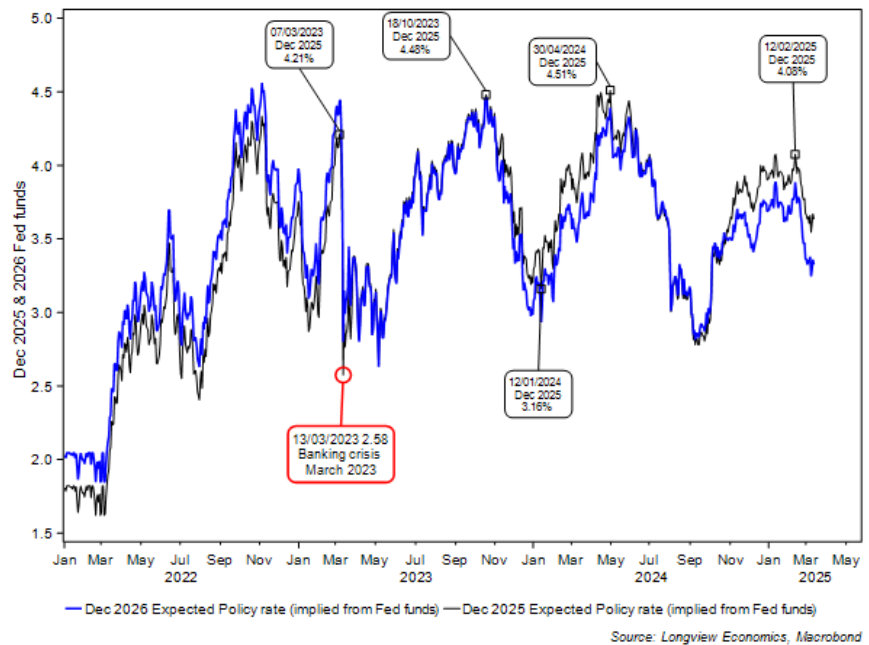
That was the playbook, for example, in 2018. That is, the economy was rolling over into a soft patch, and equities/yields both moved lower together to put pressure on the Fed to loosen policy. Of interest, like 2025, 2018 started with extreme retail optimism about the outlook for the equity market (FIG 10a).

FIG 10a: Consumer Confidence (Stock Prices expected higher in 12m) vs. S&P500



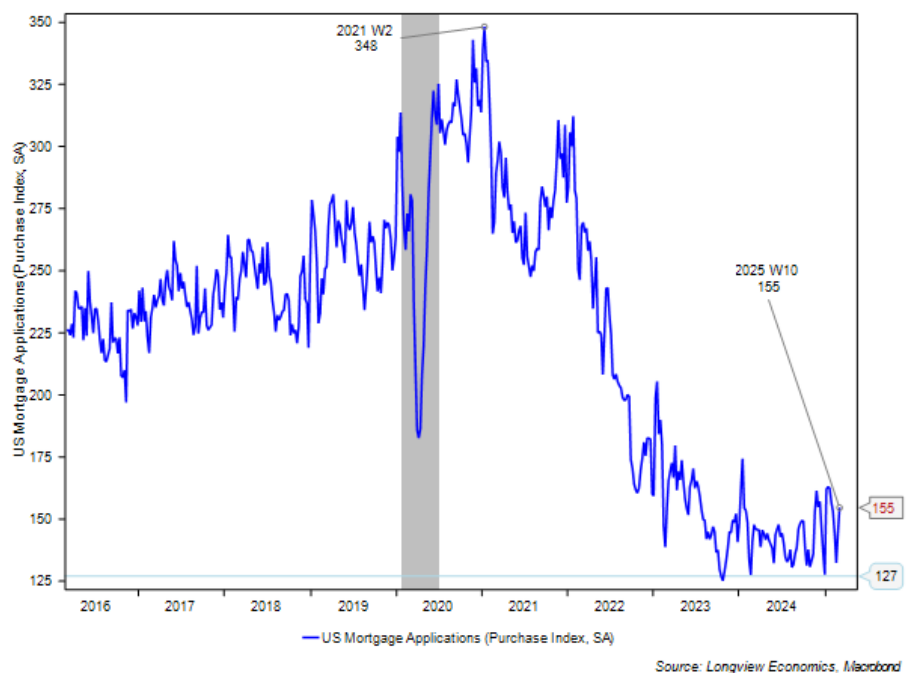
Some of that pressure on the Fed has begun to build in recent weeks, with the rates market starting to price in Fed cuts for this year and next. Currently, as FIG 11 shows, that pricing is back within the middle of the range of the past 2 – 3 years. It's similar in the Treasury market (with both US 10 and 30 year yields broadly mid-range relative to the 2022-24 range).

FIG 11: Implied policy rates for December 2025 and 2026 (Fed funds futures, %)



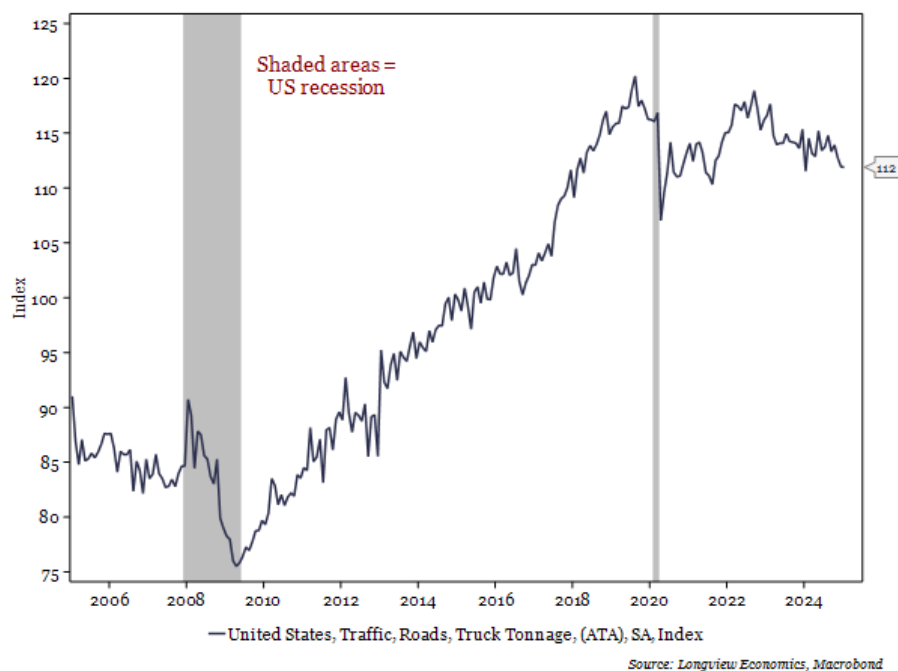
Of interest, though, in those recent years, bouts of weakness in yields/rates haven't been sufficient (or persistent enough) to reflate cyclically sensitive parts of the US economy. In the housing sector, for example, money has remained 'too tight' (e.g. see depressed mortgage apps, amongst other housing indicators)...

FIG 12: US weekly mortgage apps (purchase only)



...While other key types of cyclical activity have remained depressed/under pressure.

FIG 13: US road truck tonnage shown with US recession bands



It's likely therefore that yields/rates need to move convincingly lower, such that they set the stage for (generate) a re-acceleration in those, and other, key parts of the US economy. Before this year, that was less pressing given the fiscal largesse under Biden. Under Trump, though, more significant Fed loosening cycle is required.

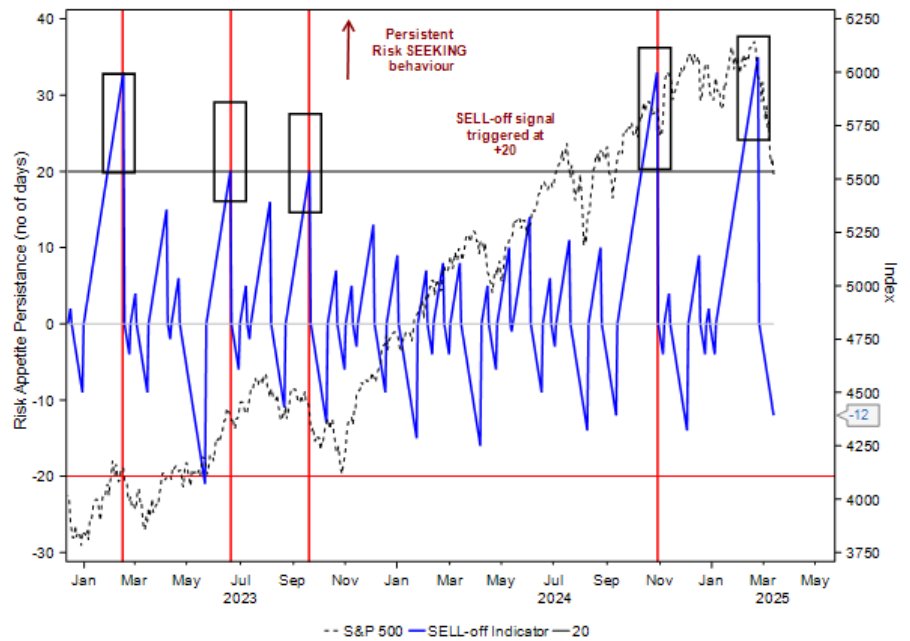
Have a great weekend.

Kind regards,

Longview

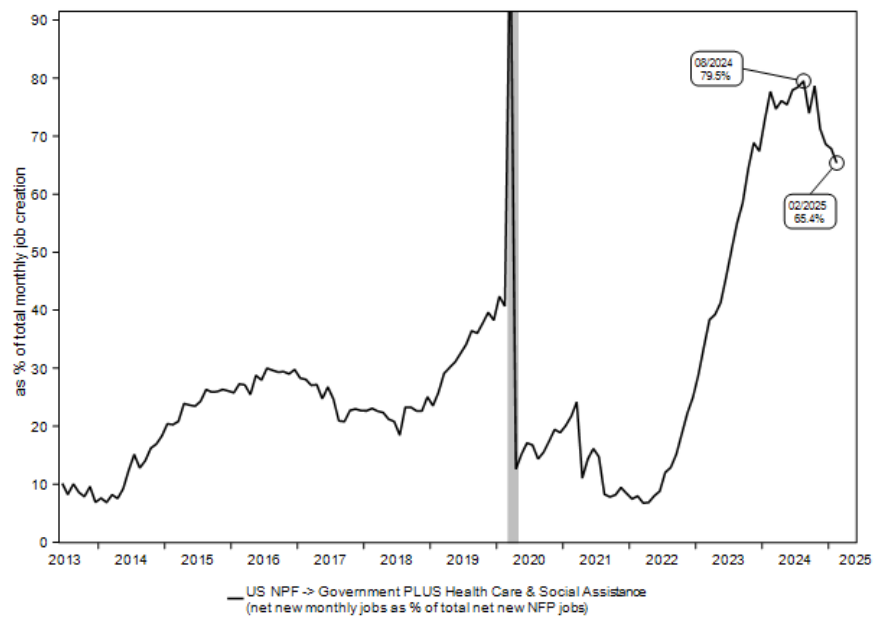
Appendix Charts

FIG 14: Longview SELL-off indicator vs. S&P500



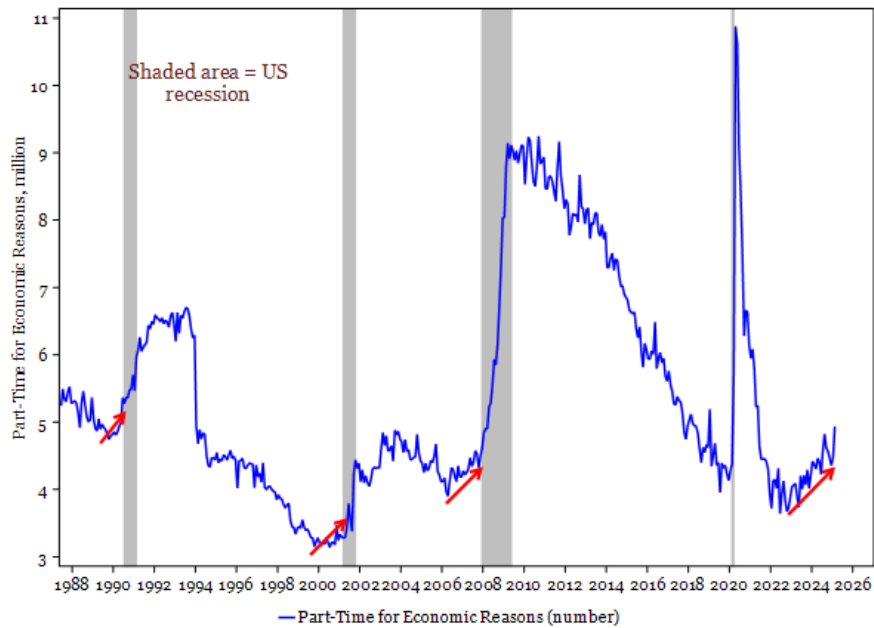
Source: Longview Economics, Macrobond

FIG 15: Government & Government-linked Healthcare jobs as % of total



Source: Longview Economics, Macrobond

FIG 16: Part-time employed for economic reasons (number), i.e. can't find a full-time job

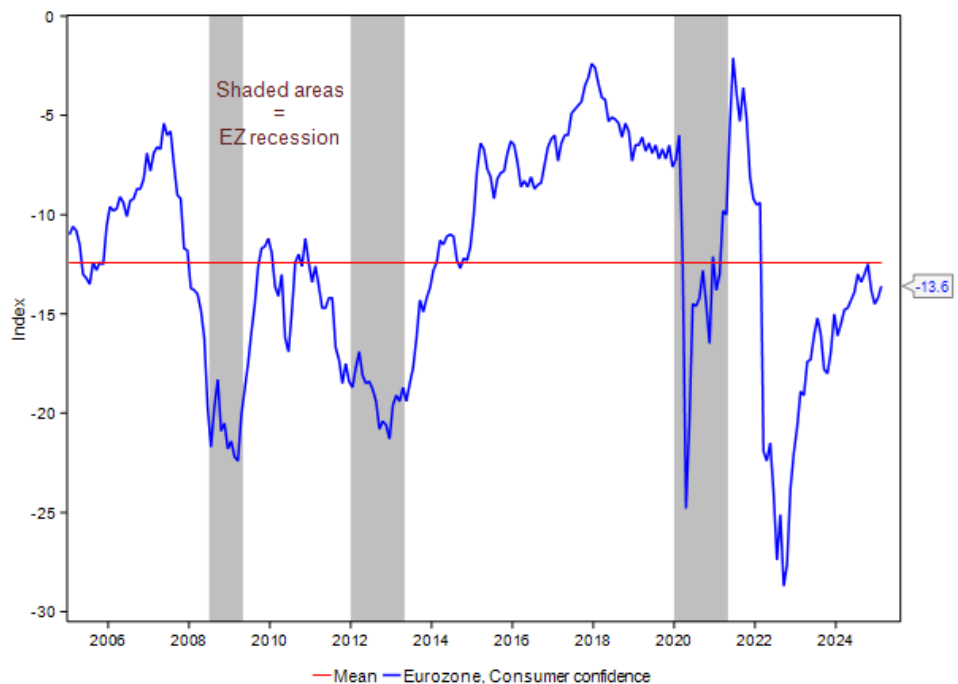


The week ahead, Europe

Key data released this week - Europe	
Events:	Bank of England policy decision & minutes (Thurs, 12pm) followed by press conference (12:30pm); SNB policy decision (Thurs, 8:30am) followed by press conference (9am); Riksbank policy decision (Thurs, 8:30am); ECB publishes Economic Bulletin (Thurs, 9am); speeches by the ECB's Rehn at MNI event (Tues, 9am), Villeroy in Paris (Wed, 10:45am), Guindos in Madrid (Wed, 12pm), Elderson in London (Wed, 1pm), Lagarde in EU Parliament hearing (Thurs, 8am), Lane in Cork (Thurs, 12pm), Villeroy in Paris (Thurs, 1pm) & Escriva at IESE banking event in Barcelona (Fri, 8:15am).
Monday:	UK Rightmove house prices (Mar, 12:01am); Spanish labour costs (Q4, 8am); Italian headline CPI (February final estimate, 9am).
Tuesday:	German & Eurozone ZEW survey – expectations & current situation (Mar, 10am); Eurozone trade balance (Jan, 10am).
Wednesday:	Eurozone labour costs (Q4, 10am); EZ headline & core CPI (February final estimate, 10am).
Thursday:	UK employment, jobless claims & average weekly earnings (Feb/Jan, 7am); German PPI (Feb, 7am); Eurozone construction output (Jan, 10am); CBI industrial trends survey (Mar, 11am).
Friday:	UK Gfk consumer confidence (Mar, 12:01am); UK public sector finances (Feb, 7am); French INSEE business & manufacturing confidence (Mar, 7:45am); ECB current account (Jan, 9am); Italian current account balance (Jan, 9:30am); Eurozone consumer confidence (March first estimate, 3pm).
Key earnings:	N/A

Source: Longview Economics

Eurozone consumer confidence (index)



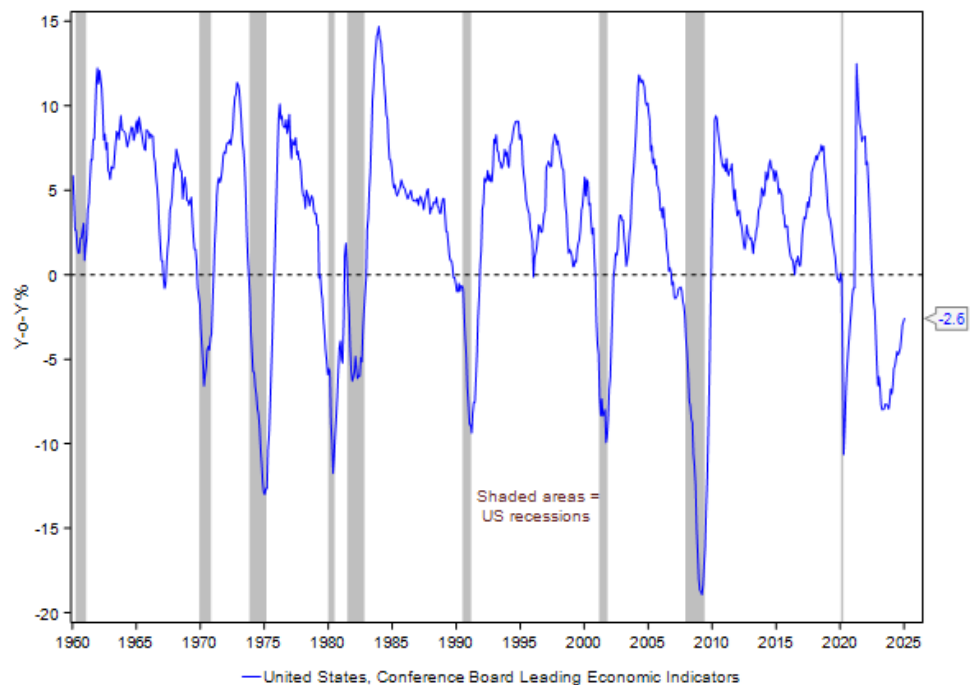
Source: Longview Economics, Macrobond

The week ahead, North America

Key data released this week - North America	
Events:	Fed policy decision (Wed, 6pm) followed by press conference (6:30pm); speech by the Fed's Williams in the Bahamas (Fri, 1:05pm).
Monday:	Canadian housing starts (Feb, 12:15pm); US retail sales (Feb, 12:30pm); US Empire manufacturing (March, 12:30pm); Canadian existing home sales (Feb, 1pm); US NAHB housing market index (March, 2pm); US business inventories (Jan, 2pm).
Tuesday:	US housing starts & building permits (Feb, 12:30pm); US New York Fed service sector business activity (March, 12:30pm); Canadian core CPI (Feb, 12:30pm); US imports and exports price index (Feb, 12:30pm); US industrial & manufacturing production & capacity utilisation (Feb, 1:15pm).
Wednesday:	US total TIC flows (Jan, 8pm).
Thursday:	US Philadelphia Fed business outlook (March, 12:30pm); US current account balance (Q4, 12:30pm); US weekly jobless claims (1:30pm); US existing home sales (Feb, 2pm); US Conference Board leading index (Feb, 2pm).
Friday:	Canadian retail sales (Jan, 12:30pm).
Key earnings:	Accenture, Nike, Micron, Cintas, FedEx (Thurs).

Source: Longview Economics

US Conference Board leading index (Y-o-Y %)

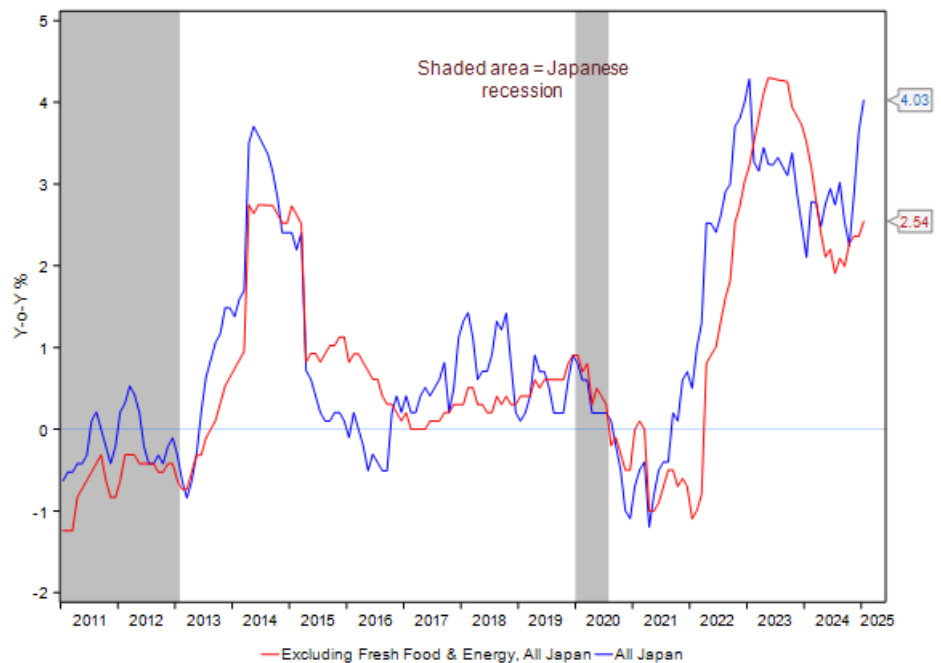


The week ahead, Asia

Key data released this week - Asia	
Events:	BOJ policy decision (Wed, time tentative); PBOC policy decision (Thurs, 1am); speech by the RBA's Hunter (Mon, 11:20pm); market holiday in Japan on account of Vernal Equinox (Thurs).
Monday:	Chinese new & used home prices (Feb, 1:30am); Chinese activity data (industrial production, retail sales, fixed asset, property investment & unemployment rate – Feb, 2am).
Tuesday:	Japanese Tertiary industry index (Jan, 4:30am); Australian Westpac leading index (Feb, 11:30pm); Japanese imports/exports, & trade balance (Feb 11:50pm); Japanese machinery orders (Jan, 11:50pm).
Wednesday:	Japanese industrial production & capacity utilisation (January final estimate, 4:30am); Japanese machine tool orders (February first estimate, 6am).
Thursday:	Australian employment data (Feb, 12:30am); Japanese headline & core CPI (Feb, 11:30pm).
Friday:	N/A
Key earnings:	Ping An Insurance Group (Thurs); China Shenhua Energy, China Petrol, Bank of Communications (Fri).

Source: Longview Economics

Japanese headline & core CPI (Y-o-Y %)



Source: Longview Economics, Macrobond

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Appendix A

Disclosure requirements in accordance with Commission Delegated Regulation (EU) 2016/958 and the FINRA Rule 2241

The below list shows companies where Pareto Securities AS - together with affiliated companies and/or persons – owns a net long position of the shares exceeding 0,5 % of the total issued share capital in any company where a recommendation has been produced or distributed by Pareto Securities AS.

Companies	No. of shares	Holdings in %
Bonheur	239 535	0.56%
Huddly	1 169 083	0.55%
Pareto Bank	14 732 432	21.09%
Selvaag Bolig	4 671 772	4.98%
Sparebank 1 Nord-Norge	5 011 402	4.99%
Sparebank 1 SMN	2 771 589	2.13%
Sparebank 1 SR-Bank	2 405 875	0.94%
SpareBank 1 Østfold Akerhus	1 237 140	9.99%
SpareBank 1 Østlandet	5 714 790	5.38%
Sparebanken Møre	566 833	1.15%
Sparebanken Sør	333 249	2.13%
Sparebanken Vest	7 590 191	7.07%
NEXT Biometrics	700 000	0.76%
SpareBank 1 Sørøst-Norge	2 608 539	4.13%

Pareto Securities AS may hold financial instruments in companies where a recommendation has been produced or distributed by Pareto Securities AS in connection with rendering investment services, including Market Making.

Please find below an overview of material interests in shares held by employees in Pareto Securities AS, in companies where a recommendation has been produced or distributed by Pareto Securities AS. "By material interest" means holdings exceeding a value of NOK 50 000.

Company	Analyst holdings*	Total holdings
AAC Clyde Space	0	72 700
Aker ASA	500	2 288
Aker BP	0	10 978
Aker Horizons	0	170 767
AMSC ASA	0	4 880
ArcticZymes Technologies	0	684
Atlantic Sepphir e	0	7 500
AURELIUSEquity Opportunities	0	500
Austevoll Seafood	0	3 548
Awilco LNG	0	30 000
Belships	0	40 000
Biolinvent	0	15 000
Bonheur	0	30 665
Borregaard ASA	0	515
Bouvet	0	980
BW Energy	0	81 374
BW Offshore	0	4 900
Cloudberry Clean Energy	0	100 000
Crayon	0	2 380
Desert Control	0	6 685
DNB	0	34 067
DNO	0	30 391
Edda Wind	0	5 000
Elkem	0	54 376
Elmer a Group ASA	0	21 405
Embracer Group	0	8 600
Equinor	0	1 616
Europris	0	18 103
Flex LNG	0	1 135
Frontline	0	15 100

Company	Analyst holdings*	Total holdings
Gaming Innovation Group	0	15 000
Gjensidige Forsikring	519	1 160
Grieg Seafood	0	15 074
Hafnia Ltd.	0	96 000
Huddly	0	1 169 083
HydrogenPro	0	34 922
International Petroleum Corp	0	5 511
Kahoot	0	36 577
Kambi Group plc	0	430
Kirron	0	2 314
Komplett Bank	0	153 800
Kongsberg Gruppen	0	500
KWS	75	75
Lea bank	0	16 355
Lerøy Seafood Group	0	38 951
Media and Games Invest	0	10 000
Meltwater	0	24 000
Mowi	0	2 288
Multitude	0	2 443
NEXT Biometrics	0	700 000
NorAm Drilling	0	6 883
NORBIT ASA	0	3 706
Nordic Semiconductor	0	13 053
Norsk Hydro	0	83 711
Norske Skog	0	79 949
Northern Drilling Ltd.	0	195 000
Odjel Drilling	0	3 881
Orkla	0	12 416
Panoro Energy	0	12 733
Pareto Bank	0	762 086
Petrofal	0	74 000
Pexip Holding	0	511 795
Protector Forsikring	0	7 300
Pyraminnovations	0	100
Quantafuel	0	17 665
REC Silicon	0	35 990
SalMar	0	3 500
Sandnes Sparebank	0	2 500
Sandvik	0	1 000
Scatec	0	30 129
Seadrill Ltd	0	7 950
SignUp Software	0	1 264
Sparebank 1 Nord-Norge	0	5 725
Sparebank 1 SMN	0	10 171
Sparebank 1 SR-Bank	0	8 045
SpareBank 1 Østlandet	0	1 100
Sparebanken Møre	0	1 080
Sparebanken Sør	0	15 940
Sparebanken Vest	0	3 294
Stolt-Nielsen	0	2 233
Storebrand	100	1 360
Storlytel	0	5 390
Subsea 7	0	28 890
Telenor	0	3 004
TGS	0	600
TORM	0	2 500
Transocean	0	13 000
Valaric	0	2 000
Vestas Wind Systems	0	1 235
Vow	0	3 281
Vår Energi	0	91 273
Wilh. Wilhelmsen Holding	0	229
Yara	0	16 014
Zaptec	0	7 400

This overview is updated monthly (last updated 15.12.2022).

*Analyst holdings refer to positions held by the Pareto Securities AS analyst covering the company.

Appendix B

Disclosure requirements in accordance with Article 6(1)(c)(iii) of Commission Delegated Regulation (EU) 2016/958

Overview over issuers of financial instruments where Pareto Securities AS have prepared or distributed investment recommendation, where Pareto Securities AS have been lead manager/co-lead manager or have rendered publicly known not immaterial investment banking services over the previous 12 months:

Add Energy	Vår Energi
Aker Clean Hydrogen	Waste Plastic Upcycling
Aker Offshore Wind	Wattif EV
Akershus Energi Varme AS	wheel.me
Alva Industries AS	Ymber AS
American Shipping Company	Ørn Software
Aprila Bank ASA	
B2Holding AS	
Bekk og Strøm AS, SV Vattenkraft AB	
Biolnvent	
Bluwater Holding	
Boreal Holding AS	
Borr Drilling	
Broge Petroleum and Gas	
BW LPG	
Cabonline Group Holding AB	
Cadeler	
CERAFILTEC	
Cloudberry Clean Energy	
COOL Company	
DNO	
Dolphin Drilling	
Ensurge Micropower	
Esmailzadeh Holding	
FIRST Camp Group	
Flex LNG	
GramCar Carriers	
Green Transition Holding	
Hafslund Eco	
HMH Holding	
Hospitality Invest	
House of Control	
HydrogenPro	
Ice Group	
Idavang AS	
InoBat Auto	
International Petroleum Corporation	
Island Green Power Ltd	
KMC Properties	
Kraft Bank	
Kruse Smith	
Kvitbjørn Energi AS	
Magnora	
Memmo Family	
Mime Petroleum	
Multitude SE	
Navios Maritime Holdings	
NorAm Drilling	
Nor-se Atlantic	
Nor-ske Skog	
Norwegian Block Exchange	
Odyssey Oceanwind	
Okeas AS	
Orellio Corporation	
Pandion Energy	
Parseto Bank	
PGS	
PHM Group	
Polight ASA	
Pronto AS	
Protector Forsikring	
Proximar Seafood	
Pryme	
PulPac AB	
Qred Holding	
Quantum	
Salmon Evolution	
Sartorius-Herbst	
Schletter International B.V.	
Shamaran Petroleum	
State European Holdings	
Standard Supply AS	
Swedencare	
Tierklinik Hofheim GbR	
Tise AS	
Trander Energi AS	
Vestby Logistikk Holding	
Viking Venture 27 AS	

This overview is updated monthly (this overview is for the period 01.12.2021 – 30.11.2022).

Appendix C

Disclosure requirements pursuant to the Norwegian Securities Trading Regulation § 3-11 (4)

Distribution of recommendations	
Recommendation	% distribution
Buy	75%
Hold	24%
Sell	2%

Distribution of recommendations (transactions*)	
Recommendation	% distribution
Buy	81%
Hold	19%
Sell	0%

* Companies under coverage with which Pareto Securities Group has on-going or completed public services in the previous 12 months

This overview is updated monthly (last updated 15.12.2022).

Appendix D

This section applies to research reports prepared by Pareto Securities AB.

Disclosure of positions in financial instruments

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The Pareto Group has material holdings of other financial instruments than shares issued by the following companies included in Pareto Securities AB's research coverage universe: None

Disclosure of assignments and mandates

Overview over issuers of financial instruments where Pareto Securities AB has prepared or distributed investment recommendation, where Pareto Securities AB has been lead manager or co-lead manager or has rendered publicly known not immaterial investment banking services over the previous twelve months:

ADDvise	Hexicon AB	SignUp Software AB
Azello	Linkfire A/S	Shamaran Petroleum Corp
Biovia International AB	Mentice AB	Swedencare AB
Boule Diagnostics AB	Media & Games Invest plc	Xbrane Biopharma AB
Cibus Nordic Real Estate AB	NGEx Minerals Ltd	VEF AB
Cinis Fertilizer AB	Oscar Properties AB	Vicore Pharma Holding AB
Egetis Therapeutics AB	Renewcell AB	VNV Global AB

Members of the Pareto Group provide market making or other liquidity providing services to the following companies included in Pareto Securities AB's research coverage universe:

ByggPartner i Dalarna Holding	Media & Games Invest plc.	Shamaran Petroleum
Implantica	Mentice AB	SignUp Software
Isotol Medical	SciBase Holding	Tethys Oil
Linkfire	Sedana Medical	VEF

Members of the Pareto Group have entered into agreements concerning the inclusion of the company in question in Pareto Securities AB's research coverage universe with the following companies: None

Member of the Pareto Group is providing Business Management services to the following companies:

Backaheden Fastighets AB	Hallsell Property Invest AB	Mälarsen AB
Bonäsudden Holding AB (publ)	Halmelätten Fastighets AB (publ)	One Publicus Fastighets AB
Borgglanda Fastighets AB	Korsängen Fastighets AB (publ)	OrigaCar AB (publ)
Bosjö Fastigheter AB	Krona Public Real Estate AB	Preservium Properties AB
Fleming Properties AB	Logistri Fastighets AB	

Members of the Pareto Group have entered into agreements concerning the inclusion of the company in question in Pareto Securities AB's research coverage universe with the following companies: None

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Appendix E

Disclosure requirements in accordance with Article 6(1)(c)(i) of Commission Delegated Regulation (EU) 2016/958

Designated Sponsor

Pareto Securities acts as a designated sponsor for the following companies, including the provision of bid and ask offers. Therefore, we regularly possess shares of the company in our proprietary trading books. Pareto Securities receives a commission from the company for the provision of the designated sponsor services.

2G Energy AG	IVU Traffic AG	Pryme B.V.
adpepper media International N.V.	Kontr on AG	PSI AG
Bioteq AG	Leifheit AG	Pyr um Innovations AG
Bioteq AG Pf.d.	Logwin AG	Questback Group AS
Corestate Capital Holding S.A.	manz AG	Salmones Camanchaca S.A.
Daldrup & Söhne AG	MAX Automation SE	Seven Principles AG
DEMIRE AG	Merkur Privatbank AG	SHOP APOTHEKE EUROPE N.V.
DF Deutsche Fortrait AG	Meta Wolf AG	SMT Scharf AG
epigenomics AG	MPL SE	Surteco AG
Foris AG	MPC Container Ships ASA	Szygy AG
GERRY WEBER International AG	Muehlhahn AG	TTL Beteiligungs- und Grundbesitz AG
Gesco AG	Mutar es SE & Co. KGaA	Uzin Utz SE
GFT Technologies SE	OVH Holding AG	VERIANOS SE
Gigaset AG	ProCredit Holding AG	Viscom AG
Heidelberg Pharma AG	Progr ess-Werk Oberkirch AG	WPU - Waste Plastic Upcycling AS
INTERSHOP Communications AG		

Appendix F

Disclosure requirements in accordance with Article 6(1)(c)(iv) of Commission Delegated Regulation (EU) 2016/958

Sponsored Research

Pareto Securities has entered into an agreement with these companies about the preparation of research reports and – in return – receives compensation.

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BayWa AG	GFT Technologies SE	Mynaric AG
BB Biotech AG	Gigaset AG	OHB SE
Bioteq AG	Heidelberg Pharma AG	ProCredit Holding AG
Bioteq AG Pf.d.	Hypoport SE	Progr ess-Werk Oberkirch AG
Cliq Digital AG	INTERSHOP Communications AG	PSI AG
Daldrup & Söhne AG	Kontr on AG	Segfried Holding AG
Dermapharma Holding SE	Leifheit AG	SMT Scharf AG
Enapter AG	Logwin AG	Surteco AG
epigenomics AG	MAX Automation SE	Szygy AG
Expresszon Biotech Holding AB	Merkur Privatbank AG	Viscom AG
GERRY WEBER International AG	MPL SE	

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