April 11 2022

Macro Weekly

Week 15/2022

Harald Magnus Andreassen
Phone : (+47) 24 13 36 21
Mobile : (+47) 91 14 88 31
E-mail : hma@sb1markets.no

Tina Norden
Phone : (+47) 24 13 37 48
Mobile : (+47) 93 22 62 24
E-mail : tina.norden@sb1markets.no

SpareBank 1 Markets
Phone : (+47) 24 14 74 00
Visit address : Olav Vs gate 5, 0161 Oslo
Post address : PO Box 1398 Vika, 0114 Oslo

SpareBank 1 MARKETS

Last week, part I

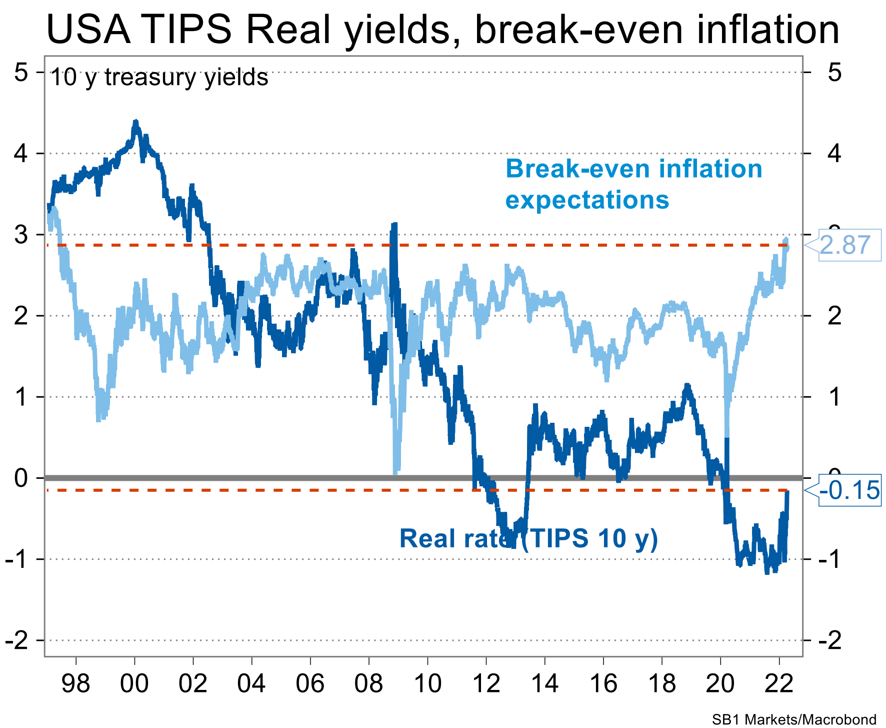
- **The War/Sanctions**
  - The brutal Russian (very likely) killings of civilians have further reduced the possibility for a search for a peace deal now. The Ukrainians want to more weapons to fight on, and the West wants to support them, in the fight against our common adversary (but president Zelensky repeated yesterday that he is open for diplomatic solutions). The Russians are not in the mood for finding a peaceful solution either, as they move to the East front in Ukraine. Risks are escalating, on many fronts
  - **Commodity prices** were mixed, oil & gas declined but wheat prices rose. Still, food prices are just up 7% from before the invasion, and they have fallen 4% over the past 4 weeks. We assume hoarding has pushed prices upwards
  - The **Russian PMIs** collapsed in March, and auto sales fell by 2/3 from February
- **The virus**
  - **Shanghai** is still partly closed down, and PMIs from China were much weaker than the first data sets signalled. China's zero tolerance strategy is obviously not a cost free (and probably not feasible)
  - In the **UK**, the decline in the number of new Covid cases accelerated last week, and the no. of hospitalised patients is very likely peaking now, at half of the peak level (Jan-21)
- **March services & composite PMIs/ISM**
  - The global PMI was significantly weaker than we expected as the Russian PMIs collapsed, especially in the service sector, with just one possible explanation (war & sanctions). In addition, and more important for the global aggregate, the service sector PMI in China was far weaker than we assumed (and now we of course have the obvious (Omicron) explanation…)
  - In the **rich part of the world**, the PMIs rose. The decline in the EMU was just marginal, and less than initially reported. In the US, the service sector ISM recovered less than expected but the level is high (58.3)
  - The global composite index fell by 0.8 p to 52.7, signalling growth at trend, at some 3%. In DM, the composite index gained 1.3 p to 56.0
  - There are some possible war & sanction impact, even globally: Delivery times climbed again, and in total, prices rose faster than ever

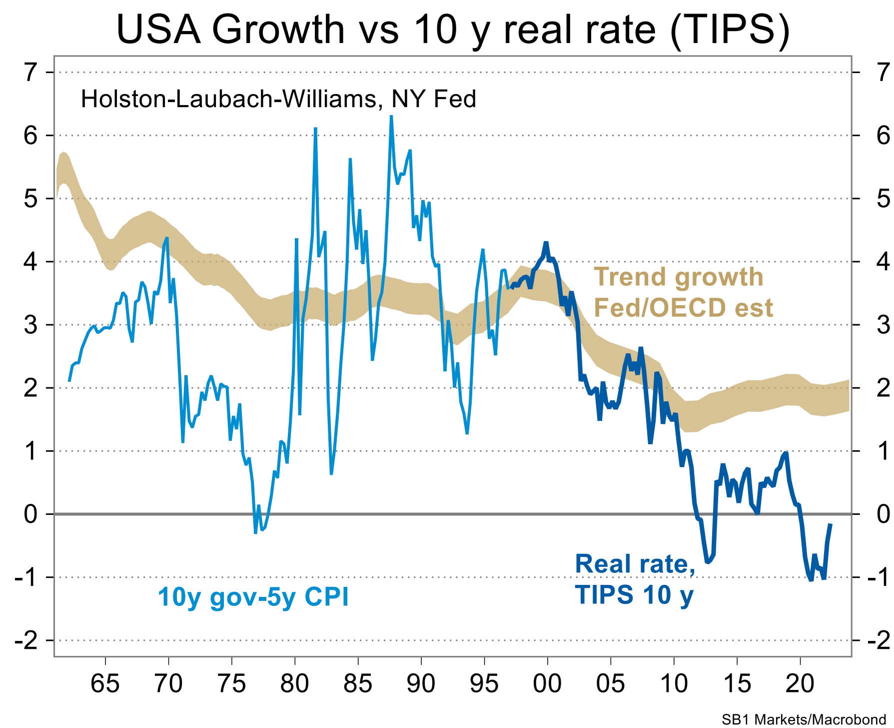
Last week, part II

- **Global auto sales**
  - **Global sales** may have fallen as much as 15% m/m in March, to 22% below the 2019 level. Sales fell in the **US**, and in **EMU** (especially in Germany). In **Russia** sales fell more than ever before (by 2/3), to the 2nd lowest level in modern times (April-20 was marginally weaker). Sales probably fell sharply in **China** too (just preliminary data so far). **German auto production** fell by 35% from February, no doubt supply chain problems
- **USA**
  - As we assumed, the **minutes from the March 16 FOMC meeting** could not be even more hawkish than the bond market already had discounted, following the 50 bp lift in the curve since after the meeting and early in last week comments from FOMC members sent yields sharply up. Still, the QT message (reduce the bond holding much faster than in 2019 by reducing the stock of treasury bonds by USD 60 bn/month and mortgage backed bonds by USD 35 bn) soured the sentiment further, and by Friday the 10 y treasury yield had climbed 33 bps to 2.72%, far above previous cycle highs. The 10 y real rate climbed 26 bps to -0.15%, the highest level since March 24 2020. Some few weeks ago the real rate was below -1.0%
  - The increase in real yields (that started last autumn) is very likely not due to higher growth expectations but rather a recognition that central banks are now changing tack to fight inflation, and that real rates will have to climb as a result. The impact on growth is of course the opposite. Growth has to be slowed to below trend to get inflation down. That always before implied lower profit margins, higher unemployment, and lower wage inflation. Actual (corporate) earnings expectations do not reflect such a scenario – even if energy prices are blurring the picture. This is the real RISK: The current rapid lift in real rates is not due to a stronger growth outlook but rather implies significantly slower growth ahead (best case, or a recession) which so far probably is not widely acknowledged (even if the debate is heating up)
  - **Atlanta Fed median wage tracker** reported a further increase in wage inflation in March, at least measured y/y, and smoothed. Growth may have slowed somewhat m/m through Q1. Wage inflation is well above a level that will yield 2% inflation over time, and it seems unlikely that wage inflation will slow substantially before demand for labour has fallen
- **Norway**
  - **Mainland GDP** grew just 0.5% in February, well below expectations – and the increase was (net) due to an increase in ocean fisheries (a lift that we assumed). Services recovered further while, while manufacturing production fell sharply (which we did not expect). We expect a further lift in GDP in March, even if some businesses are hurt by the new sanction regime
  - **House price** once more surprised at the upside, +1.1% m/m (we expected 0.2%), broadly based geographically. The supply side may still to be blamed, the new documentation requirements seem to have lowered the flow of homes fore sale substantially, and the inventory of unsold homes is at ATL. At one stage, these 'missing' homes will enter the market. At the same time, rates are moving rapidly upwards
  - **Construction costs (materials, houses)** rose more than 2% in March (and are up 25% y/y, the total index up 12%), now due to higher steel prices. Lumber prices were not reported up (but other carpenter material are just reported quarterly)

Real rates up. And we are quite sure, not because growth expectations rose

If inflation is at 3%, and the real rate is at -0.4%, *we assume it is because the growth outlook is weak*

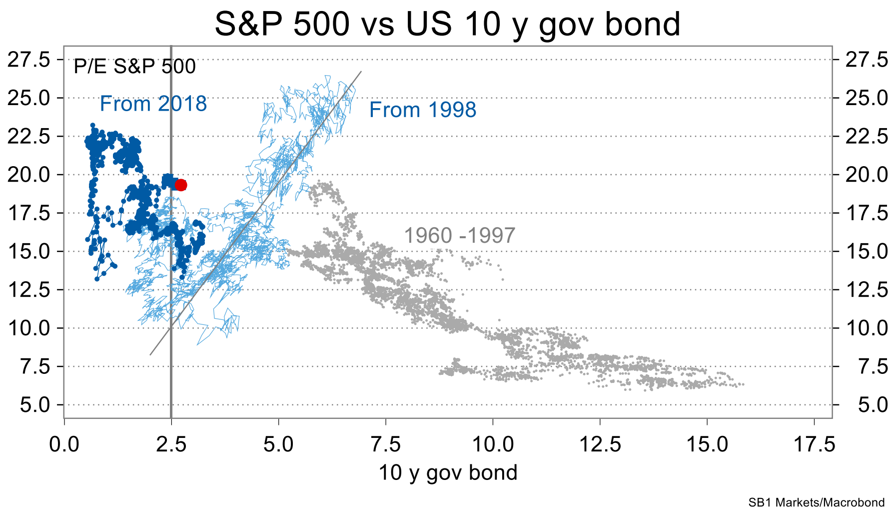


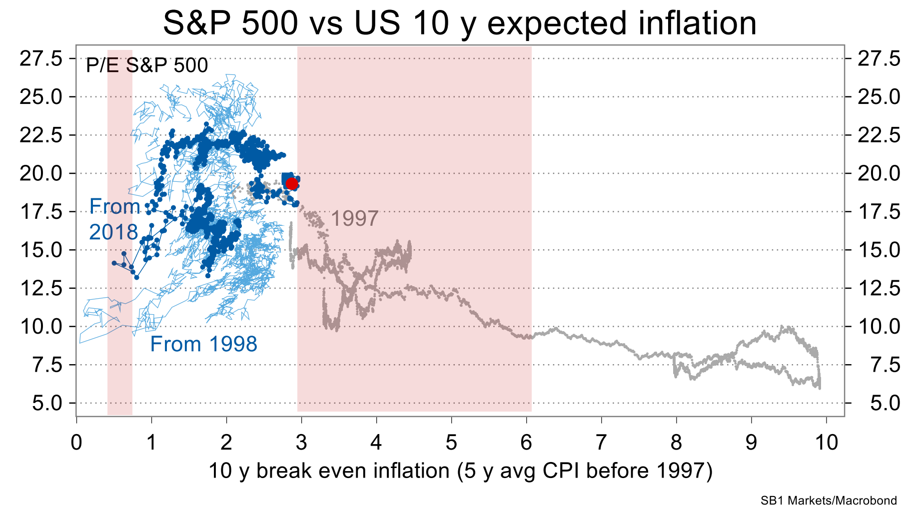


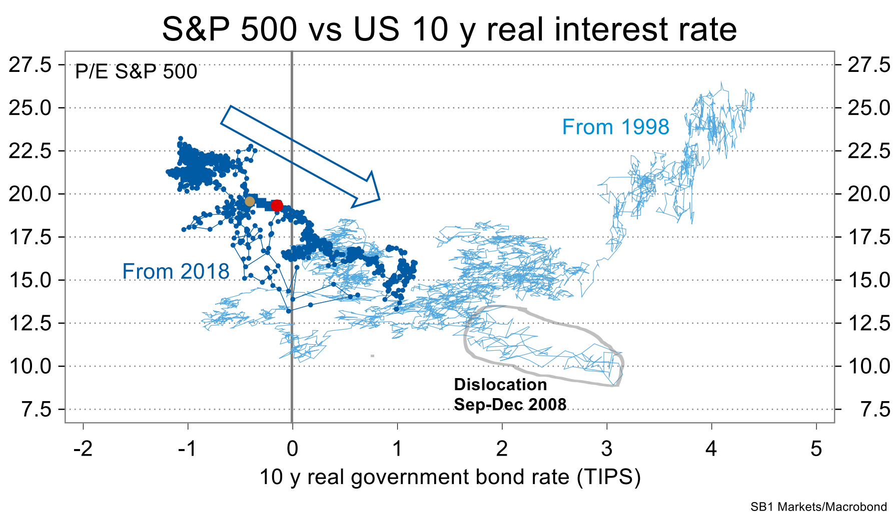
- If the economy is not really weak, we think central banks will tighten monetary policy by hiking rates, selling bonds in order to bring real rates further up to inflation under control <u>by slowing the economy to below trend growth</u>
  - » Profit margins are exposed
  - » Demand for labour will slow too, and unemployment will increase – in order to get wage inflation down
- The big question: Are other markets discounting the bleak growth outlook that seems to be discounted in the bond market?

Bonds vs. equities: What's next? Central banks are now fighting inflation!

.. And they will probably succeed. But at a price: Higher real rates + 'some' earnings surprises…







- **Expected inflation**
  - » ***If its not too low or too high: No problem***
    - 'Real' expected earnings are unaffected, higher inflation implies stronger growth in earnings, and vice versa
  - » ***If its too low or too high: A problem***
    - Something is rotten: Deflation or far too high inflation. The economy is not stable. Risk are increasing, earnings are exposed.
  - » Now: Infl. expectations at close to 3% - on the border to become a problem?
- **Expected long term real interest rates**
  - » ***Low real rates normally not good news, high rates were OK***
    - Real rates were low when the economy was weak, the outlook uncertain
    - High real rates when the economy was booming, with high P/Es
  - » **2018-21:** real rates have been low even if the economic outlook has been OK
    - Central banks wanted to lift growth, inflation was anyway not a problem – we entered the 'Goldilocks' corner'
  - » **Now:** Central banks engaged in a HUGE policy shift, to contain inflation. The risk: A further increase in REAL rates, at the same time as growth expectations slows!

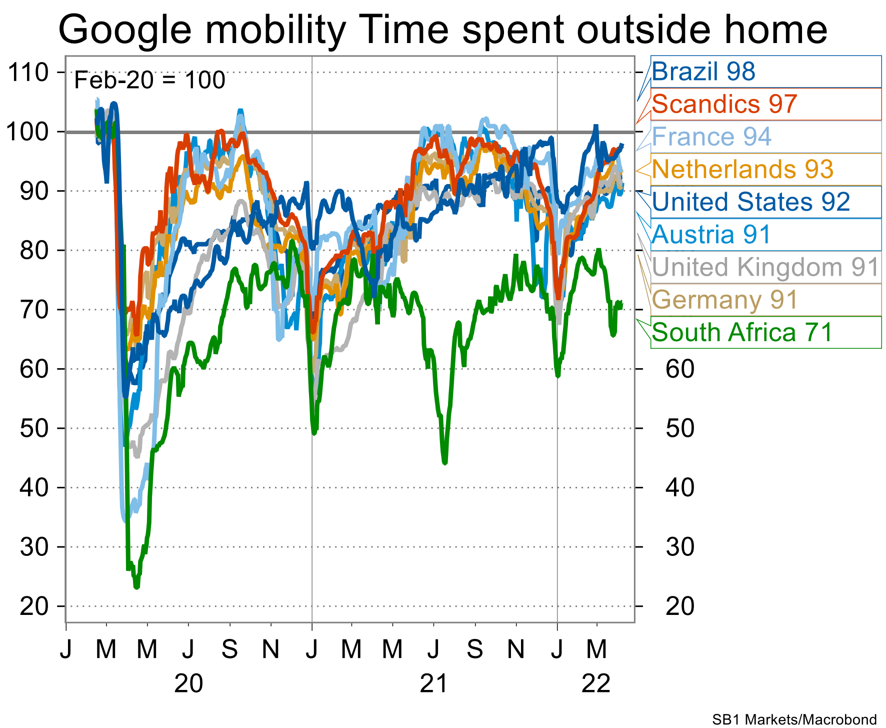
The Easter calendar: (Weak) Chinese March/Q1 data; USA CPI, retail sales, NOK CPI

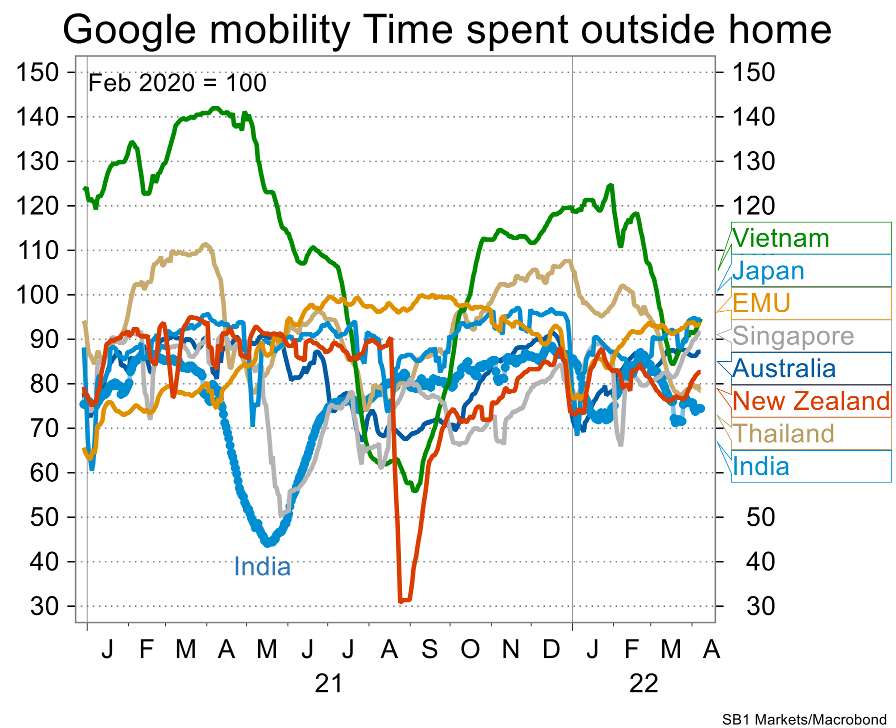
Time	Count.	Indicator	Period	Forecast	Prior
Monday April 11					
08:00	NO	CPI YoY	Mar	5%(5.0)	3.7%
08:00	NO	CPI Underlying MoM	Mar	0.4%	1.2%
08:00	**NO**	**CPI Underlying YoY**	**Mar**	**2.4%(2.4)**	**2.1%**
08:00	UK	Monthly GDP (MoM)	Feb	0.3%	0.8%
08:00	UK	Manufacturing Production MoM	Feb	0.4%	0.8%
Tuesday April 12					
06:00	SW	PES Unemployment Rate	Mar	--	3.4%
08:00	UK	Weekly Earnings ex Bonus	Feb	4.0%	3.8%
08:00	UK	Unemployment	Feb	3.9%	3.9%
11:00	GE	ZEW Survey Expectations	Apr	-47	-39.3
12:00	US	NFIB Small Business Optimism	Mar	95	95.7
14:30	US	CPI YoY	Mar	8.4%	7.9%
14:30	**US**	**CPI Ex Food and Energy MoM**	**Mar**	**0.5%**	**0.5%**
14:30	US	CPI Ex Food and Energy YoY	Mar	6.6%	6.4%
20:00	US	Monthly Budget Statement	Mar	--	-$216.6b
Wednesday April 13					
	CH	Trade Balance	Mar	$20.50b	$94.46b
	CH	Exports YoY	Mar	12.9%	20.9%
	CH	Imports YoY	Mar	8.6%	19.5%
08:00	UK	CPI YoY	Mar	6.7%	6.2%
08:00	**UK**	**CPI Core YoY**	**Mar**	**5.4%**	**5.2%**
14:30	US	PPI Final Demand YoY	Mar	10.6%	10.0%
Thursday April 14					
08:00	SW	CPI YoY	Mar	5.5%	4.3%
08:00	**SW**	**CPIF Excl. Energy YoY**	**Mar**	**3.7%**	**3.4%**
13:45	**EU**	**ECB Deposit Facility Rate**	**Apr-14**	**-0.5%**	**-0.5%**
14:30	US	Retail Sales Advance MoM	Mar	0.6%	0.3%
14:30	**US**	**Retail Sales Control Group**	**Mar**	**-0.1%**	**-1.2%**
14:30	US	Initial Jobless Claims	Apr-09	175k	166k
16:00	US	Business Inventories	Feb	1.3%	1.1%
16:00	US	U. of Mich. Sentiment	Apr P	58.8	59.4
Friday April 15					
03:30	CN	New Home Prices MoM	Mar		-0.13%
14:30	US	Empire Manufacturing	Apr	1	-11.8
15:15	US	Manufacturing (SIC) Production	Mar	0.4%	1.2%
Monday April 18					
04:00	**CN**	**Industrial Production YoY**	**Mar**	**4.3%**	**4.3%**
04:00	**CN**	**GDP SA QoQ**	**1Q**	**0.8%**	**1.6%**
04:00	CN	GDP YoY	1Q	4.3%	4.0%
04:00	**CN**	**Retail Sales YoY**	**Mar**	**-2.5%**	**1.7%**
04:00	CN	Fixed Assets Ex Rural YTD YoY	Mar	8.4%	12.2%
16:00	US	NAHB Housing Market Index	Apr	78	79

- **China**
  - » **March** cannot possibly have been a good month for the Chinese economy. The PMIs fell sharply, and several larges cities are fighting against the Omicron variant with draconic measures. Monthly changes in demand and production was very likely weak. Even the **Q1 GDP** will be influenced by Covid-19 trouble.
- **USA**
  - » **CPI:** Yes, we know it – and everybody and his dog know it will become worse before it one day gets better. Still, extreme CPI data are never welcome news – and they will remind us on what's ahead: aggressive monetary tightening in order to bring growth significantly below trend – so that margins are squeezed, unemployment increased and wage inflation slowed substantially
  - » **Retail sales** (core goods) have flattened (in volume terms) since last spring but remains far above any reasonable long term trend, especially in value terms. Spending on services are on the way up – but has far from recovered, and most of them probably will over the coming months/few quarters (if there is labour available to fill the new openings)
- **EMU**
  - » **A further tightening** (in the rhetoric)? Very likely, even if the growth outlook is very cloudy. Inflation has climbed further, and more may come due to supply constraints that are building up due to the war. However, we strongly argue that the hike in prices so far has been almost solely due to oil and gas prices, and a small slice from food prices. Wage inflation remains at 2.00%. The risk on wage are on the upside, as the unemployment is at the lowest level since 1981 and the vacancy rate is record high – and wage are not unresponsive to labour market conditions. Anyway, the ECB will conclude that the inflation outlook warrants a tightening not before long. And given the starting point at -0.5%, inflation a 7% and a record low unemployment we of course agree that rate should be lifted! The QE program was scaled substantially down at the last meeting
- **Norway**
  - » This morning, we expect the **March CPI** to report another hike, both the headline & the core. Regrettably, our estimates are identical with the Bloomberg consensus. We assume electricity prices rose 13%, and gasoline prices 8%. Even the core may have accelerated 0.3 pp to 2.4% - and the headline will approach 5%. We expect a substantial decline in the annual rate, starting in May

Sources: Bloomberg. SB1M est. in brackets. Key data are highlighted, **the most important in bold**

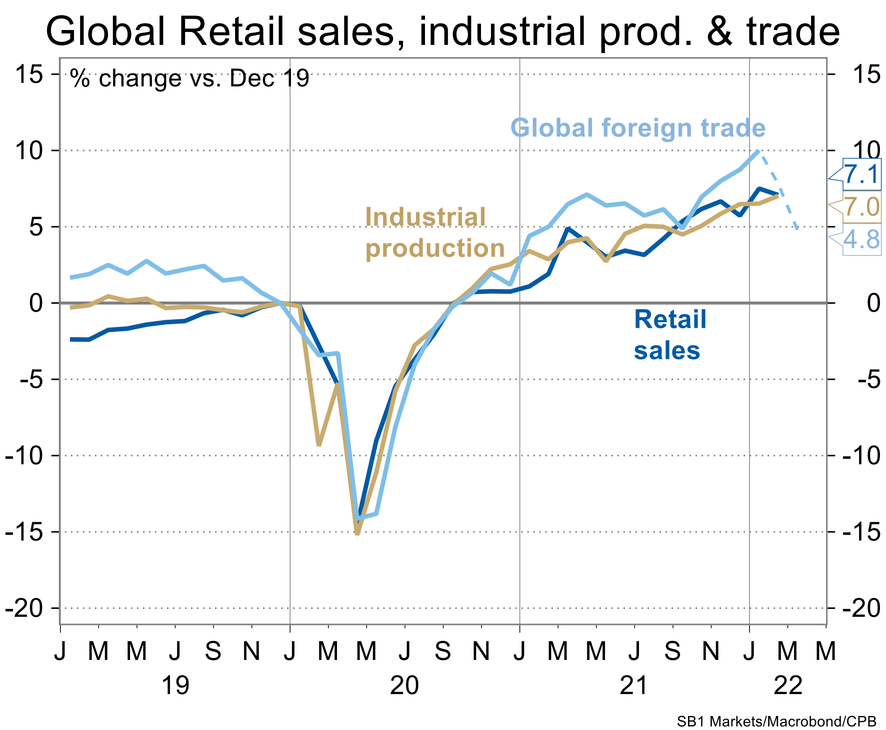
Mobility on the way up in the West, some positive signs in Asia (x China) as well

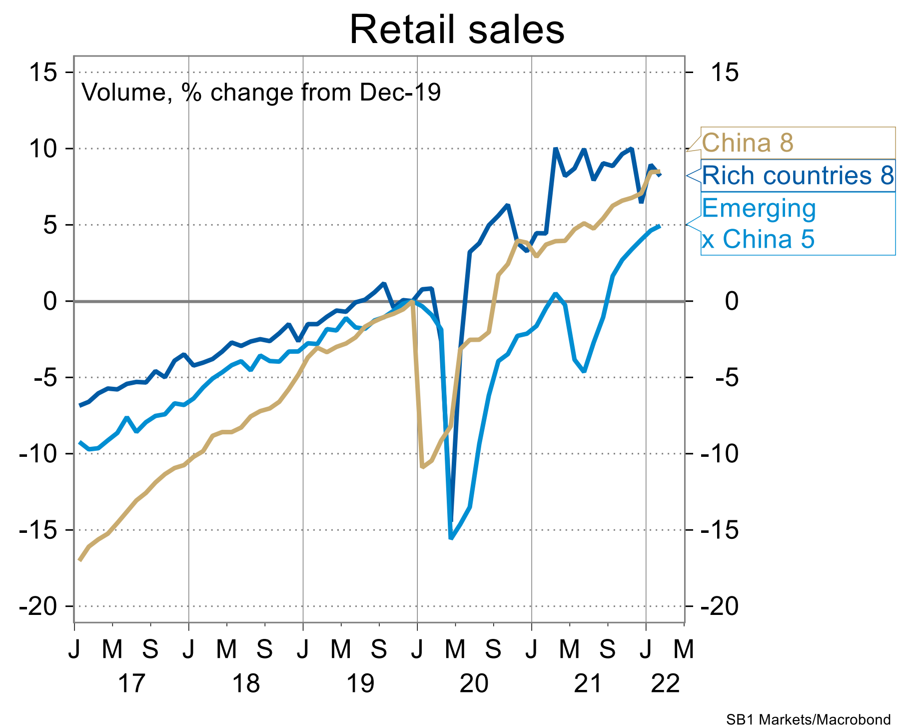




Global retail sales remained strong in February. Emerging markets on the way up

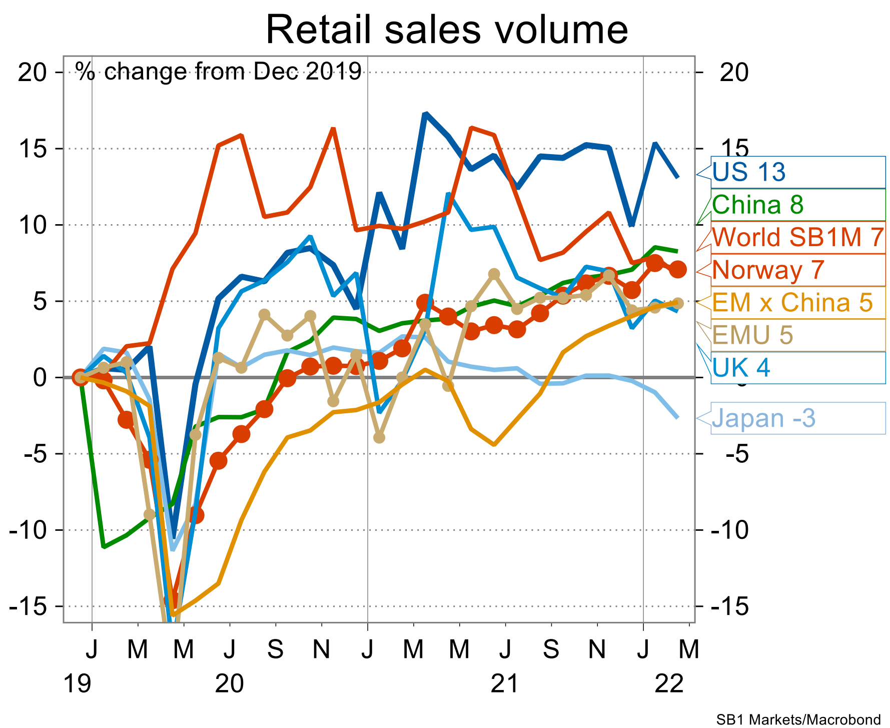
Industrial production on the right track too. Global trade may have slowed in February and March

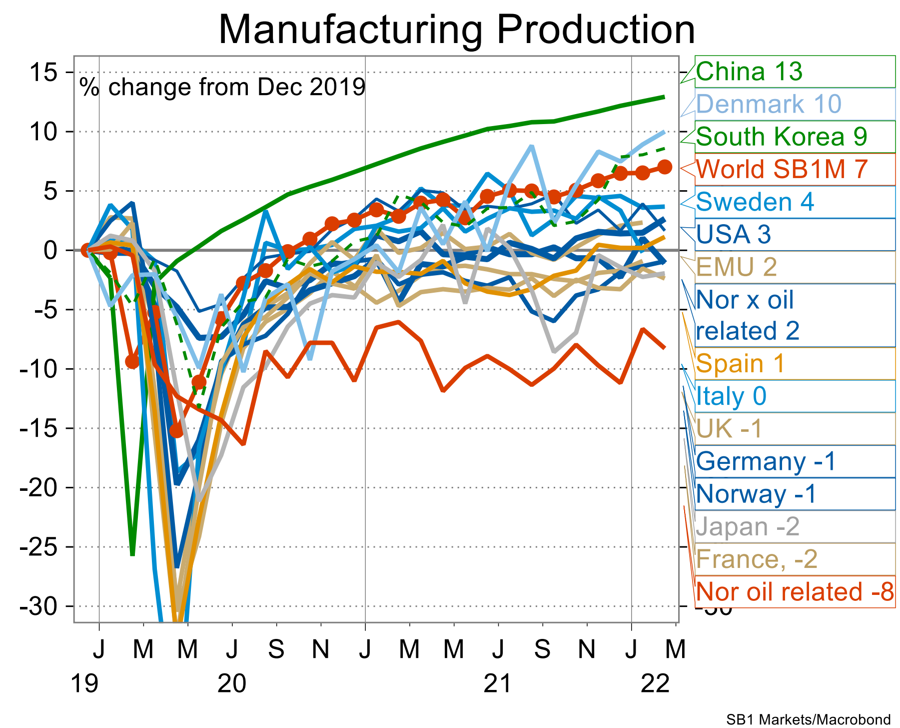




Retail sales are still trending up, thanks to EM, China included

However, the trend is very likely down in the rich part of the world. Manufacturing prod. still OK

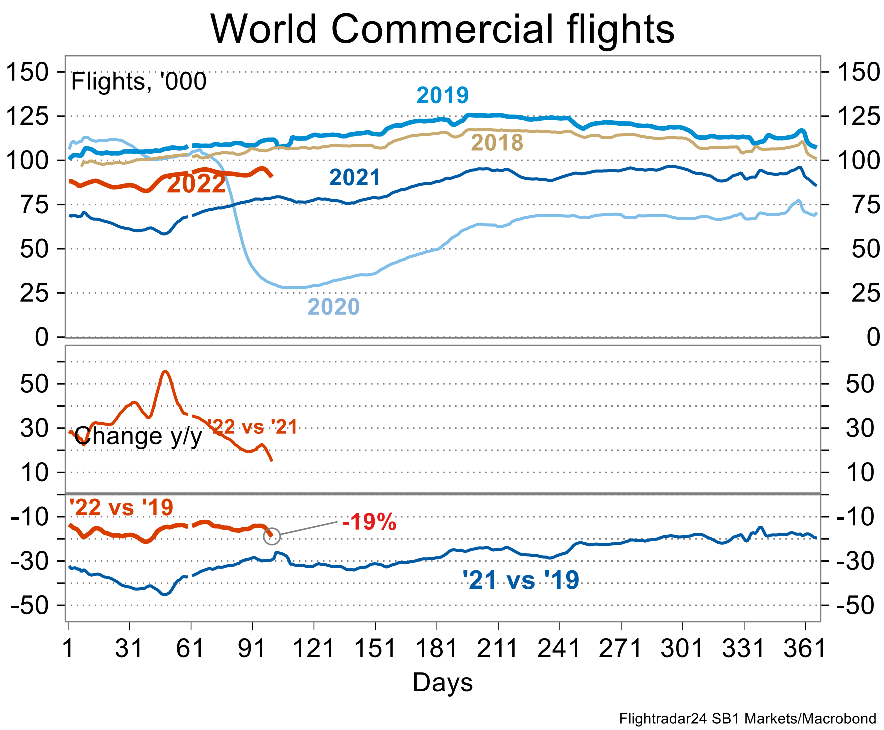


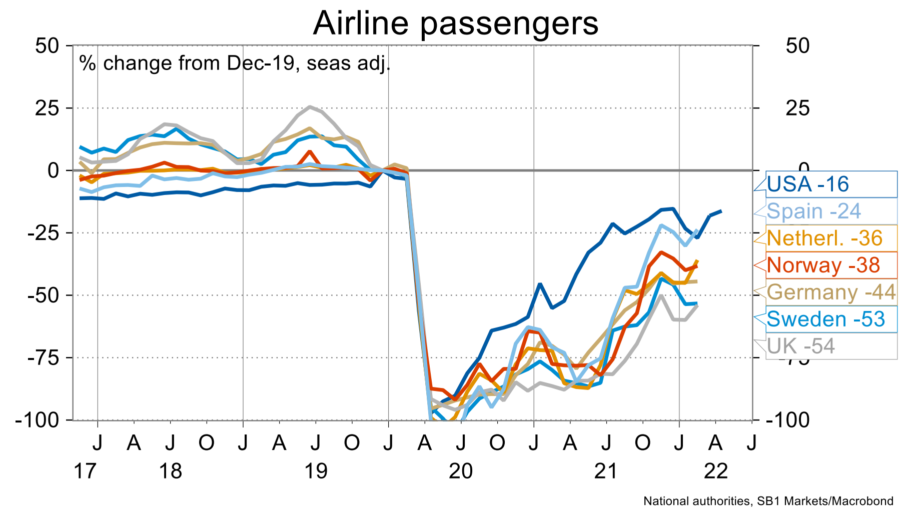


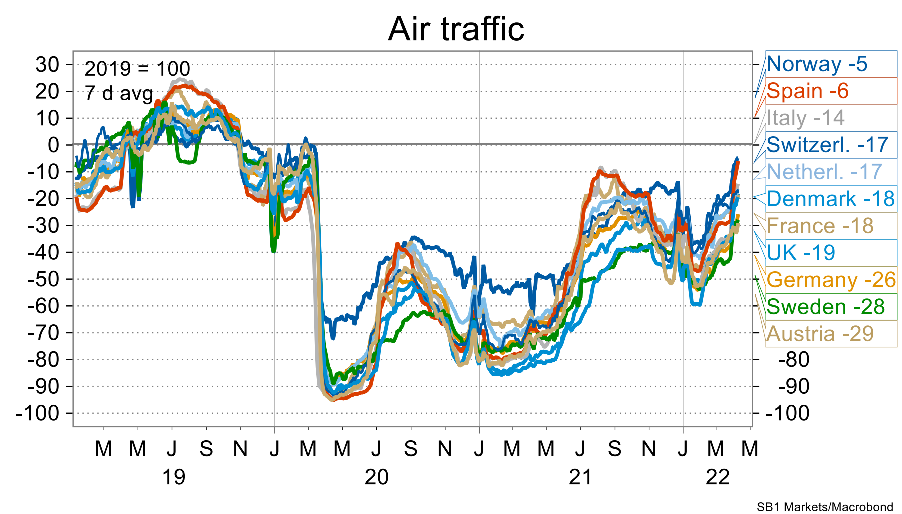
- **Retail sales** in Emerging Markets x China are recovering but is far below pre-pandemic trends
- **Manufacturing production** has been hampered by a deep decline in auto production. The manufacturing PMIs are down from the peak but aare still signalling growth above trend

Global airline traffic down 5% last week – down 19% vs. 2019

European, US data OK. Perhaps some problems in Russia, China?

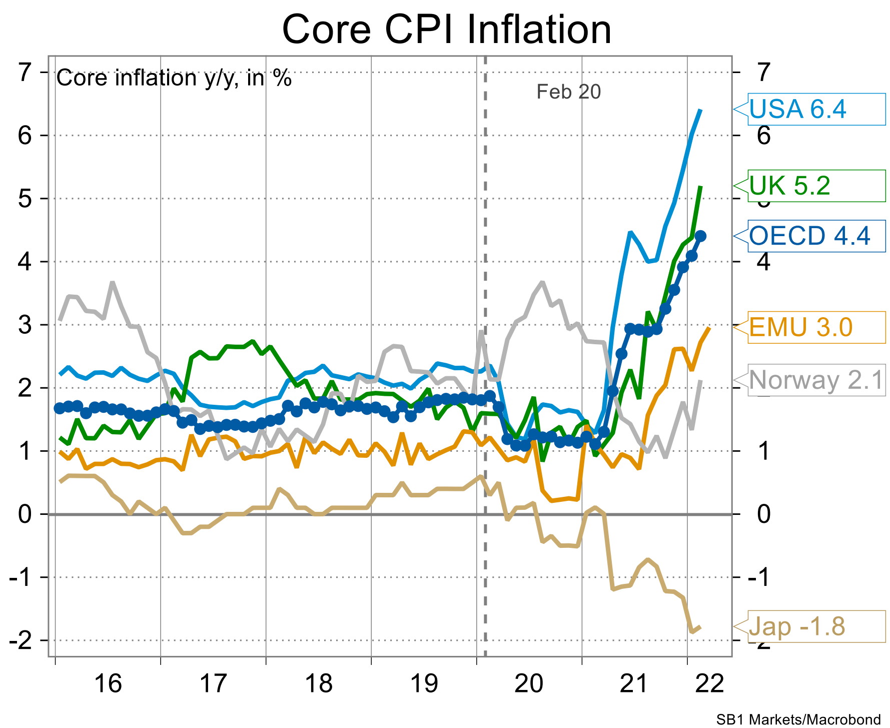


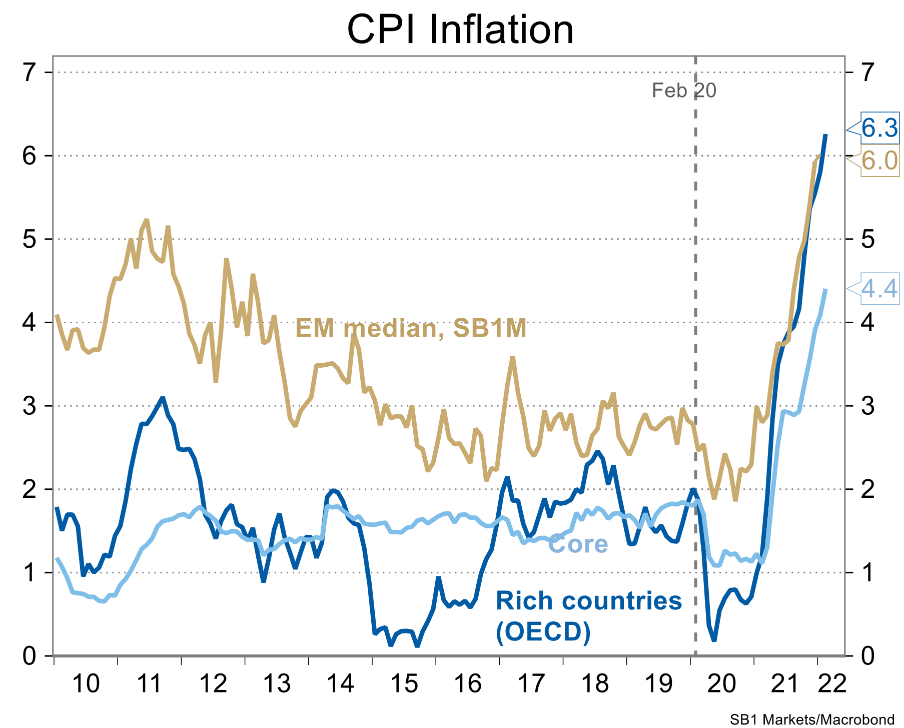




Inflation still rapidly on the way up

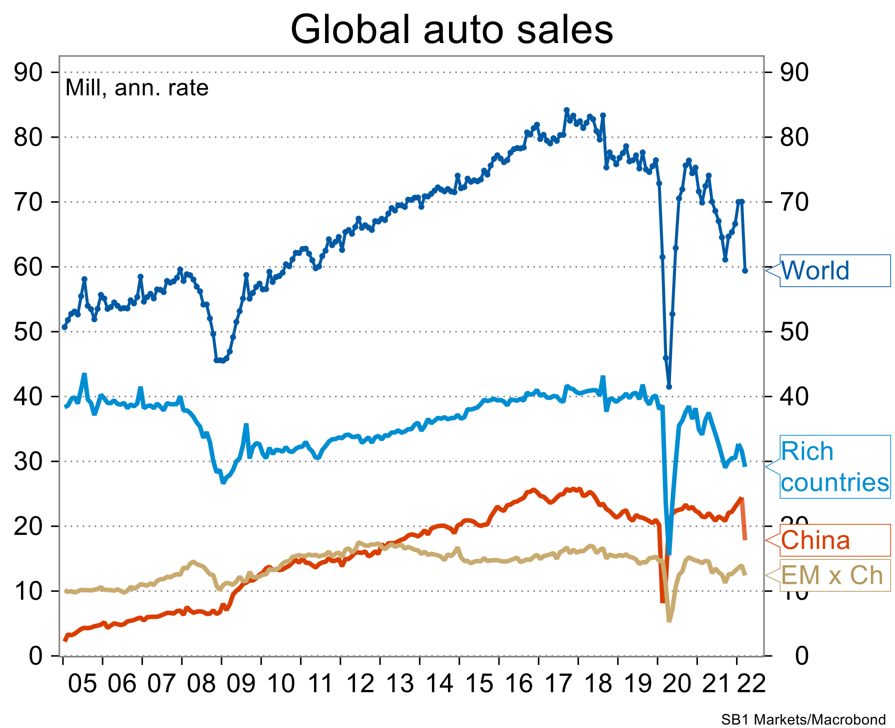
Energy prices the main culprit, but core inflation has turned up most places

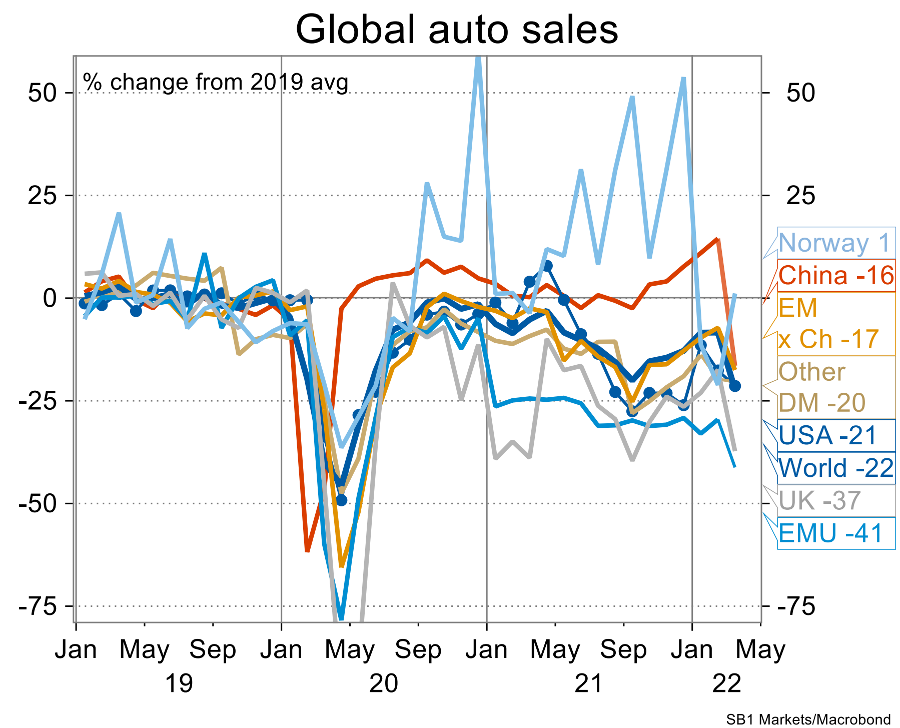




Auto sales straight down in March; Russia, China, and EMU mostly to blame

Global sales may have fallen as much as 15% - but data from China & others still not finalised

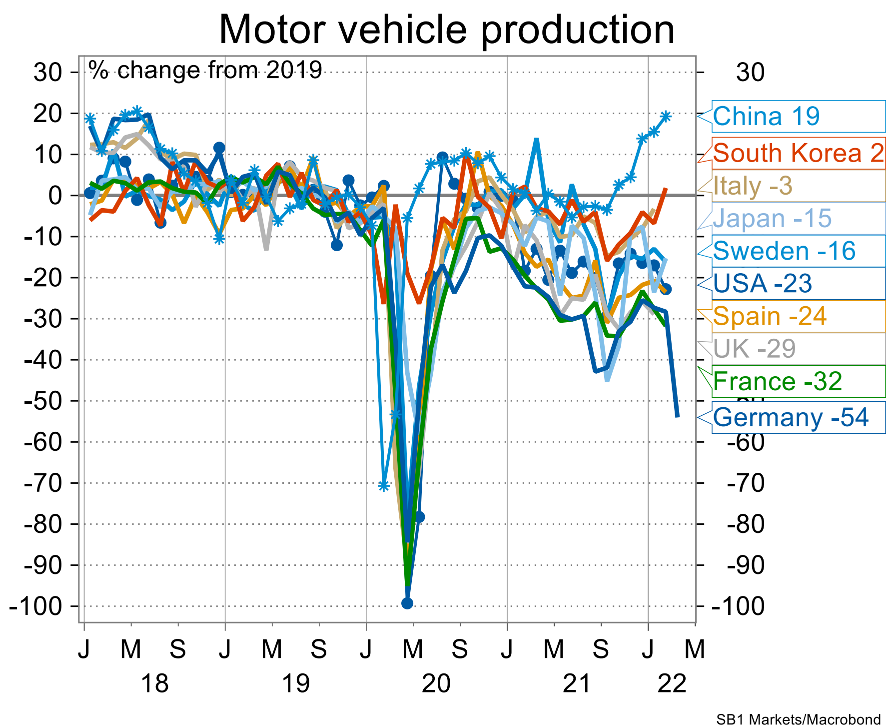




- **The decline in global sales** in March is still a preliminary estimate. Still, we know that sales fell in US, and even more in the EMU (German sales collapsed), and even more in Russia (down almost 2/3! Very likely sales fell in China as well – but final data are not yet published. Global sales were down 22% vs the 2019 average
- Sales in the **US** are down 21% vs the 2019 average, **EMU** is down 41% (!). **China** went from +15% to -16% and lockdowns lowered sales sharply. Sales in the **UK** fell sharply as well, down 37% (vs 2019). Sales in Norway rose, and are equal to the (high) 2019 average
- **Auto production** very likely fell sharply too, we so far just have German data. Here, production fell by 35% m/m, according to prelim. Data. War & sanctions no doubt creates new challenges for the auto industry, and Europe will probably take the hardest hit

German auto production down 35% in March – down 54% vs the 2019 level!!

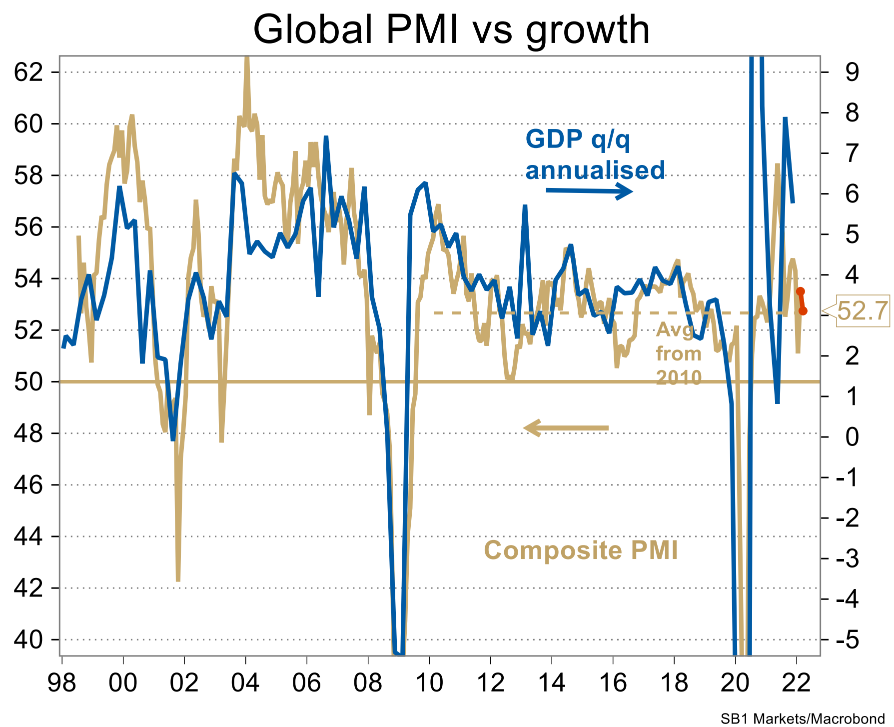
Chinese auto production probably also declined substantially – but no stats available yet

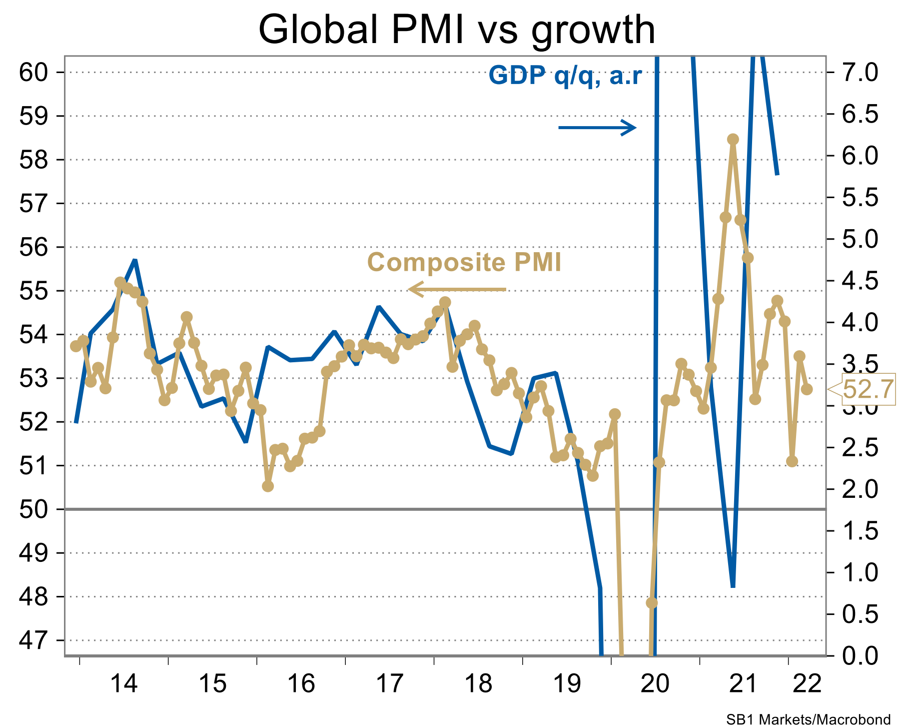


- The war in Ukraine may lead to more supply chain challenges for the auto industry like lack of Ukrainian neon gas for semiconductor production or car parts from Ukraine

The global economy slowed in March due to ‘some’ trouble in China & Russia

The composite PMI fell 0.8p to 52.7, we expected a 1.3p lift – but some EMs were very weak

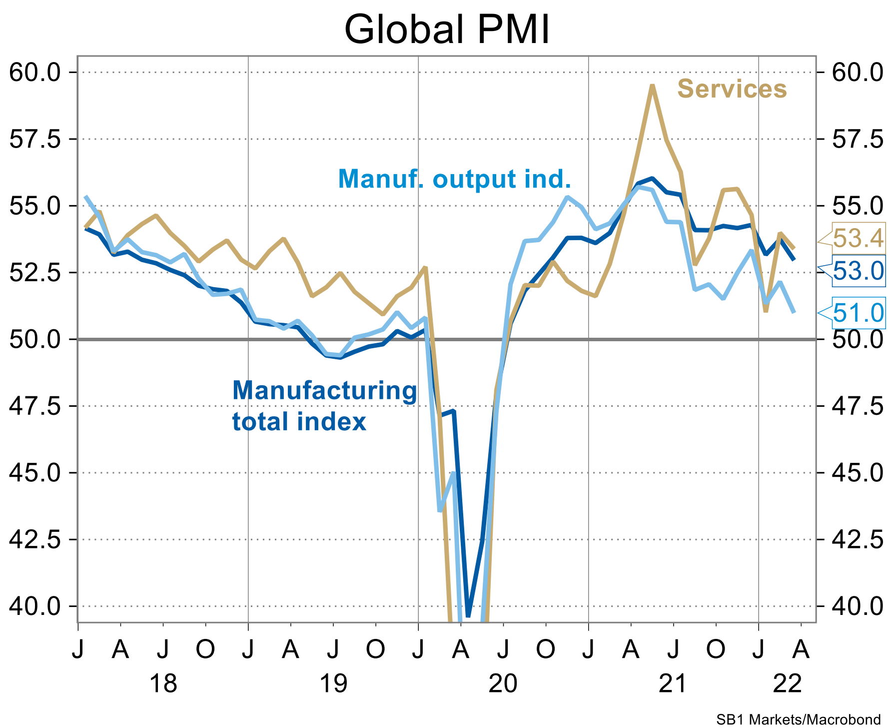


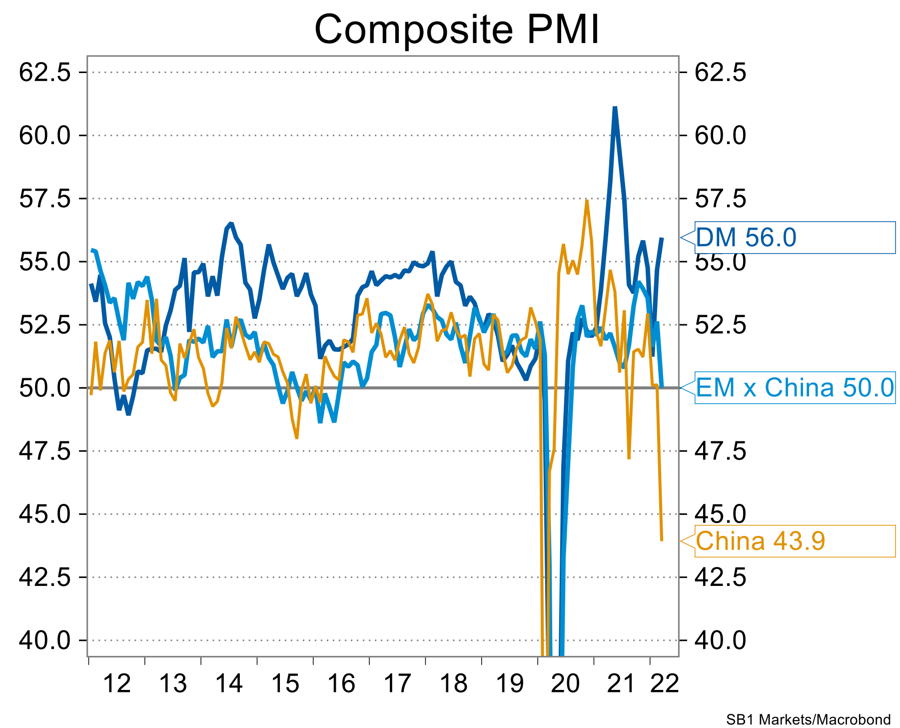


- The **global PMI** still signals GDP growth at average level, some 3%
- **Both manufacturing & service contributed to the modest decline**
- **China and Russia** reported steep declines, even more in services than in manufacturing. The setback in China is very likely do to the ‘local’ lockdowns imposed to fight the very contagious Omicron variant. Russia is engaged in some special operations
- **In the rich part of the world**, the PMIs rose. The decline in the EMU PMI was less than initially reported – and the level signals growth above trend
- **Delivery times** rose in the manufacturing sector – and all **price indices** rose – and most to new ATH. So war & sanctions had some impacts…

Both manufacturing & services report slower growth in March

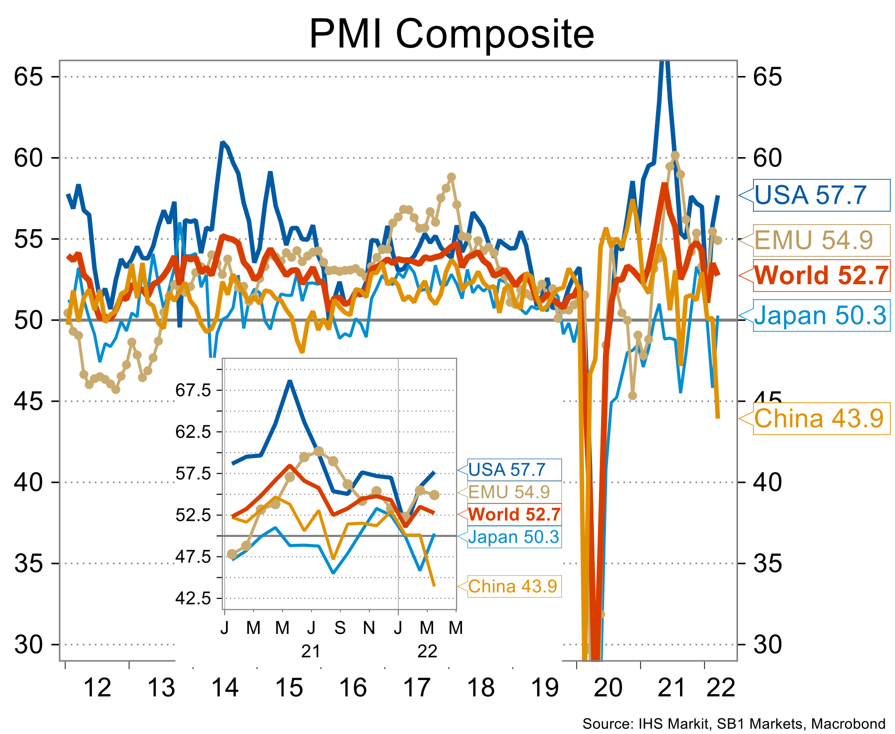
... although just due to sharp declines in Russia and China

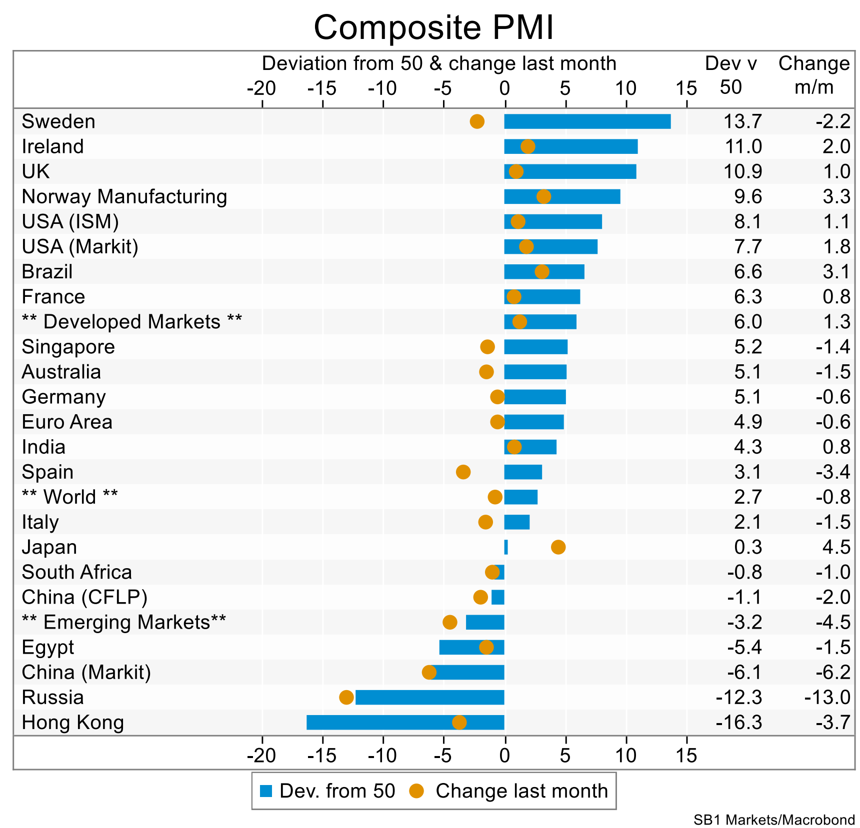




The global composite PMI down, due to steep declines in Russia & China

In the DM, the PMI gained 1.5p to 56.0 – but the total fell by 0.8 p to 52.5. Russia -12p, China -6p

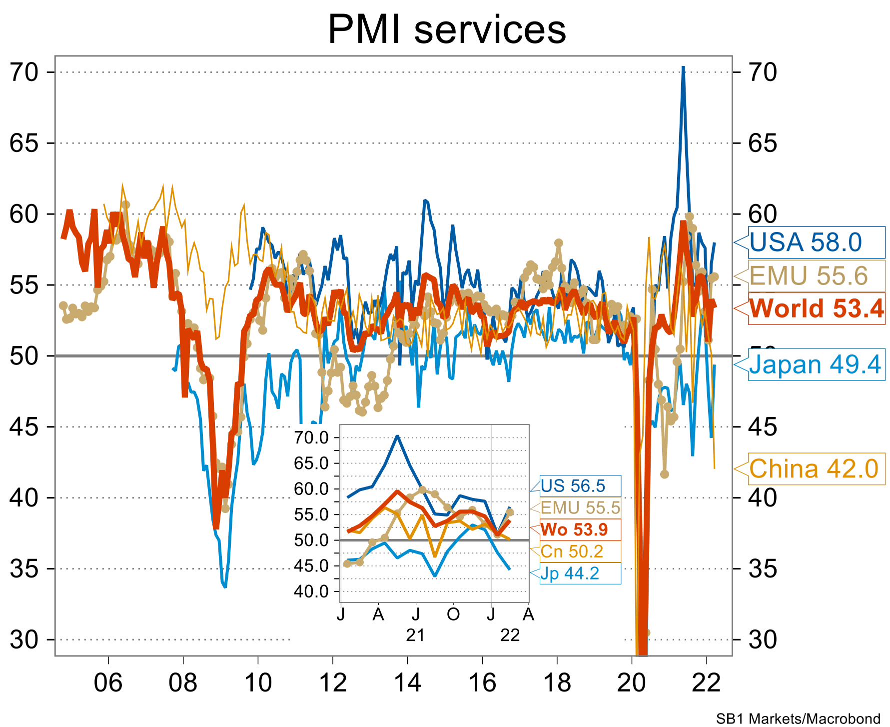


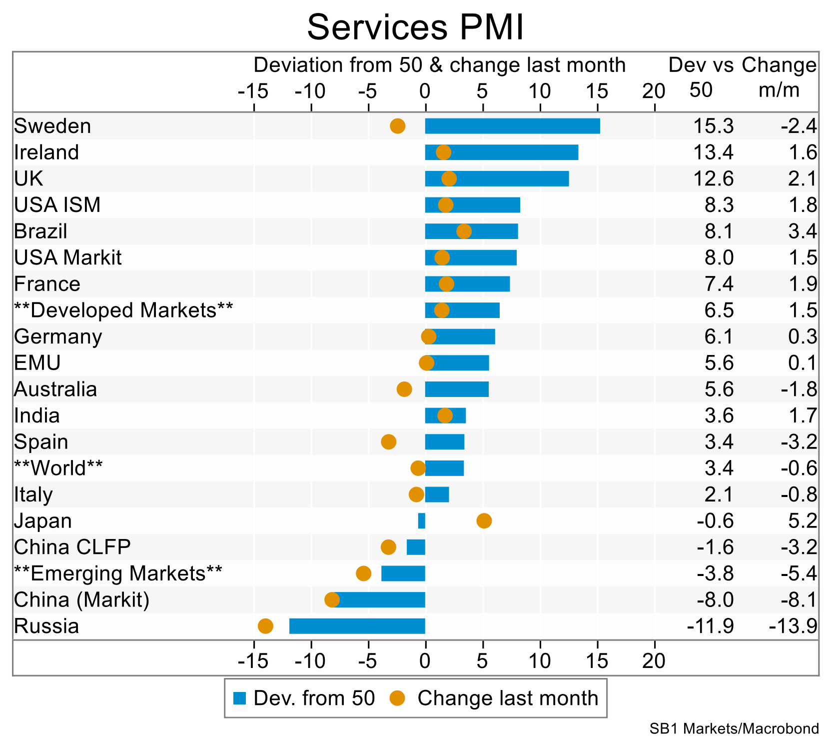


- Just 9 countries/regions up in March (down from 17), and 15 down (from 8)
- **The declines in Russia and China (and in Hong Kong)** are brutal. War & sanctions are hurting the Russia economy brutally, according to businesses. China is fighting the virus with its 'impossible' zero tolerance policy. (Hong Kong may have turned the corner, at least cases are falling and mobility is on the way back
  - » Other EMs also mixed: Brazil sharply up (Omicron cases collapsed), India stabilised, while some others declined
- **The EMU composite** fell, but just by 0.6 p – and less than initially reported (war/sanctions did not hurt more, through March
- **Sweden** still has the pole position, far above no. 2 (Ireland, and the UK!)
- (Norway does not compete here, we just have a manufacturing PMI. The level would have yielded a 4th place in the composite race.

Even the service sector PMI weaker than we assumed, solely due to China, Russia

Huge setbacks, for different reasons (we hope). War & sanctions wrecked Russia, Omicron China



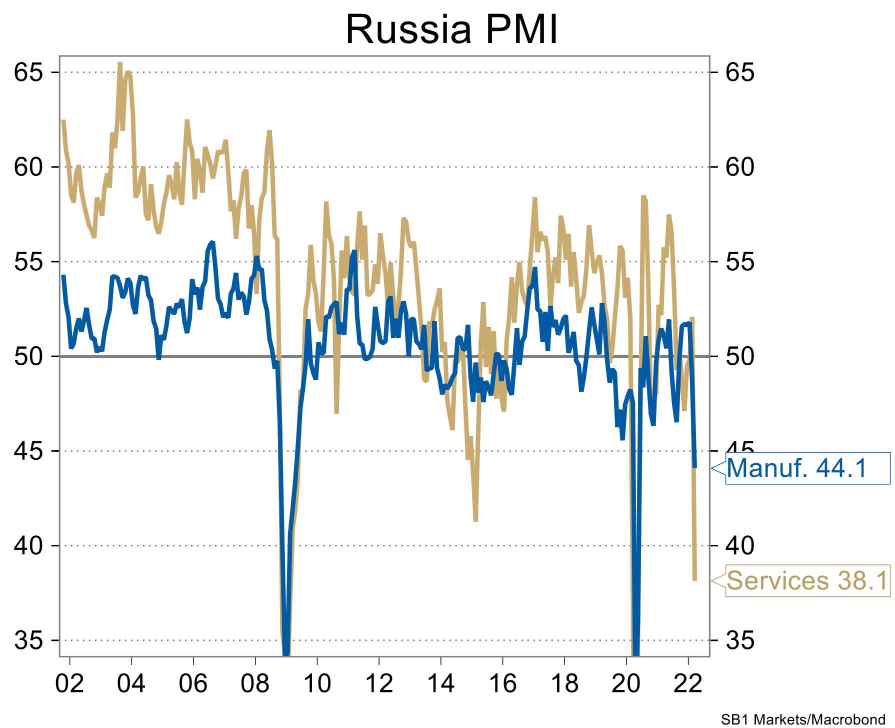


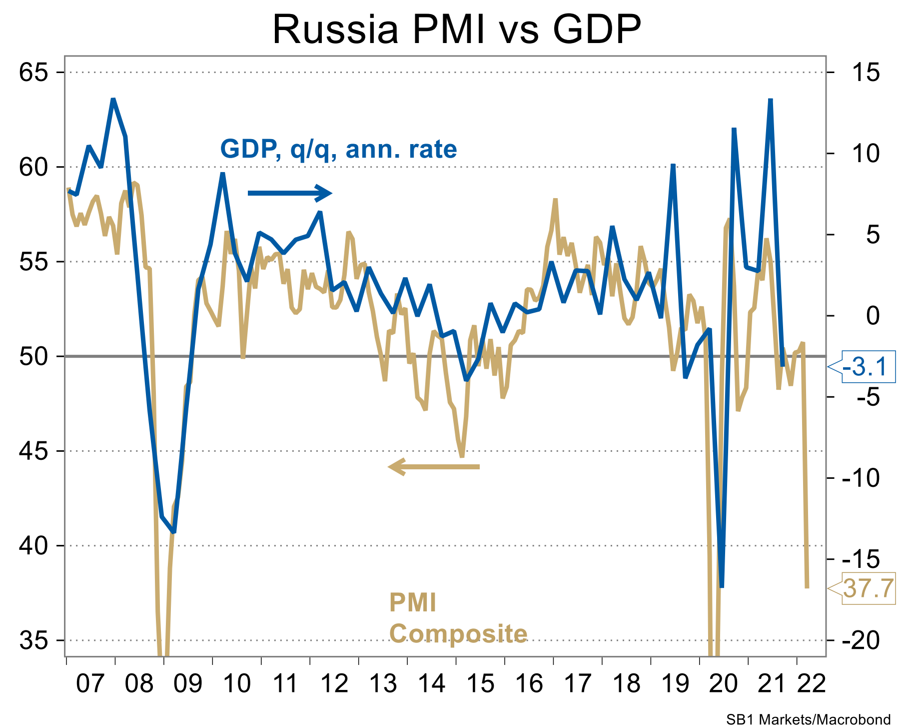
	Dev vs 50	Change m/m
Sweden	15.3	-2.4
Ireland	13.4	1.6
UK	12.6	2.1
USA ISM	8.3	1.8
Brazil	8.1	3.4
USA Markit	8.0	1.5
France	7.4	1.9
Developed Markets	6.5	1.5
Germany	6.1	0.3
EMU	5.6	0.1
Australia	5.6	-1.8
India	3.6	1.7
Spain	3.4	-3.2
World	3.4	-0.6
Italy	2.1	-0.8
Japan	-0.6	5.2
China CLFP	-1.6	-3.2
Emerging Markets	-3.8	-5.4
China (Markit)	-8.0	-8.1
Russia	-11.9	-13.9

- **The global service sector PMI** declined by 0.6% to 53.4, far below our 55.3 estimate, based on the prelim surveys from Developed markets – which rose 1.5 to 56.5
  - » A large majority of rich countries reported higher service sector PMIs, even the Euro Area. Both the PMI and the ISM index strengthen in March
  - » The Swedish PMI is still top of the pop
- **The March setbacks in Russia and China are dramatic** – and both indices fell to very low levels. In Russia a steep decline in activity is signalled by a 38.1 PMI, while the service sector in China may have flattened (zero growth), with a 42 PMI level

A shocking decline in the services PMI in March – a setback in manufacturing too

The composite PMI fell 13 p (just April-20 worse), to 37.7, signalling at least a 10% in GDP

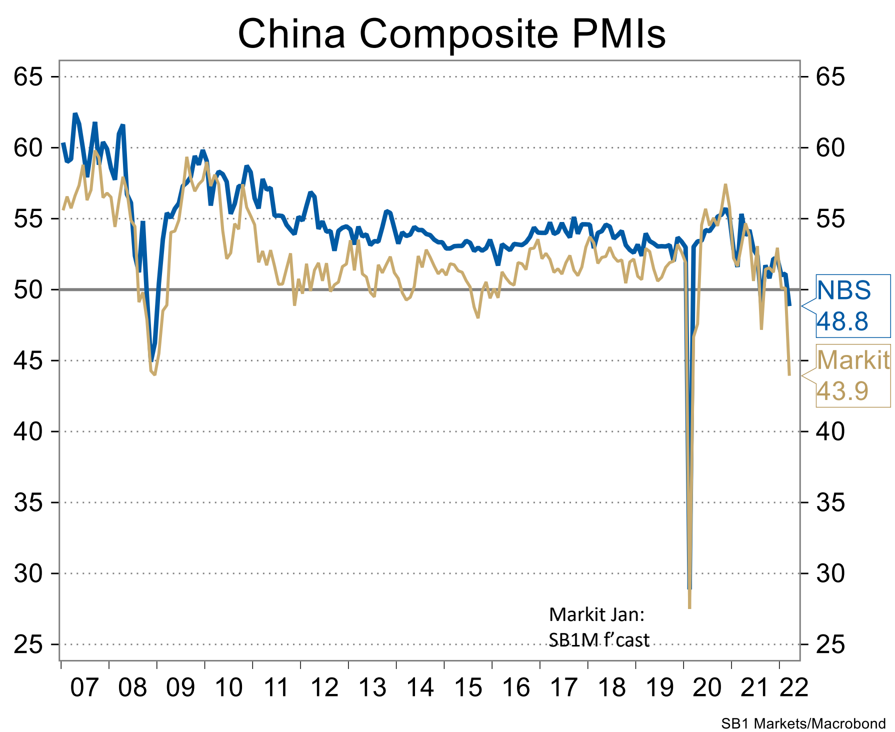


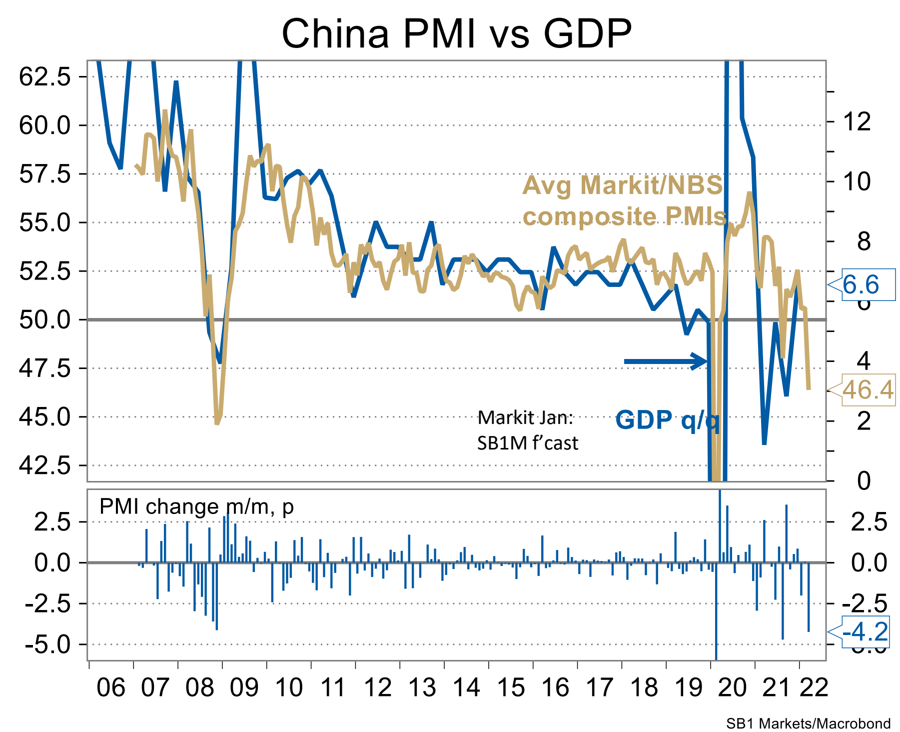


- **The service sector PMI** fell 14 p to 38!
- **The output component in the manufacturing index** fell sharply too (a part of the composite index), while the total index just fell 4.5 p to 44.1
- There is of course just one possible explanation for this abrupt contraction in activity in April: The special operation in Ukraine and Western sanction
- **A reminder:** The PMIs are not sentiment surveys – respondents are asked about in changes in actual activity (new orders, output, employment, inventories) from the previous month

Markit's services fell even more than we assumed: The Omicron challenge is HUGE!

Markit's composite PMI fell 6.2p to 43.9, just Feb-20 has been worse. Signals almost no GDP growth

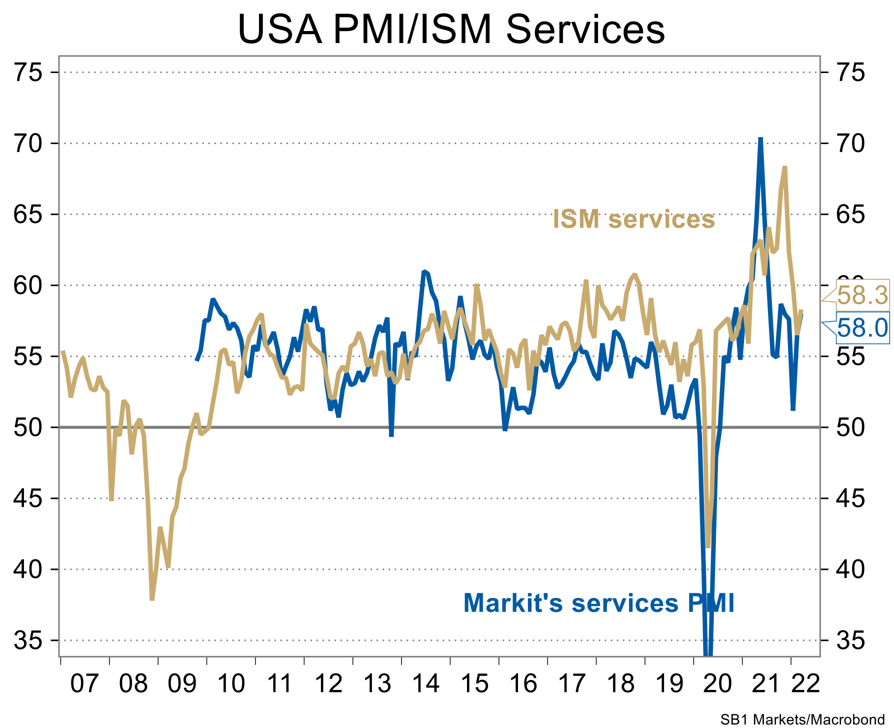


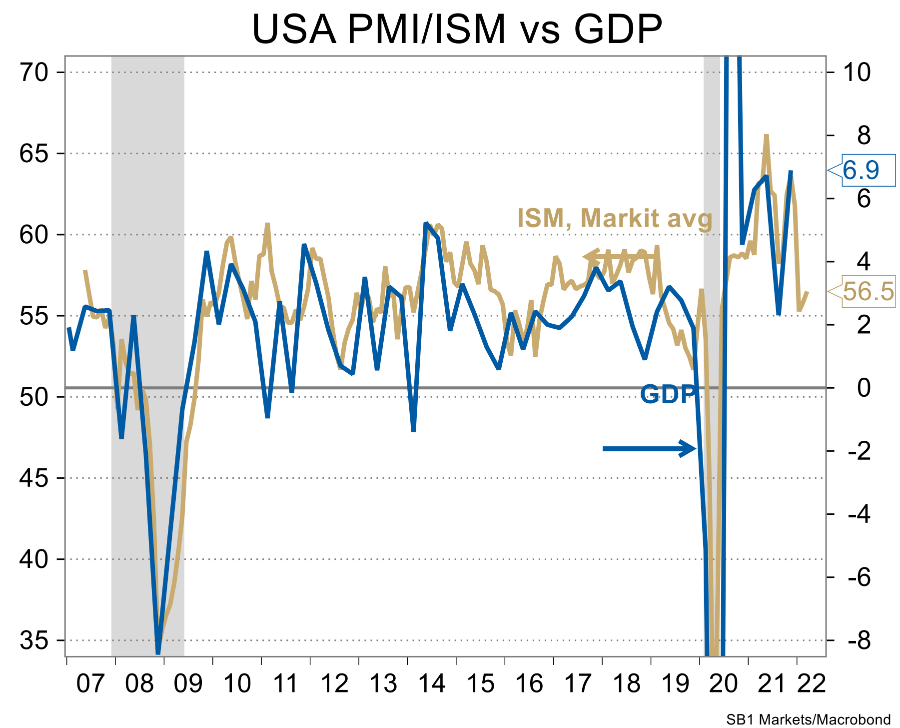


- **Markit's** service sector PMI declined 8.1p to 42.0, while the decline in the manufacturing index was more modest but still substantial, down 2.3 p to 48.1, the 2nd lowest since early 2016 (Feb-20 was even weaker)
- The **CFLP/NBS composite PMI** fell 'just' 2.3 to 48.8, also one of the weakest prints on record
- **The average of the two PMI data sets** declined to 46.4, the 2nd lowest level since 2008, signalling a 3% growth pace
- **What happened?** China's corona strategi has more or less failed. The Omicron variant is very contagious, and vaccines to not work well (and too few are vaccinated). The lockdowns is hurting the economy – and global supply chains – until a more viable strategy is chosen. Media has reported that China will start buying Western vaccines

Services ISM reversed most of the Feb decline and the level is high – at 58.3

Markit's index services PMI confirmed up. The grand total of the PMI/ISMs at 56.5, signals 3% growth

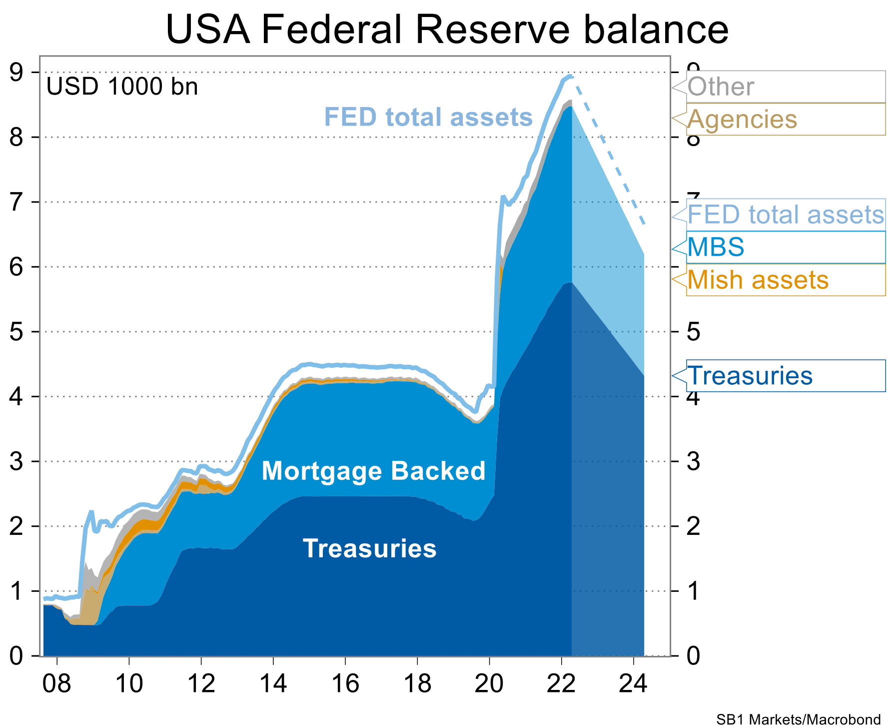




- **The ISM services index** added 1.8 p to 58.3 in March, slightly below expectations. Ordre inflow strengthened, up to above 60 again. The level is well below the re-opening spikes but well above average levelss
- The price index rose marginally. The level – at 83.8 is just 0.1 p below the ATH print in December.
  - » In the manufacturing sector, the input price index shot up 11.5 to 87.1, not far below ATH. The weighted average is at the highest level ever. Price pressures are not yet easing (check charts next page) …
- Together with their manufacturing indices, the **PMI/ISMs** signal a 2.5 – 3% GDP growth rate

Fed minutes: Not more hawkish than expected, that is…

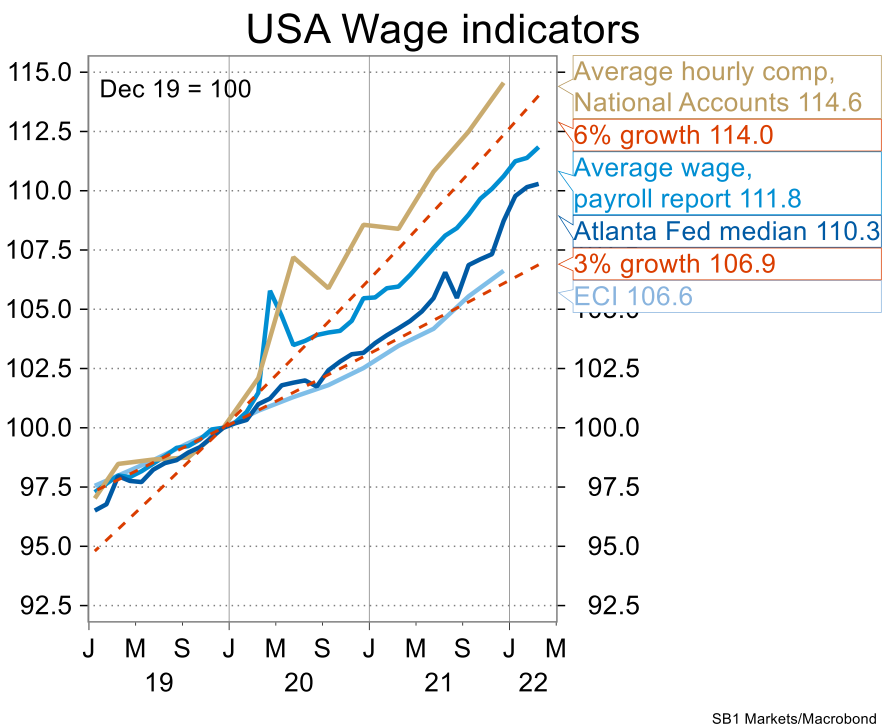
after the Fed officials have drummed the curve up 50 bps since Powell's presser after the meeting

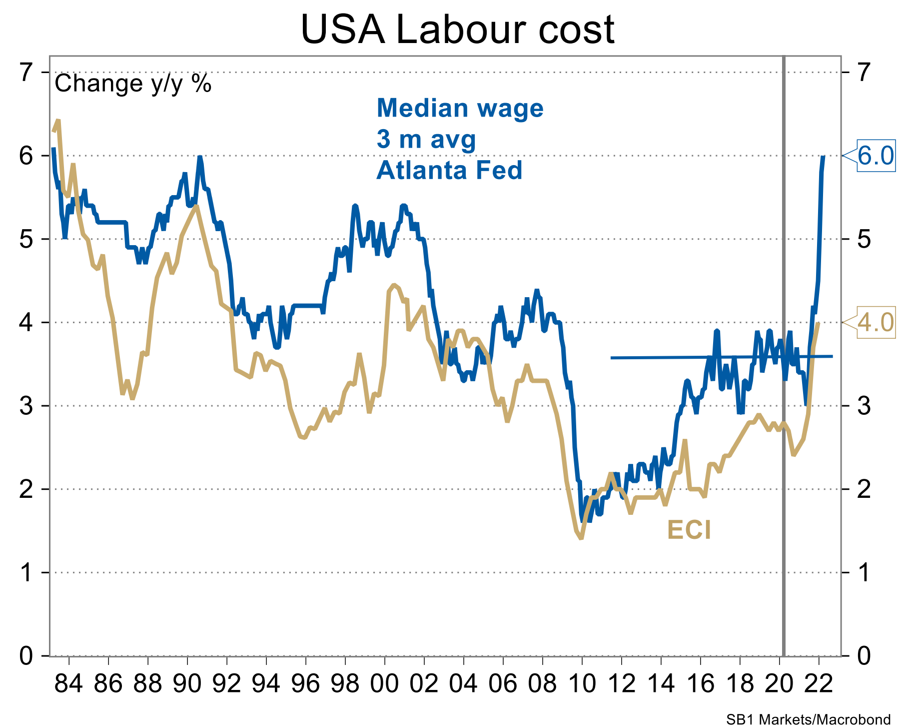


- **The minutes** revealed that members of the FOMC would have voted for a 50 bps hike in March, if not for the uncertainty created by the war in Ukraine
- The 50 bps hikes the coming meetings had been well communicated (if not that well by Powell at the press conference just after the FOMC meeting, but he maid it clear 3 working days later, and the short end of the curve shot up)
- Ahead of the meeting, several FOMC members had been arguing for a rapid start of the QT, the reduction of Fed's holdings of treasures and mortgage backed securities. At Monday, a traditional FOMC dove, Leal Brainard, said she was in favour of starting the QT immediately, that is to formally decide it at the at the May meeting (and bond yields rose sharply)
- The FOMC members seems to agree that holdings of treasuries should be reduced by USD 60 bn per months, and MBS bonds by USB 35 bn. During the QE, that ended in February, the Fed bought USD 80 bn in treasuries and USD 40 bn in MBS bonds
  - » The indicated QT speed is at least twice as fast as during in QT in 2018/19
- The bond market did not react much the minutes, as there were no real surprises here, the curve had been talked up on beforehand. But rates climbed further at Thursday and Friday, in total 33 bps since last Friday to 2.72%! Real rates rose 26 bps to -0.15%! Both are large, but not unusually large weekly movements

Atlanta Fed's wage tracker reports a further (smoothed) wage acceleration

The median wage up 6.0% y/y, following a totally unprecedented acceleration since last spring

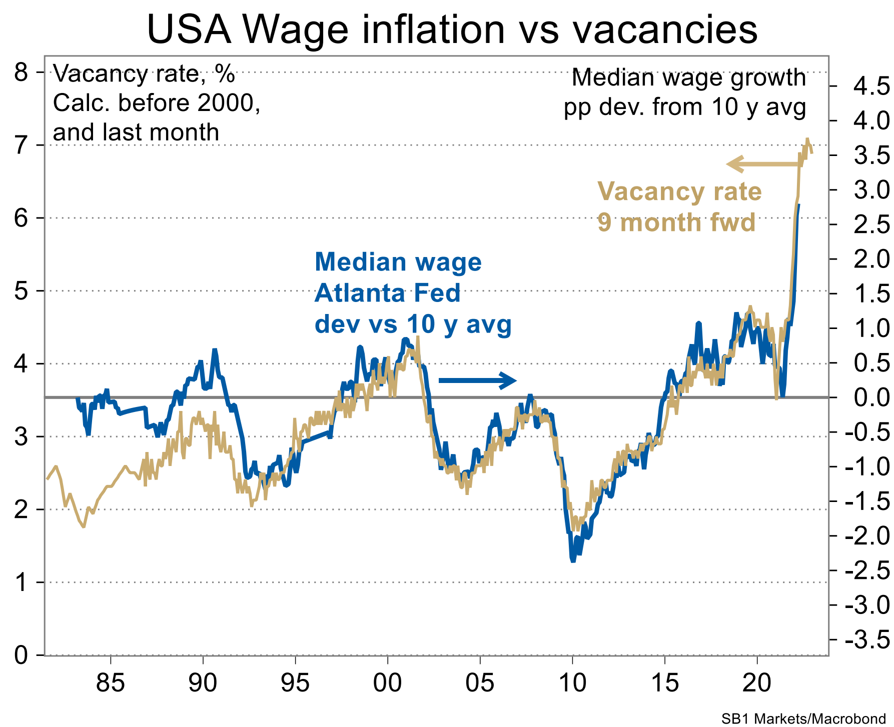


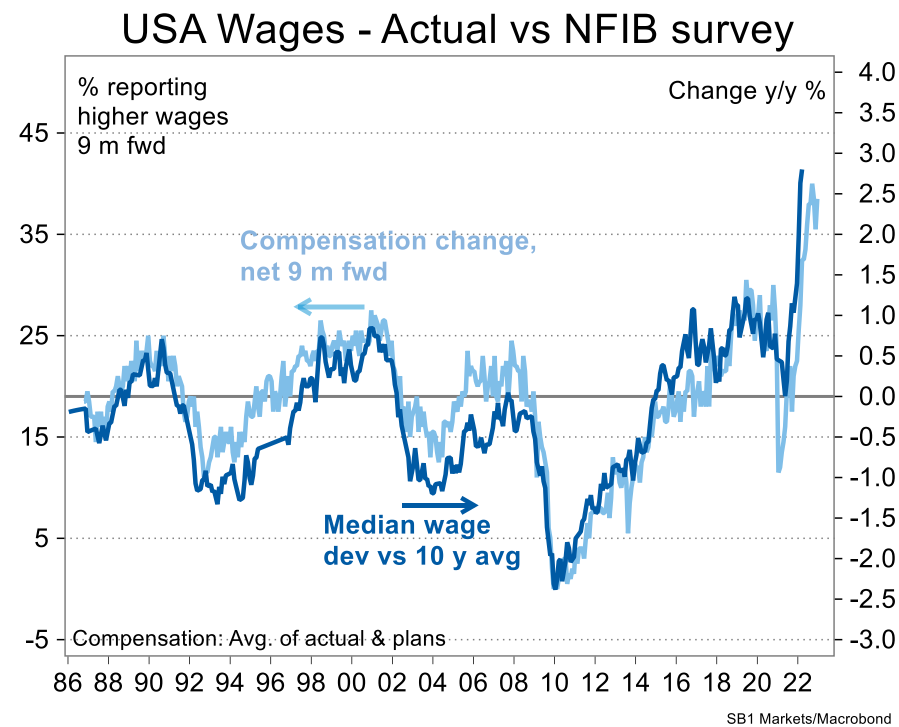


- **The Atlanta median wage tracker** was up 6.0% y/y in 1990, and the first observation, in March 1983 – and in March 2022
  - » **The take off** since late last spring is unprecedented – just as the lift in annual wage increases vs. the 10 past years' average at almost 3 pp– check the chart next page
  - » The only positive sign: Following extreme rapid m/m increased in Q4, m/m growth (calculated by us) has slowed somewhat in January, February, and further in March. The average wage in the monthly payrolls stats also reports slower growth through Q1
- **All wage indicators** are reporting faster wage growth, and all reporting wage growth well above the average recent years, also if we apply a 2-year average growth rate, to exclude the impact of changes during the first part of the pandemic (chart to the right)
- It will be a 'challenge' to keep inflation at 2% if wage inflation remains at current levels. It does not seem likely that wage inflation will turn south before the labour market weakens (check next page). Productivity growth has not accelerated by much. Profit margins may take a beating – and they very likely will – but that will not be not sufficient to bring inflation down

There seems to be a connection here??

The correlation between the vacancy rate and changes in median wage growth is extremely tight

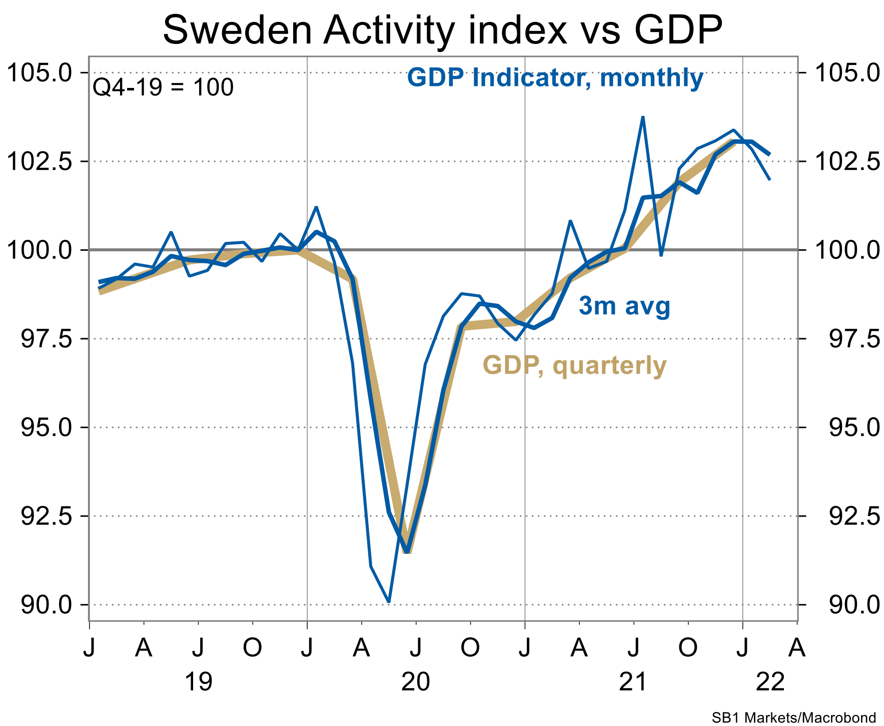


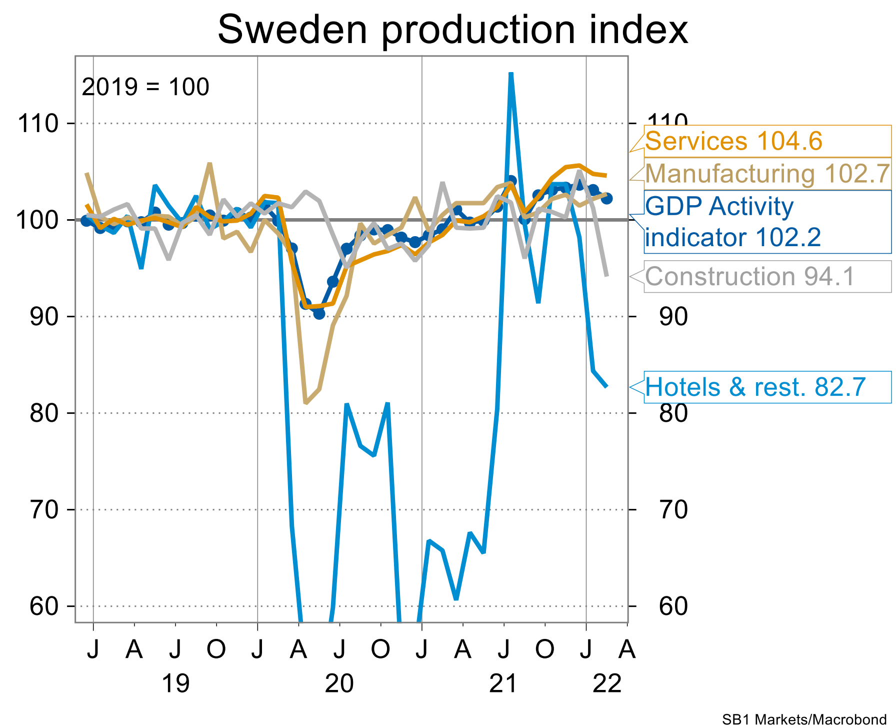


- Our 'Phillips curve' signal a further increase in wage inflation the coming quarters, as the vacancy leads changes in wage inflation quite consistently by 3 quarters
- In addition, the correlation changes compensation plans (see previous page) and future actual wage growth is not that bad (again with a 3 quarter lead). These compensations plans do not suggest a further wage growth acceleration. However

GDP down for the 2nd month in row in Feb, but in March Omicron was gone

GDP fell by 0.8% in Feb, following the 0.5% decline in Jan. GDP probably down in Q1. It's just the virus

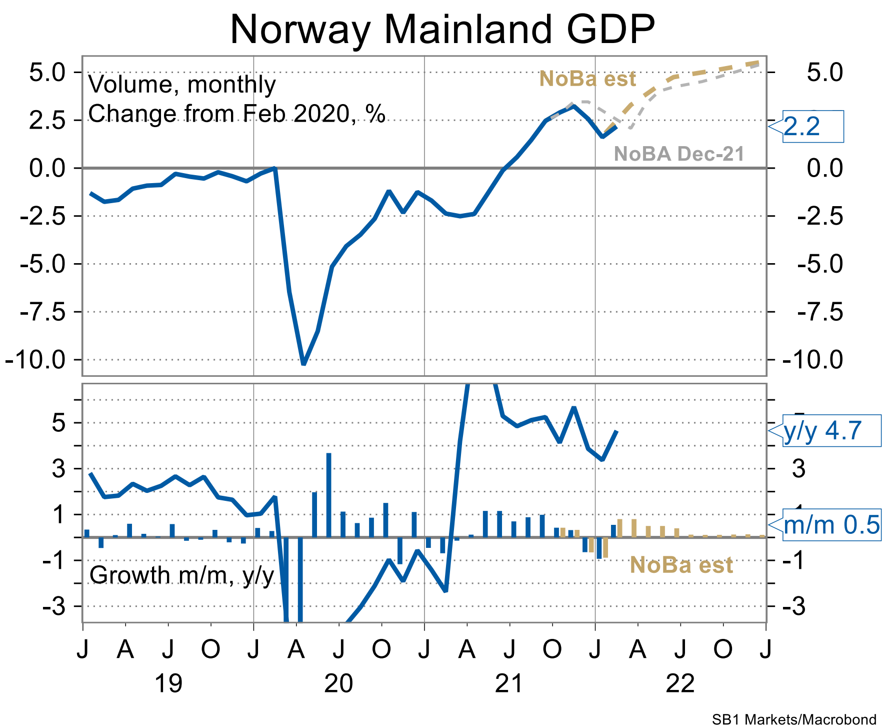




- **Activity in hotels & restaurants** are down almost 20% in Jan/Feb, and the transport sector is hurt. Mobility fell in both months – but has returned to a something closer to normal level in March. GDP will follow suit
- **The outlook** remains excellent, according to Swedish companies. THE KI (NIER) survey fell in March but remains well above an average level. The Swedish PMI remained the strongest in the world in March
- **The Riksbank** will very likely turn at the dime at the upcoming board meeting in late April – and interest rate hikes in 2022 will be signalled, at least one

Mainland GDP up 0.5%, exp. 0.8 – 1%, manufacturing surprised at the downside

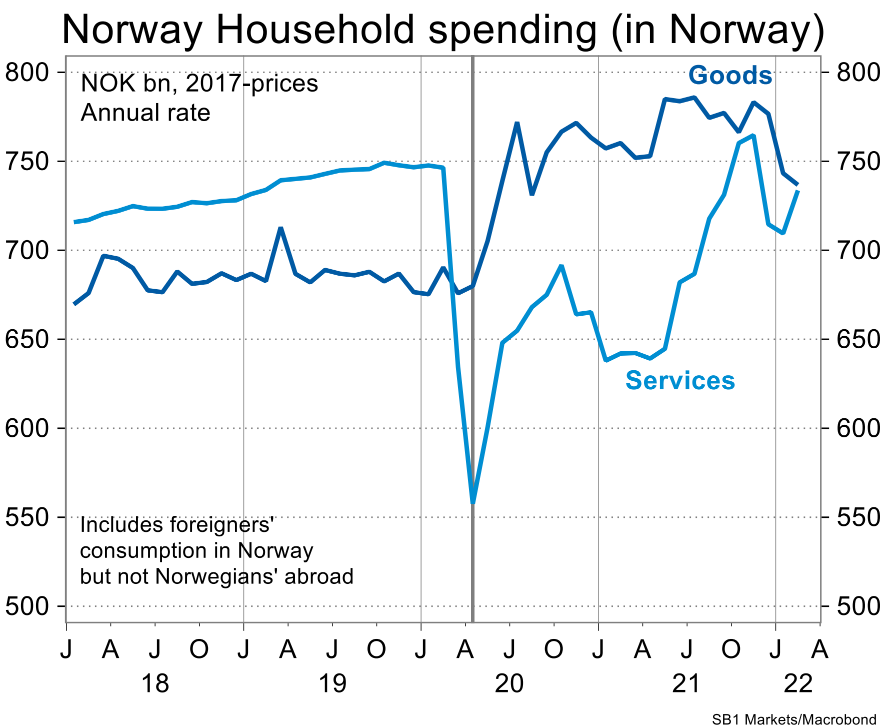
Very likely, GDP will recover further – and faster – in March

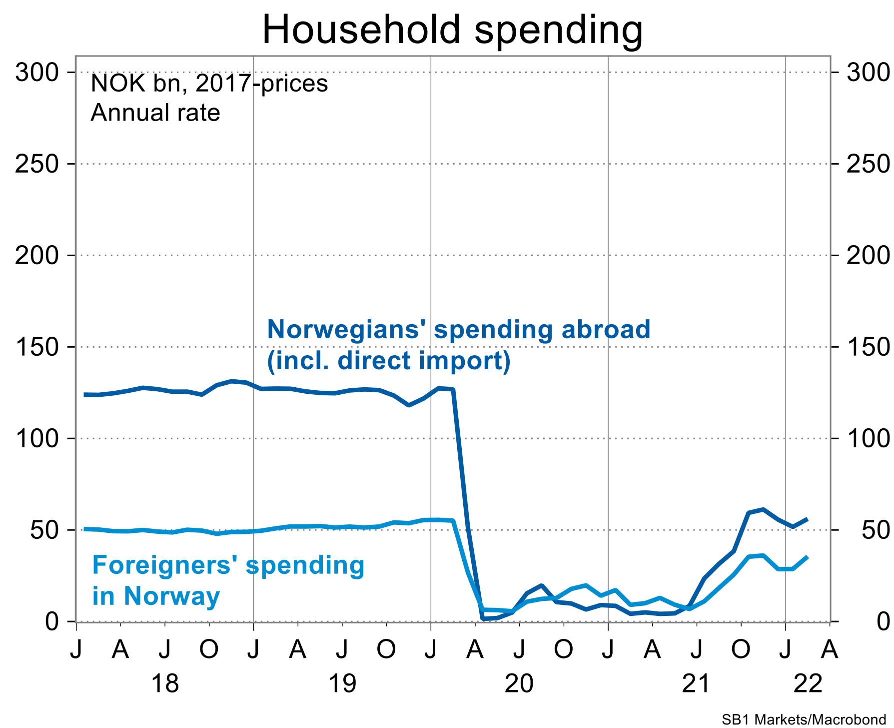


- **Mainland GDP** fell in both December and January and even after the uptick in February, activity is still 1% below the November level.
  - **Production:** Manufacturing production fell sharply, and public sector production declined. In the rest of the economy, activity grew. We assume hotels and restaurants and transport contributed to the lift in services – and that March will be substantially better. In 'other goods', a lift in ocean fisheries contributed to a 0.5% lift in Mainland GDP, equal the overall growth (other sectors were net zero). No detailed sector data are available
  - **Demand:** Most components at the upside but consumption of goods fell and oil investments fell further. Consumption of goods is on the way to more normal levels, while services and consumption abroad are recovering – and have much more to go
- The **fight against the Omicron variant** have so far lowered activity by some 0.3% of annual GDP and the total loss before the economy fully to the pre-Omicron trend 0.4 – 0.5% (we assume are reasonable recovery the coming three months). In NOK, 16 bn.
- **Mainland GDP** is up 2.2% vs the Feb-20 level, which is well below a normal growth path over these two year (4 – 4.5%), indicating an output gap well below the level 2 years ago
  - However, unemployment is well below the pre-pandemic level, the employment rate (among Norwegian citizens) is far above, and businesses are reporting unusual lack of labour
  - Businesses are also reporting a much higher capacity utilisation than before the pandemic
  - Thus, Norges Bank is very likely right when it assumes that the output gap is substantially higher now, than before the pandemic

Goods consumption down, services up – and both will report more of the same

We expect a brisk recovery in services the coming months. Domestic spending on goods still ‘too’ high

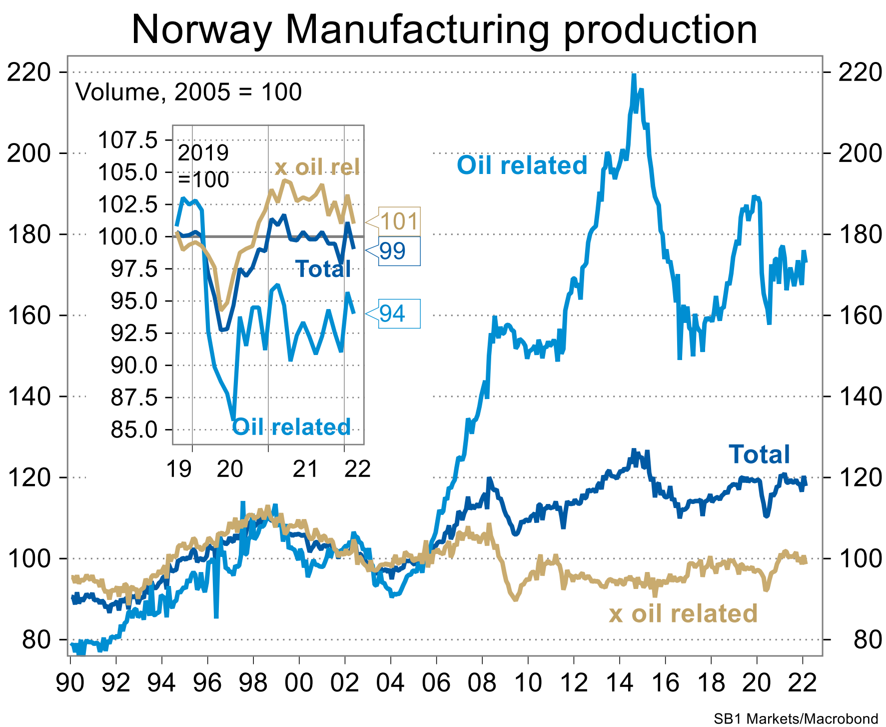


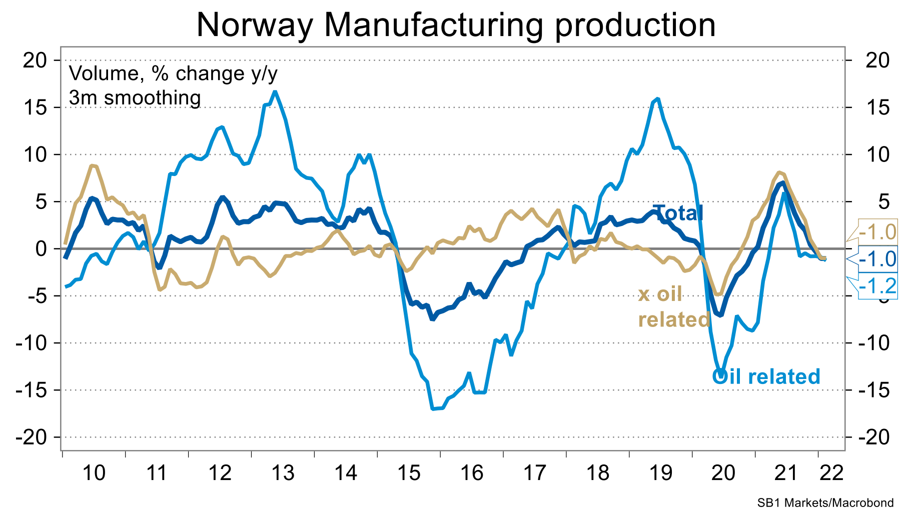


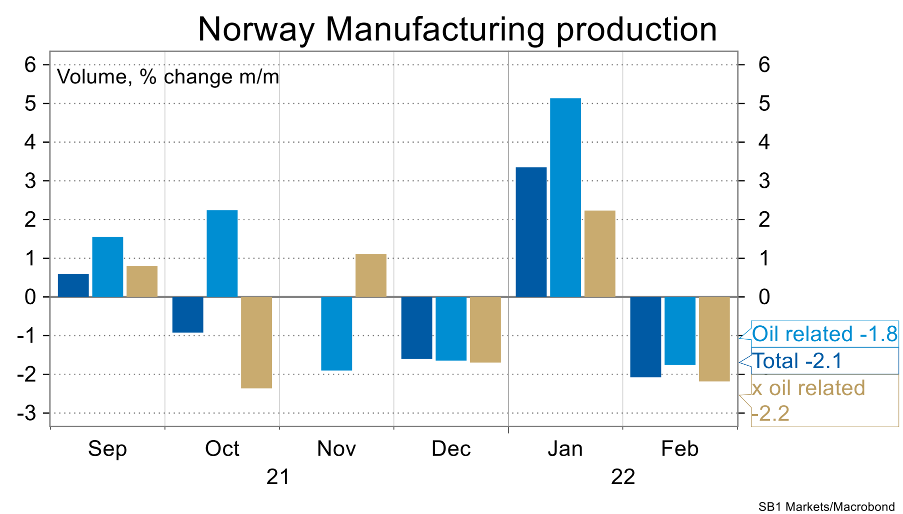
- Spending abroad is still muted, especially for Norwegians – and we expect a steep rise the coming months

Manufacturing production down again in February, x oil-related trending down

Production down 2.1%, we expected a small increase. Surveys are strong, actual production not





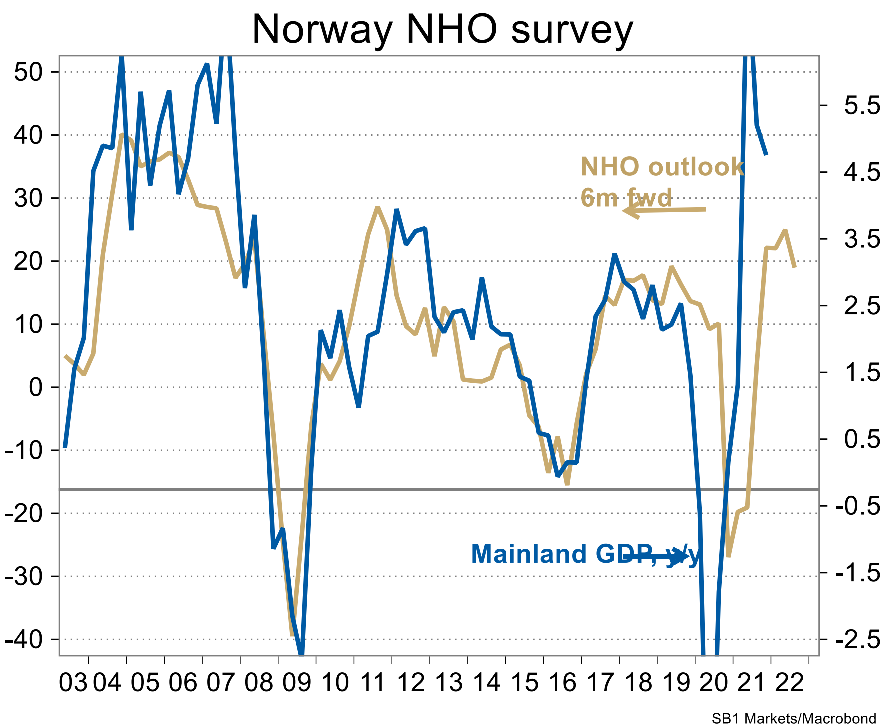


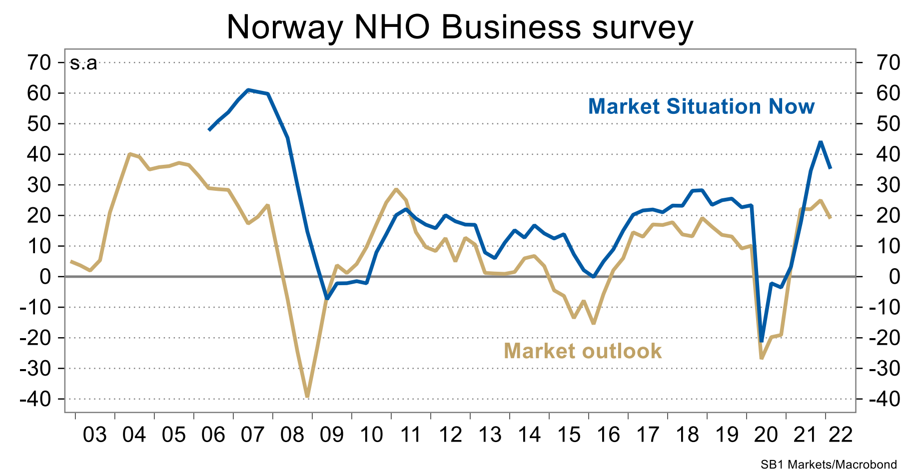
- The 2.1% decline was less than the 3.3% lift in January – but the Dec level was the lowest in one year
  - » Oil related manufacturing production fell 1.8% but is trending UP
  - » Other sectors fell 2.2% - and the short term trend now heading DOWN
  - » Still, production x oil related sectors is 1% above 2019 level, while oil related is down 6%!
- Manufacturing surveys are signalling strong growth in activity, but actual production is lower than in March-21

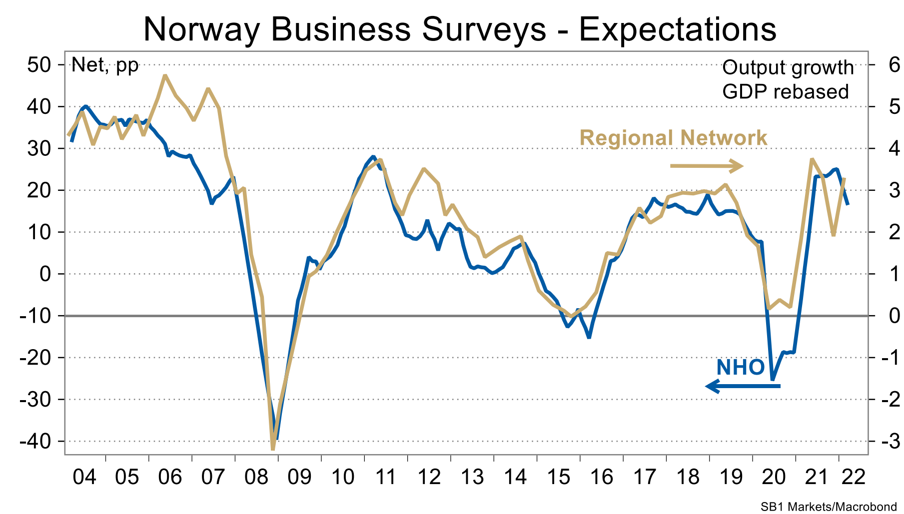
SpareBank 1 MARKETS

NHO Q1 survey reports slightly slower growth – but still unusual strong growth

A 2.5 - 3% GDP growth rate is signalled – in line with Norges Bank's Regional Network survey

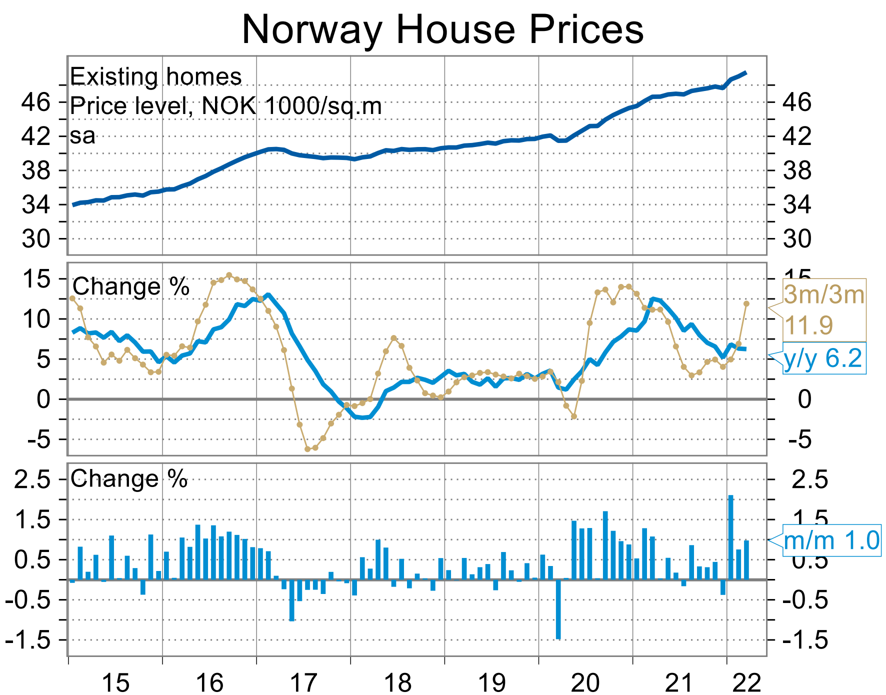




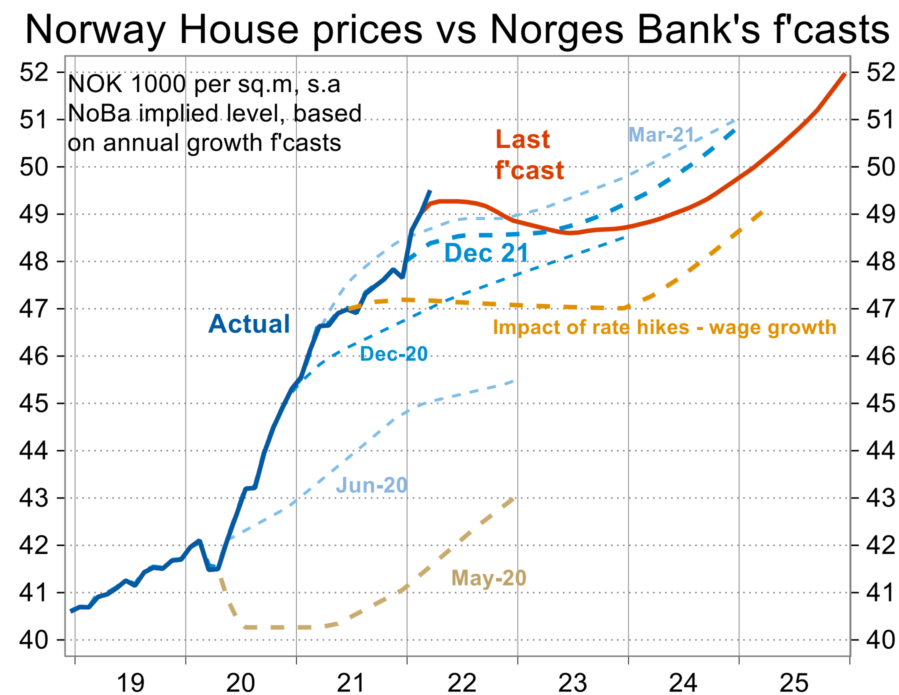


A ‘technical’ house price appreciation in ~~January~~ ~~February~~ March too?

Prices rose 1.0%, we expected 0.3%. Prices grew 3.9% in Q1. Due to temporary lack of supply? If not..



SB1 Markets/Eiendom Norge/Finn/Eiendomsverdi AS

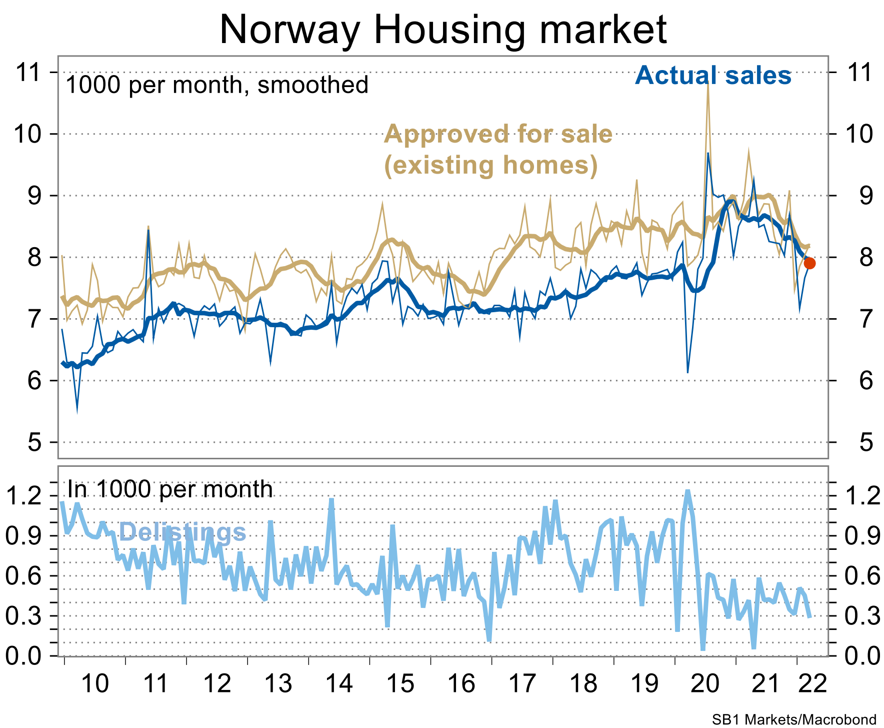


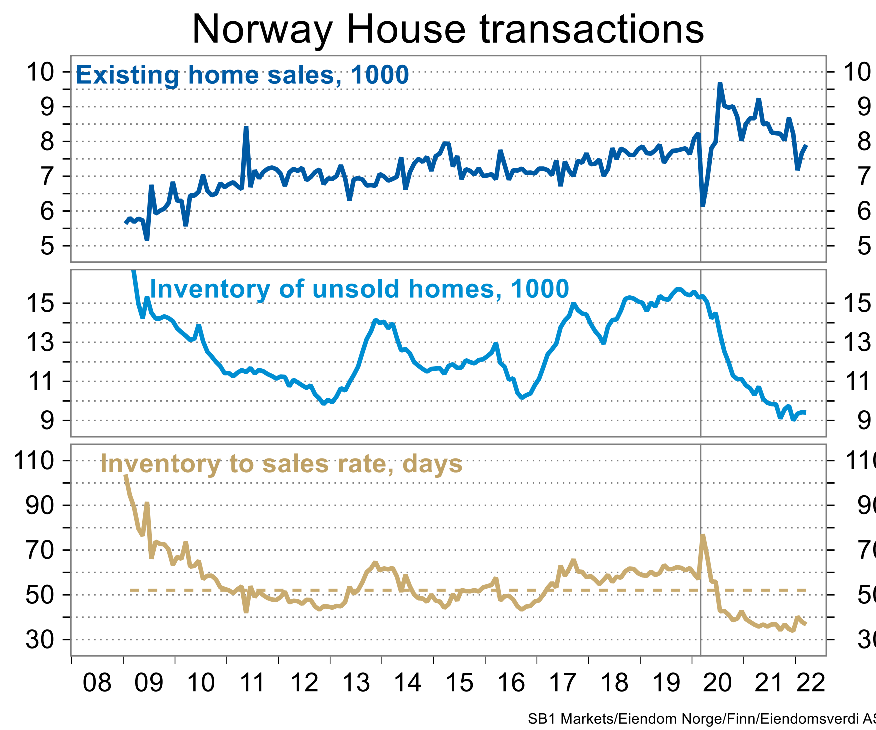
SB1 Markets/Macrobond

- **House prices** rose 1.0% m/m in February (seas. adjusted., +1.1% unadj.), we expected 0.2%, following the 2.1% + 0.8% (rev up 0.1 pp) hike in January & February. Norges Bank expected a 0.4% lift. The number of transactions is still lower than ‘normal’, and the inventory is record low
  - » The surge in prices in Q1 is probably <u>mostly</u> due to lack of supply as a new law put up stricter requirements for technical valuation reports etc and thus fewer new homes for sale reached the market. Most likely, the congestion will we ease the coming months, bringing supply back up to a ‘normal’ level. Realtors are confirming that supply is ‘under way’
- **Norges Bank** expects prices to flatten from here, and to decline marginally from Q3, before turning up again in H2 2023. In Q3 2024 prices are expected back to the H1-22 level. The impact of a 25 bps hike in the signal rate (=-1% per hike after 4 quarters) adjusted for a 1:1 impact of expected income growth is illustrated at the chart to the right
  - » If the ‘technical’ explanation for the prices hikes is not confirmed pretty soon (and prices continues rapidly upward), it will have some impact of NoBa’s monetary policy stance

The number of transactions up in March but still ‘low’

Few homes were approved for sale too – and the inventory is at a record low level

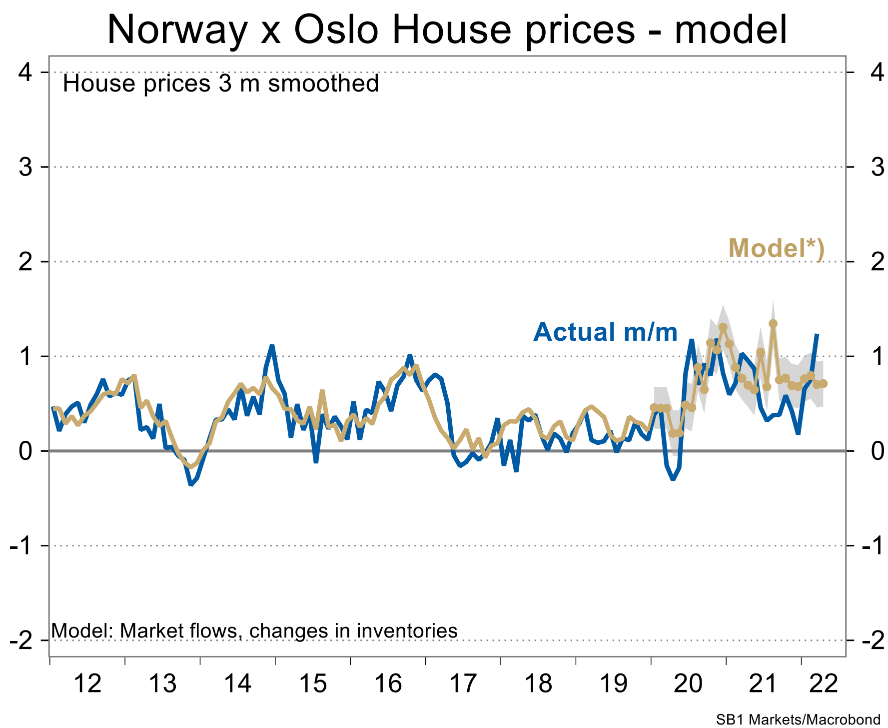


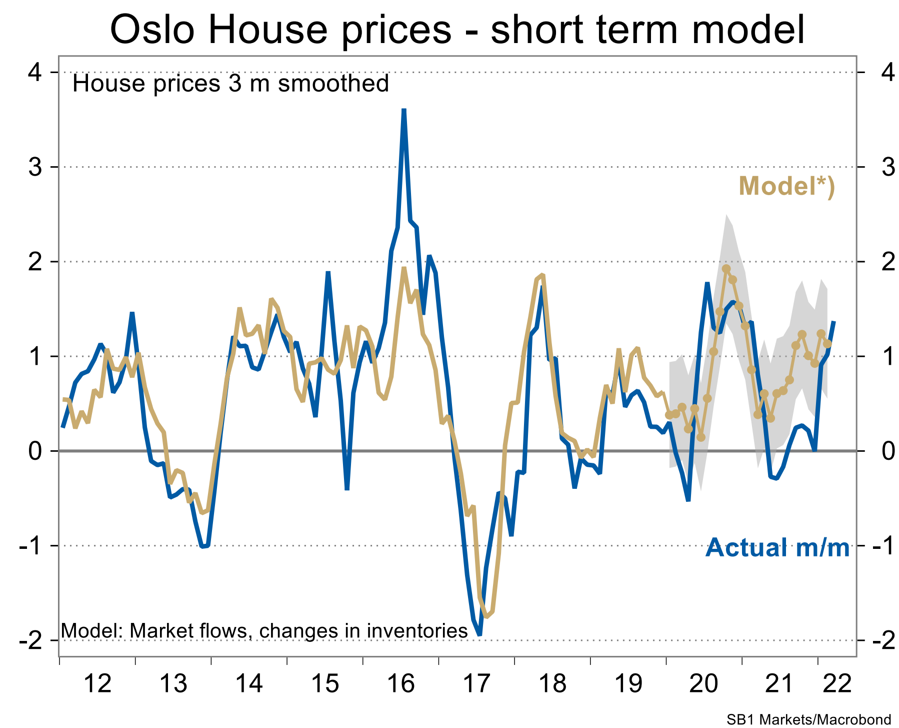


- **The number of transactions** has recovered somewhat following the large decline in January but the level is still below normal, at least the normal during the pandemic. The trend has been down since last summer but the decline in January was deep
- The **supply of new existing homes for sale (approvals)** also rose somewhat but the level is lower than normal
- The **inventory of unsold homes** was close to unchanged at a record low level in March
- The **inventory/sales ratio** declined 1 day to 37 days, vs an average at 52 days
- The **actual time on market** for those homes sold was unch was also 1 day, to 32 days, the fastest pace in almost 10 days

Short term market flows suggest decent price growth

.. But not the kind of price increases we have seen in Q1

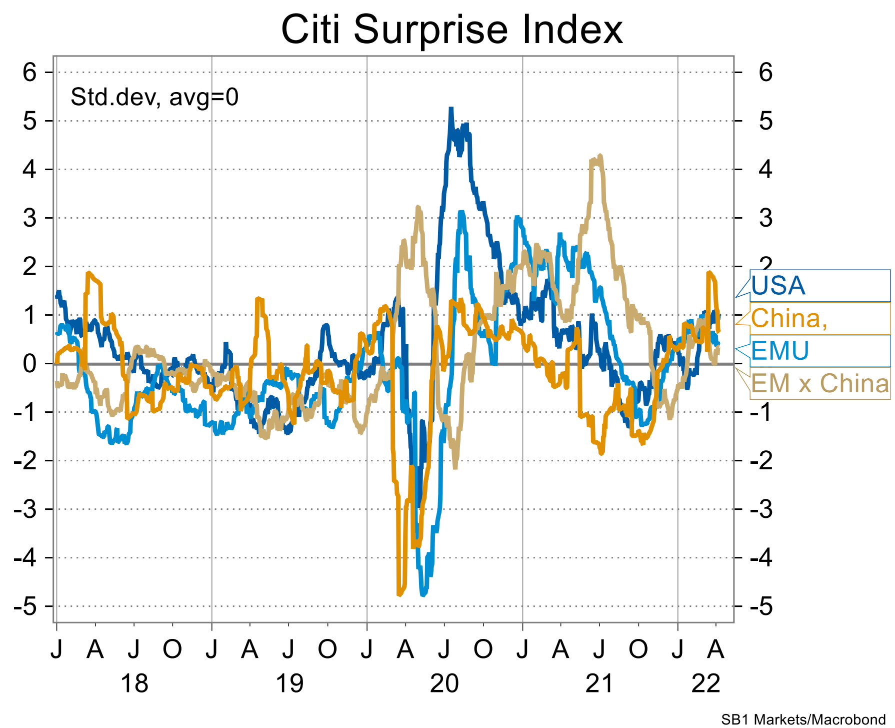


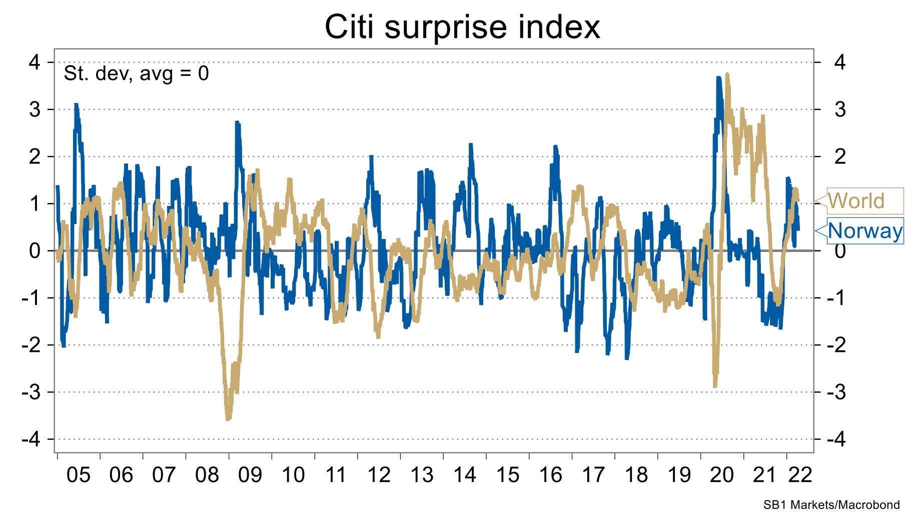


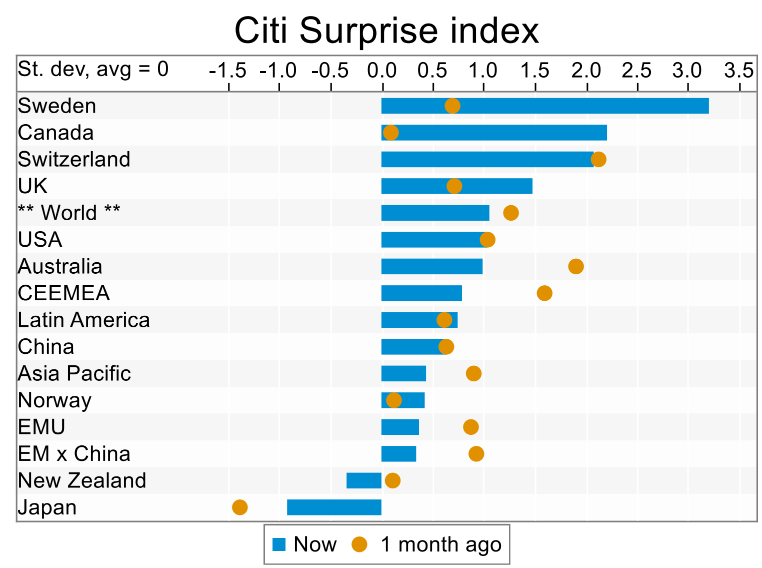
- Our **national x Oslo model** based on flows and the inventory signals a 0.8% growth in house prices per month, well below the actual 1.25% average increase the past 3 months
- Our **Oslo model** signals slightly above 1% growth, below the 1.4% past 3 months
- **Mortgage rates** are not included in these short term market models, because they have not consistently added to the models' performance. Now rates are on the way up but prices are still climbing than these models suggests. Lack of supply due to new documentation requirements still seem to be a reasonable explanation
- *These models are not long term price models, just short term price models based on flows of (existing) houses approved for sale actual sales & changes in inventories*

The world is surprising at the upside. At least so far…

Just Japan (and New Zealand) at the downside vs expectations







- **Norway** was surprising sharply on the downside through most of 2021, according to Citi. But in early December we crossed the zero line, and shot up in January – and we are still well above average
- Weak Chinese PMIs lowered the China surprise index

Surprise-indices measure the difference between economists' expectations and the actual outcome over a 3-month rolling window

Highlights

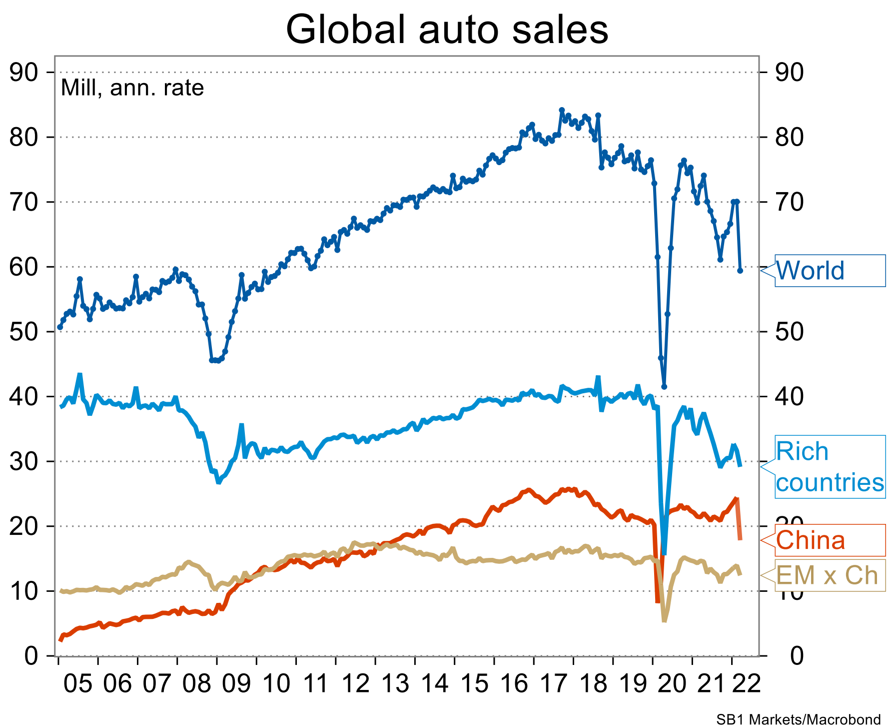
The world around us

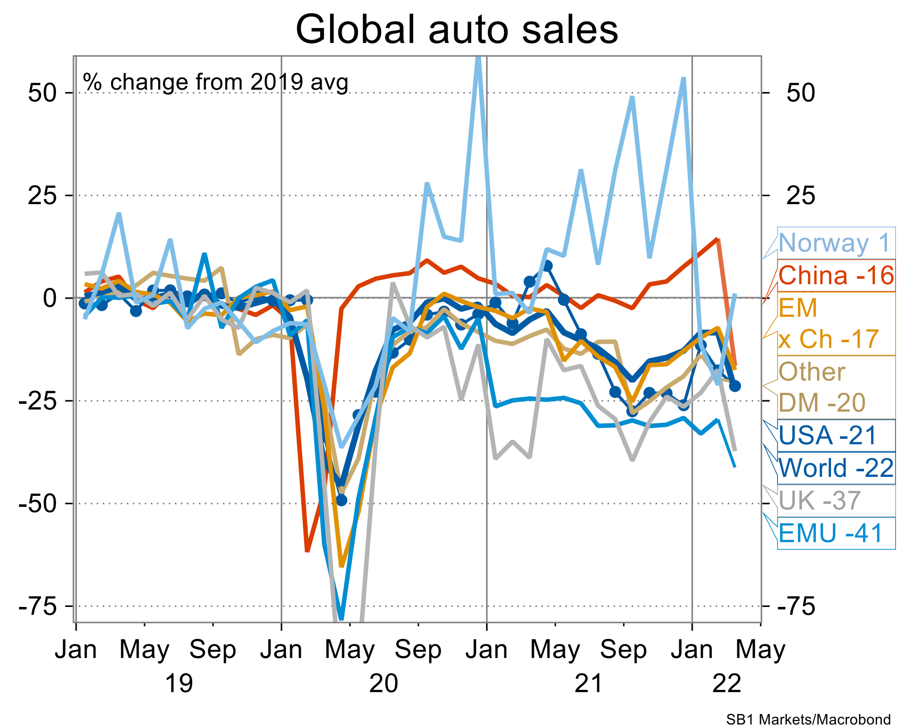
The Norwegian economy

Market charts & comments

Auto sales straight down in March; Russia, China, and EMU mostly to blame

Global sales may have fallen as much as 15% - but data from China & others still not finalised

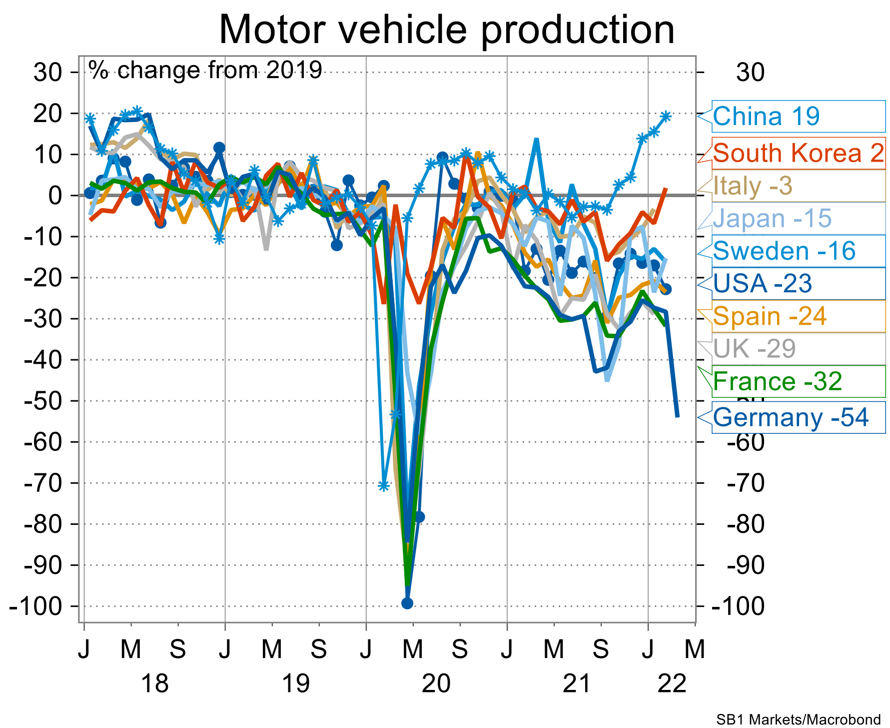




- **The decline in global sales** in March is still a preliminary estimate. Still, we know that sales fell in US, and even more in the EMU (German sales collapsed), and even more in Russia (down almost 2/3! Very likely sales fell in China as well – but final data are not yet published. Global sales were down 22% vs the 2019 average
- Sales in the **US** are down 21% vs the 2019 average, **EMU** is down 41% (!). **China** went from +15% to -16% and lockdowns lowered sales sharply. Sales in the **UK** fell sharply as well, down 37% (vs 2019). Sales in Norway rose, and are equal to the (high) 2019 average
- **Auto production** very likely fell sharply too, we so far just have German data. Here, production fell by 35% m/m, according to prelim. Data. War & sanctions no doubt creates new challenges for the auto industry, and Europe will probably take the hardest hit

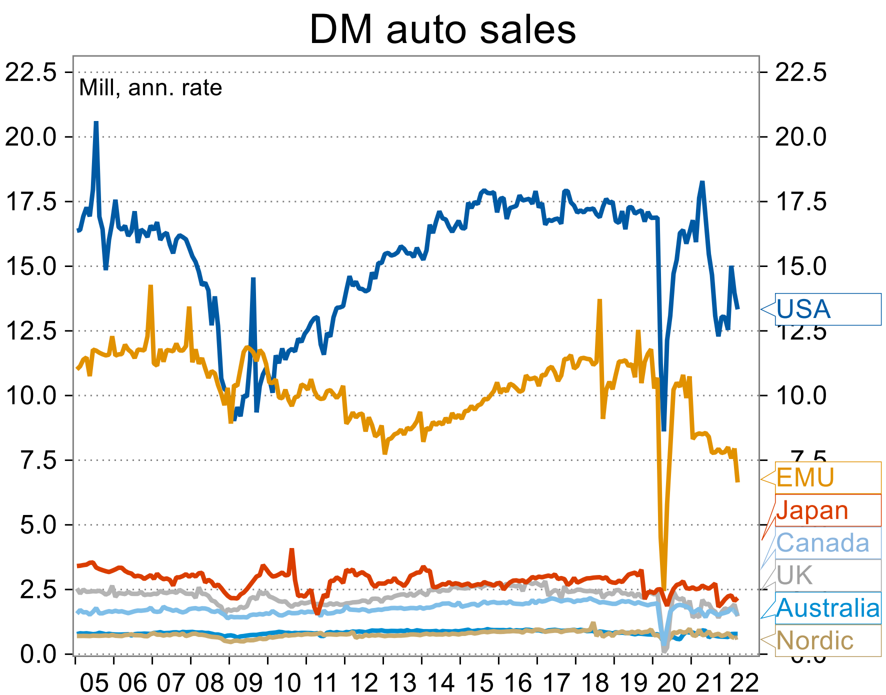
German auto production down 35% in March – down 54% vs the 2019 level!!

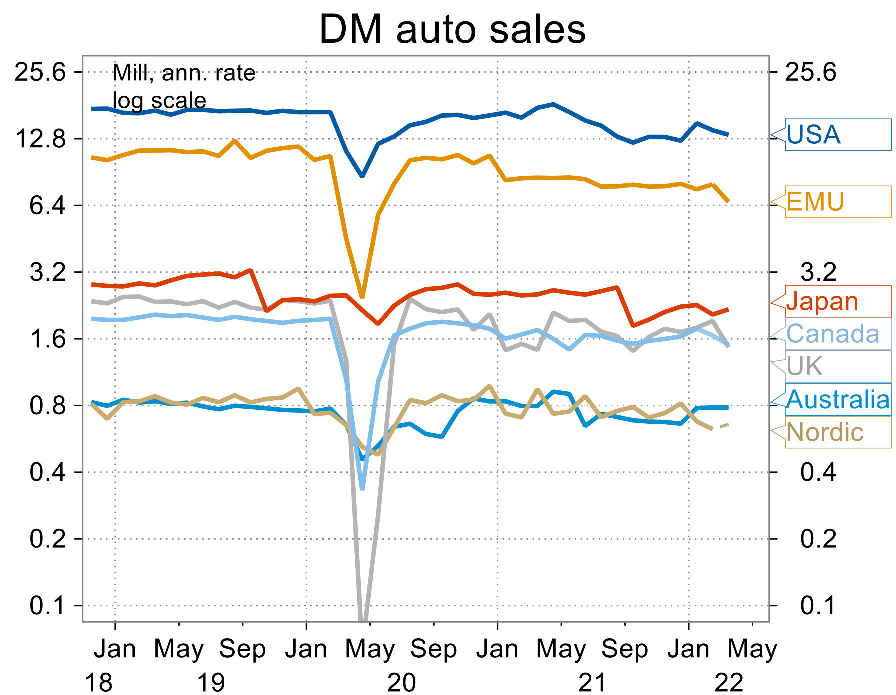
Chinese auto production probably also declined substantially – but no stats available yet



- The war in Ukraine may lead to more supply chain challenges for the auto industry like lack of Ukrainian neon gas for semiconductor production or car parts from Ukraine

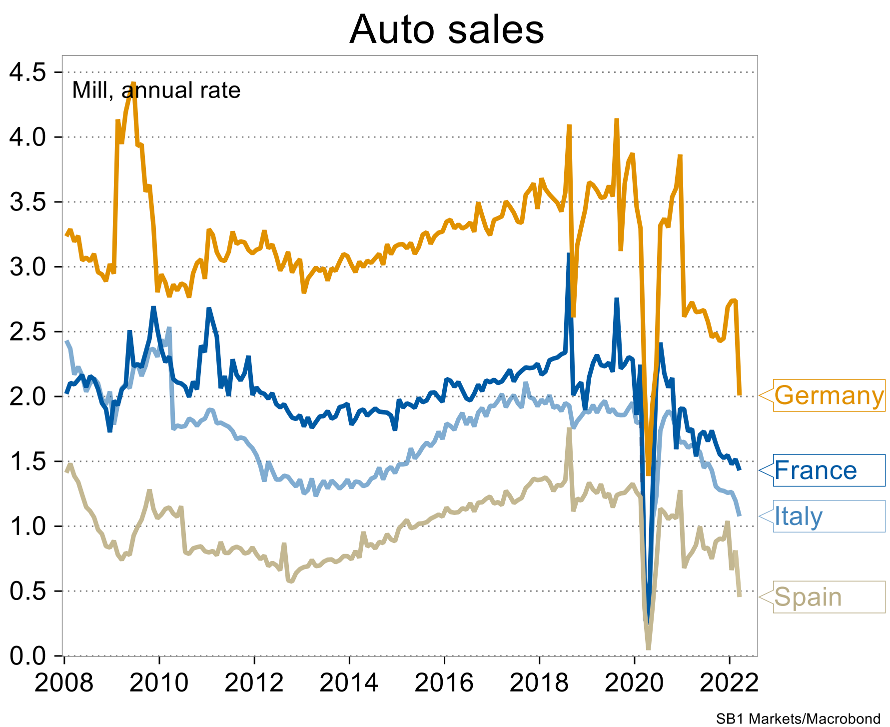
DM sales: Down in February - with EMU as the weakest link

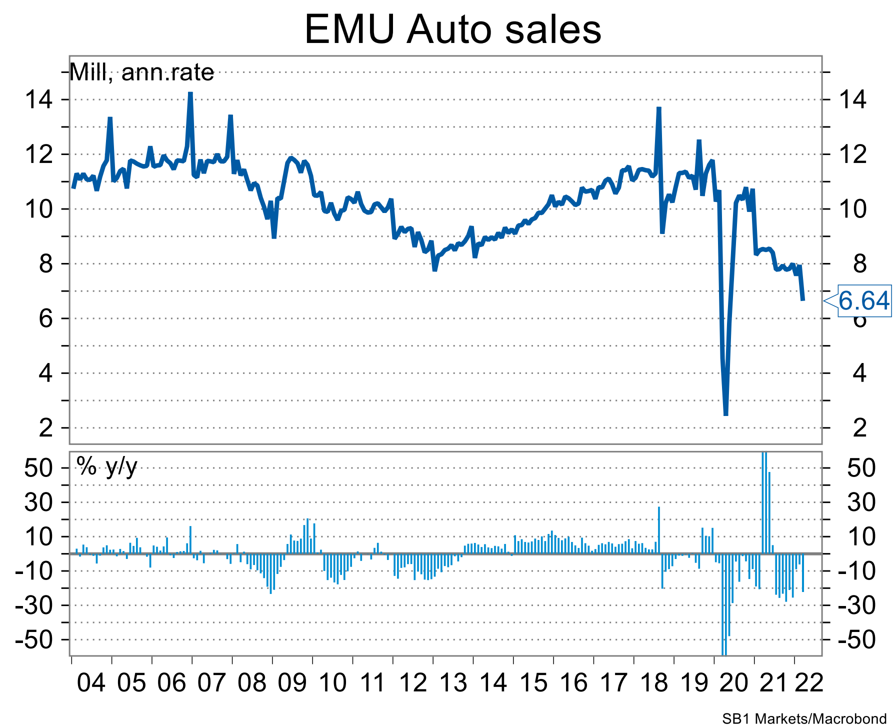




German & Spanish auto sales collapsed in March. A fell in France & Italy too

Total sales probably down to some 6.6 mill, from 8 mill in February. Down 41 % from 2019!

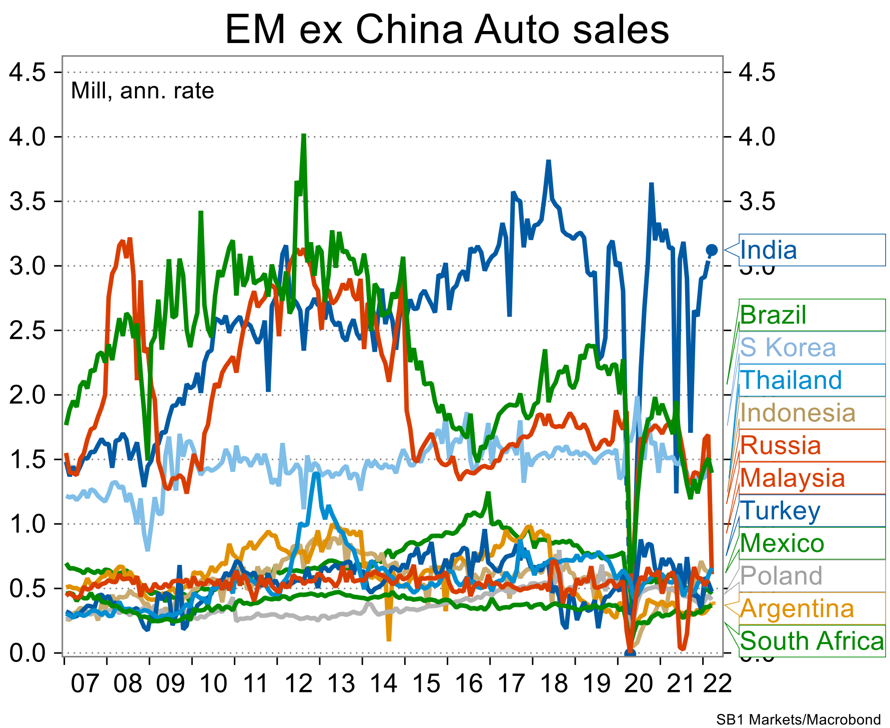


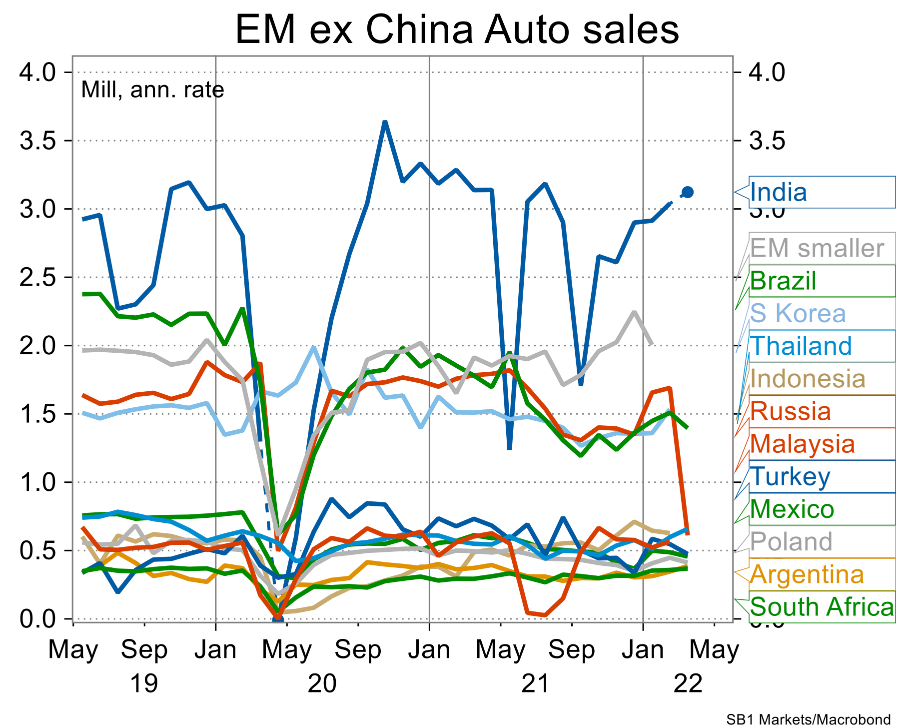


- The coming months will probably be very challenging. The supply chains are exposed, once more – and German production nose-dived in March

EM: Sales down by 2/3 in Russia, just April 2020 even weaker

This is not like in 2014/15, when oil collapsed and Russia was sanctioned due the Crimean invasion



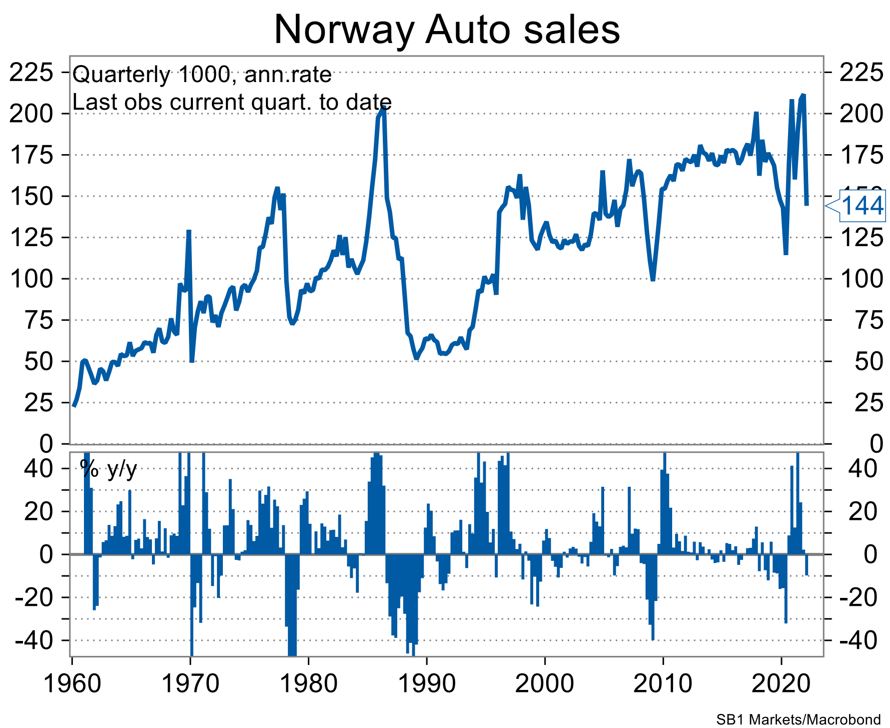


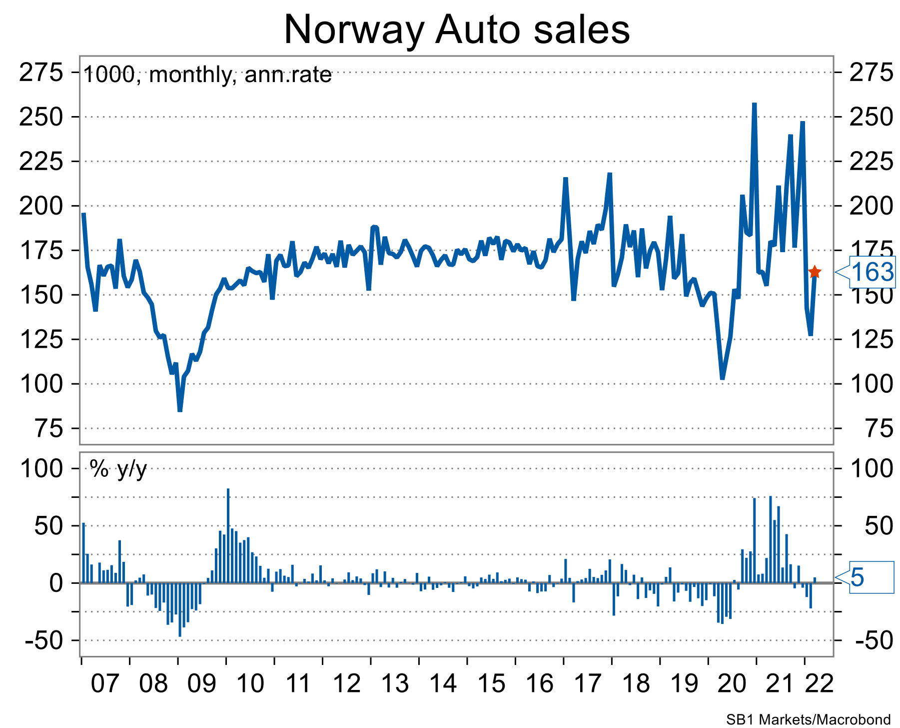
- Elsewhere, no big setbacks – at least not reported so far (the Indian figure is preliminary)

Not all countries have reported yet, and for some countries we have just plugged in figures from media reports that are not always correct

Norway: Auto sales up in March, still well below the 2021 fabulous pace

Sales up to 163’, from 127’ in Feb. Q1 at 144’, well below the 192’ avg 2021 level



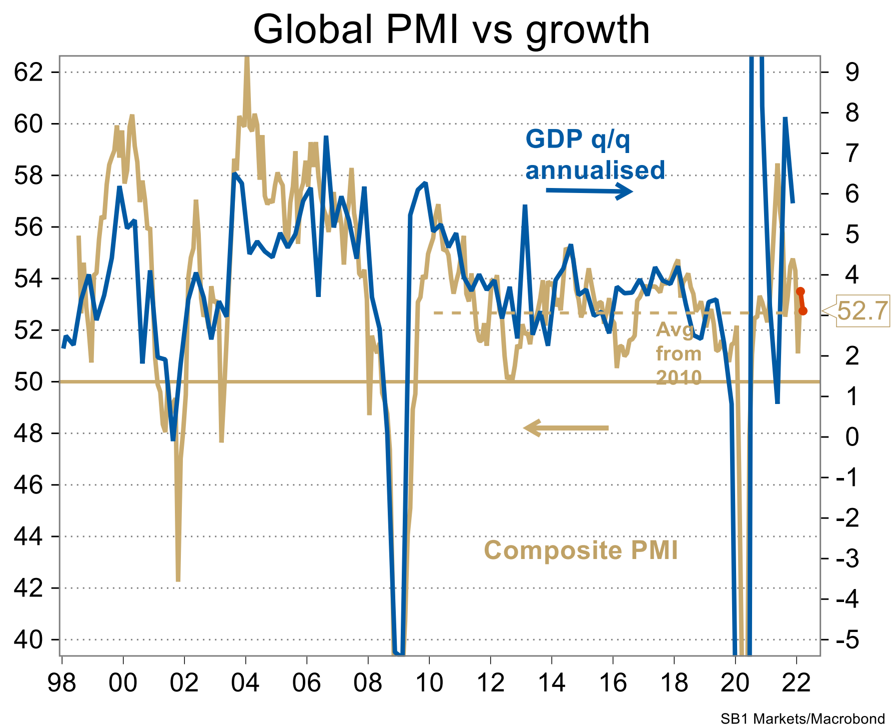


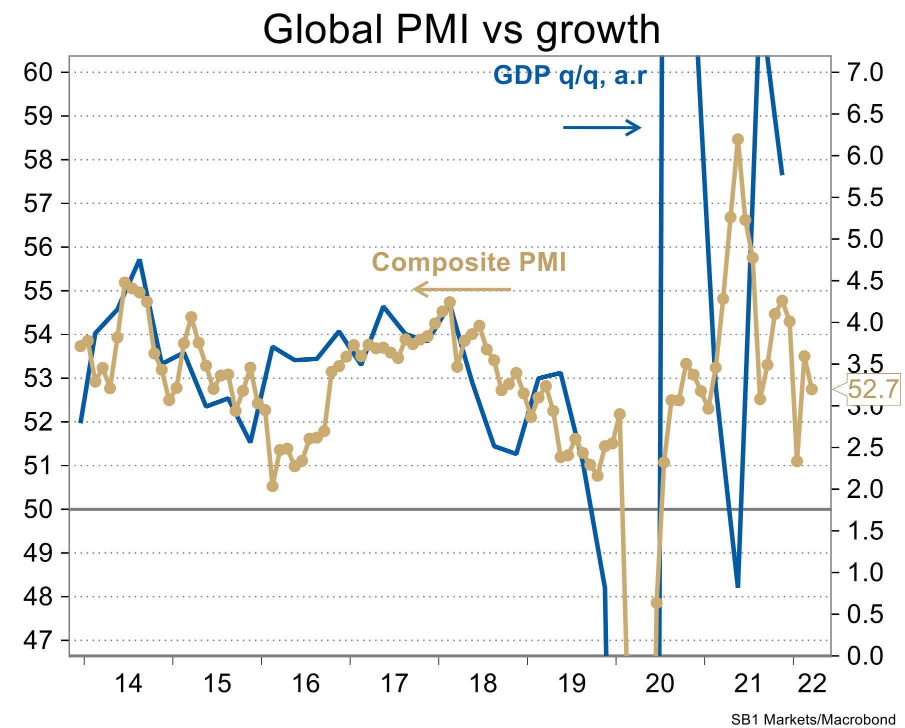
- Sales fell sharply in Q1, for an ATH level in Q4-21.
- Last year, 192’ autos were first time registered –above the previous ATH at 185’ in 2017 – and before that 173’ in 2006!
  - Sales rose 21% from 2020 – in a year where global production and sales fell
  - Sales were been much stronger than in any other rich country. Even the Q1 level ‘just’ 10% below the 2019 level. ‘Just’ because global sales are down 22%

SpareBank 1 MARKETS

The global economy slowed in March due to 'some' trouble in China & Russia

The composite PMI fell 0.8p to 52.7, we expected a 1.3p lift – but some EMs were very weak

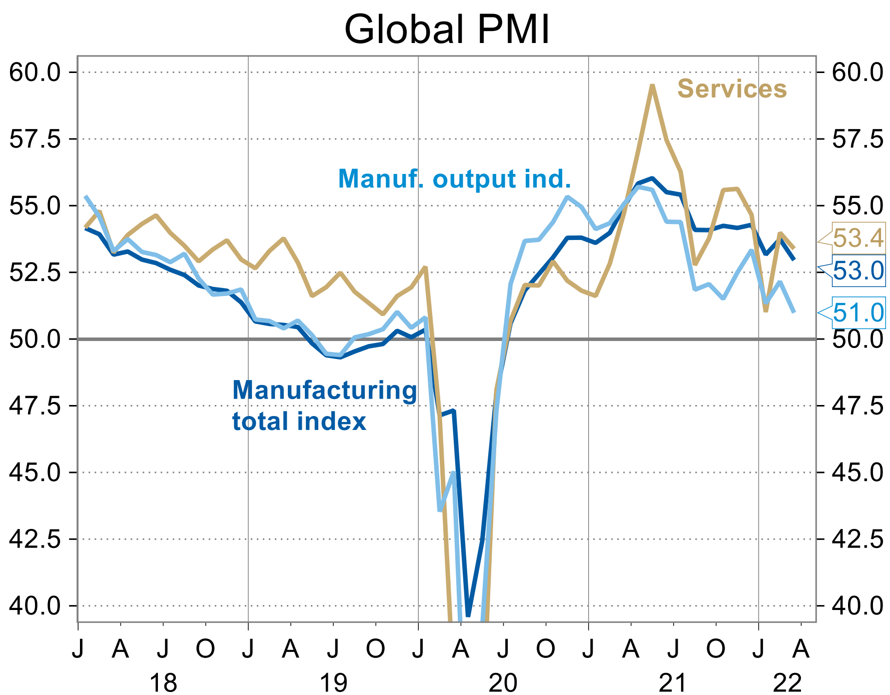


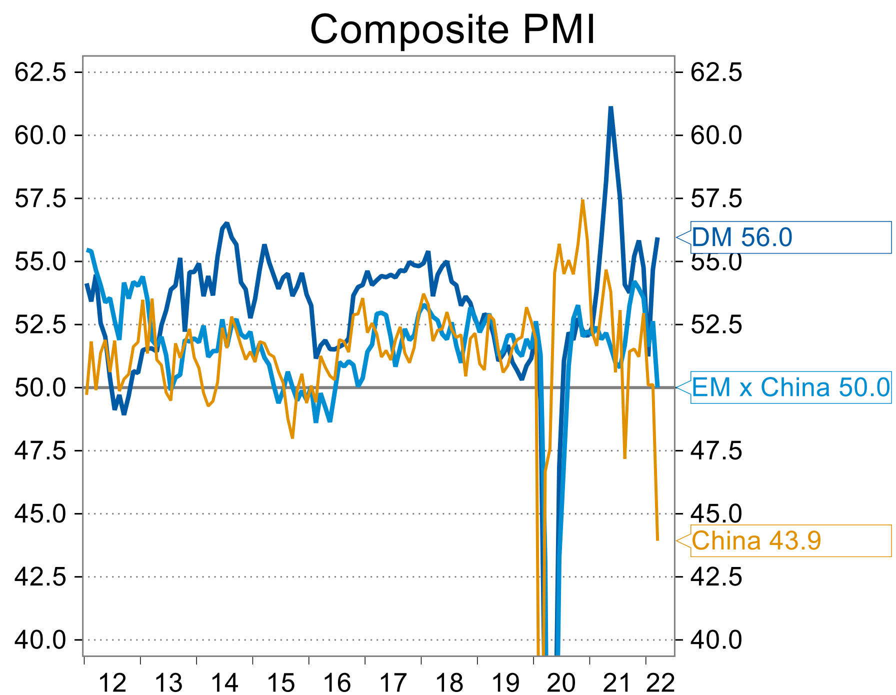


- The **global PMI** still signals GDP growth at average level, some 3%
- **Both manufacturing & service contributed to the modest decline**
- **China and Russia** reported steep declines, even more in services than in manufacturing. The setback in China is very likely do to the 'local' lockdowns imposed to fight the very contagious Omicron variant. Russia is engaged in some special operations
- **In the rich part of the world**, the PMIs rose. The decline in the EMU PMI was less than initially reported – and the level signals growth above trend
- **Delivery times** rose in the manufacturing sector – and all **price indices** rose – and most to new ATH. So war & sanctions had some impacts…

Both manufacturing & services report slower growth in March

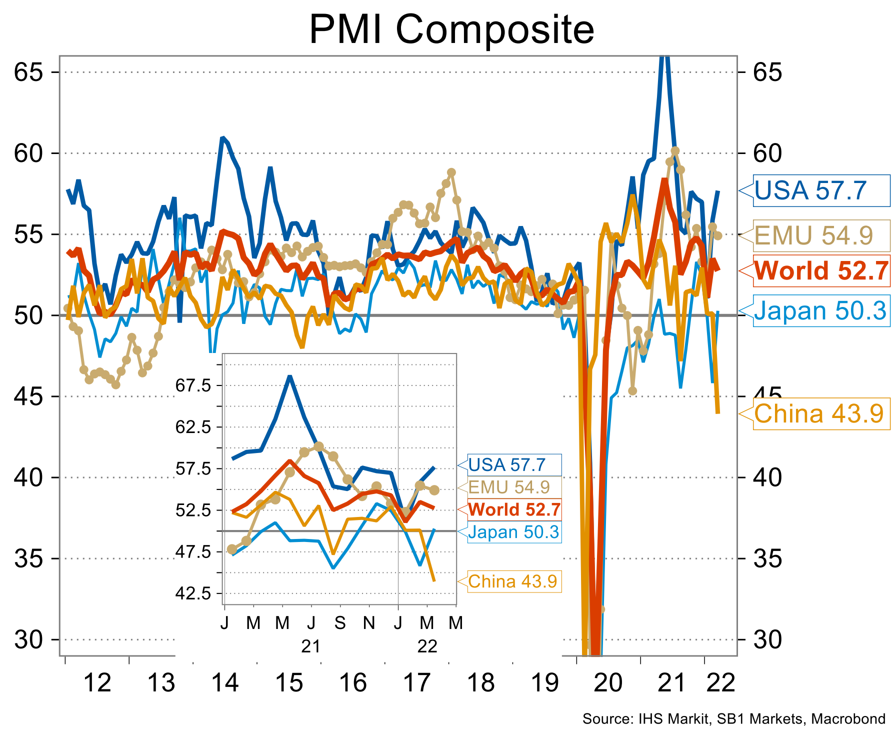
… although just due to sharp declines in Russia and China

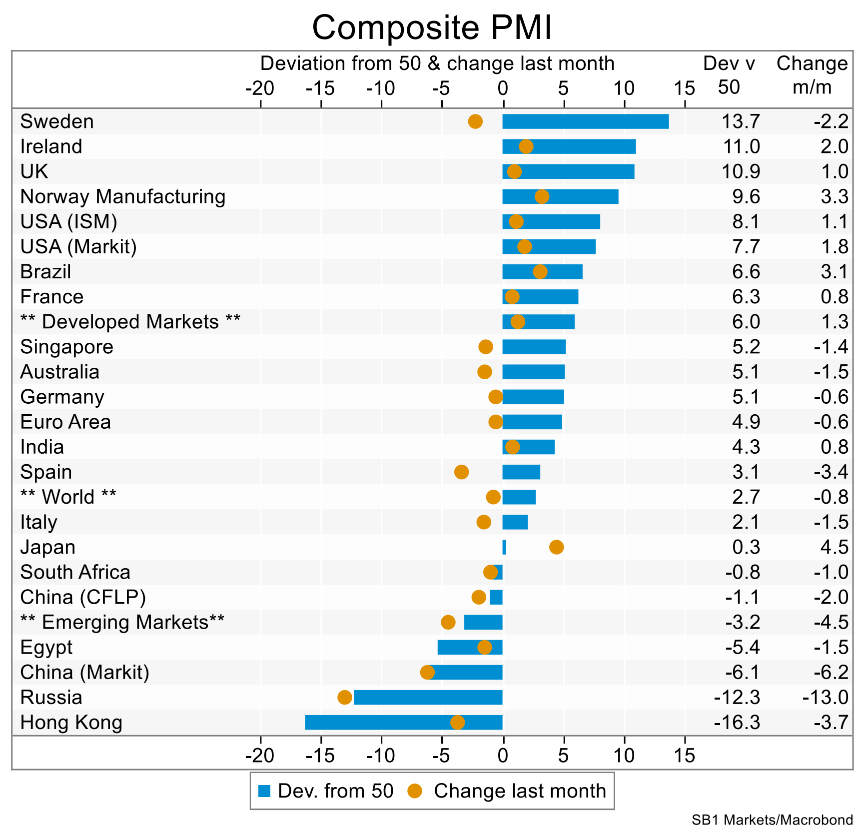




The global composite PMI down, due to steep declines in Russia & China

In the DM, the PMI gained 1.5p to 56.0 – but the total fell by 0.8 p to 52.5. Russia -12p, China -6p

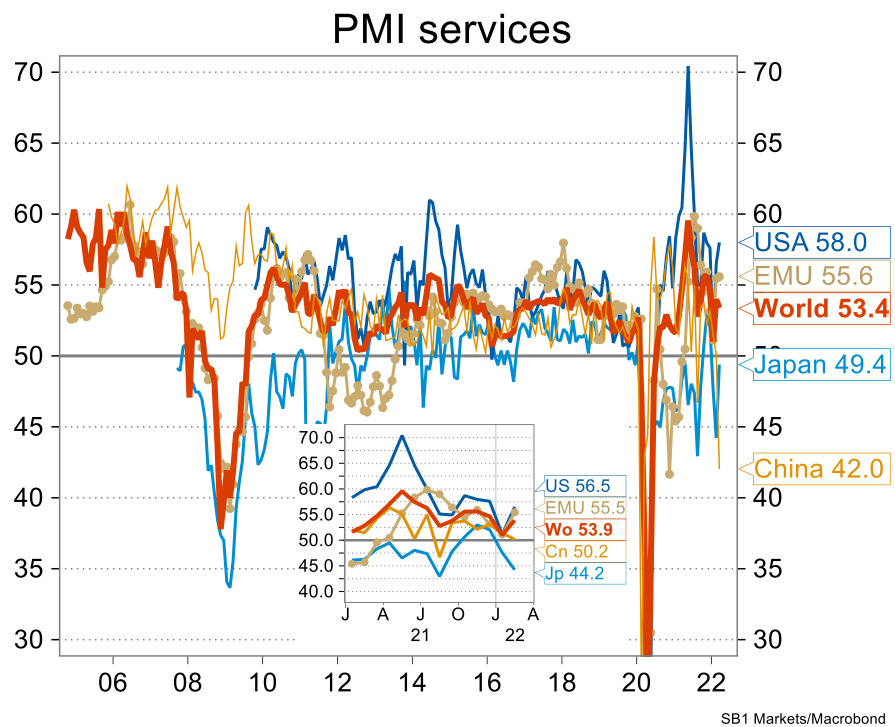


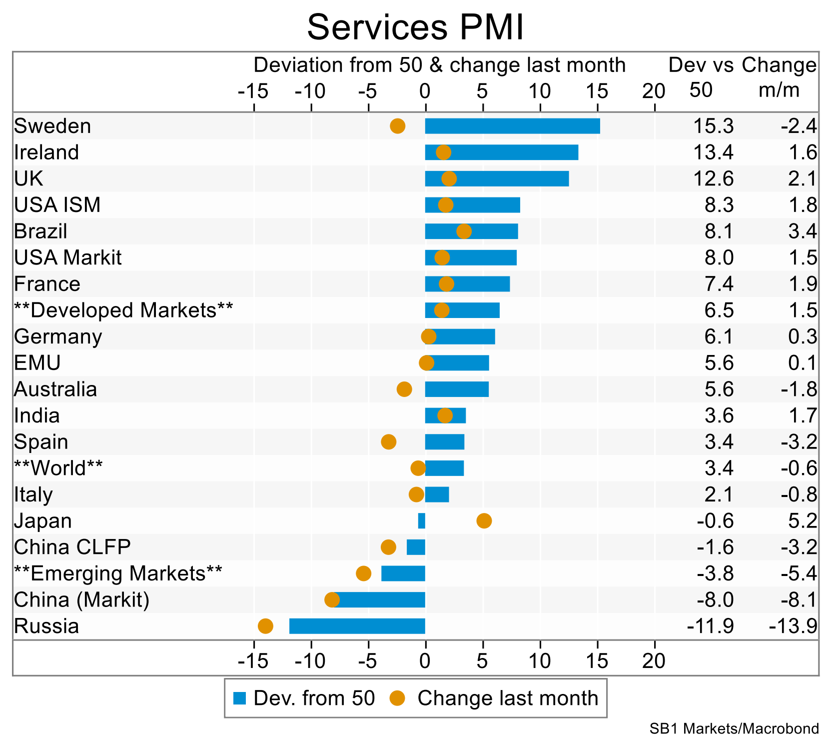


- Just 9 countries/regions up in March (down from 17), and 15 down (from 8)
- **The declines in Russia and China (and in Hong Kong)** are brutal. War & sanctions are hurting the Russia economy brutally, according to businesses. China is fighting the virus with its 'impossible' zero tolerance policy. (Hong Kong may have turned the corner, at least cases are falling and mobility is on the way back
  - » Other EMs also mixed: Brazil sharply up (Omicron cases collapsed), India stabilised, while some others declined
- **The EMU composite** fell, but just by 0.6 p – and less than initially reported (war/sanctions did not hurt more, through March
- **Sweden** still has the pole position, far above no. 2 (Ireland, and the UK!)
- (Norway does not compete here, we just have a manufacturing PMI. The level would have yielded a 4th place in the composite race.

Even the service sector PMI weaker than we assumed, solely due to China, Russia

Huge setbacks, for different reasons (we hope). War & sanctions wrecked Russia, Omicron China



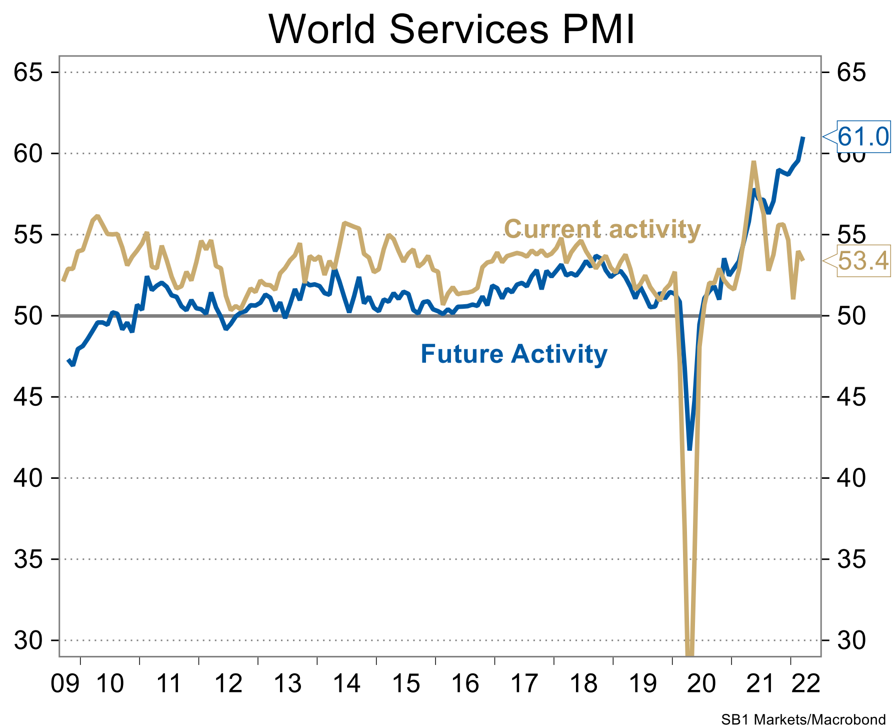


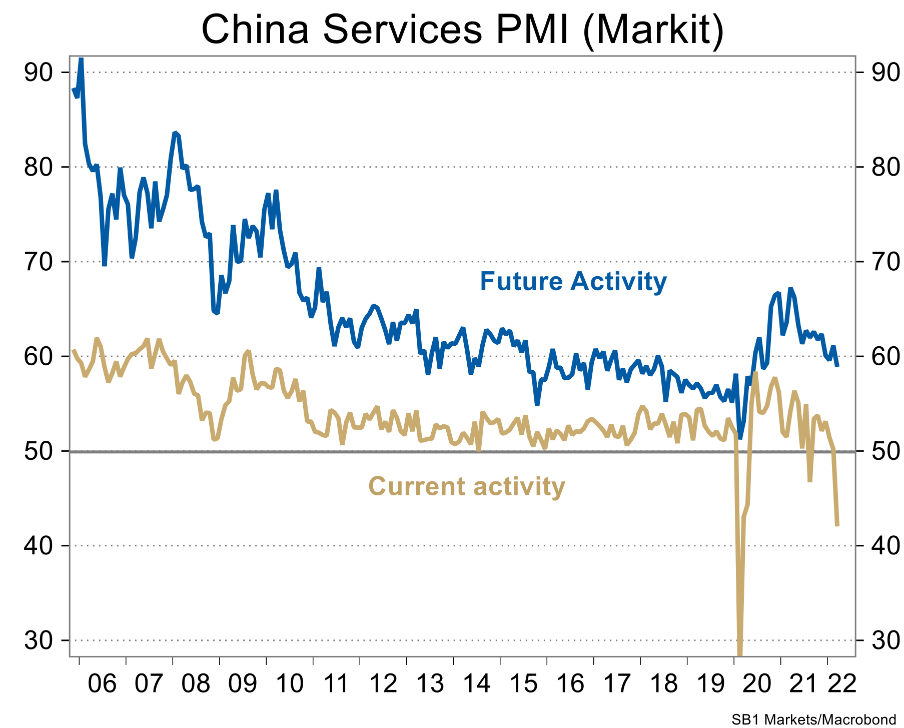
- **The global service sector PMI** declined by 0.6% to 53.4, far below our 55.3 estimate, based on the prelim surveys from Developed markets – which rose 1.5 to 56.5
  - A large majority of rich countries reported higher service sector PMIs, even the Euro Area. Both the PMI and the ISM index strengthen in March
  - The Swedish PMI is still top of the pop
- **The March setbacks in Russia and China are dramatic** – and both indices fell to very low levels. In Russia a steep decline in activity is signalled by a 38.1 PMI, while the service sector in China may have flattened (zero growth), with a 42 PMI level

SpareBank 1 MARKETS

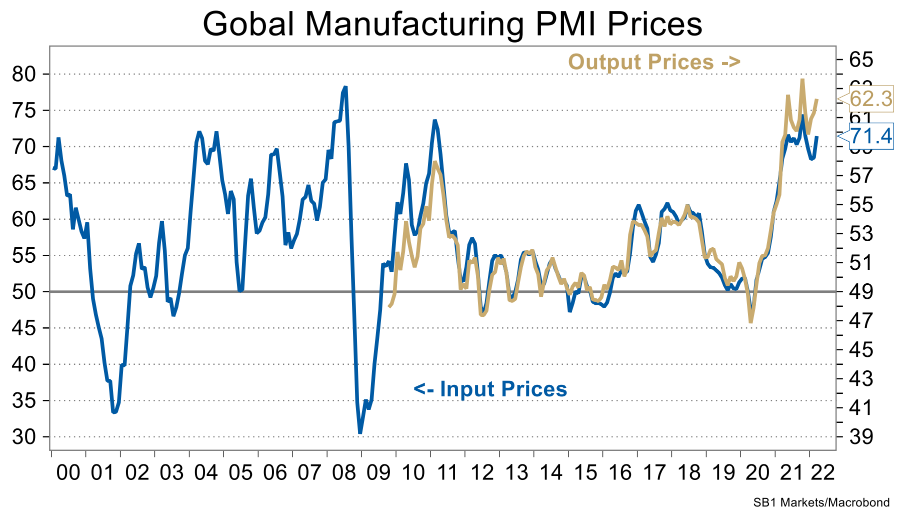
The service sector expects better times the ever before

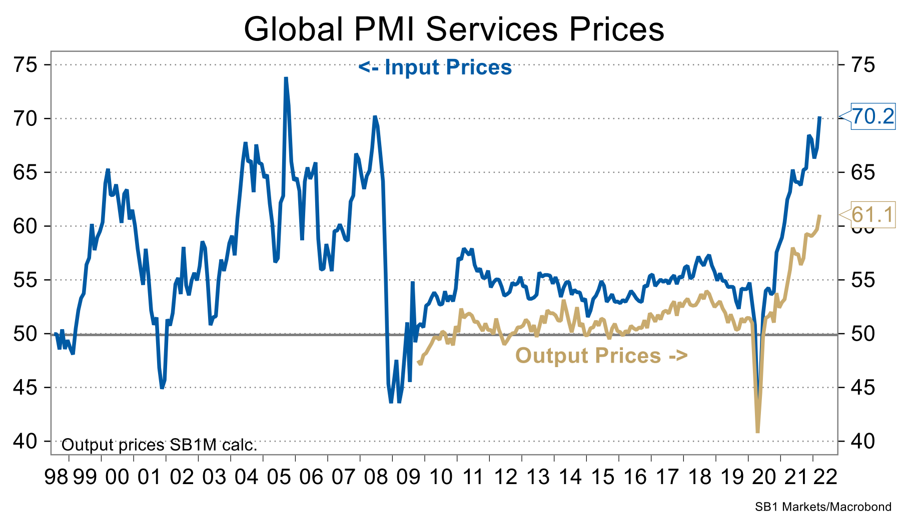
At least outside China – but even services in China are still rather upbeat

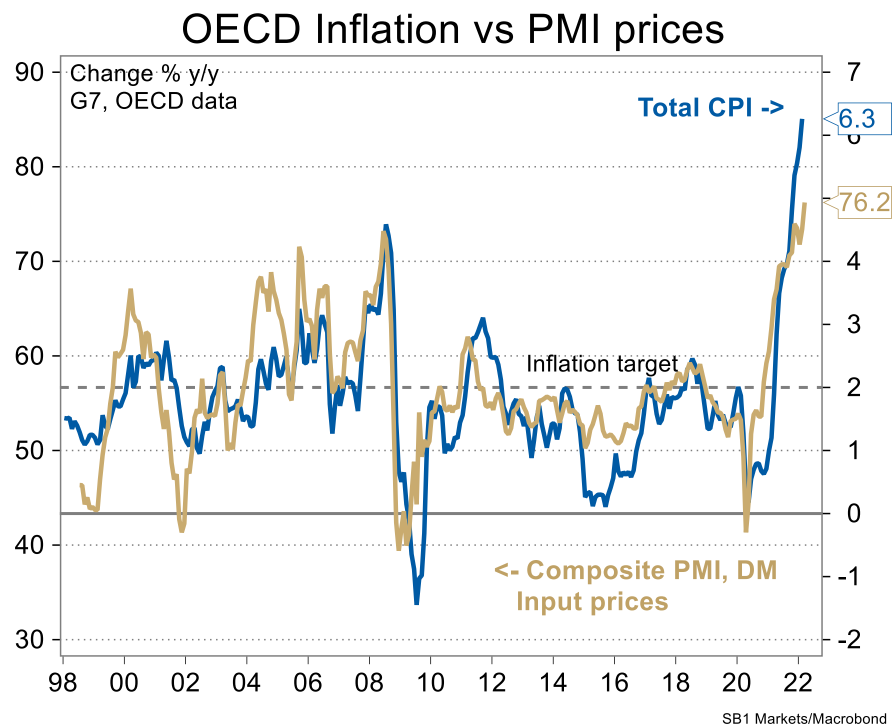




All aggregated price indices up in March – and several up to ATH

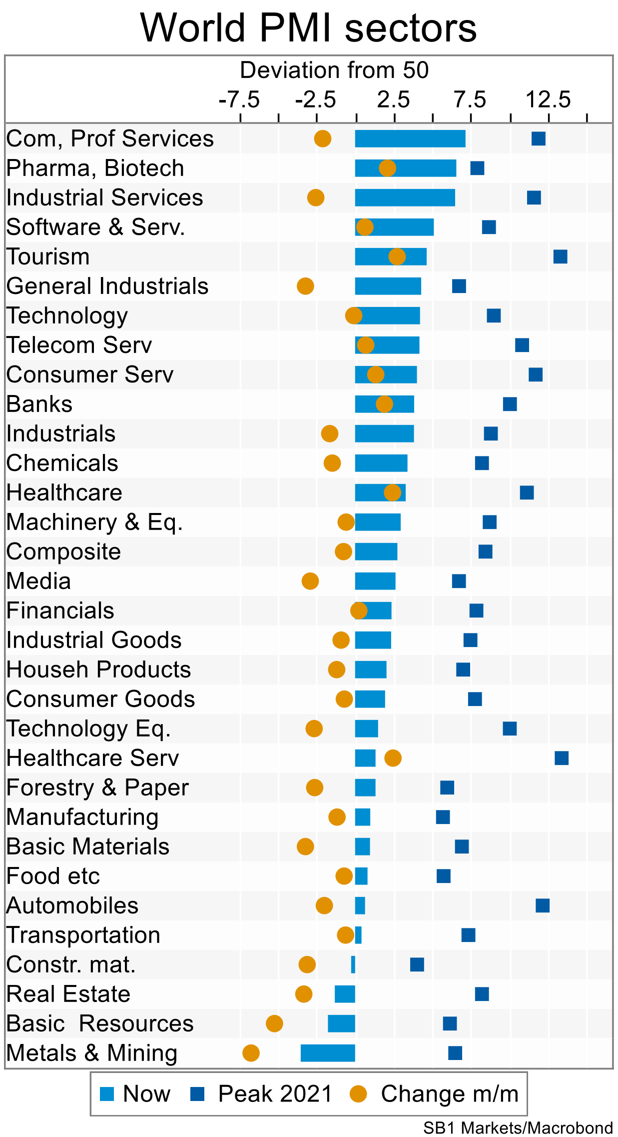


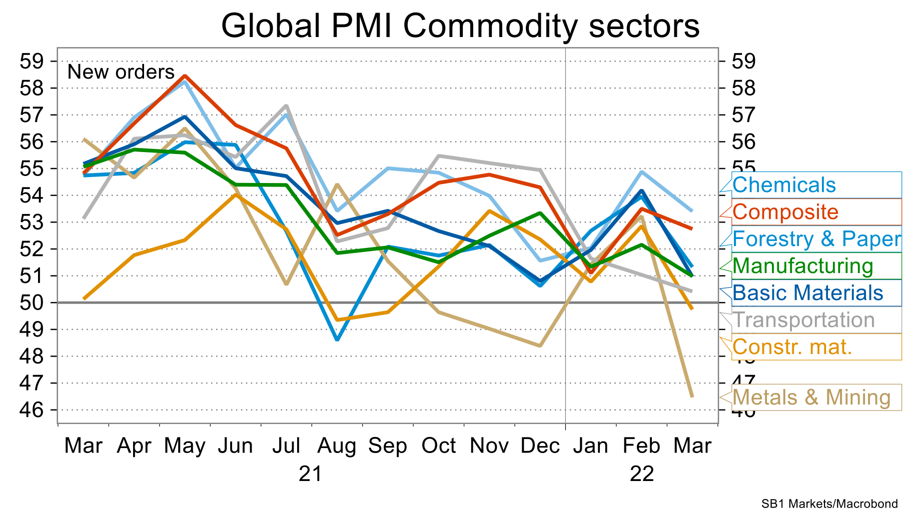


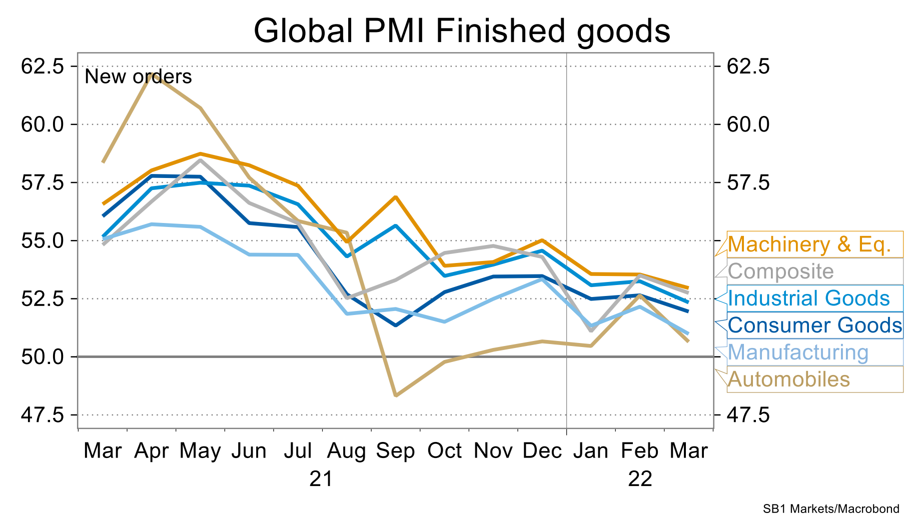


Most sectors reported slower growth in March; Basic material/metals down

Tourism is recovering though

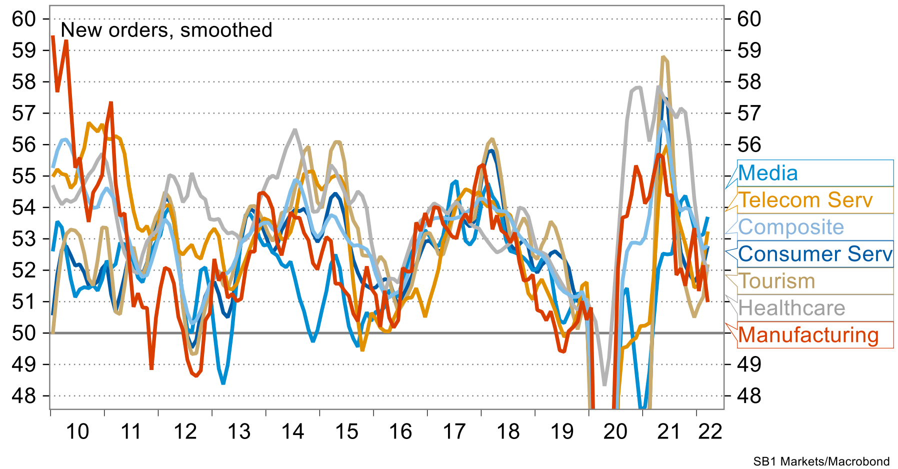




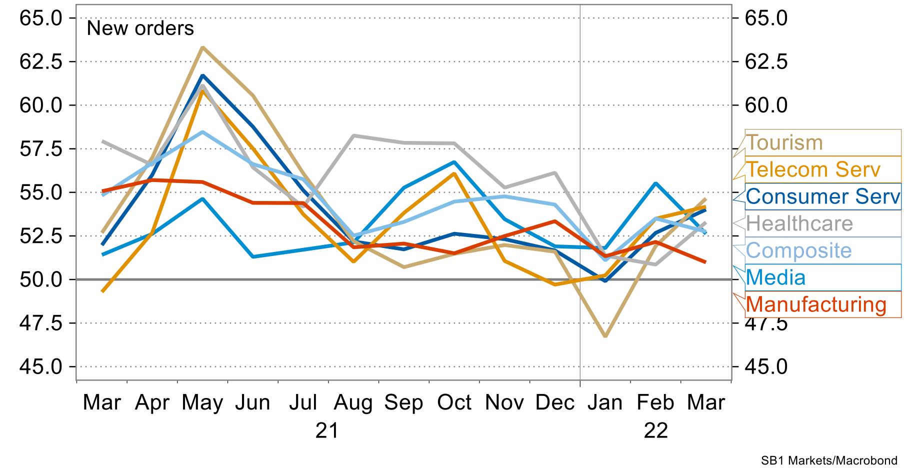


Services are reporting growth but most sectors slowed down in March

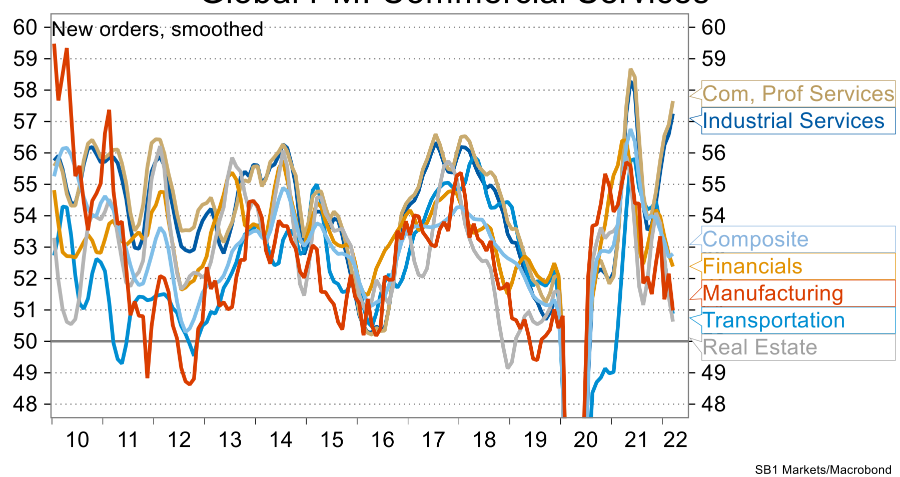
Global PMI Consumer services



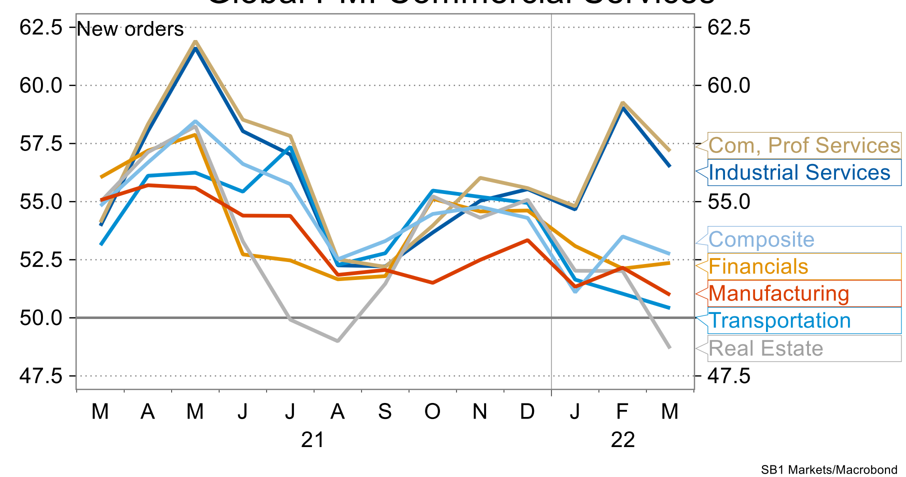
Global PMI Consumer services



Global PMI Commercial Services



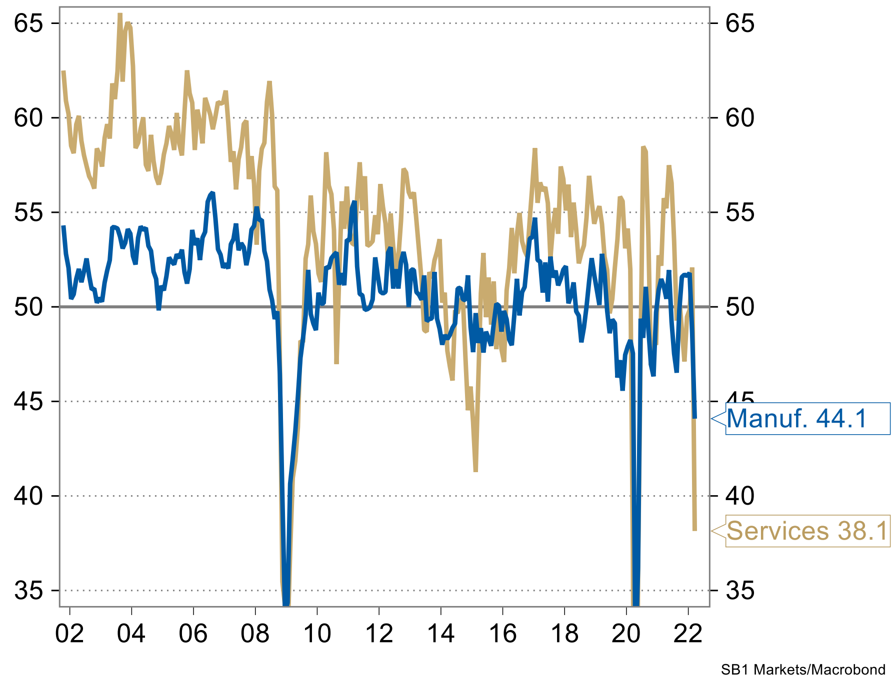
Global PMI Commercial Services



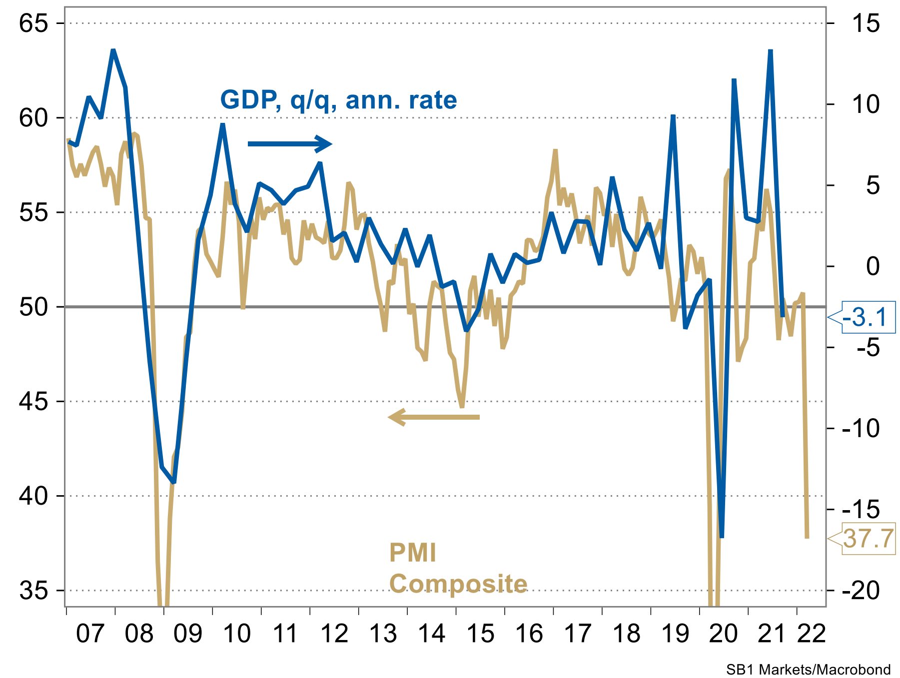
A shocking decline in the services PMI in March – a setback in manufacturing too

The composite PMI fell 13 p (just April-20 worse), to 37.7, signalling at least a 10% in GDP

Russia PMI



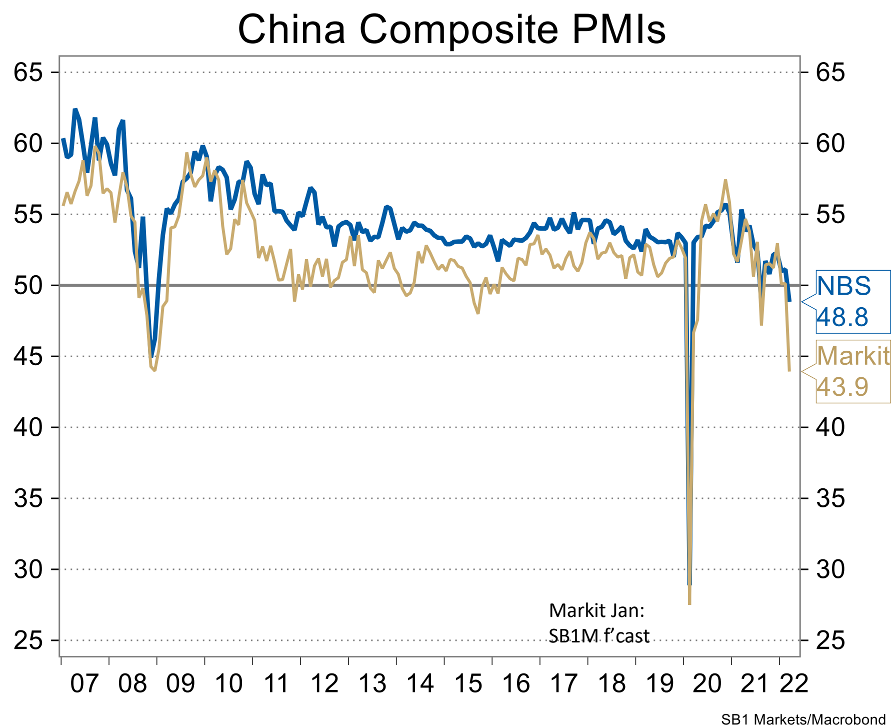
Russia PMI vs GDP

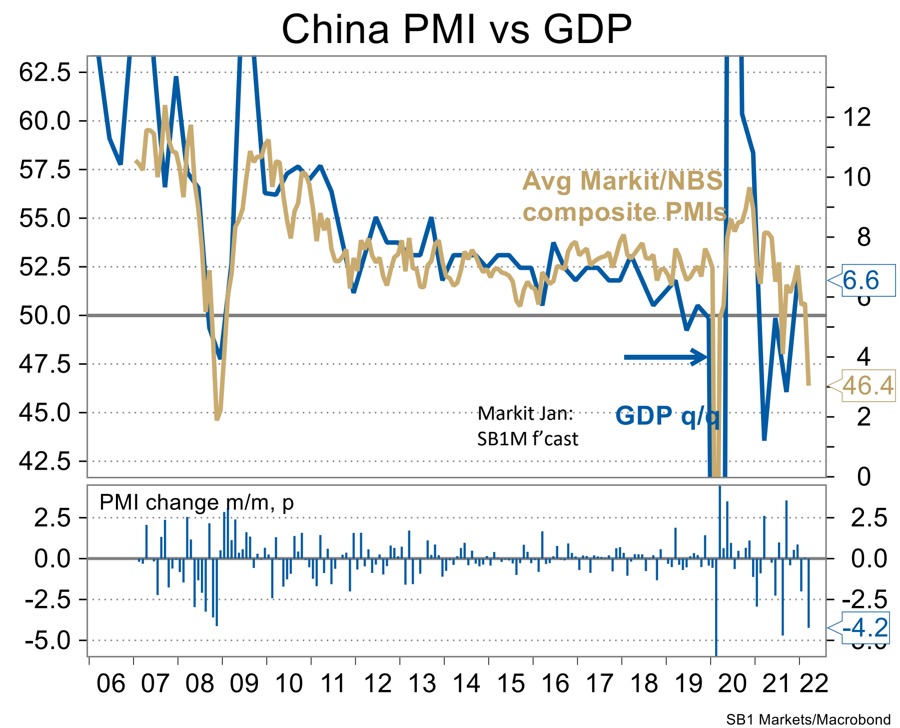


- **The service sector PMI** fell 14 p to 38!
- **The output component in the manufacturing index** fell sharply too (a part of the composite index), while the total index just fell 4.5 p to 44.1
- There is of course just one possible explanation for this abrupt contraction in activity in April: The special operation in Ukraine and Western sanction
- **A reminder:** The PMIs are not sentiment surveys – respondents are asked about in changes in actual activity (new orders, output, employment, inventories) from the previous month

Markit's services fell even more than we assumed: The Omicron challenge is HUGE!

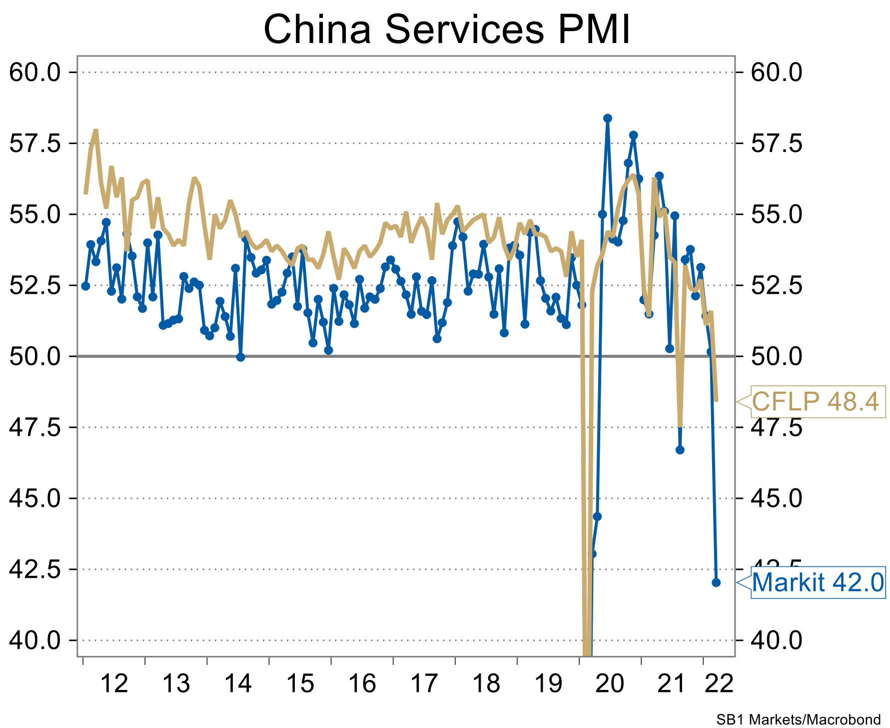
Markit's composite PMI fell 6.2p to 43.9, just Feb-20 has been worse. Signals almost no GDP growth





- **Markit's** service sector PMI declined 8.1p to 42.0, while the decline in the manufacturing index was more modest but still substantial, down 2.3 p to 48.1, the 2nd lowest since early 2016 (Feb-20 was even weaker)
- The **CFLP/NBS composite PMI** fell 'just' 2.3 to 48.8, also one of the weakest prints on record
- **The average of the two PMI data sets** declined to 46.4, the 2nd lowest level since 2008, signalling a 3% growth pace
- **What happened?** China's corona strategi has more or less failed. The Omicron variant is very contagious, and vaccines to not work well (and too few are vaccinated). The lockdowns is hurting the economy – and global supply chains – until a more viable strategy is chosen. Media has reported that China will start buying Western vaccines

Markit's services sharply down in February as China fights a contagious variant

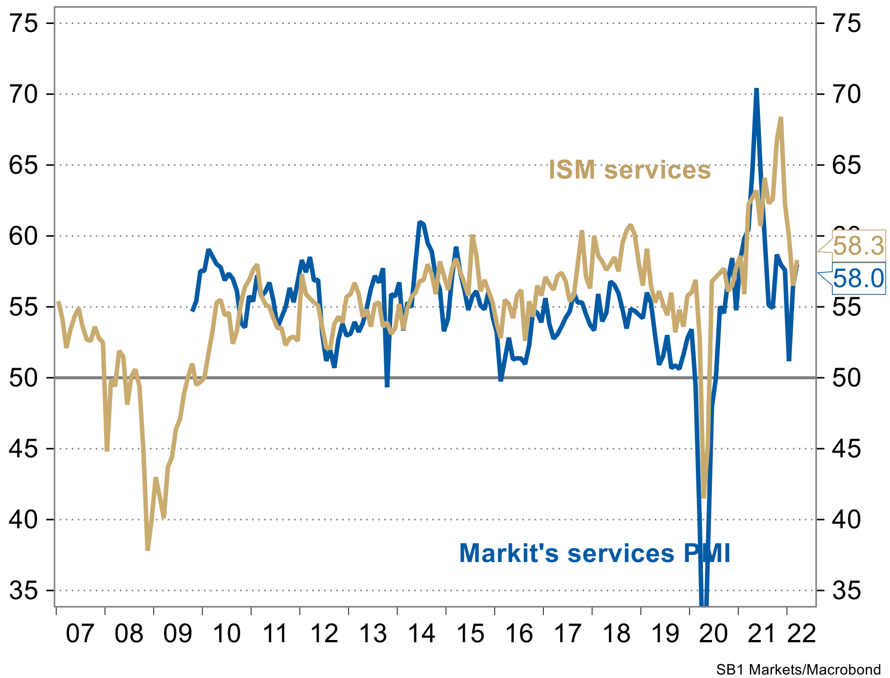


SpareBank 1 MARKETS

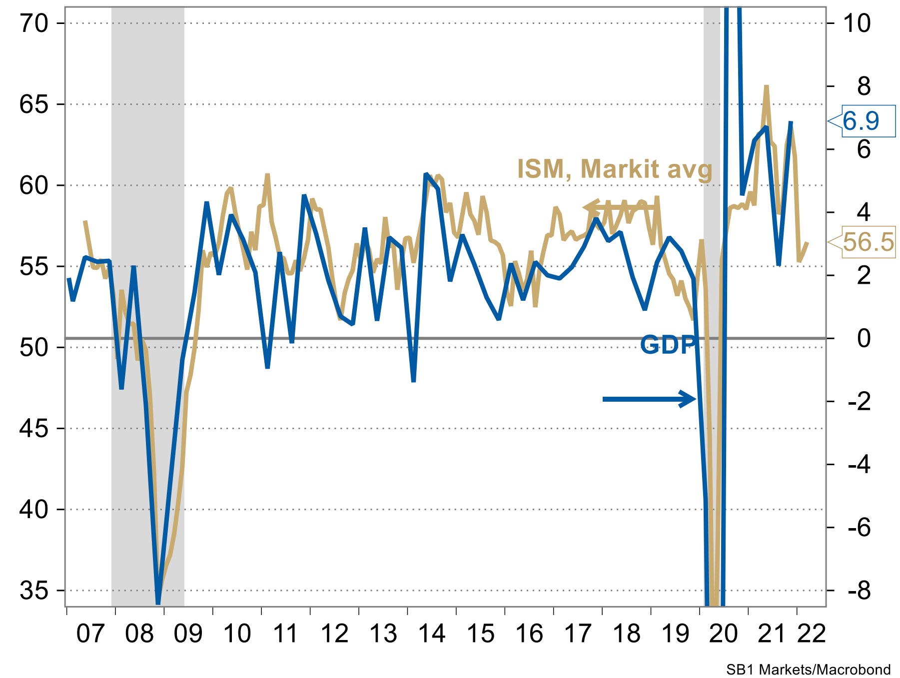
Services ISM reversed most of the Feb decline and the level is high – at 58.3

Markit's index services PMI confirmed up. The grand total of the PMI/ISMs at 56.5, signals 3% growth

USA PMI/ISM Services



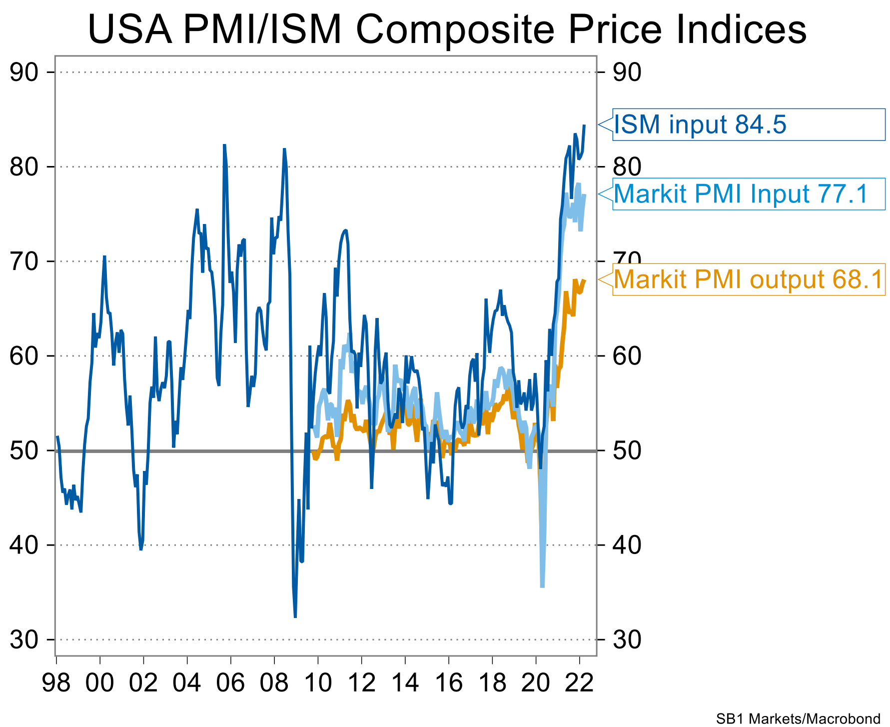
USA PMI/ISM vs GDP

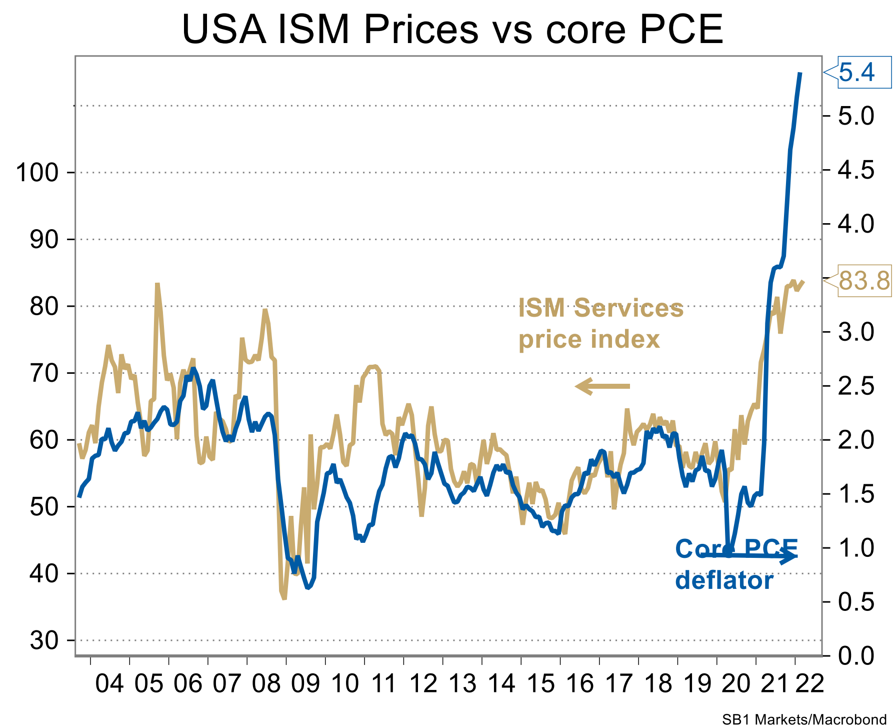


- **The ISM services index** added 1.8 p to 58.3 in March, slightly below expectations. Ordre inflow strengthened, up to above 60 again. The level is well below the re-opening spikes but well above average levelss
- The price index rose marginally. The level – at 83.8 is just 0.1 p below the ATH print in December.
  - » In the manufacturing sector, the input price index shot up 11.5 to 87.1, not far below ATH. The weighted average is at the highest level ever. Price pressures are not yet easing (check charts next page) …
- Together with their manufacturing indices, the **PMI/ISMs** signal a 2.5 – 3% GDP growth rate

ISM input prices reported faster up than ever before

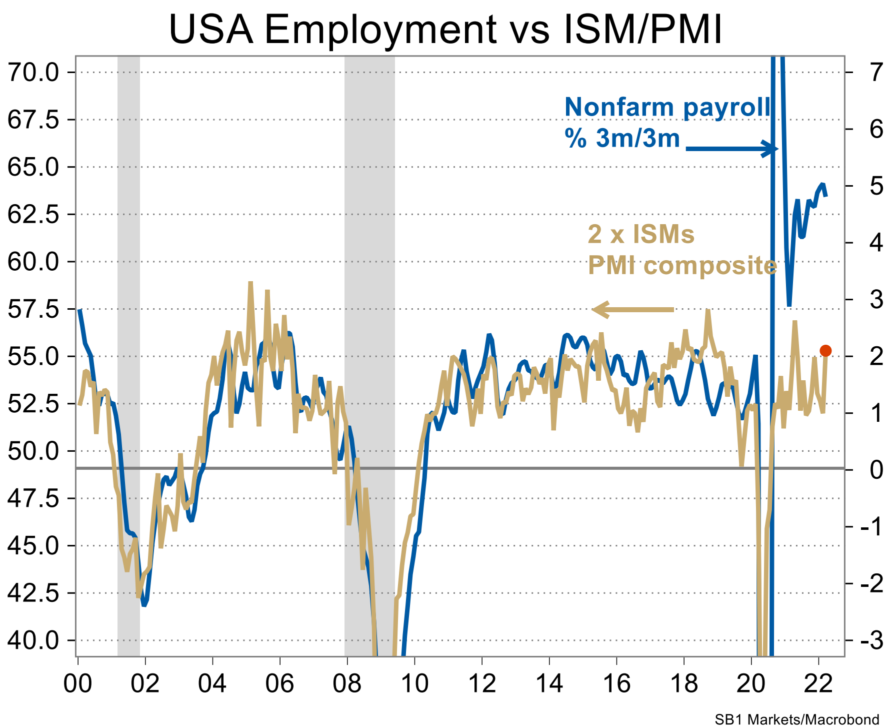
… but actual prices (at least the core) have climbed more than the PMI/ISMs have told us they would





PMI/ISM: The employment indices signals continued employment growth

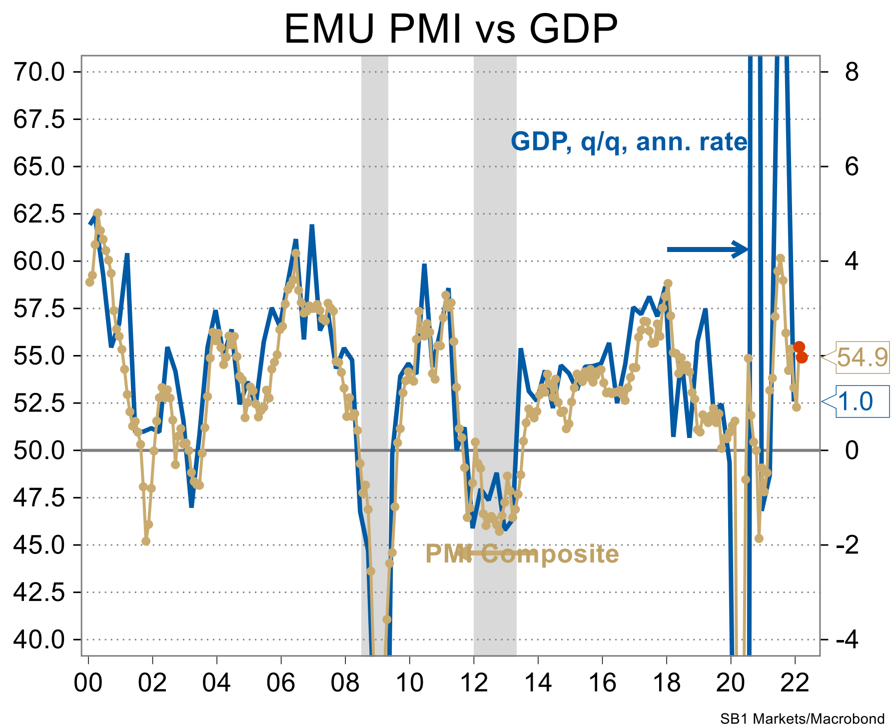
.. But not as strong as over the recent months

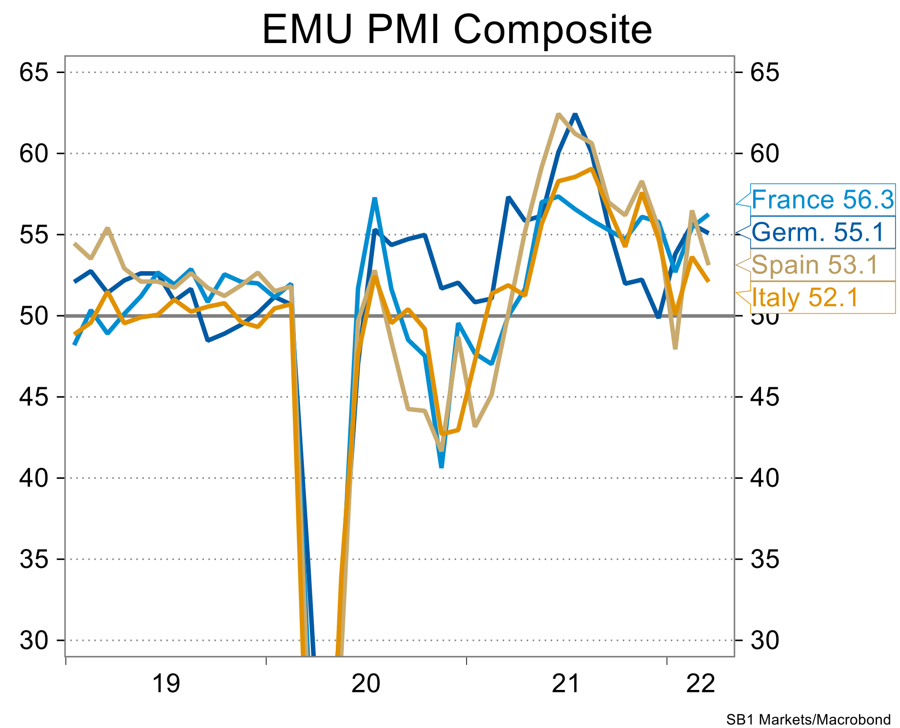


- **Actual employment** growth measured 3m/3m is strong, at some 5%
- The **average of PMI & ISM employment indices** signals close to a 2% growth pace, up from a 1% message sent out one month ago
  - » Because they to not need/want to hire – or because they are not able? Probably mostly due to the latter

No war shock: The March PMIs fell even less than first reported

The composite PMI down 0.6 to 54.9, 0.4 p better than the preliminary estimate

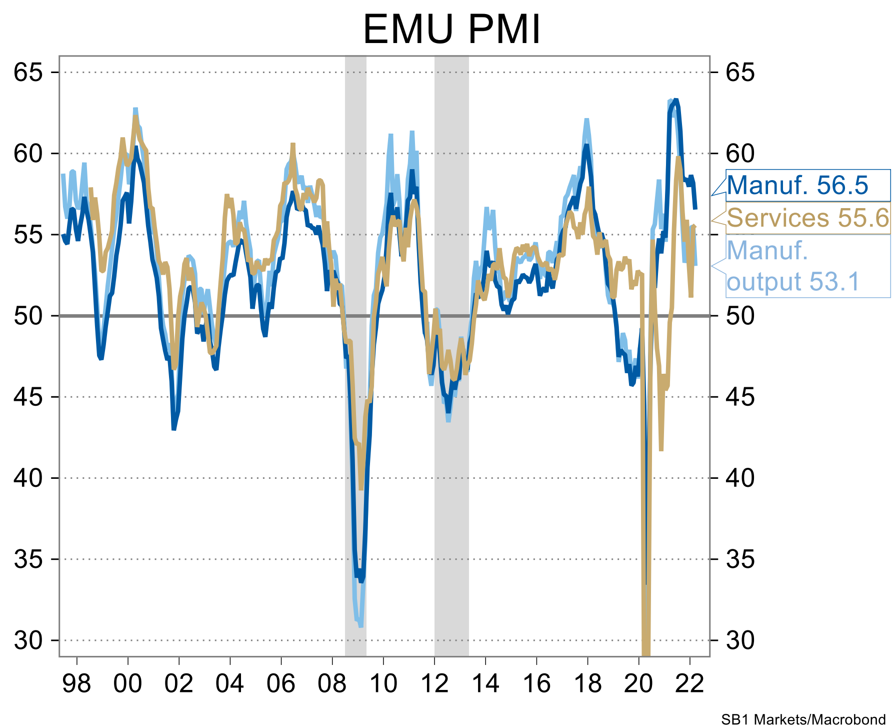


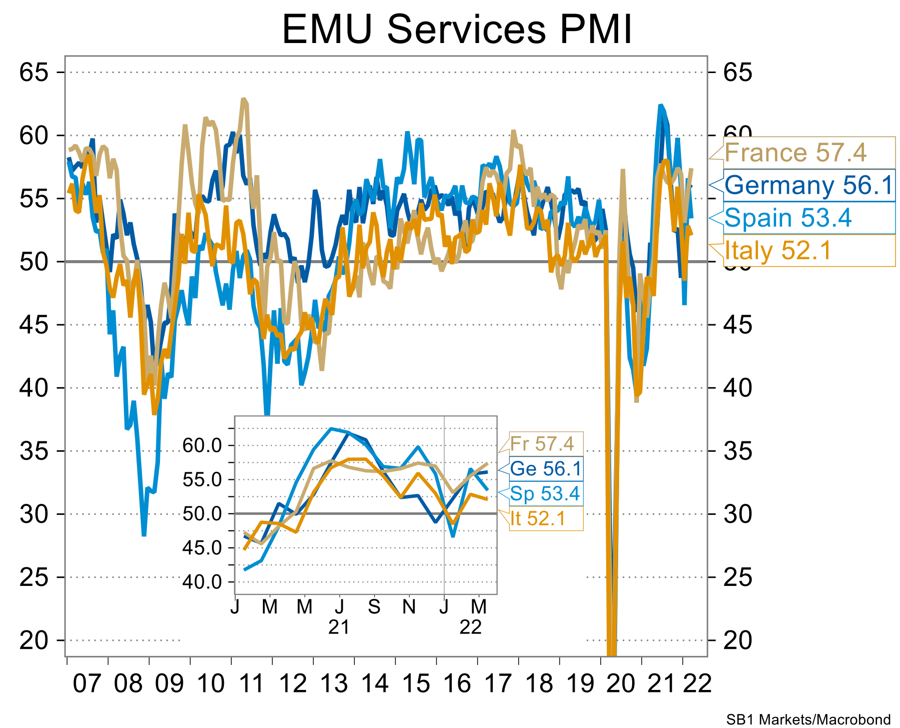


- We feared a decline vs. the first estimate as more companies recognised impacts of war & sanction
  - Less than half of the increase was due to an increase in the delivery times index
  - The service index was revised slightly up, while the output index in the manufacturing sector fell marginally vs. the first estimate
- The final **composite PMI** at 54.9 in Feb signals growth well above trend, at close to2% (yes, that's above trend)
- The French PMI rose, the other big reported a decline, Spain the most
- All big 3 are reporting growth, at or above trend

Manufacturing report lower growth, services gained speed

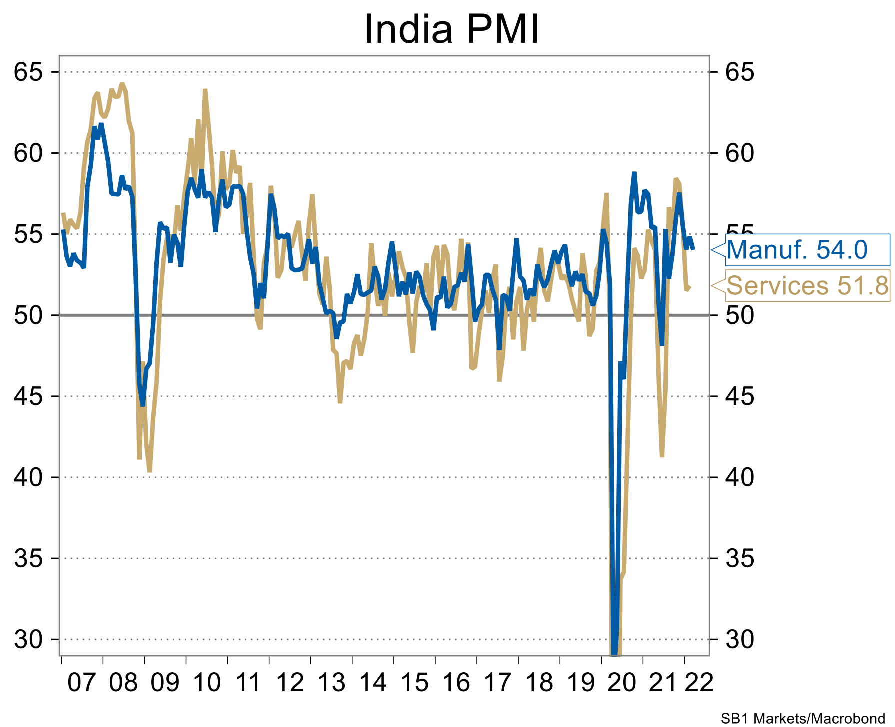
.. And Omicron restrictions were eased and mobility grew

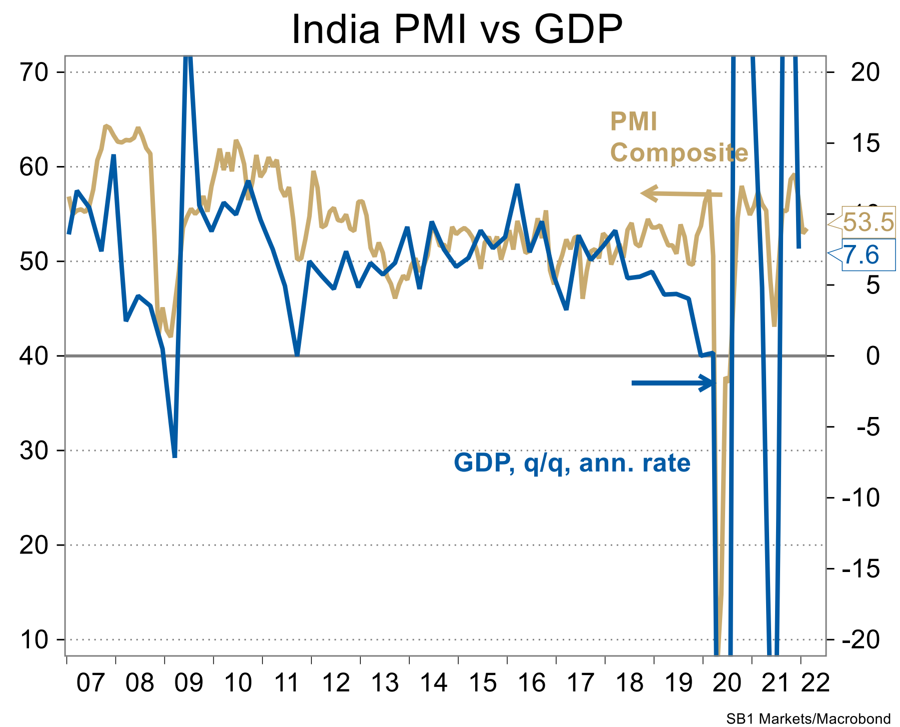




The PMIs stabilised at a decent level, signalling growth approx. at trend

Following the 3.5 drop in February, the March PMI gained 0.5 p to 53.5 in March

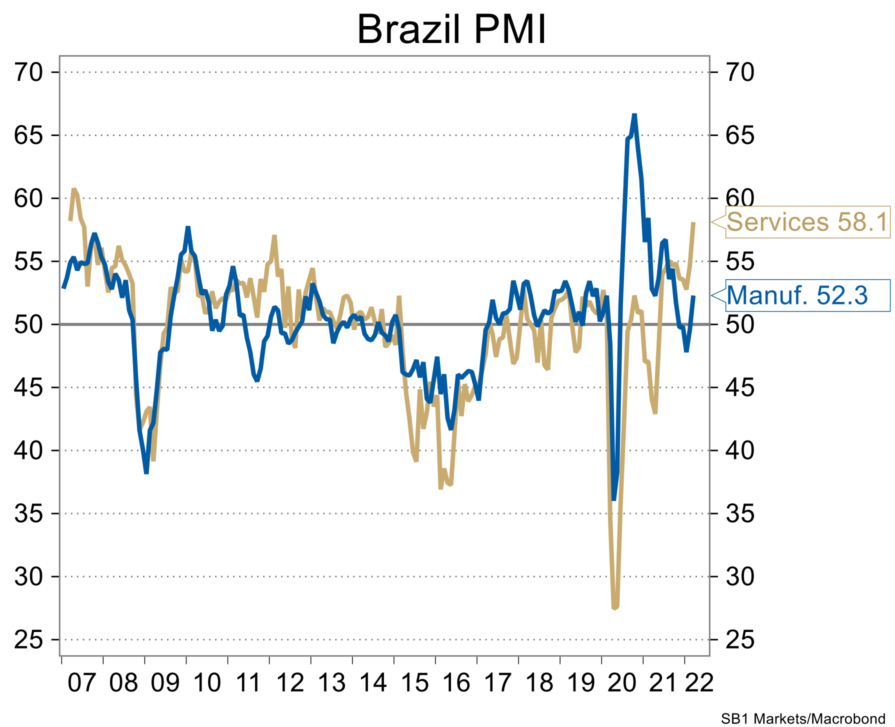


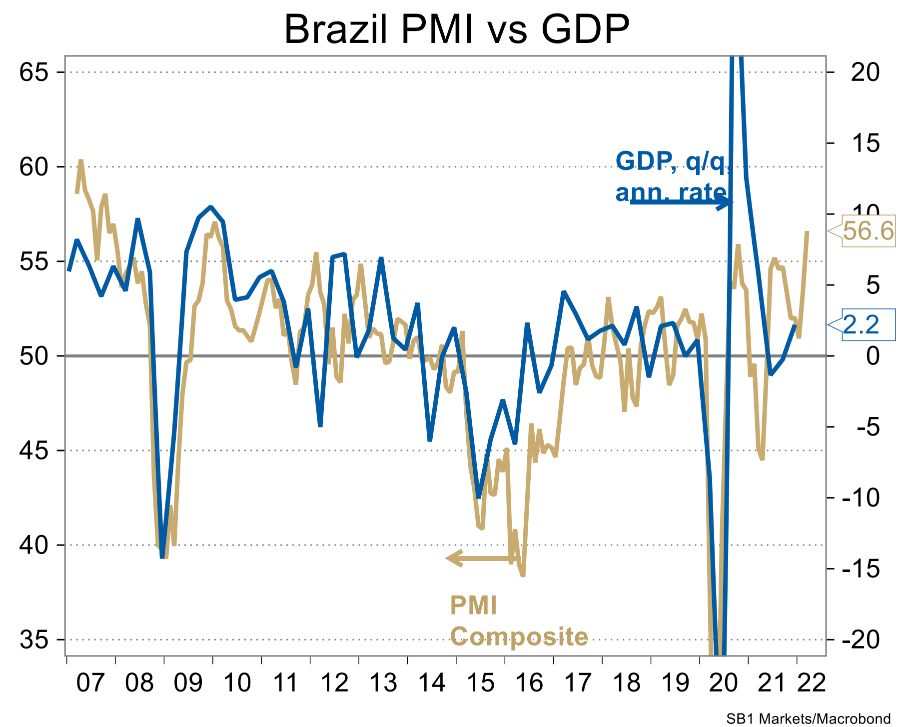


- **In Q4, Indian GDP** grew at 7.6 pace in Q4, and the PMI signals growth approx. at the same level
- However, the correlation between the PMIs and GDP is rather weak

Suddenly, the best PMI in more than 10 years – equalling 9% GDP growth

The composite index gained 3.1 p in March, following the 2.6 p lift in February. Out of the pandemic!

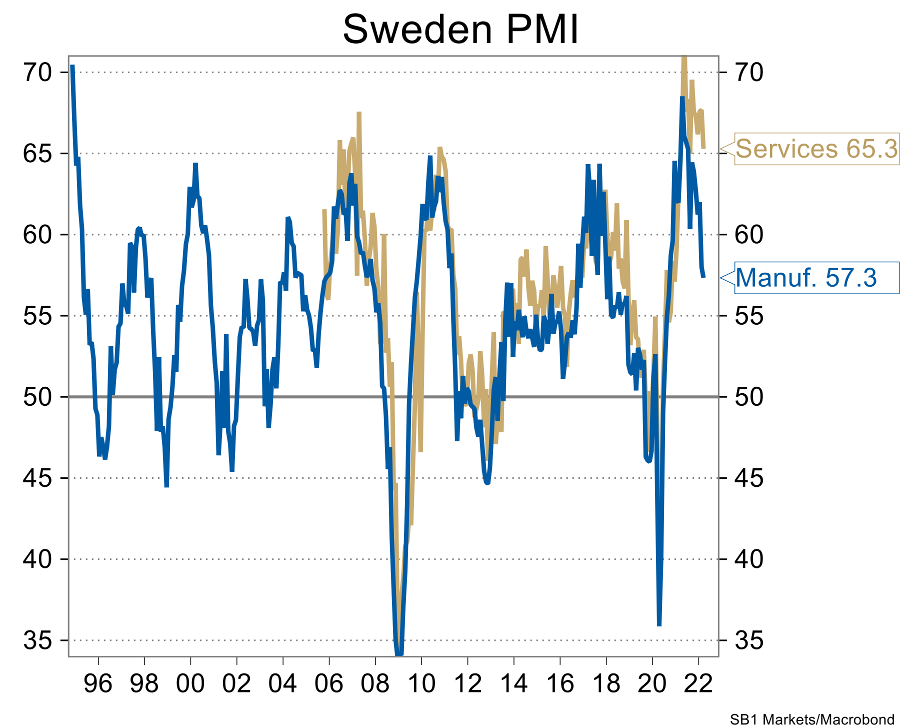


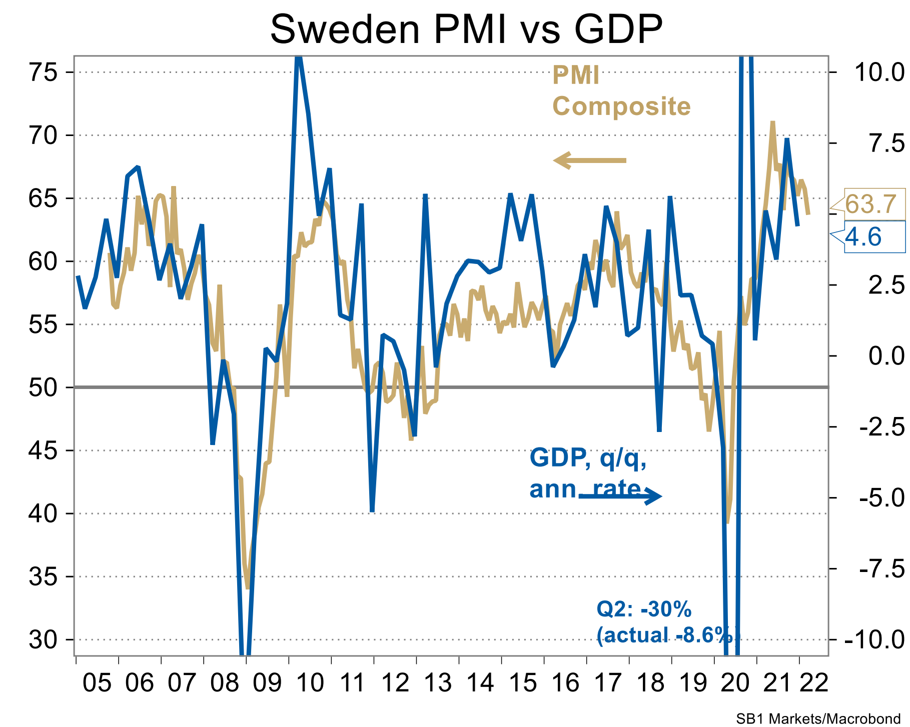


- Mobility rose significantly in February and remained high in March, as the number of new covid cases has fallen by 85%
- GDP growth has been weak the previous 3 quarters as the country has experienced serious covid challenges. A recovery is now under way

The Swedish composite PMI down but still signals 5% GDP growth

Both sectors reported slower growth in March – and the composite fell 2.2 p to 63.7

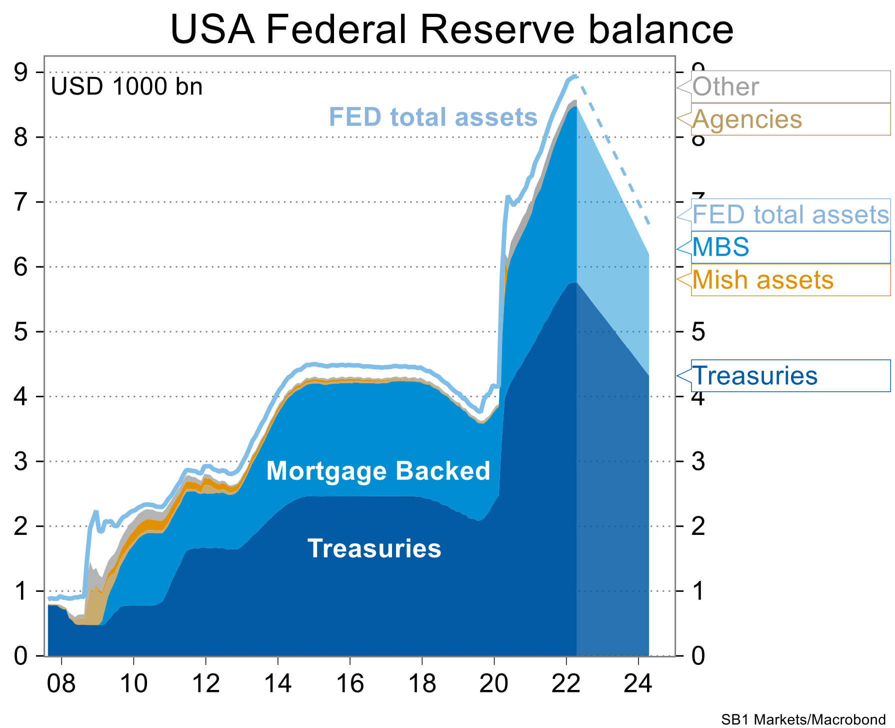




- XXX GDP JAN/FEB
- The **Riksbank** has so far not yielded, it promises to keep the exchange rate at 0 until ~~Q4~~ H2 2024

Fed minutes: Not more hawkish than expected, that is…

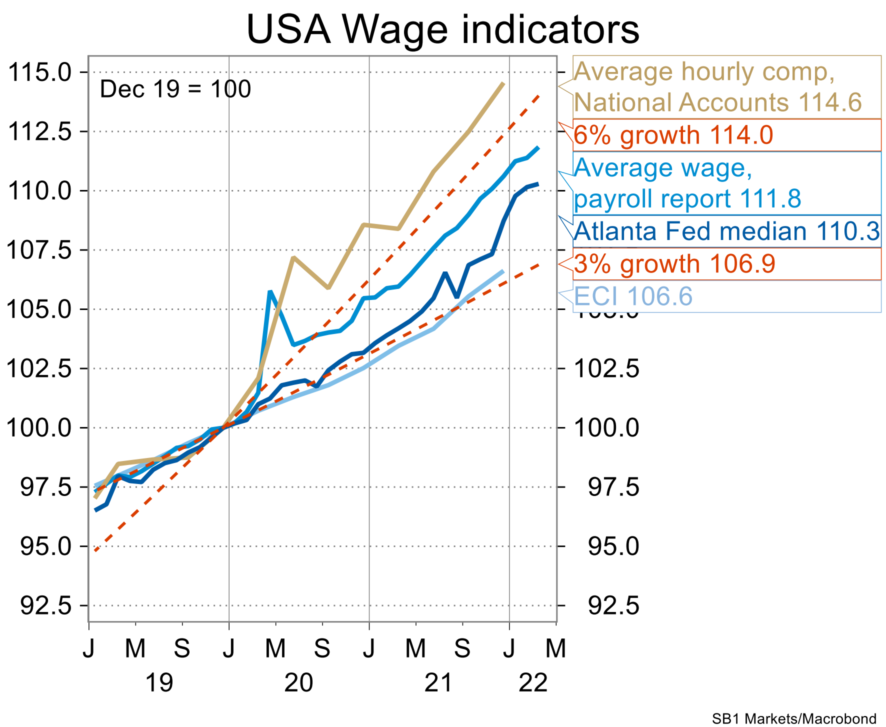
after the Fed officials have drummed the curve up 50 bps since Powell's presser after the meeting

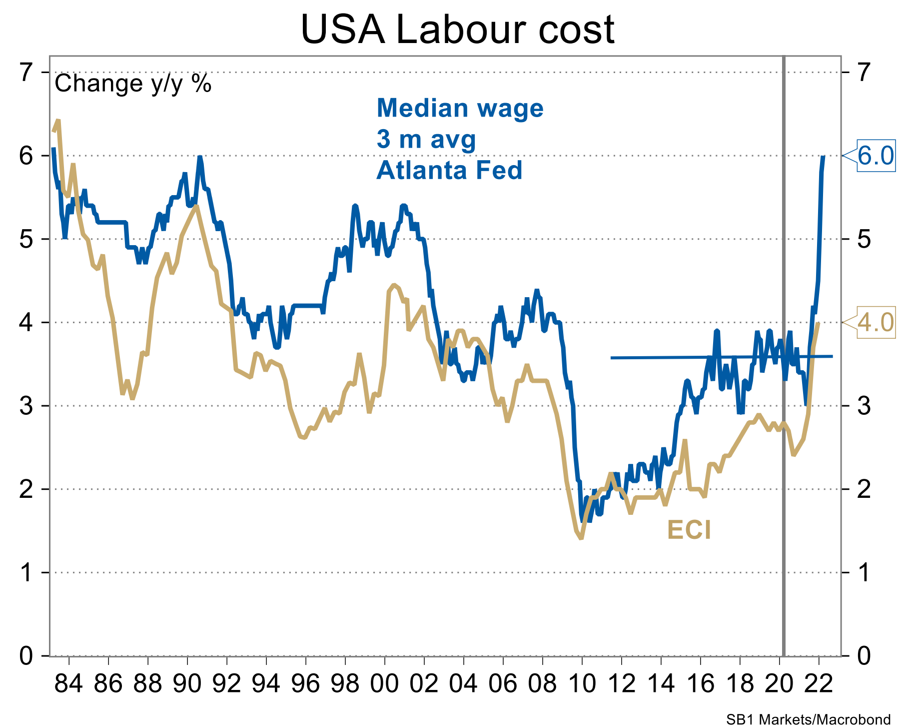


- **The minutes** revealed that members of the FOMC would have voted for a 50 bps hike in March, if not for the uncertainty created by the war in Ukraine
- The 50 bps hikes the coming meetings had been well communicated (if not that well by Powell at the press conference just after the FOMC meeting, but he maid it clear 3 working days later, and the short end of the curve shot up)
- Ahead of the meeting, several FOMC members had been arguing for a rapid start of the QT, the reduction of Fed's holdings of treasures and mortgage backed securities. At Monday, a traditional FOMC dove, Leal Brainard, said she was in favour of starting the QT immediately, that is to formally decide it at the at the May meeting (and bond yields rose sharply)
- The FOMC members seems to agree that holdings of treasuries should be reduced by USD 60 bn per months, and MBS bonds by USB 35 bn. During the QE, that ended in February, the Fed bought USD 80 bn in treasuries and USD 40 bn in MBS bonds
  - » The indicated QT speed is at least twice as fast as during in QT in 2018/19
- The bond market did not react much the minutes, as there were no real surprises here, the curve had been talked up on beforehand. But rates climbed further at Thursday and Friday, in total 33 bps since last Friday to 2.72%! Real rates rose 26 bps to -0.15%! Both are large, but not unusually large weekly movements

Atlanta Fed's wage tracker reports a further (smoothed) wage acceleration

The median wage up 6.0% y/y, following a totally unprecedented acceleration since last spring

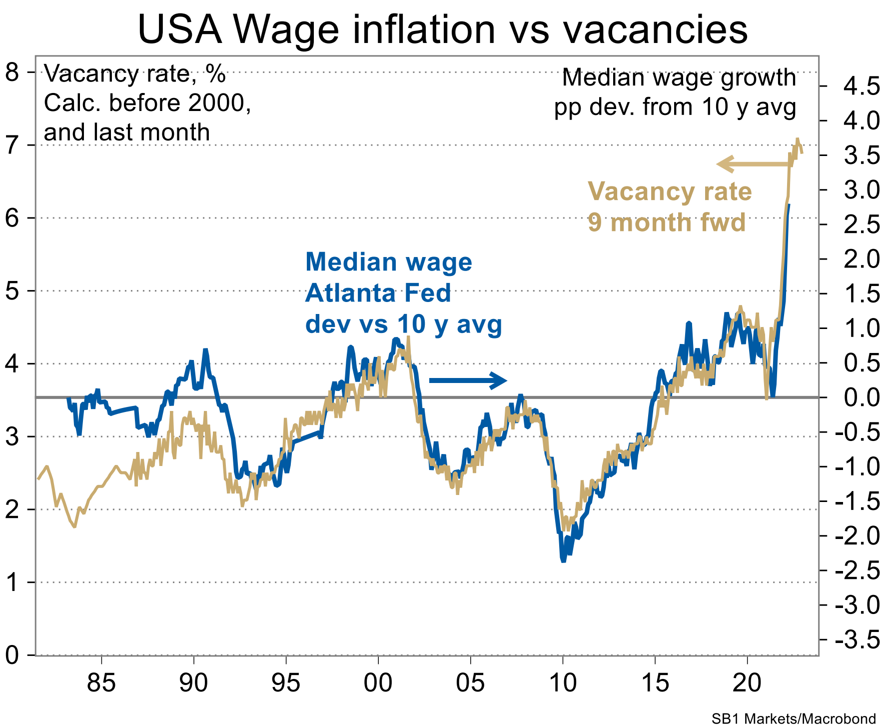


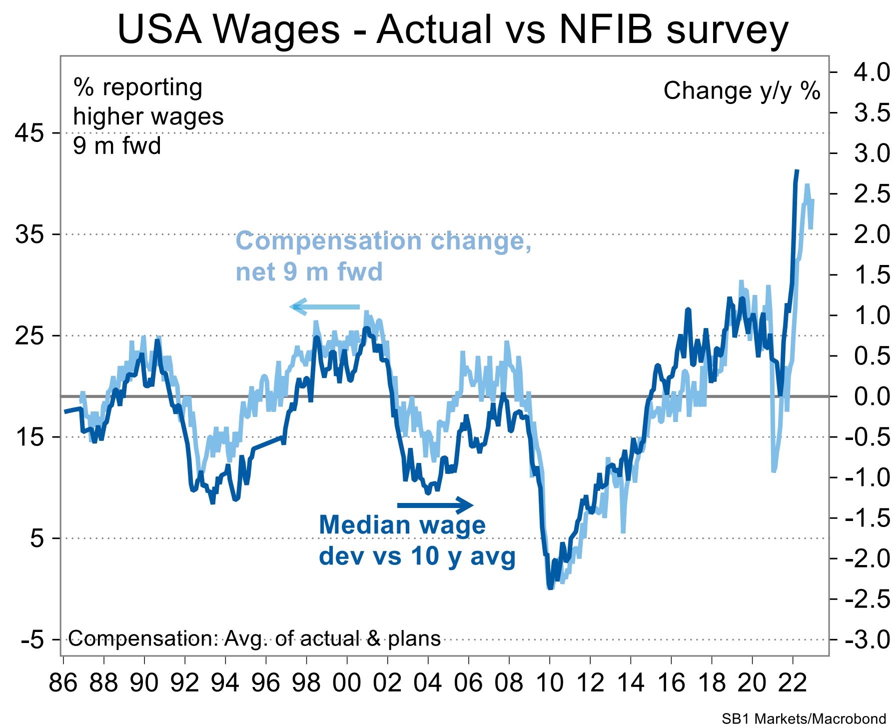


- **The Atlanta median wage tracker** was up 6.0% y/y in 1990, and the first observation, in March 1983 – and in March 2022
  - » **The take off** since late last spring is unprecedented – just as the lift in annual wage increases vs. the 10 past years' average at almost 3 pp– check the chart next page
  - » The only positive sign: Following extreme rapid m/m increased in Q4, m/m growth (calculated by us) has slowed somewhat in January, February, and further in March. The average wage in the monthly payrolls stats also reports slower growth through Q1
- **All wage indicators** are reporting faster wage growth, and all reporting wage growth well above the average recent years, also if we apply a 2-year average growth rate, to exclude the impact of changes during the first part of the pandemic (chart to the right)
- It will be a 'challenge' to keep inflation at 2% if wage inflation remains at current levels. It does not seem likely that wage inflation will turn south before the labour market weakens (check next page). Productivity growth has not accelerated by much. Profit margins may take a beating – and they very likely will – but that will not be not sufficient to bring inflation down

There seems to be a connection here??

The correlation between the vacancy rate and changes in median wage growth is extremely tight

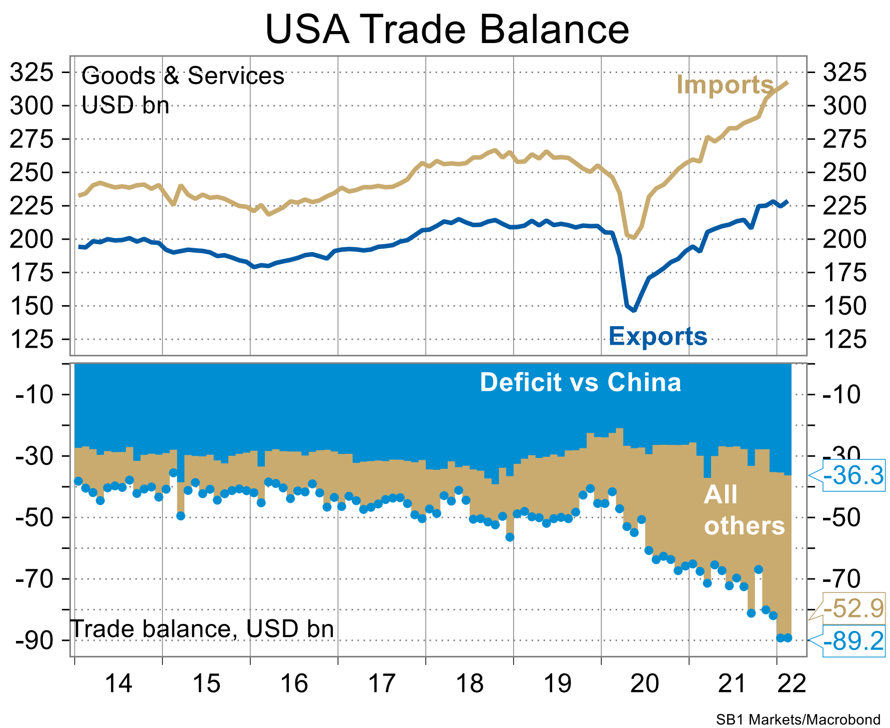


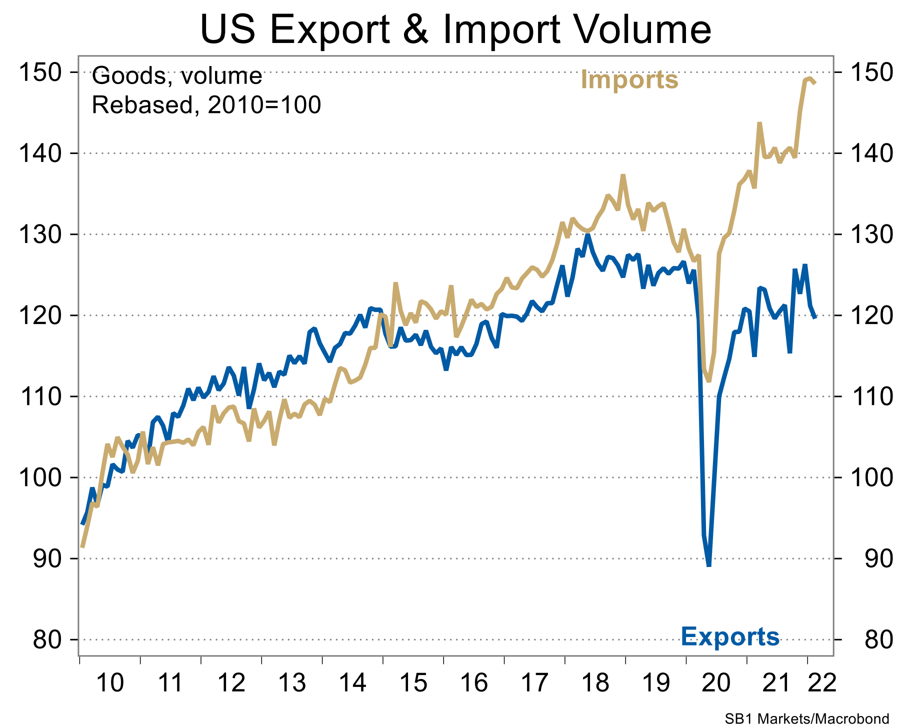


- Our 'Phillips curve' signal a further increase in wage inflation the coming quarters, as the vacancy leads changes in wage inflation quite consistently by 3 quarters
- In addition, the correlation changes compensation plans (see previous page) and future actual wage growth is not that bad (again with a 3 quarter lead). These compensations plans do not suggest a further wage growth acceleration. However

The trade deficit remained at a record high level in February

Both exports and imports up in value terms – but volumes down (at least goods volumes)

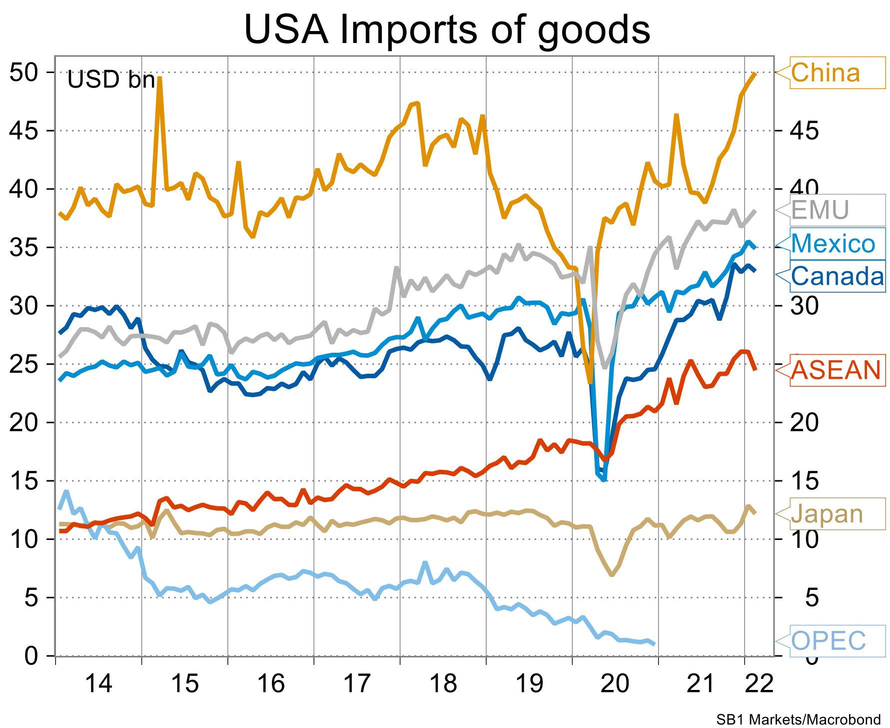


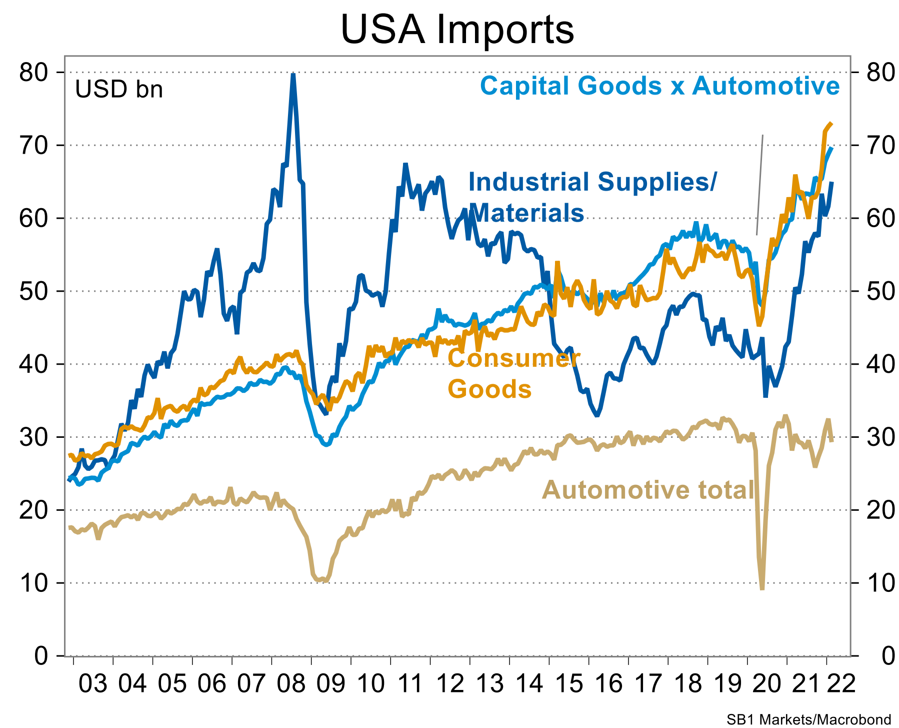


- **Exports** rose 2% m/m in February, following a similar decline in January. Export volumes have still fallen 5% past two months and are down 3% from Feb 2020. We expect many of US' trading partners to increase their demand for US goods, and one day even for services (like travelling into US)
- **Imports** rose by 1% m/m are 25% above the Feb 2020 level. In volume terms, the imports of goods are 11% above! Demand for goods has been strong during the pandemic, driving imports – even if auto imports have been low. We expect US households' demand for goods to slow the coming quarters, from the present very high level – dampening demand for imports too
  - Imports from China rose to the highest level ever – and China is US' largest trading partner
- **The trade deficit** was unch. at ATH at USD 89 bn, marginally higher than expected. The trade deficit is still below previous peaks measured in % of GDP – because petroleum net imports have turned into a small surplus

Higher imports driven by everything, and now even autos!

Consumer goods are up 36% (in value) from before the pandemic!

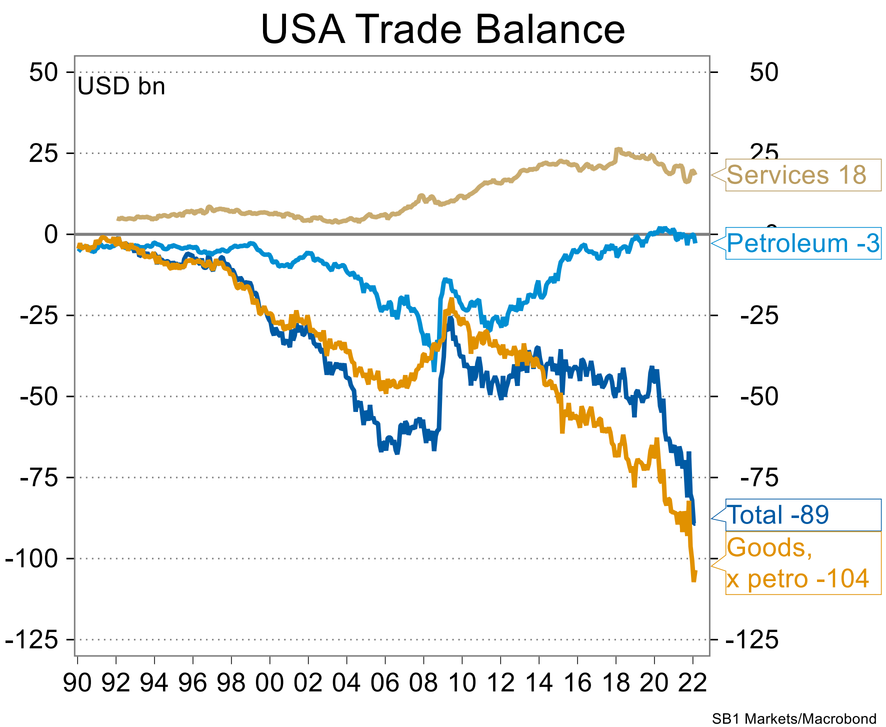


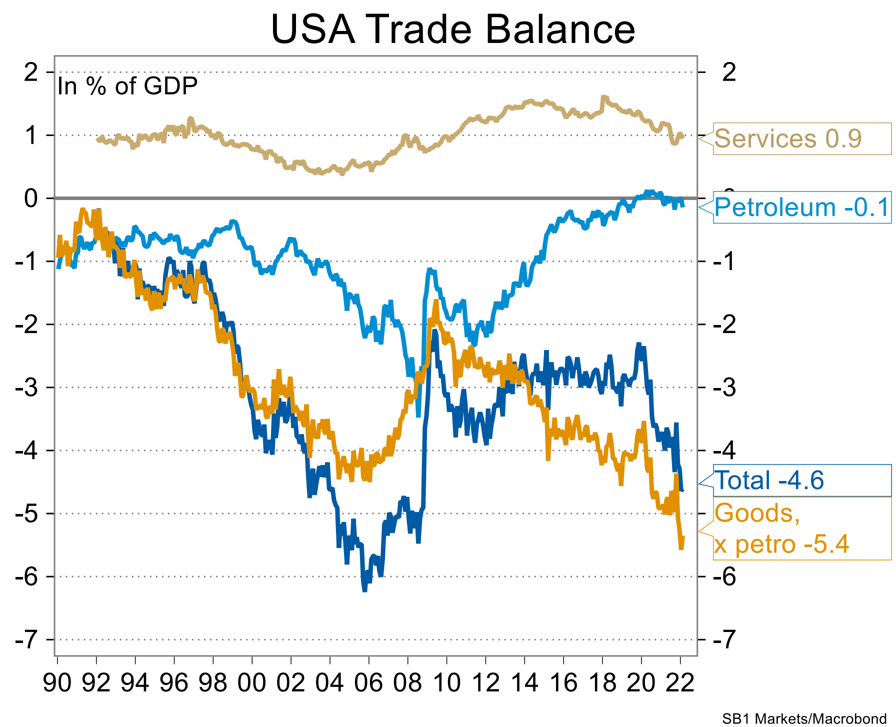


- **Imports from regions:**
  - » Imports from China are ATH (barring a one month's spike in 2015) – and is the largest counterpart vs. imports into the US
  - » Imports from ASEAN (the minor Asians) are trending sharply up – as are imports from Canada
  - » Imports from the EMU has been growing rapidly during the pandemic, but has flattened recently
- **Imports by type of goods:**
  - » Consumer goods imports are surging, but so is imports of capital goods (up 20% vs the pre-pandemic level, and industrial supplies are up more than 40% (all figures in value terms)

Goods x petroleum deficit very high, even in % of GDP

Surplus in services keeps narrowing

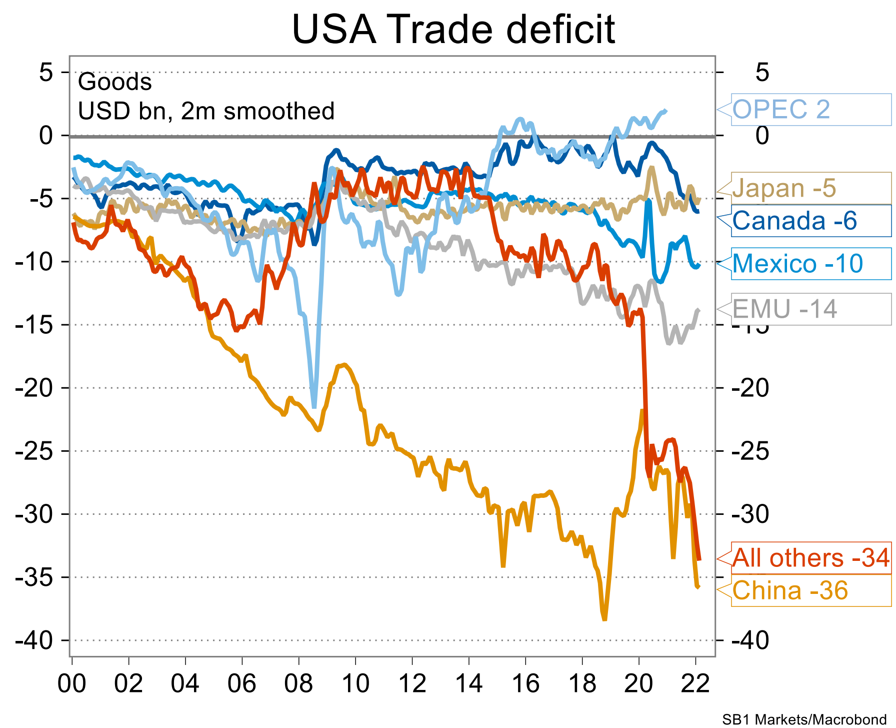




- **The goods** deficit was USD -104 bn in Feb. The deficit equals 5.4% of GDP, up from 4% before the pandemic
  - » Before the corona virus hit, the trade deficit in goods was narrowing, as growth in the US slowed (and imports fell, which is normal)
  - » The petroleum trade balance is in, well, balance
- **The US runs a surplus in services** at USD 18 bn, equalling 0.9% of GDP, but it is trending down (and the downturn started well before corona)
- The **total trade deficit** equals 4.6% of GDP, well below the record at 6.2% in late 2005, thanks to the shale oil revolution. The deficit has widened from 2.5% in early 2020 – as domestic demand has been stronger in the US than abroad

The deficit vs. China is widening rapidly again, soon to ALH?

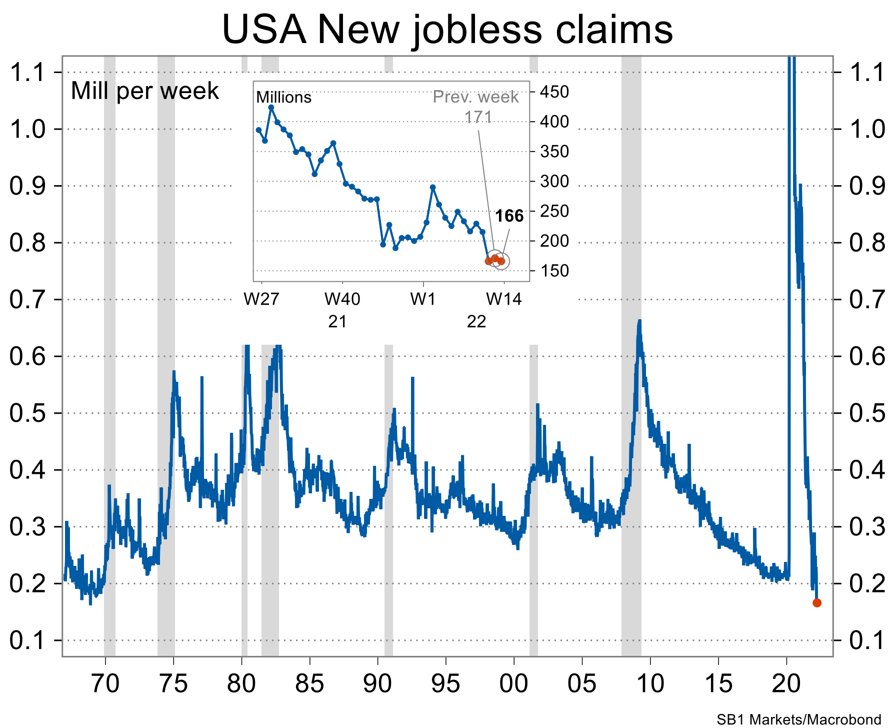
The deficit is increasing in most directions

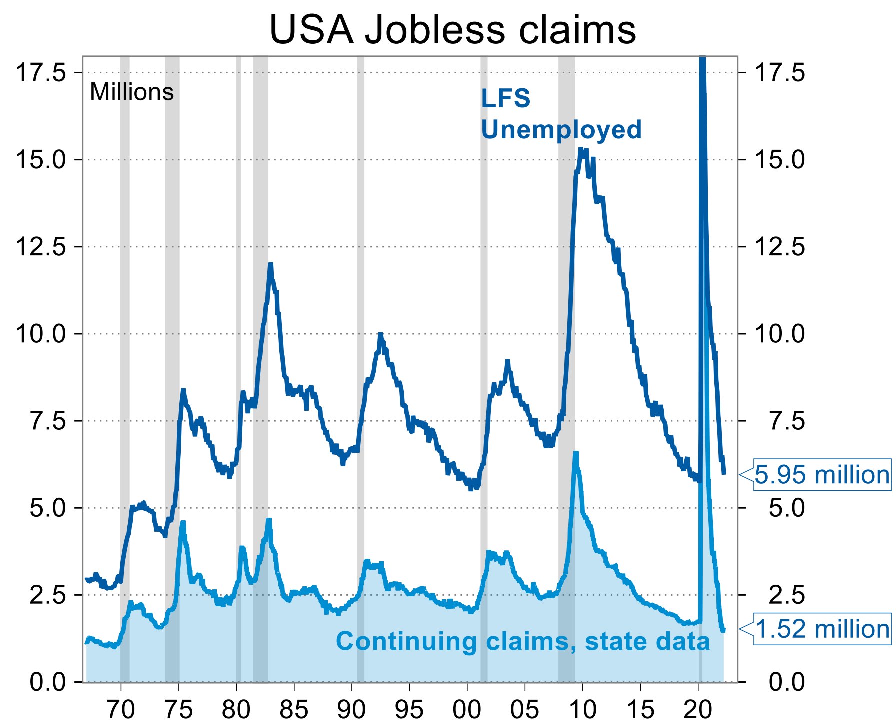


- The US deficit in goods (no services in these country stats) vs China equals more than 43% of the total deficit in goods, still lower than before the trade war started
- The deficit vs EMU has flattened during the pandemic – at a record high level
- The balance vs 'others' rose sharply in 2020

New jobless down to cycle low – and the 2nd lowest level among 2.800 weeks

And to a record low level vs the size of the labour force. Continued claims also at very low level

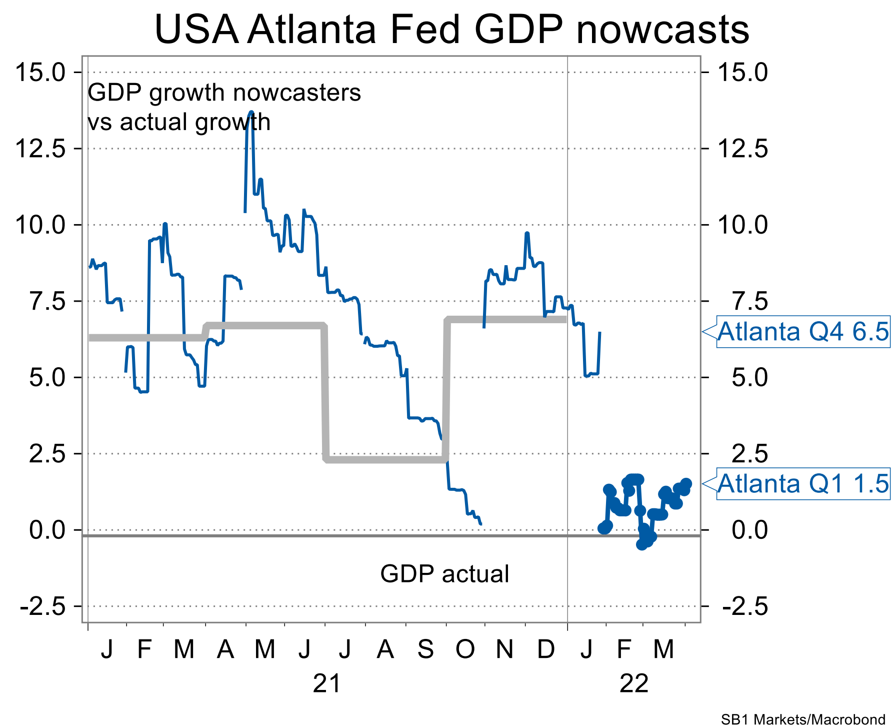


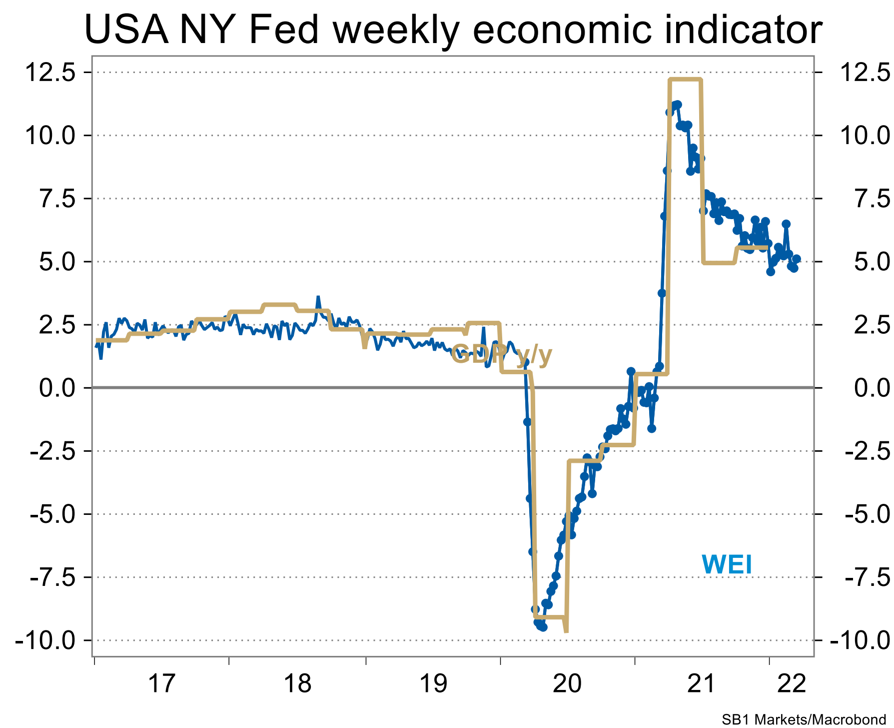


- **New jobless claims** fell 15’ in week 13 to 171’ (revised from 201’), close to the lowest inflow ever, a week in December 1968, when the labour force was 2 times larger than today
- **Ordinary continuing claims** rose 17’ to 1.52 mill, the lowest level since early 1970’ies

Atlanta Fed's nowcaster suggests 1.5% growth in Q1

Net trade & inventories contributes at the downside, according to Atlanta Fed

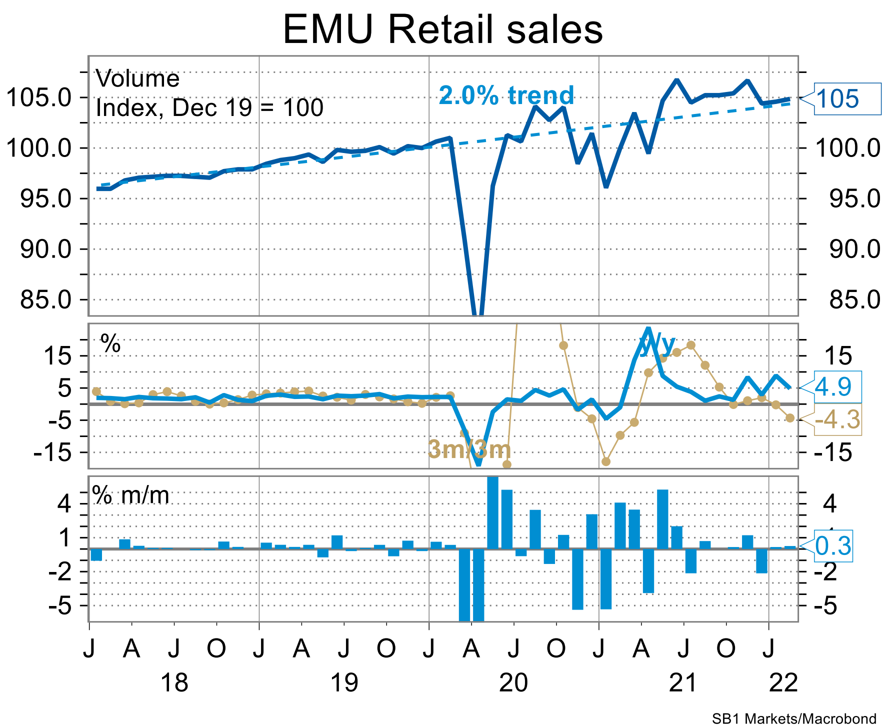




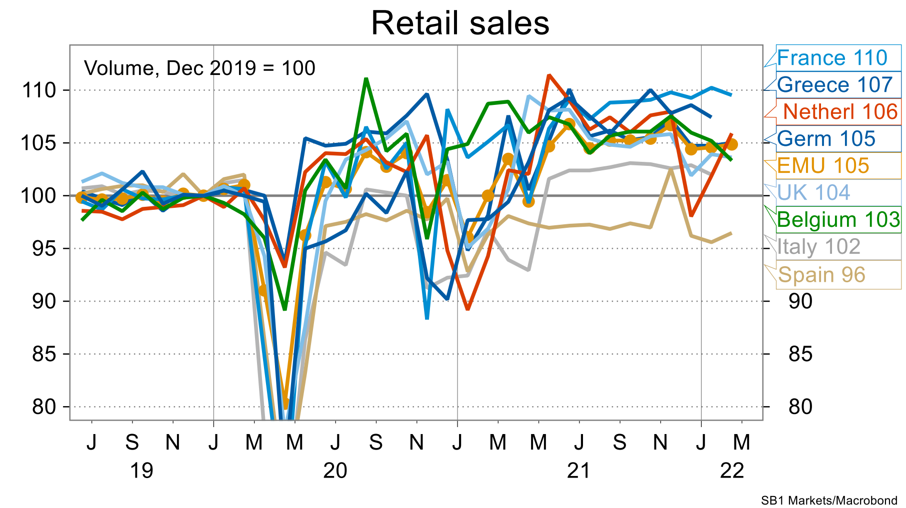
SpareBank 1 MARKETS

Retail sales up just 0.3% in Feb, level back to the 2% pre-pand. growth path

Most countries reported growth but not by much



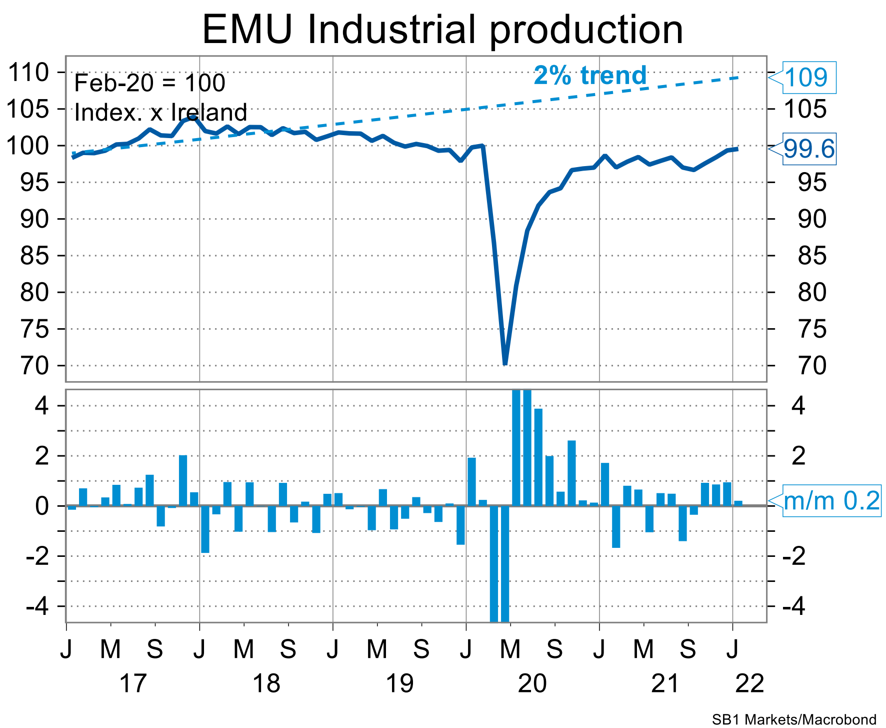
- Since before the pandemic: Sales are up 5%, and tle level is close to the pre-pandemic growth path – signalling a limited downside risk
- At least if gas supplies are kept open, and there are no war in the vicinity

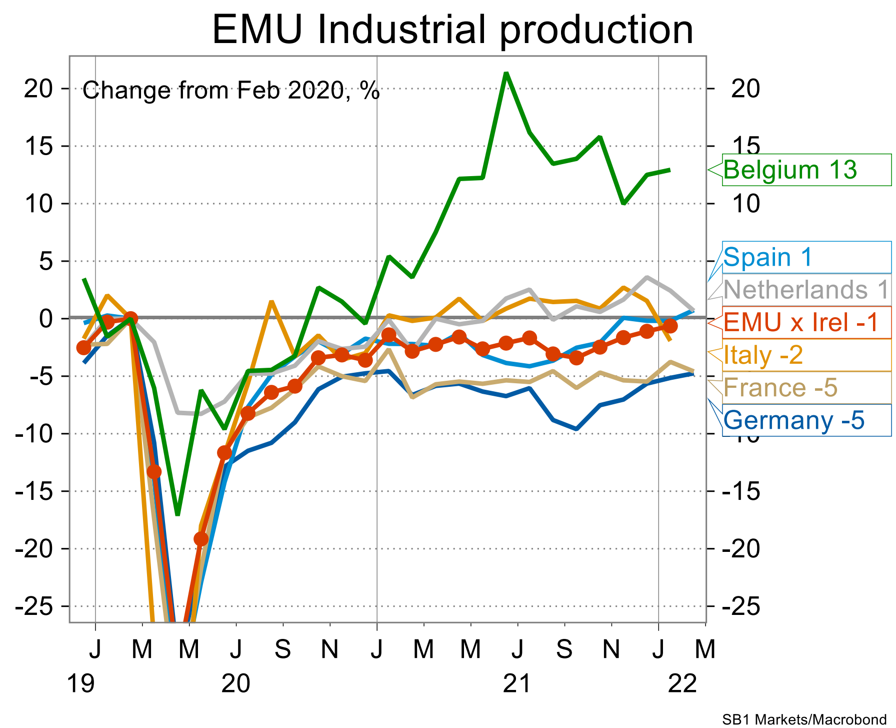


- France reported a decline (prelim. data signalled an increase)
- Italy has not yet showed its cards

Industrial production probably up 0.2% in February

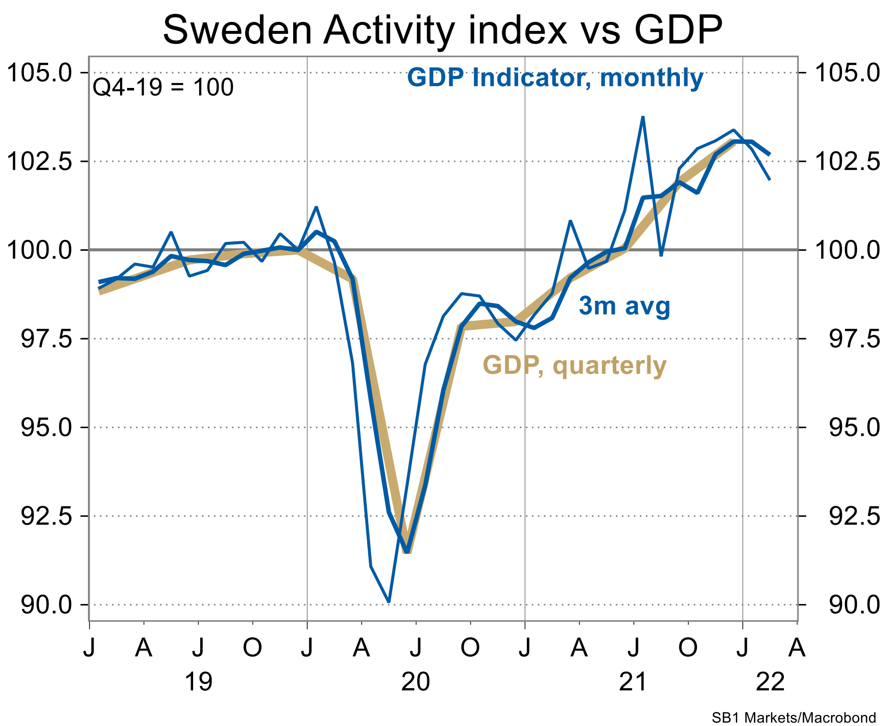
Germany and Spain contributed at the upside, France at the downside

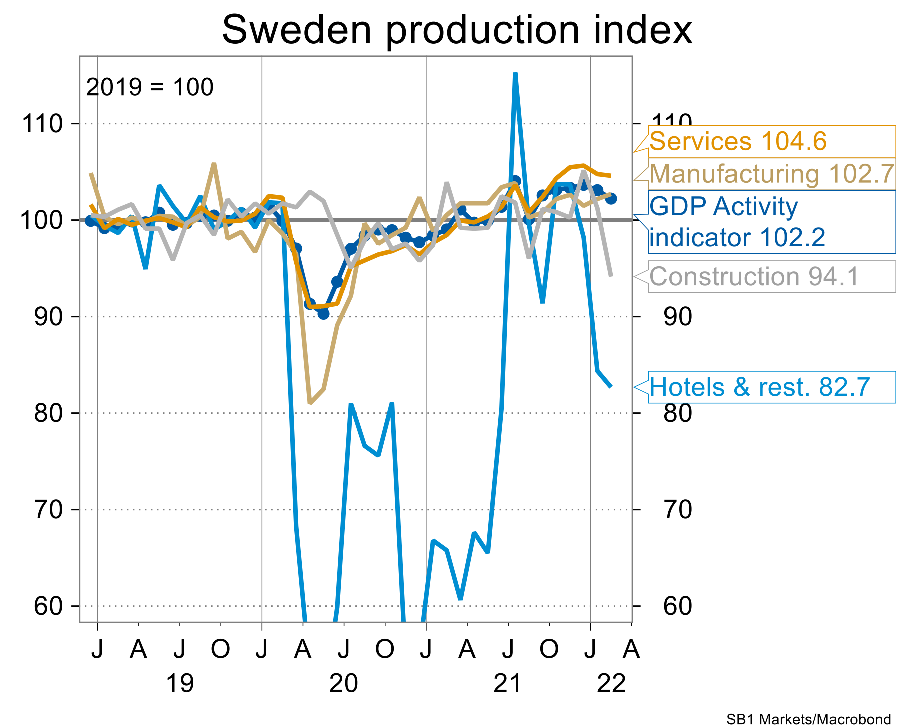




GDP down for the 2nd month in row in Feb, but in March Omicron was gone

GDP fell by 0.8% in Feb, following the 0.5% decline in Jan. GDP probably down in Q1. It's just the virus





- **Activity in hotels & restaurants** are down almost 20% in Jan/Feb, and the transport sector is hurt. Mobility fell in both months – but has returned to a something closer to normal level in March. GDP will follow suit
- **The outlook** remains excellent, according to Swedish companies. THE KI (NIER) survey fell in March but remains well above an average level. The Swedish PMI remained the strongest in the world in March
- **The Riksbank** will very likely turn at the dime at the upcoming board meeting in late April – and interest rate hikes in 2022 will be signalled, at least one

Highlights

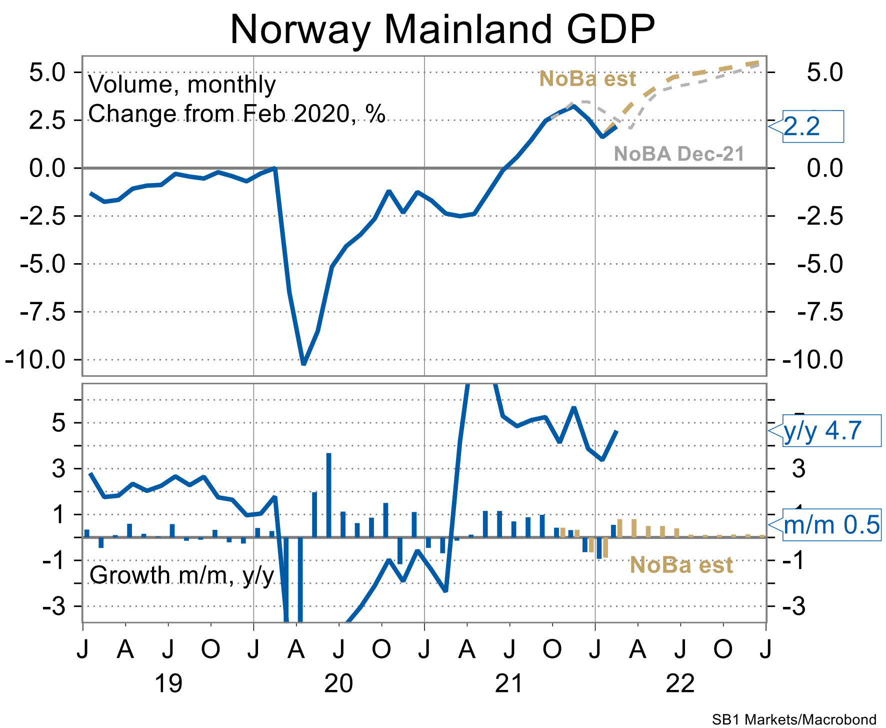
The world around us

The Norwegian economy

Market charts & comments

Mainland GDP up 0.5%, exp. 0.8 – 1%, manufacturing surprised at the downside

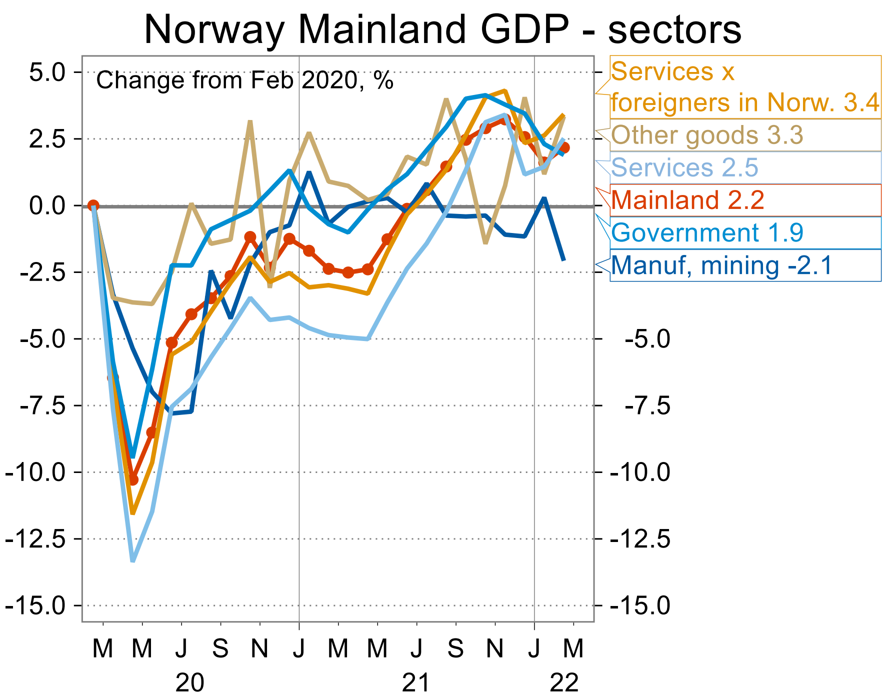
Very likely, GDP will recover further – and faster – in March



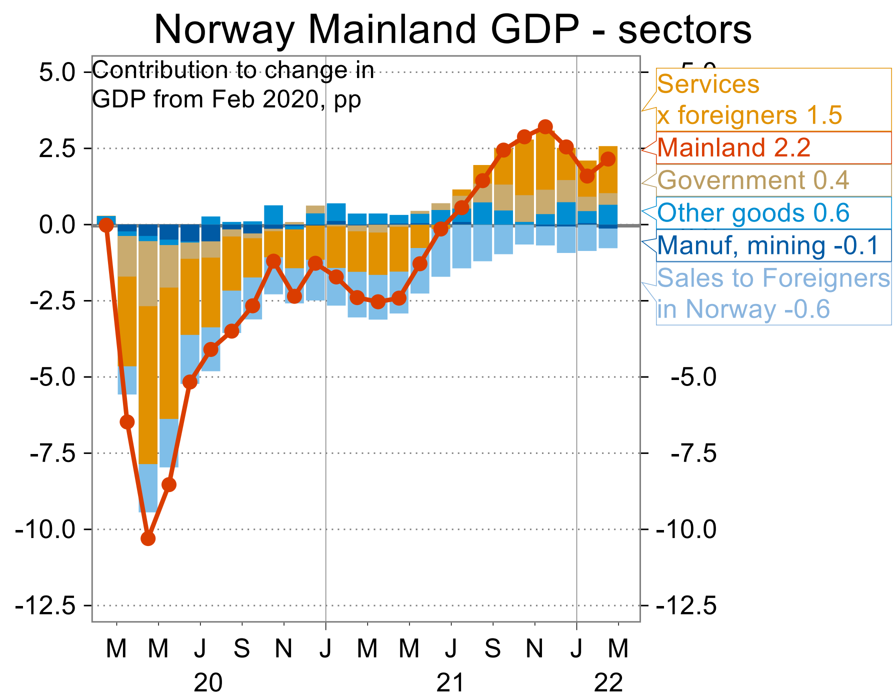
- **Mainland GDP** fell in both December and January and even after the uptick in February, activity is still 1% below the November level.
  - **Production:** Manufacturing production fell sharply, and public sector production declined. In the rest of the economy, activity grew. We assume hotels and restaurants and transport contributed to the lift in services – and that March will be substantially better. In 'other goods', a lift in ocean fisheries contributed to a 0.5% lift in Mainland GDP, equal the overall growth (other sectors were net zero). No detailed sector data are available
  - **Demand:** Most components at the upside but consumption of goods fell and oil investments fell further. Consumption of goods is on the way to more normal levels, while services and consumption abroad are recovering – and have much more to go
- The **fight against the Omicron variant** have so far lowered activity by some 0.3% of annual GDP and the total loss before the economy fully to the pre-Omicron trend 0.4 – 0.5% (we assume are reasonable recovery the coming three months). In NOK, 16 bn.
- **Mainland GDP** is up 2.2% vs the Feb-20 level, which is well below a normal growth path over these two year (4 – 4.5%), indicating an output gap well below the level 2 years ago
  - However, unemployment is well below the pre-pandemic level, the employment rate (among Norwegian citizens) is far above, and businesses are reporting unusual lack of labour
  - Businesses are also reporting a much higher capacity utilisation than before the pandemic
  - Thus, Norges Bank is very likely right when it assumes that the output gap is substantially higher now, than before the pandemic

Production: Manufacturing & government down in February, the rest up

‘Other goods’ sharply up due to ocean fisheries (which were at the low side in February



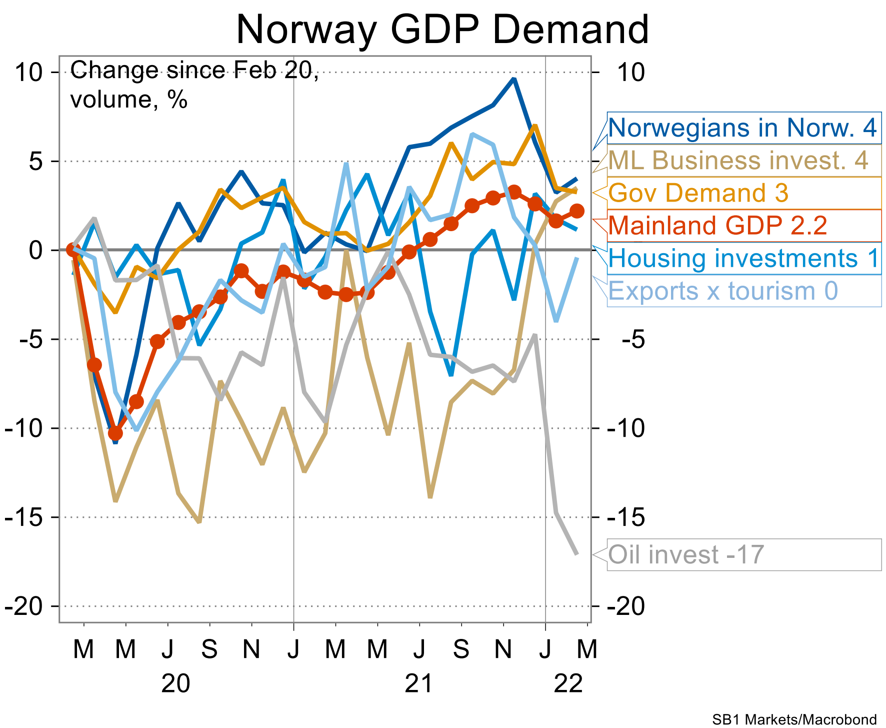
SB1 Markets/Macrobond

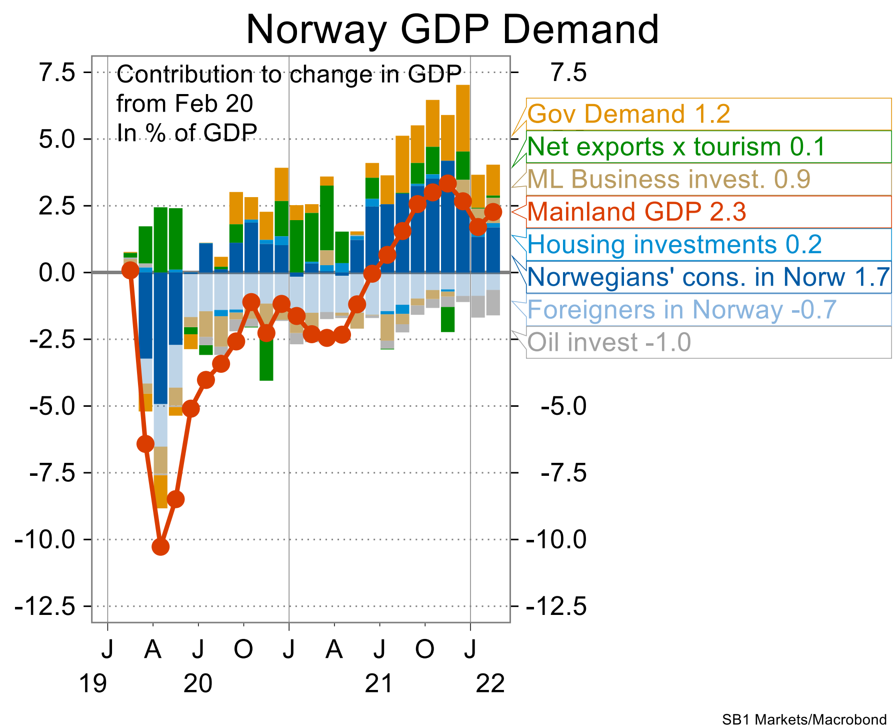


SB1 Markets/Macrobond

Demand: Oil investments & housing down – other demand components up

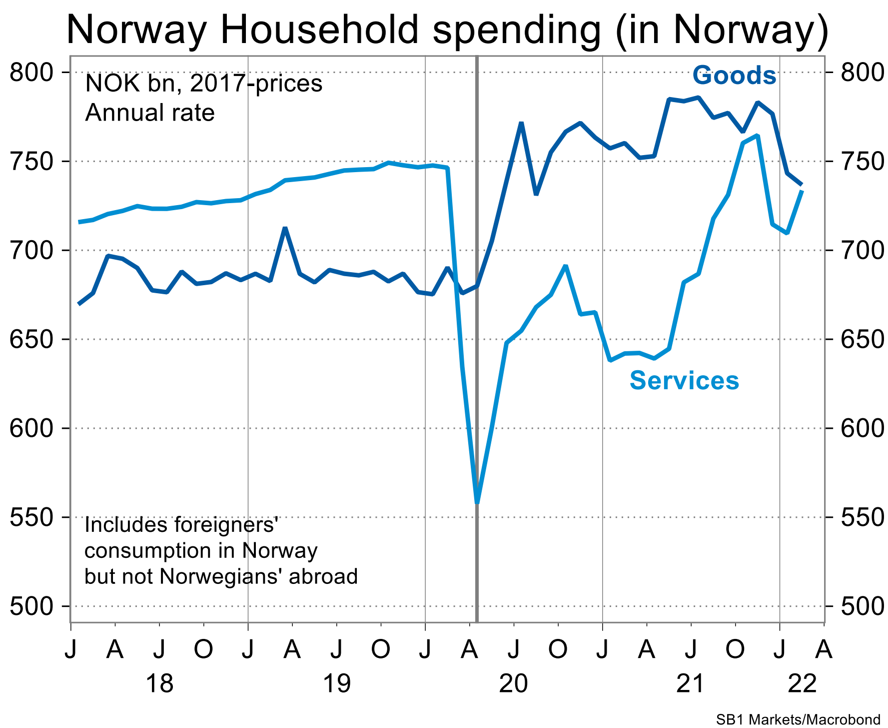
Oil investments sharply down in Jan/Feb but data are very volatile

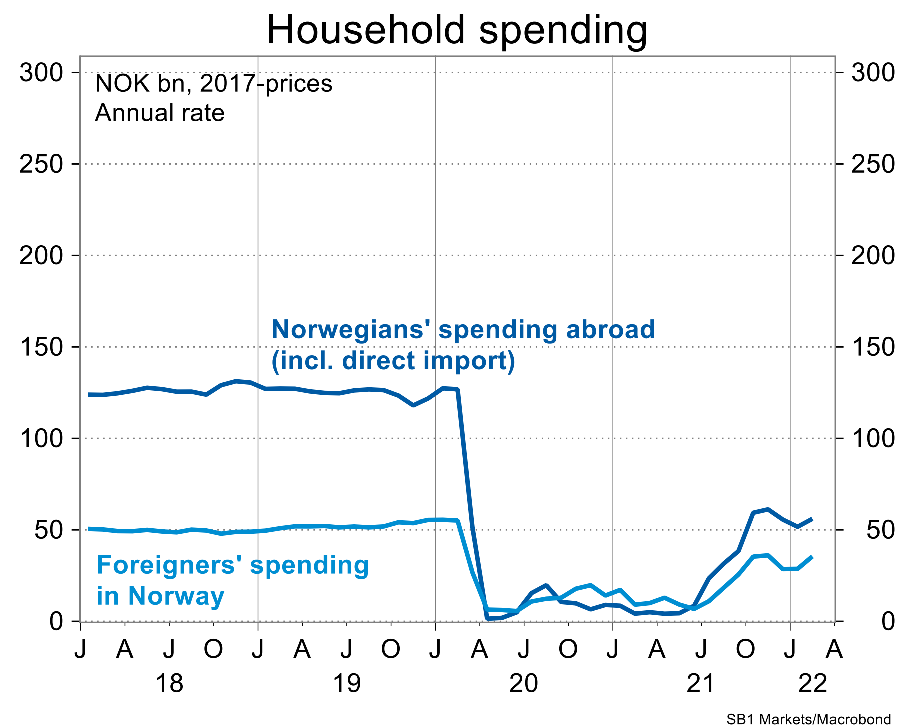




Goods consumption down, services up – and both will report more of the same

We expect a brisk recovery in services the coming months. Domestic spending on goods still ‘too’ high

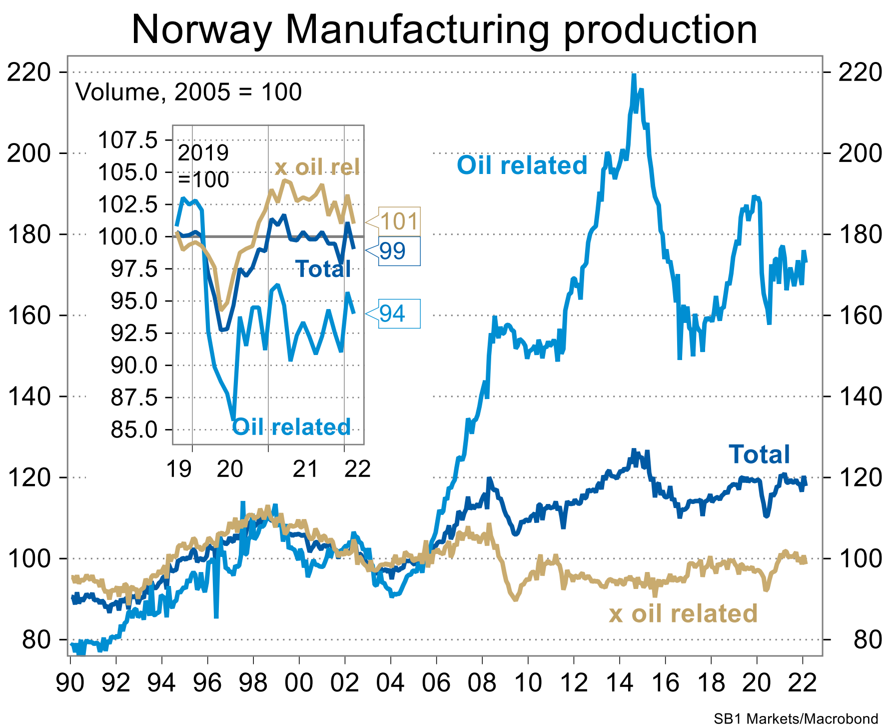


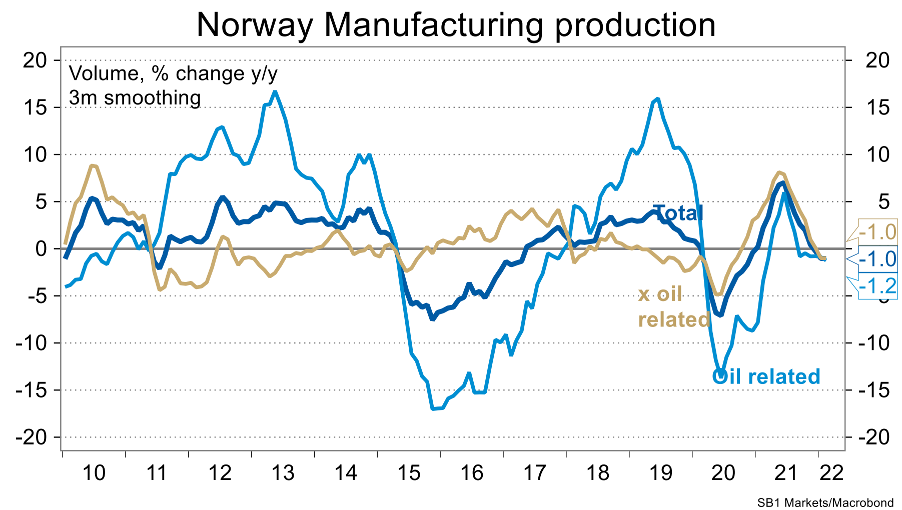


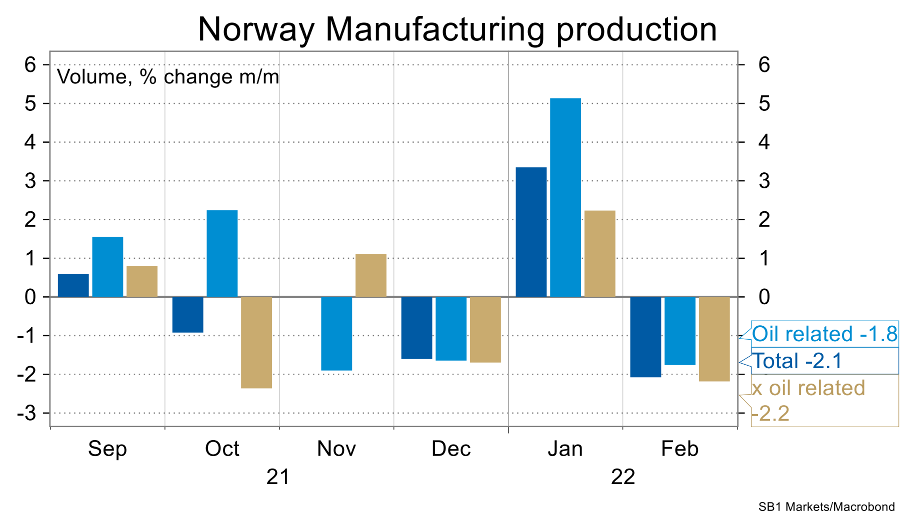
- Spending abroad is still muted, especially for Norwegians – and we expect a steep rise the coming months

Manufacturing production down again in February, x oil-related trending down

Production down 2.1%, we expected a small increase. Surveys are strong, actual production not



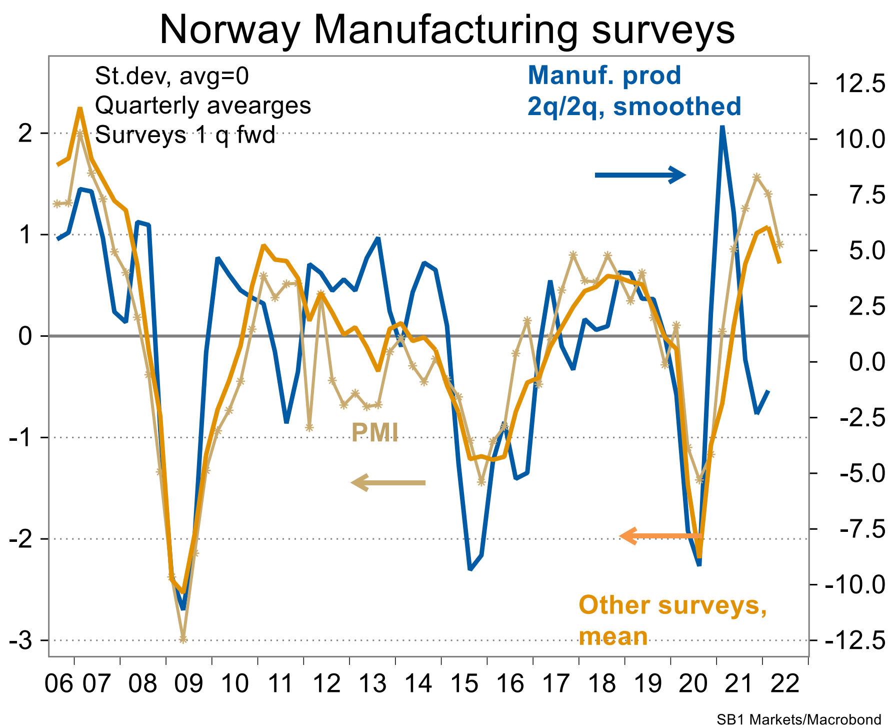




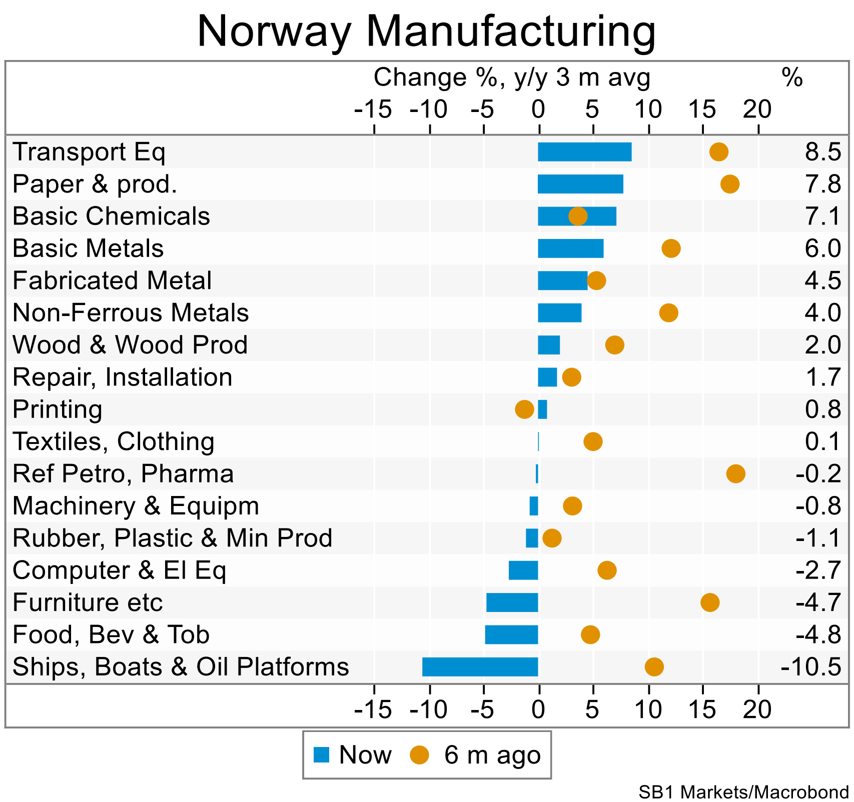
- The 2.1% decline was less than the 3.3% lift in January – but the Dec level was the lowest in one year
  - Oil related manufacturing production fell 1.8% but is trending UP
  - Other sectors fell 2.2% - and the short term trend now heading DOWN
  - Still, production x oil related sectors is 1% above 2019 level, while oil related is down 6%!
- Manufacturing surveys are signalling strong growth in activity, but actual production is lower than in March-21

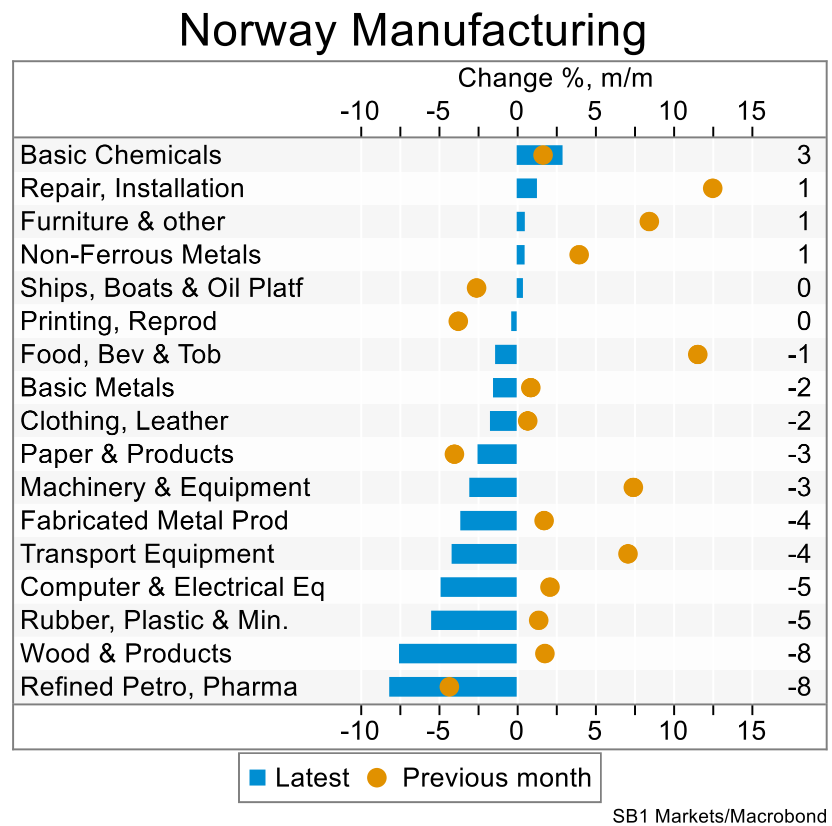
Surveys are signalling growth (like elsewhere)

… but so far production has not been that impressive (like most other places)



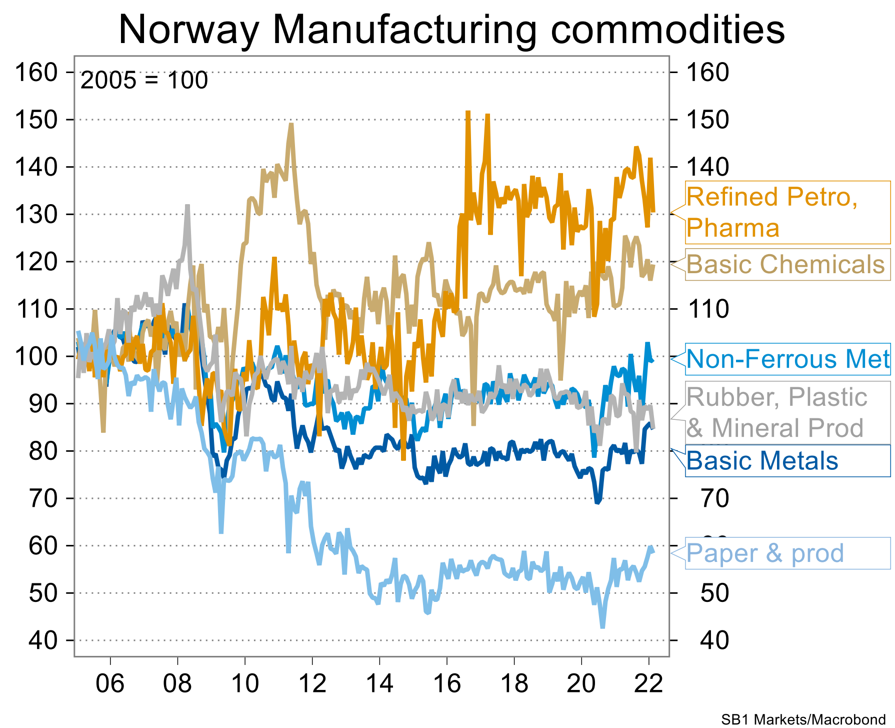
Rather mixed between sectors: Electronics, food, and even more ships down y/y

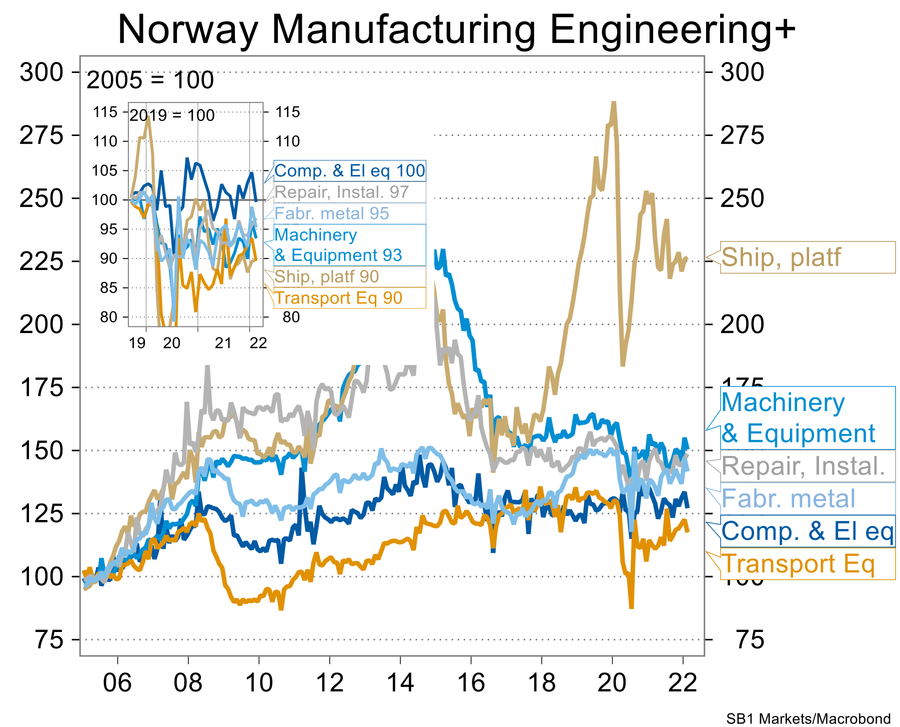




Engineering on the way up, barring ships & platforms

Intermediate goods (metals, chemicals, paper) mostly on the way up too

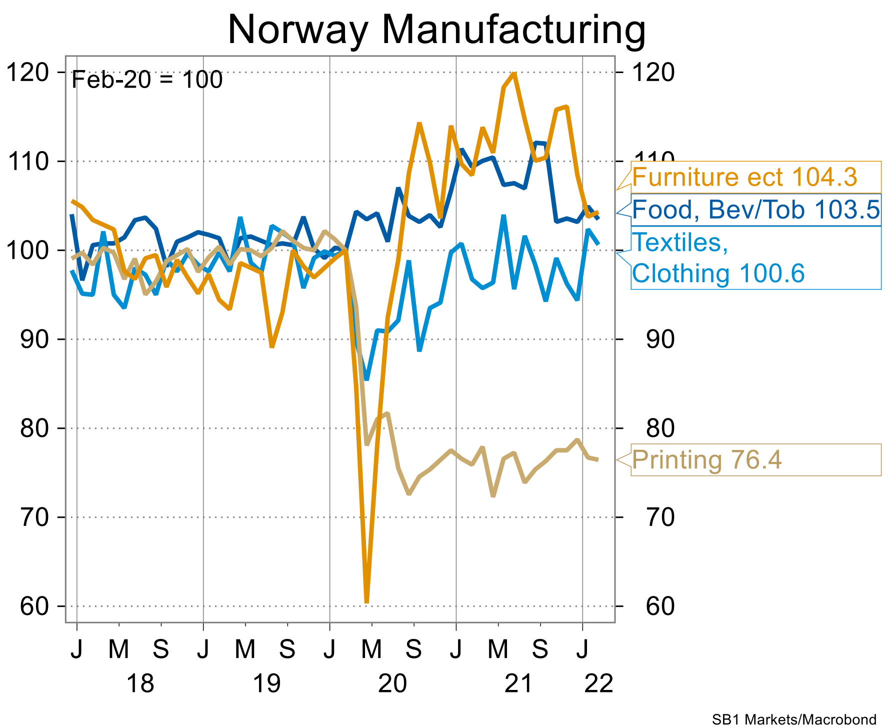




- **Production of ships & platforms** has flattened – other engineering sectors are on the way uo
  - » **Corona measures** (lack of foreign labor, contacts with foreign vendors/customers), supply chain challenges probably explained parts of the decline in the early phase of the pandemic, while demand has slowed as well – but oil investments is now recovering (at least for a while)
- **Commodities** have been on the way up, but some branches have reported lower production recent months

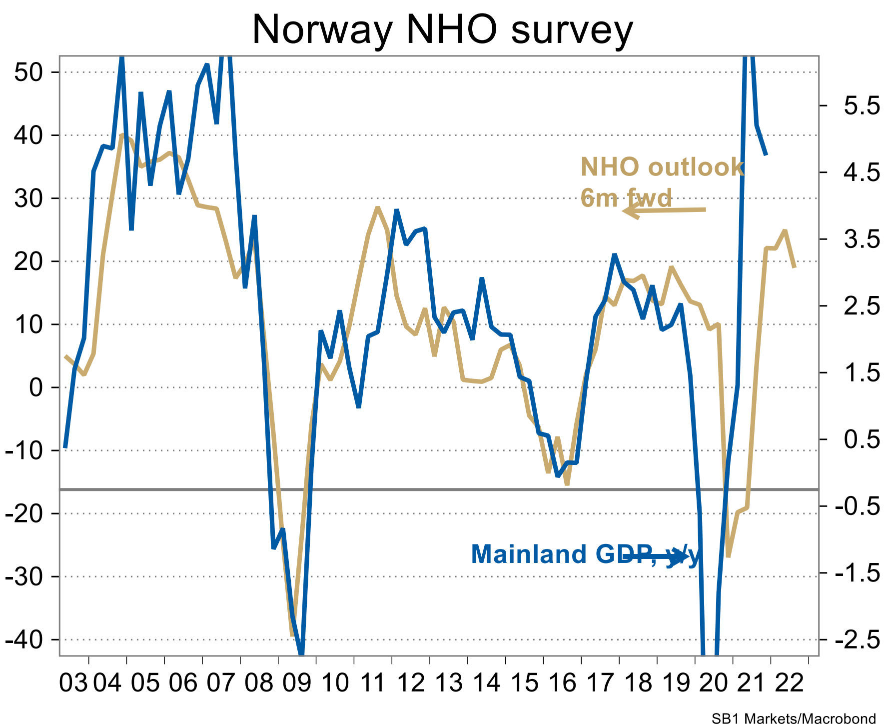
SpareBank 1 MARKETS

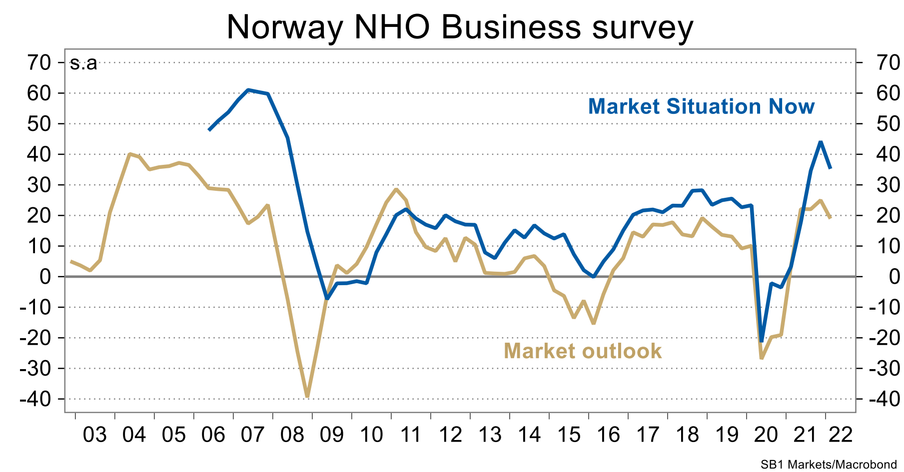
Food production is back to a normal level – and furniture prod. is approaching it

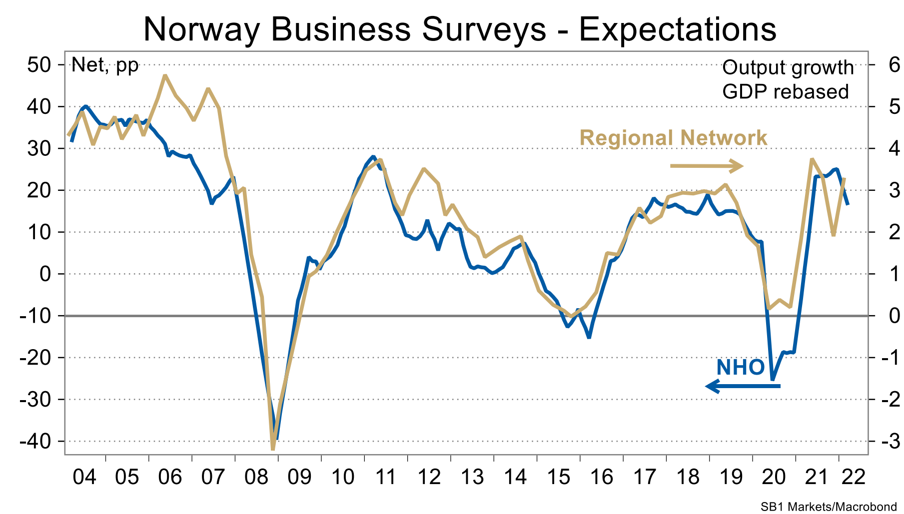


NHO Q1 survey reports slightly slower growth – but still unusual strong growth

A 2.5 - 3% GDP growth rate is signalled – in line with Norges Bank's Regional Network survey

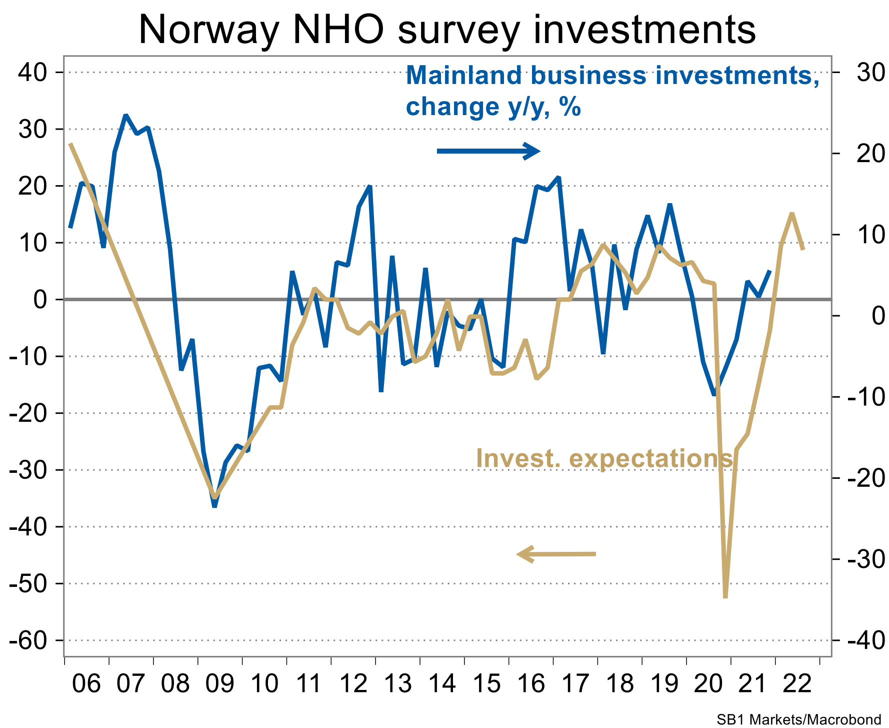


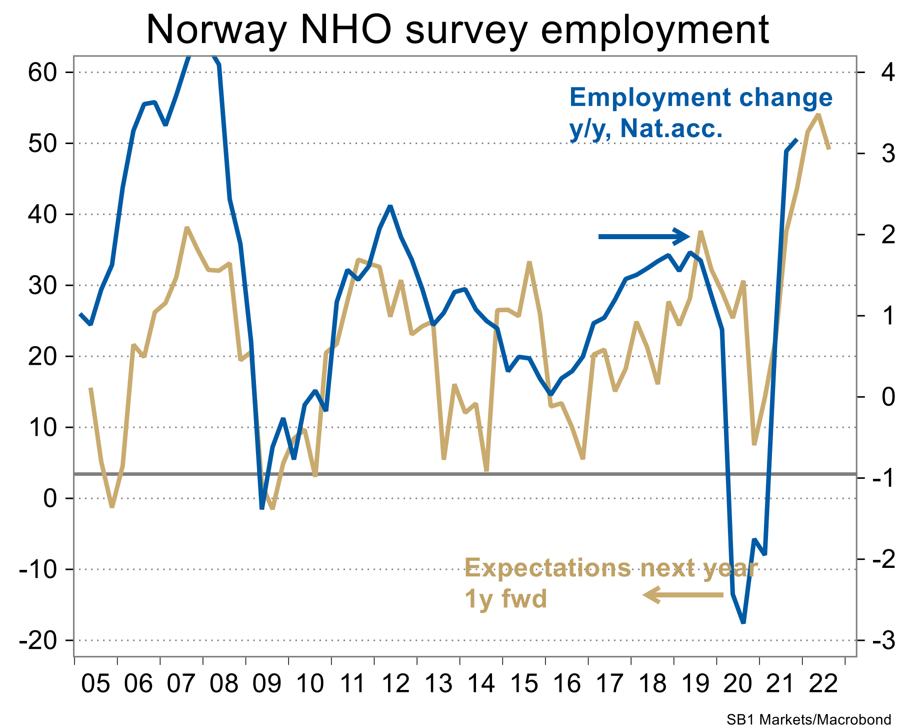




Businesses expect strong growth in investm, and an unprecedented empl. growth

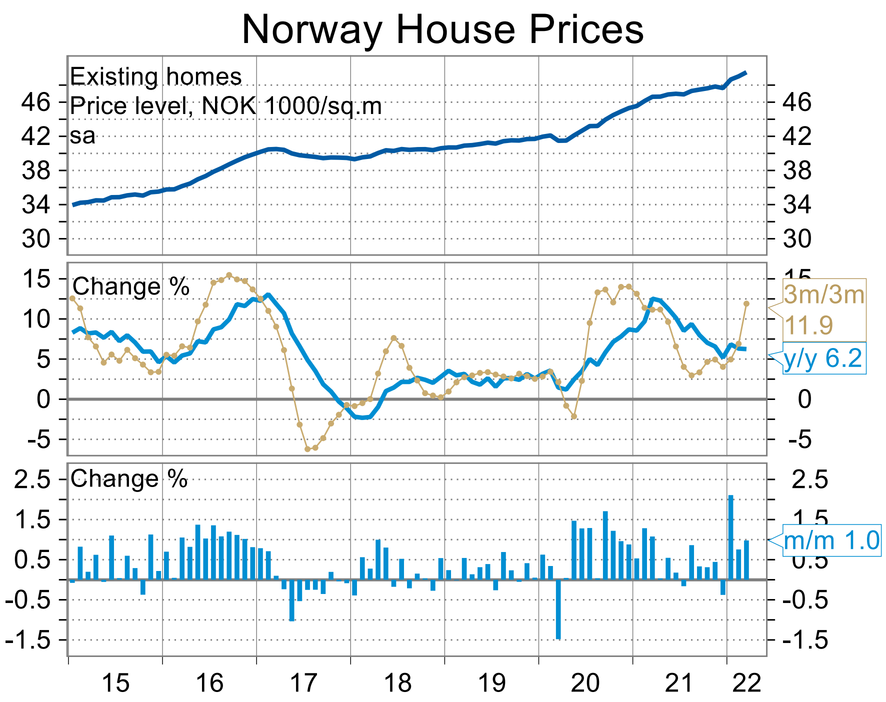
… which is not possible to achieve, in macro



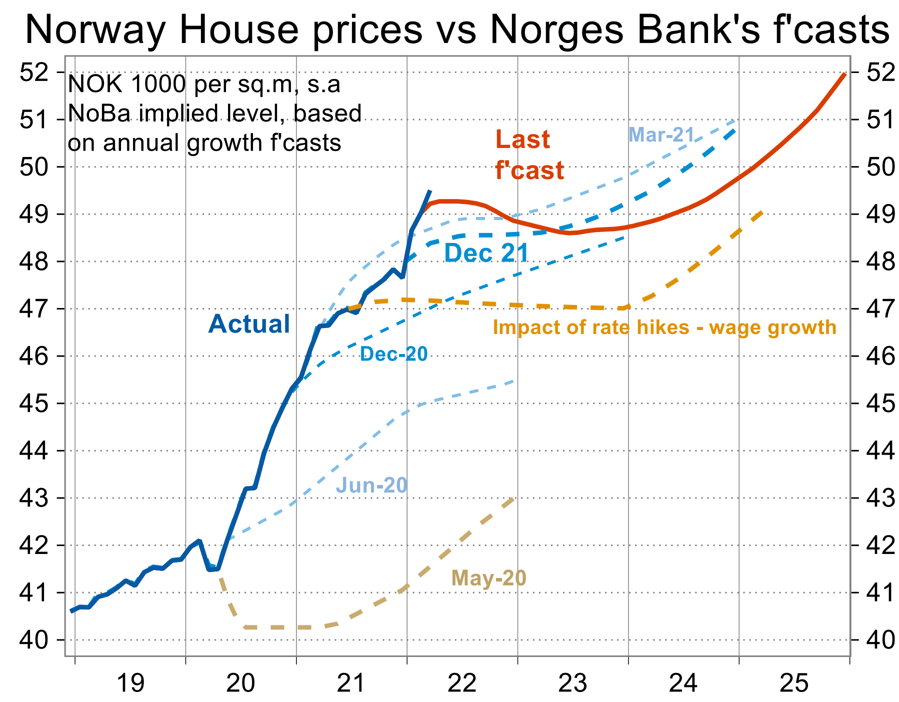


A 'technical' house price appreciation in ~~January~~ ~~February~~ March too?

Prices rose 1.0%, we expected 0.3%. Prices grew 3.9% in Q1. Due to temporary lack of supply? If not..



SB1 Markets/Eiendom Norge/Finn/Eiendomsverdi AS

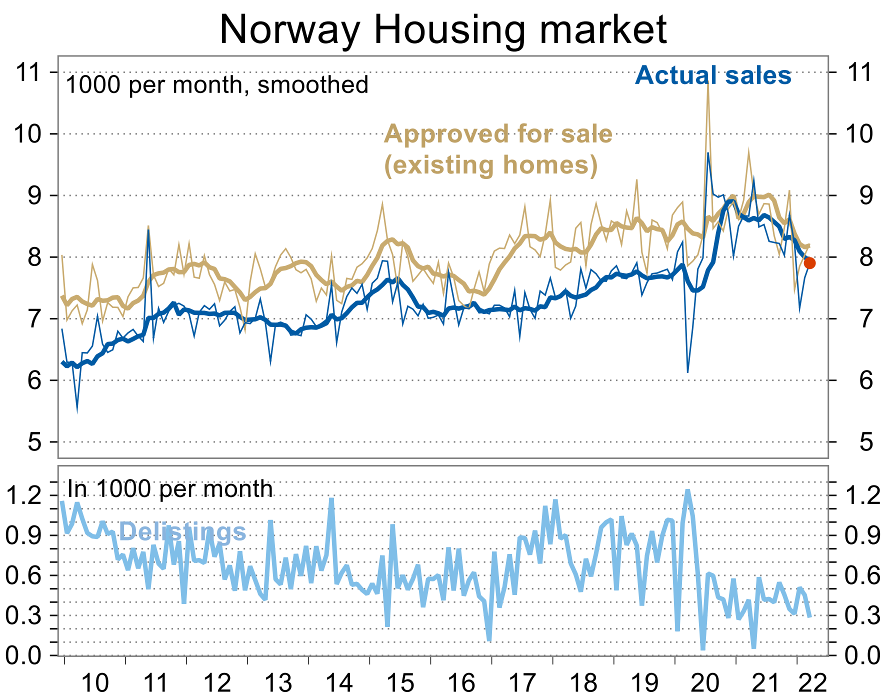


SB1 Markets/Macrobond

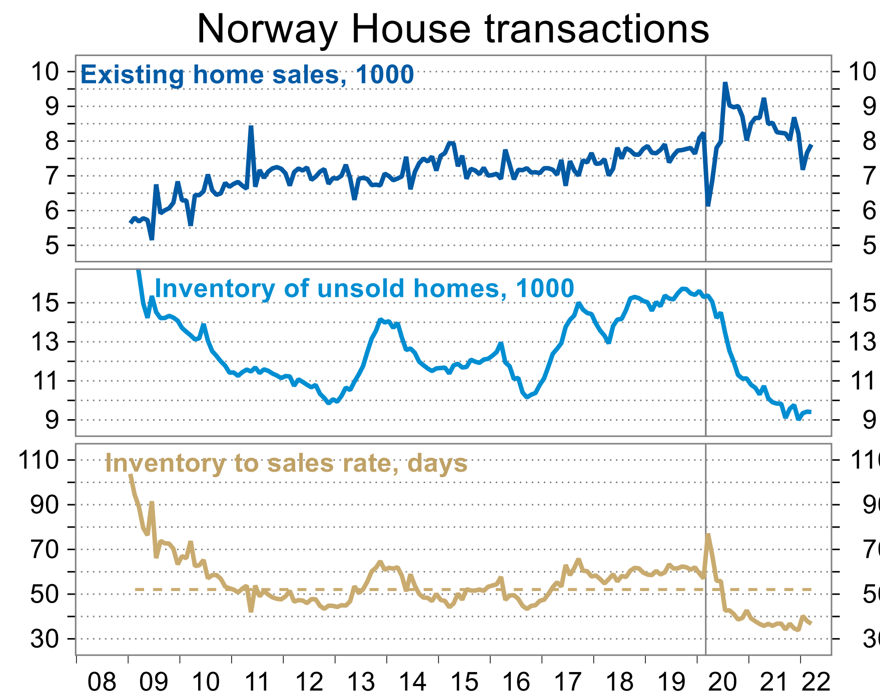
- **House prices** rose 1.0% m/m in February (seas. adjusted., +1.1% unadj.), we expected 0.2%, following the 2.1% + 0.8% (rev up 0.1 pp) hike in January & February. Norges Bank expected a 0.4% lift. The number of transactions is still lower than 'normal', and the inventory is record low
  - » The surge in prices in Q1 is probably mostly due to lack of supply as a new law put up stricter requirements for technical valuation reports etc and thus fewer new homes for sale reached the market. Most likely, the congestion will we ease the coming months, bringing supply back up to a 'normal' level. Realtors are confirming that supply is 'under way'
- **Norges Bank** expects prices to flatten from here, and to decline marginally from Q3, before turning up again in H2 2023. In Q3 2024 prices are expected back to the H1-22 level. The impact of a 25 bps hike in the signal rate (=-1% per hike after 4 quarters) adjusted for a 1:1 impact of expected income growth is illustrated at the chart to the right
  - » If the 'technical' explanation for the prices hikes is not confirmed pretty soon (and prices continues rapidly upward), it will have some impact of NoBa's monetary policy stance

The number of transactions up in March but still ‘low’

Few homes were approved for sale too – and the inventory is at a record low level



SB1 Markets/Macrobond

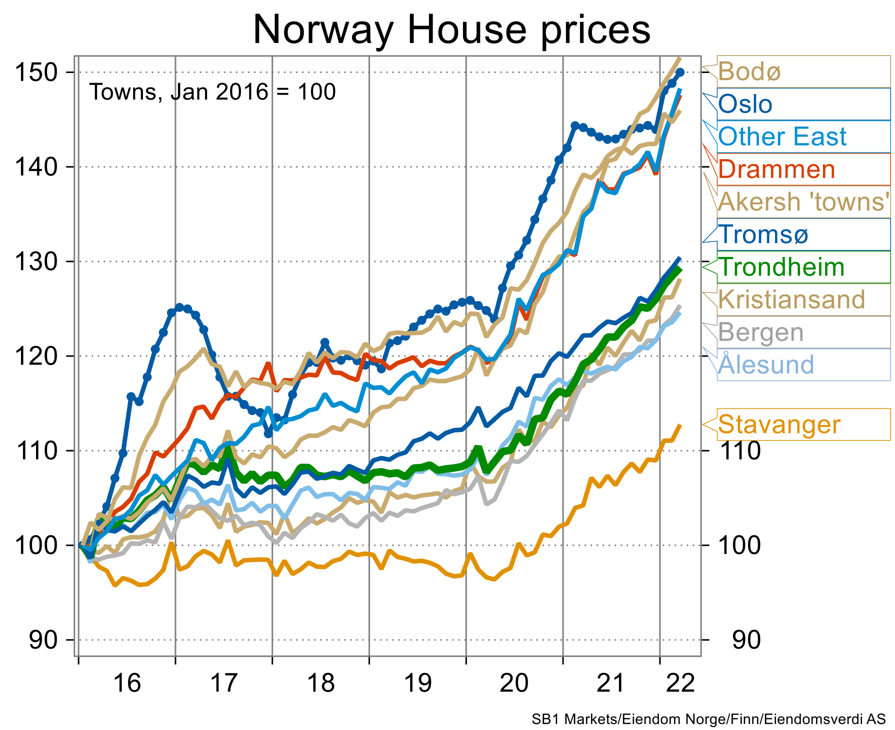


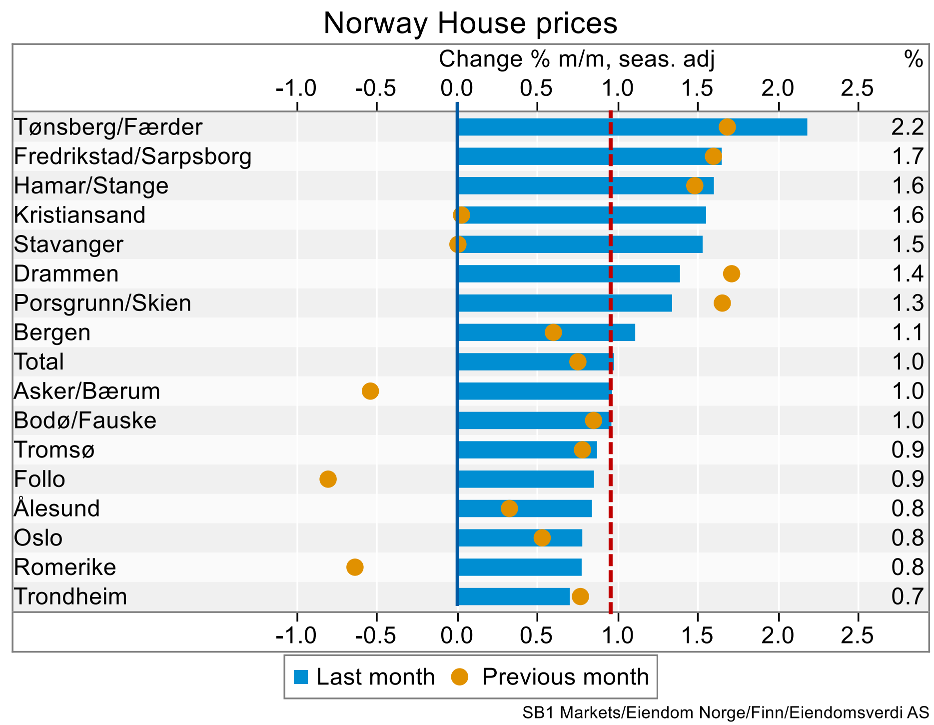
SB1 Markets/Eiendom Norge/Finn/Eiendomsverdi AS

- **The number of transactions** has recovered somewhat following the large decline in January but the level is still below normal, at least the normal during the pandemic. The trend has been down since last summer but the decline in January was deep
- The **supply of new existing homes for sale (approvals)** also rose somewhat but the level is lower than normal
- The **inventory of unsold homes** was close to unchanged at a record low level in March
- The **inventory/sales ratio** declined 1 day to 37 days, vs an average at 52 days
- The **actual time on market** for those homes sold was unch was also 1 day, to 32 days, the fastest pace in almost 10 days

All cities reported higher growth in March – Oslo close to the bottom of the list

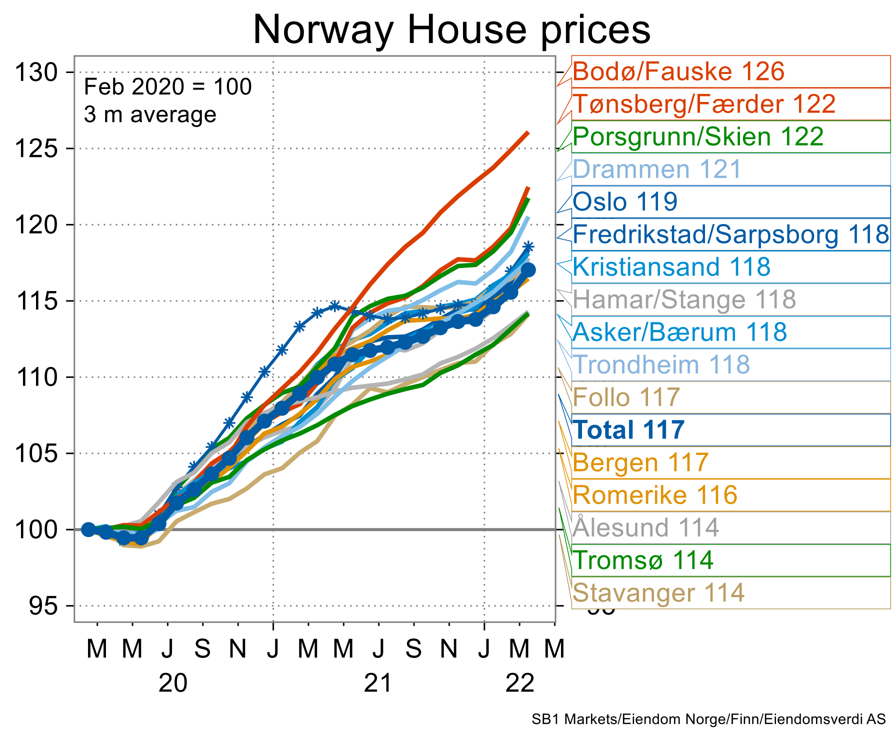
The discrepancy between cities smaller than normal

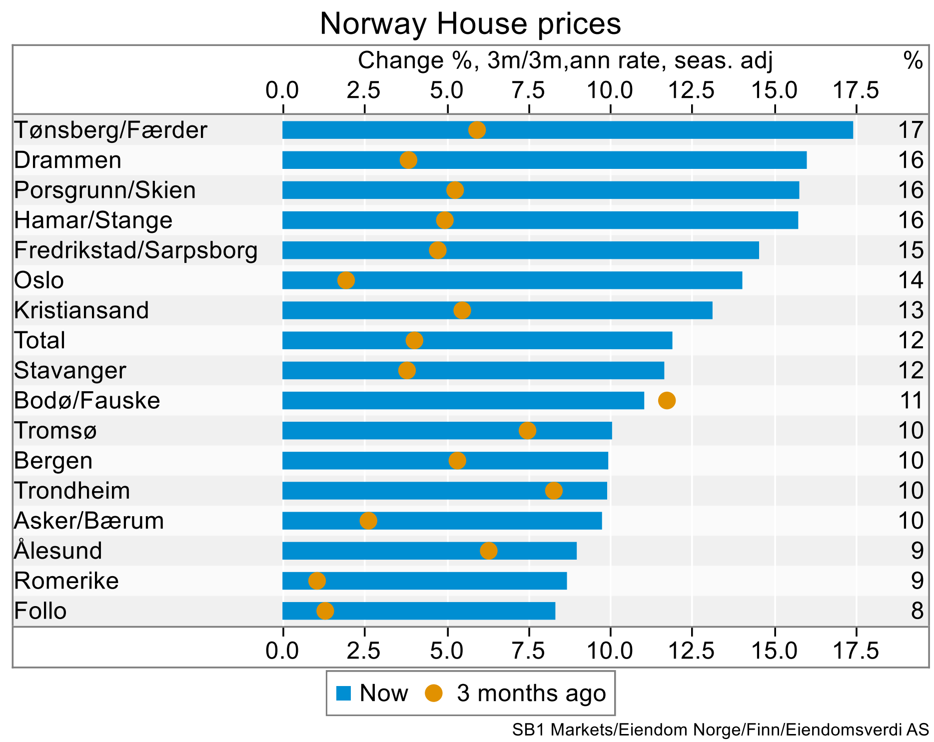




The big picture: Bodø still in the pole position but more cities are coming up

Bodø is the only city where growth has slowed. Eastern cities are gaining speed

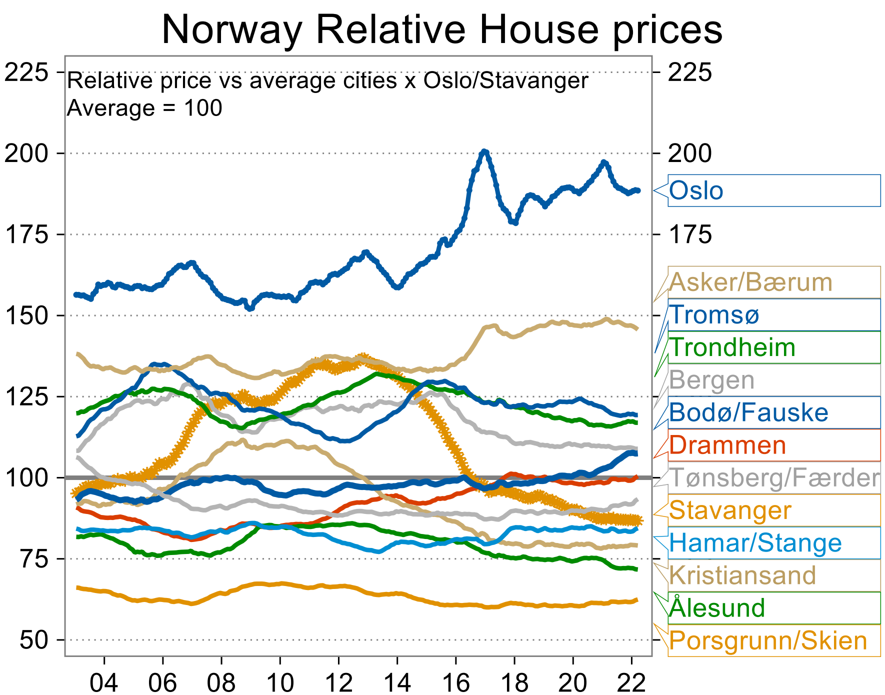




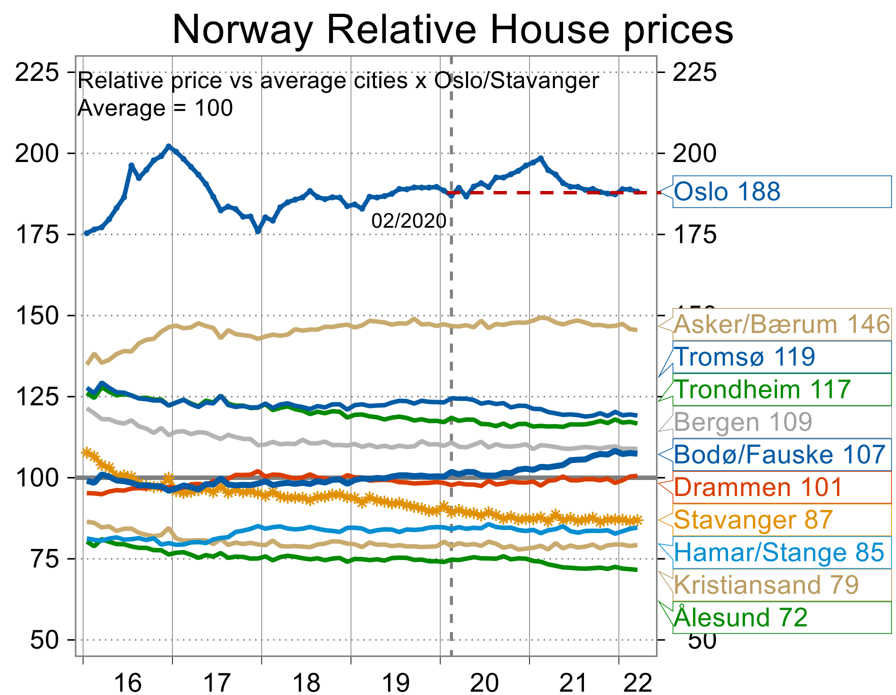
- Bodø the winner both since 2016 and early 2020
- No clear pattern in changes in house prices during the pandemic or over the recent months but Eastern towns are at bottom over the recent months

Oslo relative prices close to the pre-pandemic level

Stavanger is still sliding down, as is Ålesund. Bodø the big winner, of course



SB1 Markets/Eiendom Norge/Finn/Eiendomsverdi AS

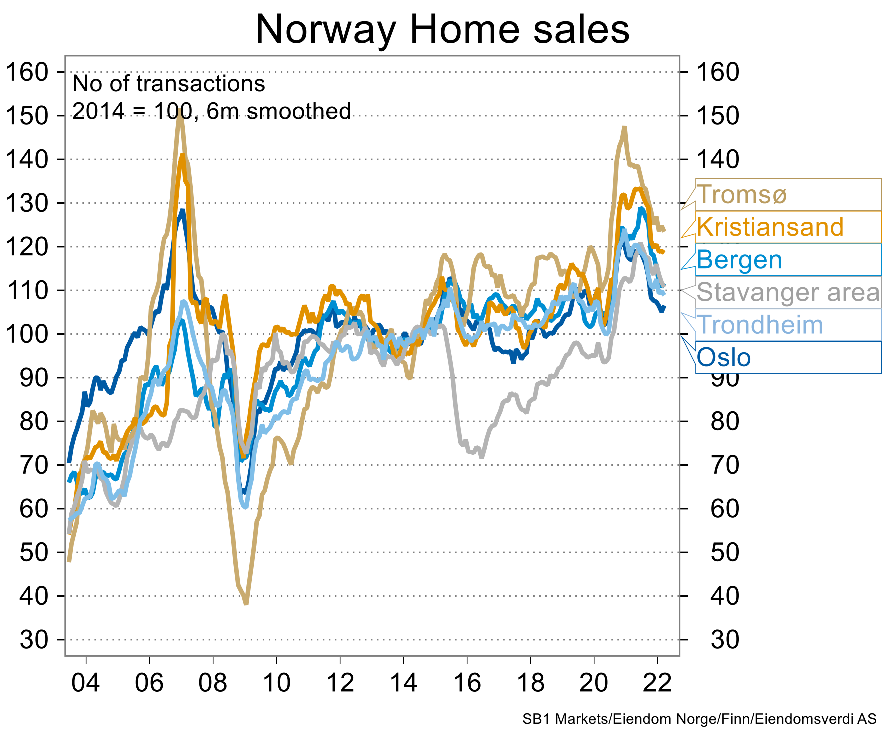


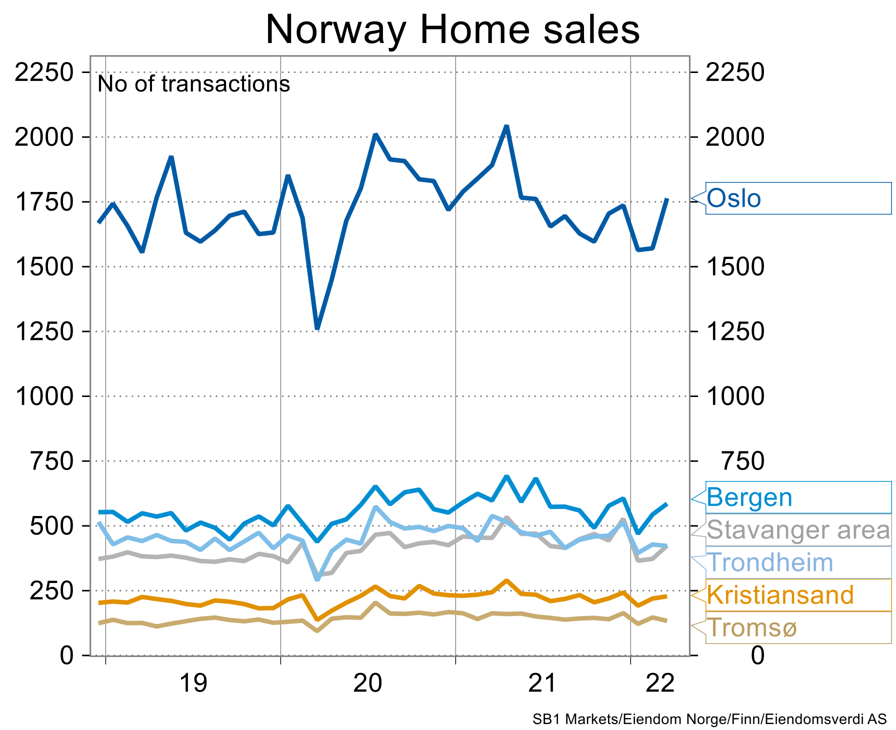
SB1 Markets/Eiendom Norge/Finn/Eiendomsverdi AS

- Housing starts in Stavanger/Rogaland are still not lower than normal. It is still profitable to build, even at 'Hamar/Stange' prices! And why shouldn't it??

Number of transactions up in most cities in March

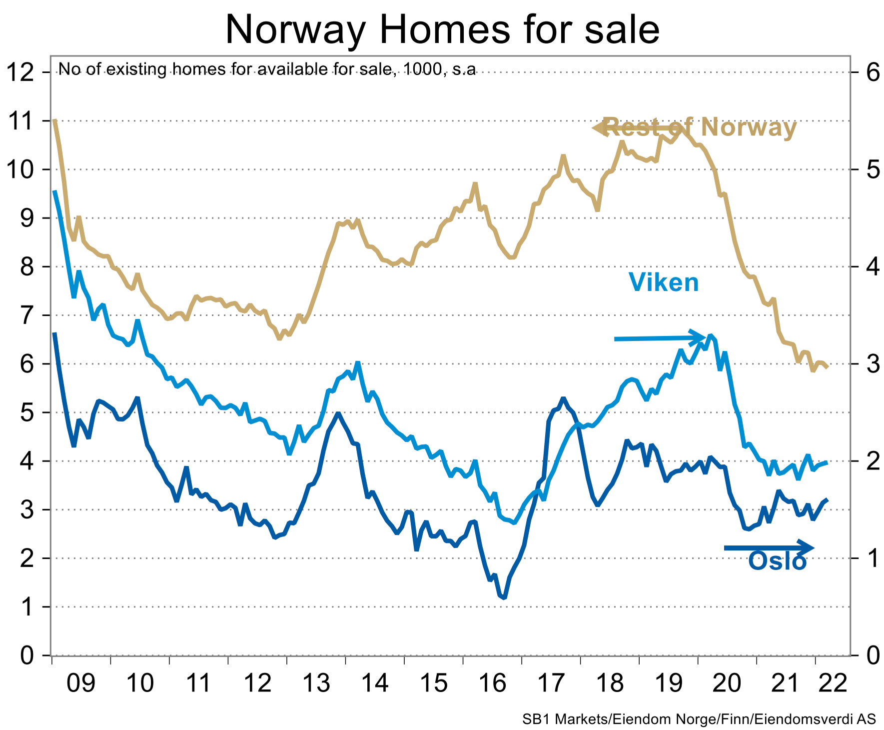
However, recent months have been lower than the previous everywhere

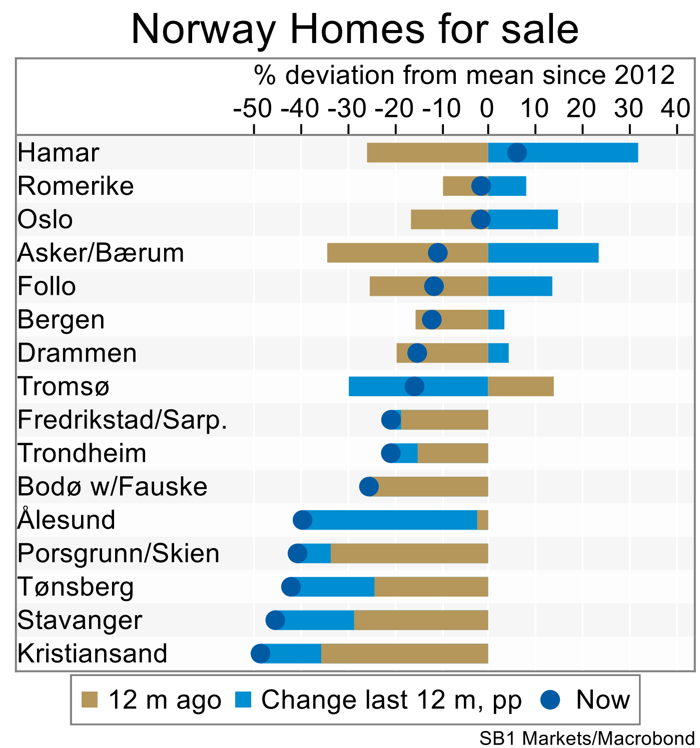




The inventory is lower than normal everywhere (except in Hamar)

The no. unsold homes is falling in half of the towns, up last year in the other half

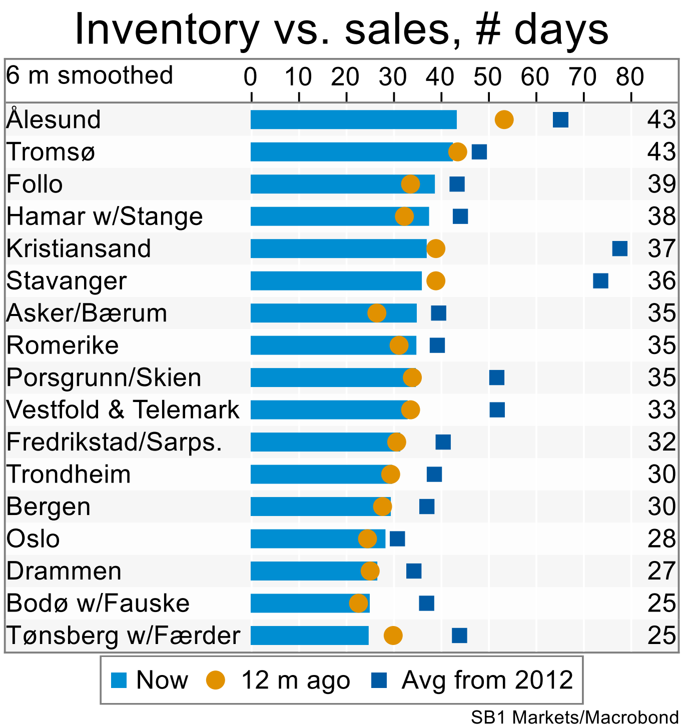




- Over the last year, the inventory by the most in Ålesund and Tromsø
- Hamar, Asker/Bærum, Oslo, Follo & Romerike are reporting more homes for sale

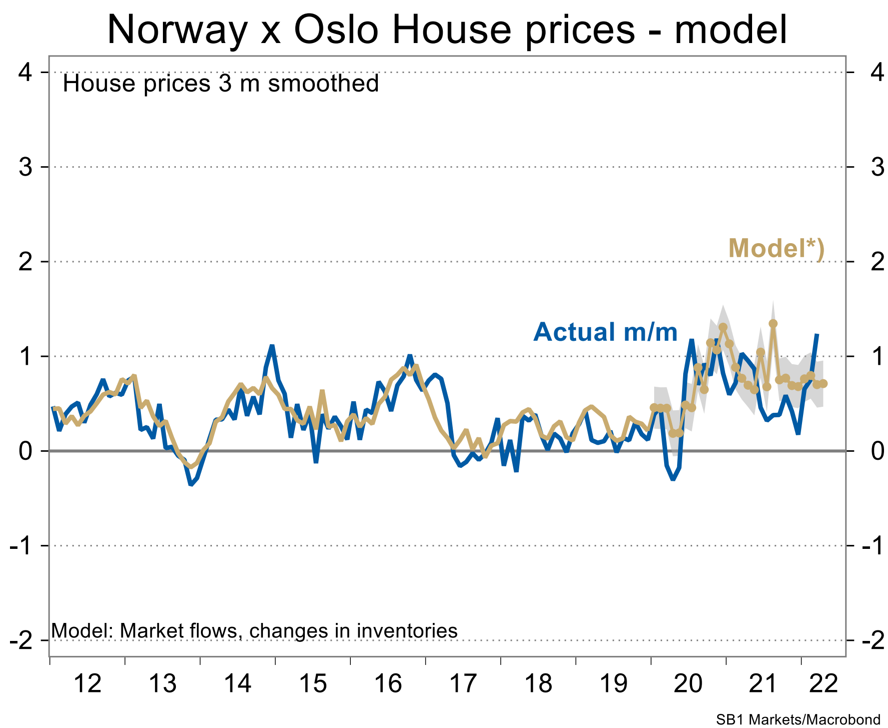
The inventory is turned around faster than normal everywhere

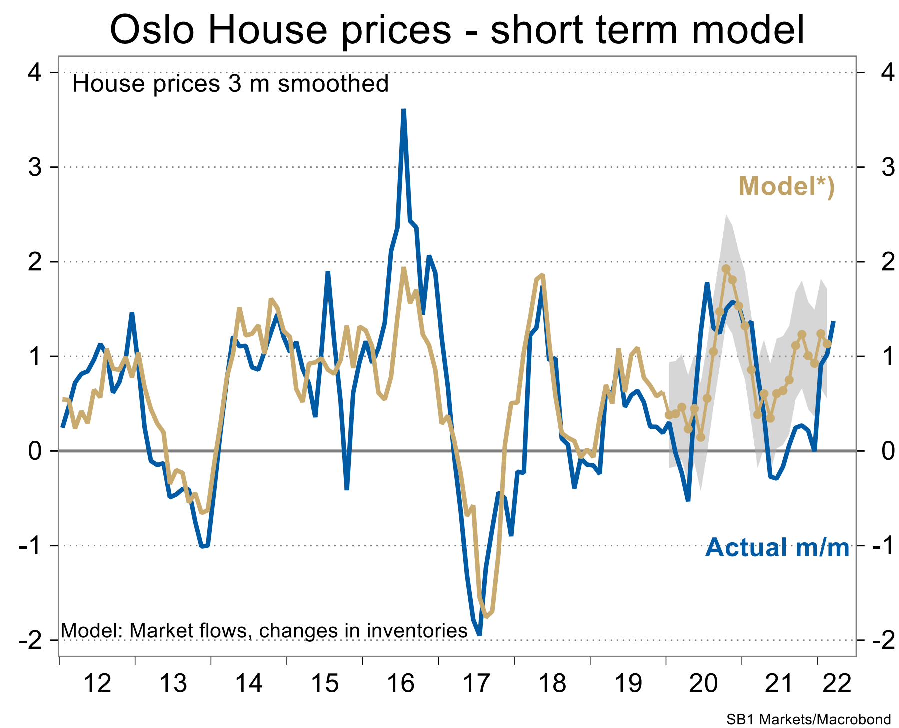
Though with substantial regional differences



Short term market flows suggest decent price growth

.. But not the kind of price increases we have seen in Q1



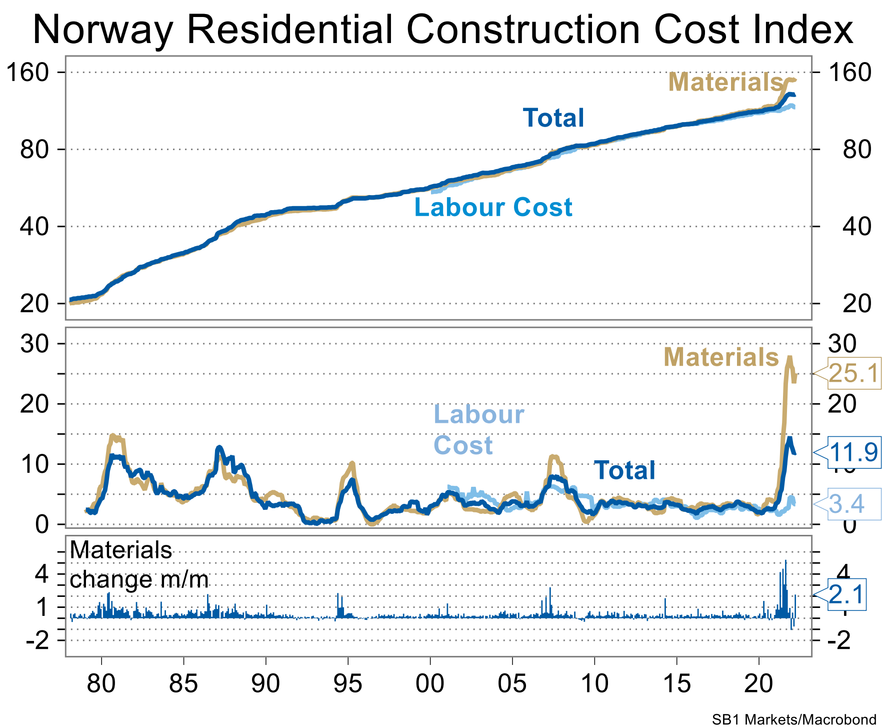


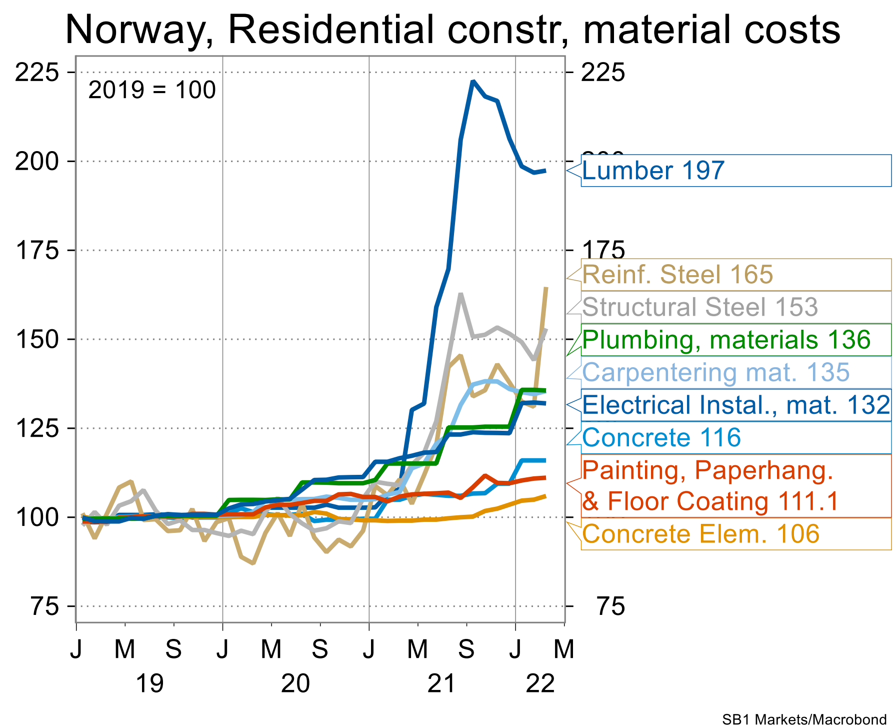
- Our **national x Oslo model** based on flows and the inventory signals a 0.8% growth in house prices per month, well below the actual 1.25% average increase the past 3 months
- Our **Oslo model** signals slightly above 1% growth, below the 1.4% past 3 months
- **Mortgage rates** are not included in these short term market models, because they have not consistently added to the models' performance. Now rates are on the way up but prices are still climbing than these models suggests. Lack of supply due to new documentation requirements still seem to be a reasonable explanation
- *These models are not long term price models, just short term price models based on flows of (existing) houses approved for sale actual sales & changes in inventories*

SpareBank 1 MARKETS

Building costs: and then steel prices went through the roof

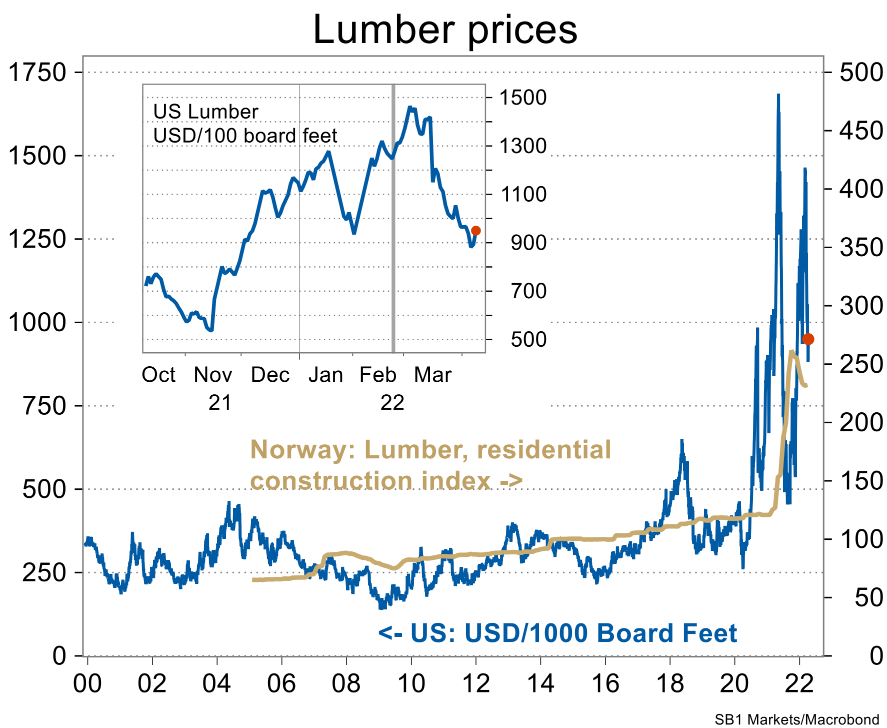
Lumber prices were not up in March but media report higher prices





- **Material prices** added 2.1% in March, and prices are up 25.1% y/y. Steel prices rose, reinforces steel shot up 26%, and they are up almost 50% y/y. Lumber prices have flattened recent months, after a decline last autumn but they are still up 83% from March last year
  - » Other material prices are trending up, from 5% (painting & floor coating) to 18% (plumbing materials)
- **Labour costs** are up to 3.4% y/y in Q1 from 4.5% in Q4 (which was the highest growth rate since 2009)
- Including labour costs, the **total building** cost index is up by 11.9%, down from the ATH at 14.6% at the peak in Oct

US lumber prices (2’’x4’’) sharply down in March, still above a normal level

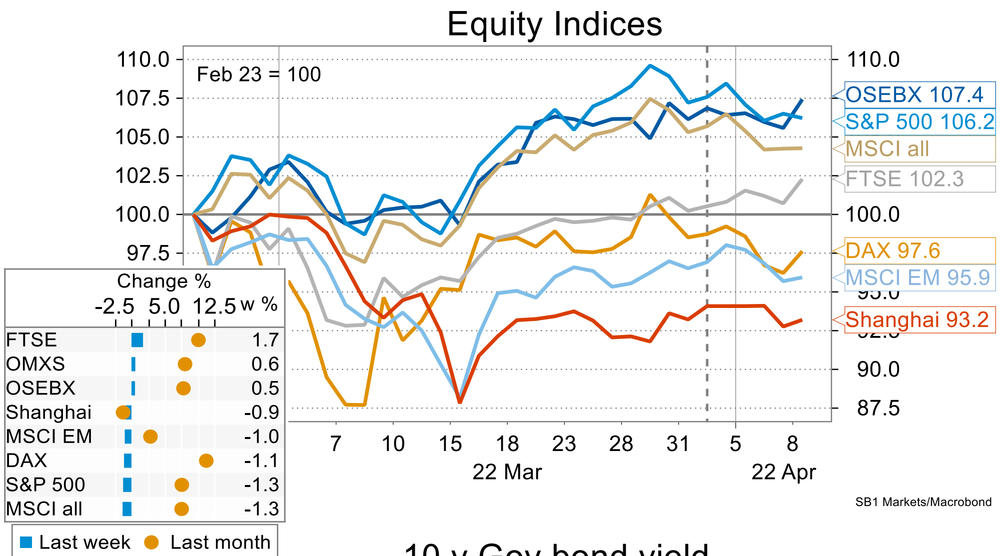


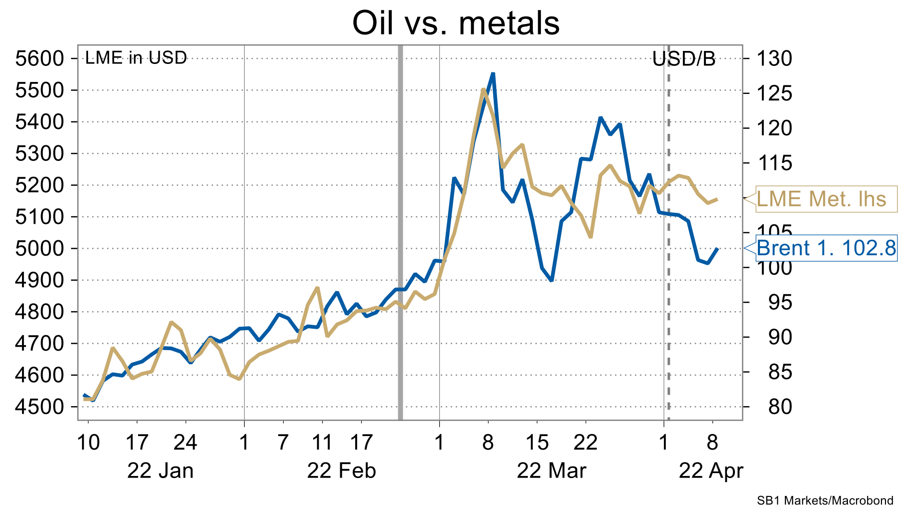
SpareBank 1 MARKETS

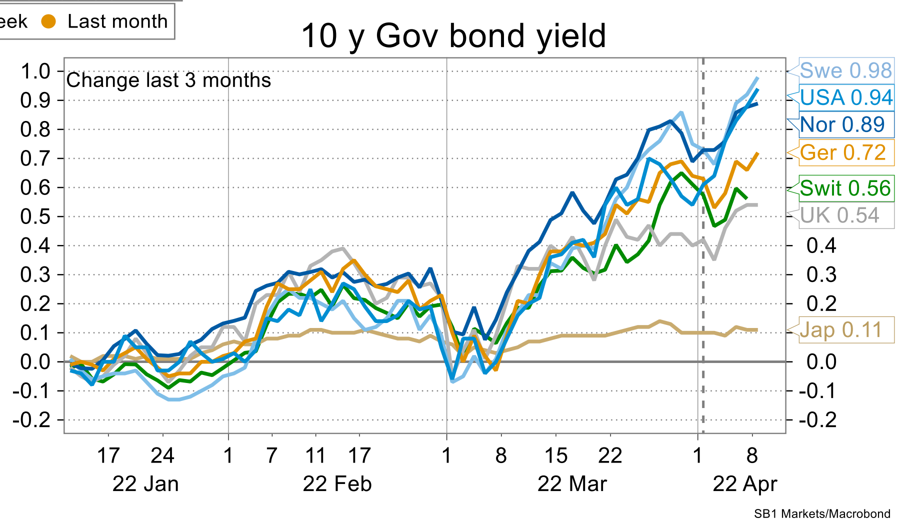
SpareBank 1 MARKETS

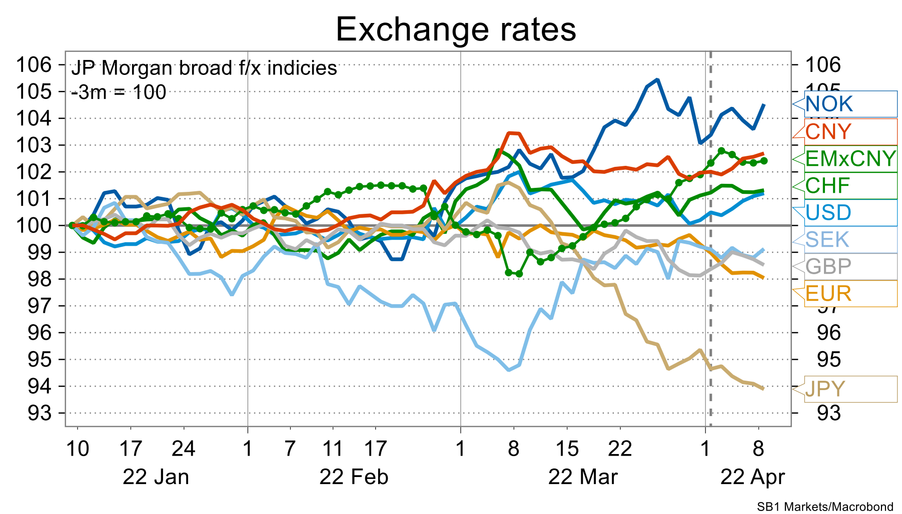
Equity markets mixed round zero, bond yields up, even if oil fell further

The NOK ~~won~~ ~~lost~~ won the currency lottery last week, even the oil price fell, and rates rose less than abroad



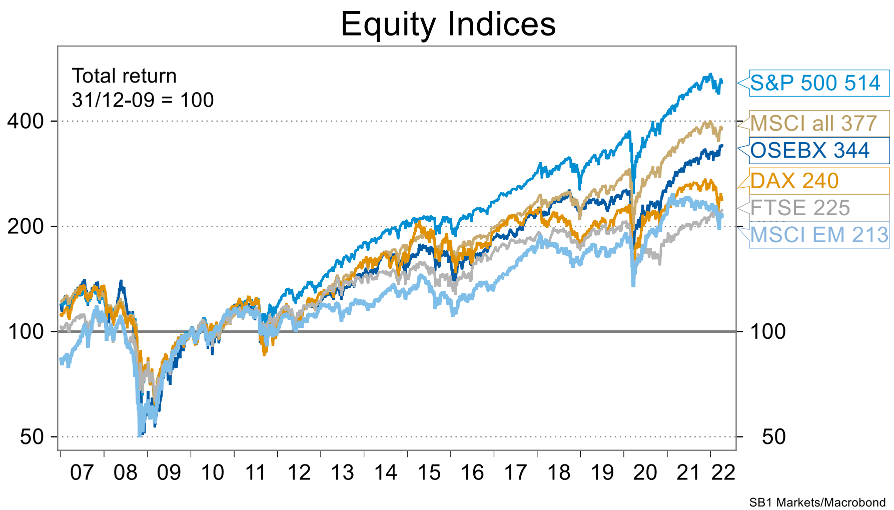


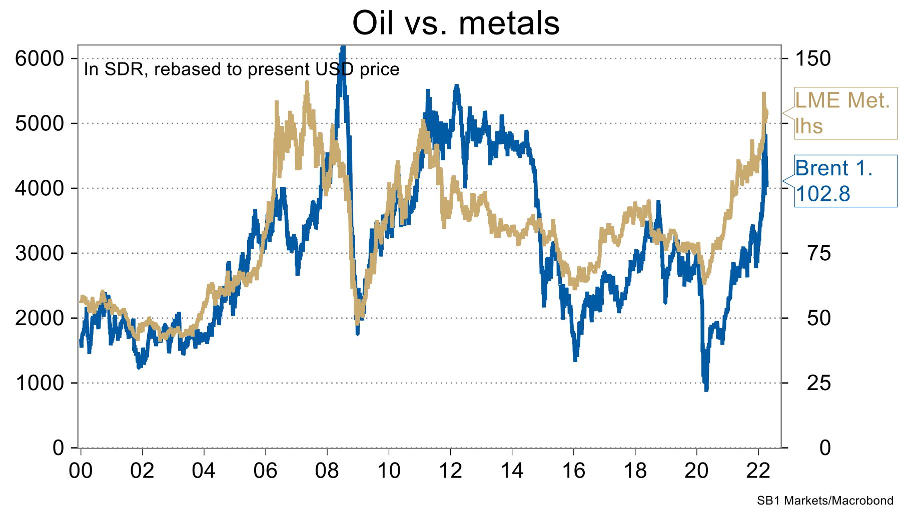


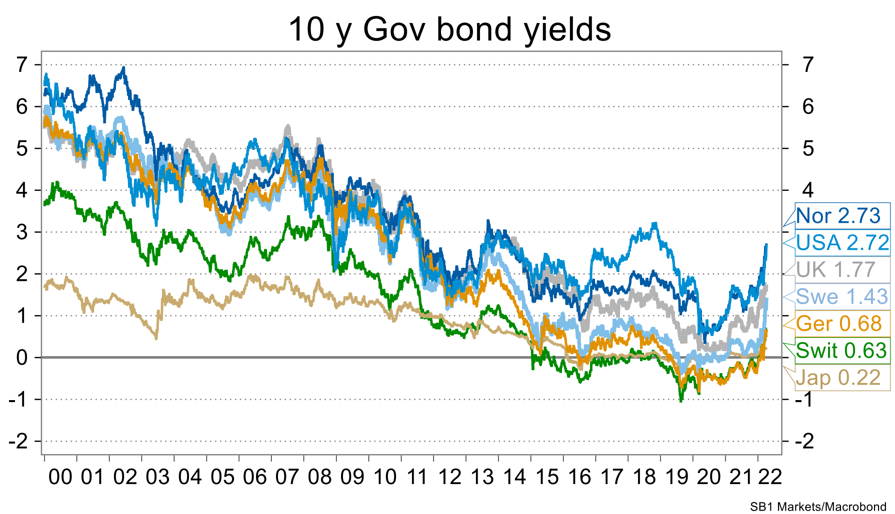


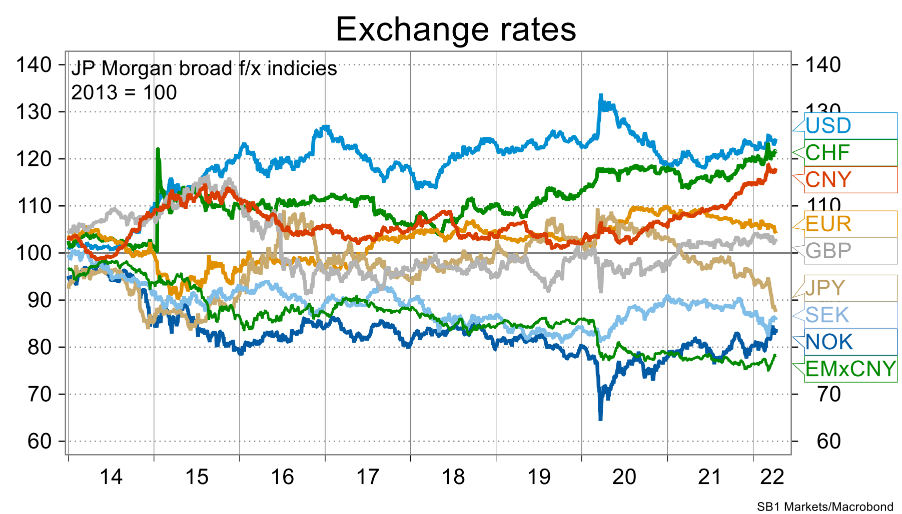
The big picture: Stock markets down (-OSEBX), bond yields up, commodities up

Commodities have taken a big step upwards







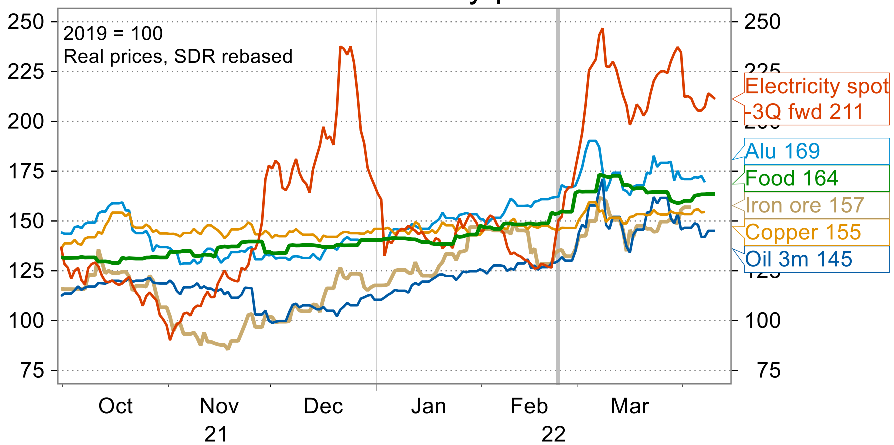


SpareBank 1 MARKETS

Mixed commodity prices, wheat up. Food prices just up 7% from before invasion

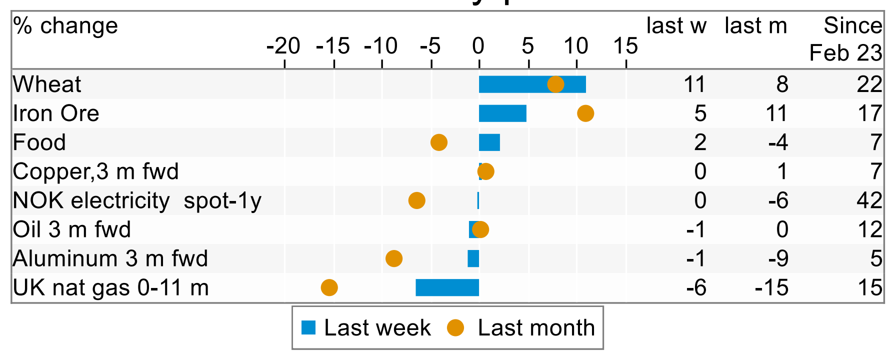
.. and still down over the past 4 weeks. European gas prices are trending down

Commodity prices



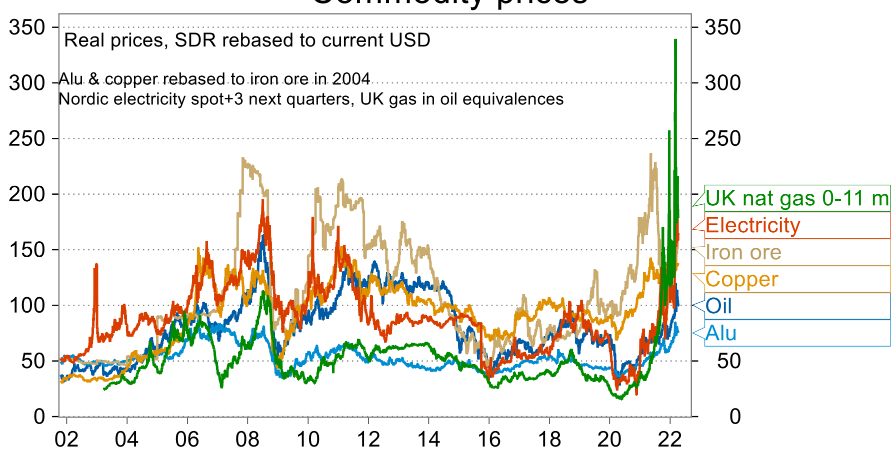
SB1 Markets/Macrobond

Commodity prices



SB1 Markets/Macrobond

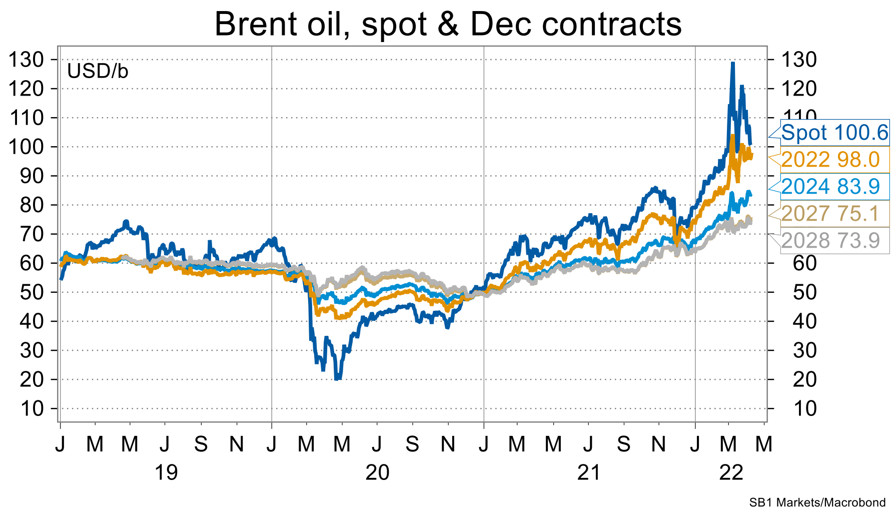
Commodity prices

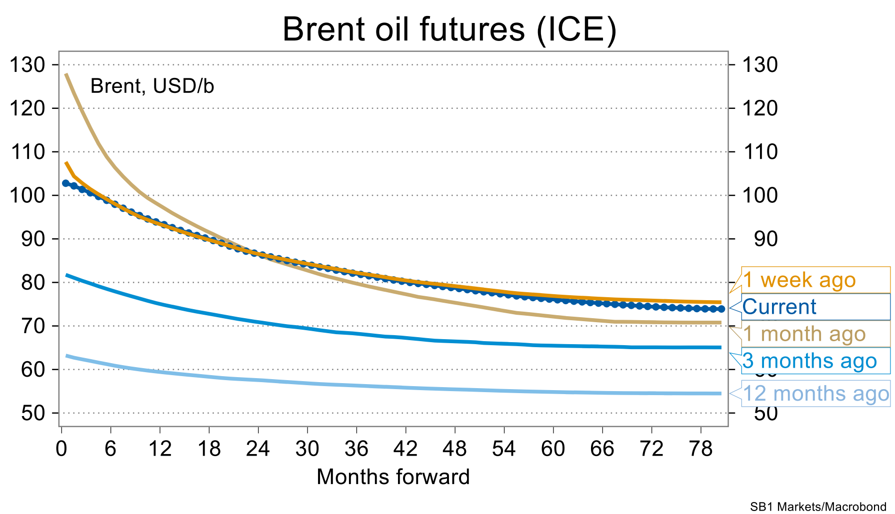


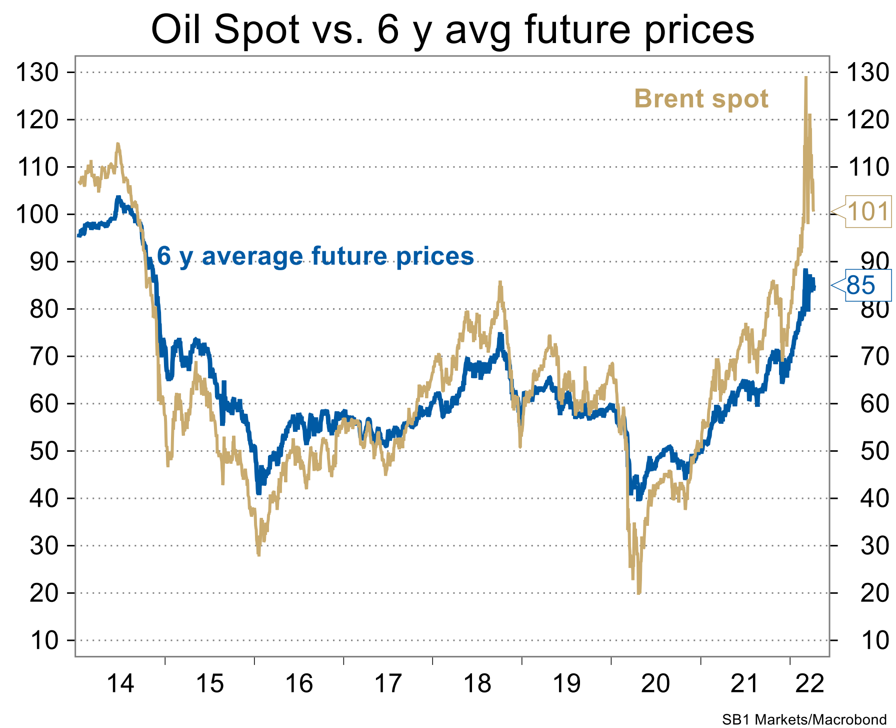
SB1 Markets/Macrobond

The oil price is trending down but just in the very short end

Future prices have been more stable than usual vs spot price, and are not trending down



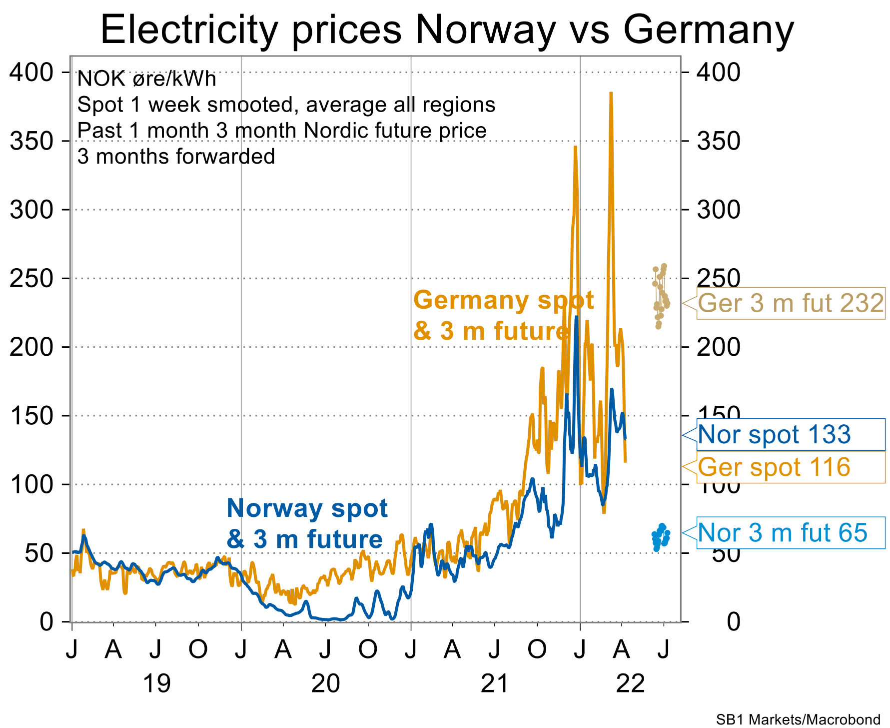


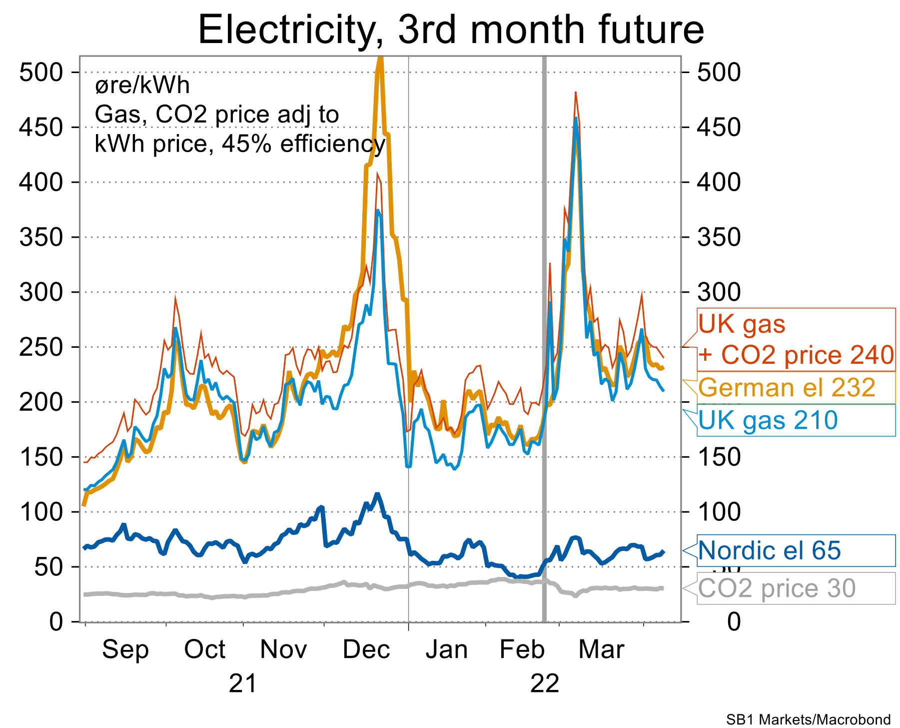


- Future prices have been lower than normal vs. the short end of the curve after the invasion – because markets assume that in the end, oil will flow

SpareBank 1 MARKETS

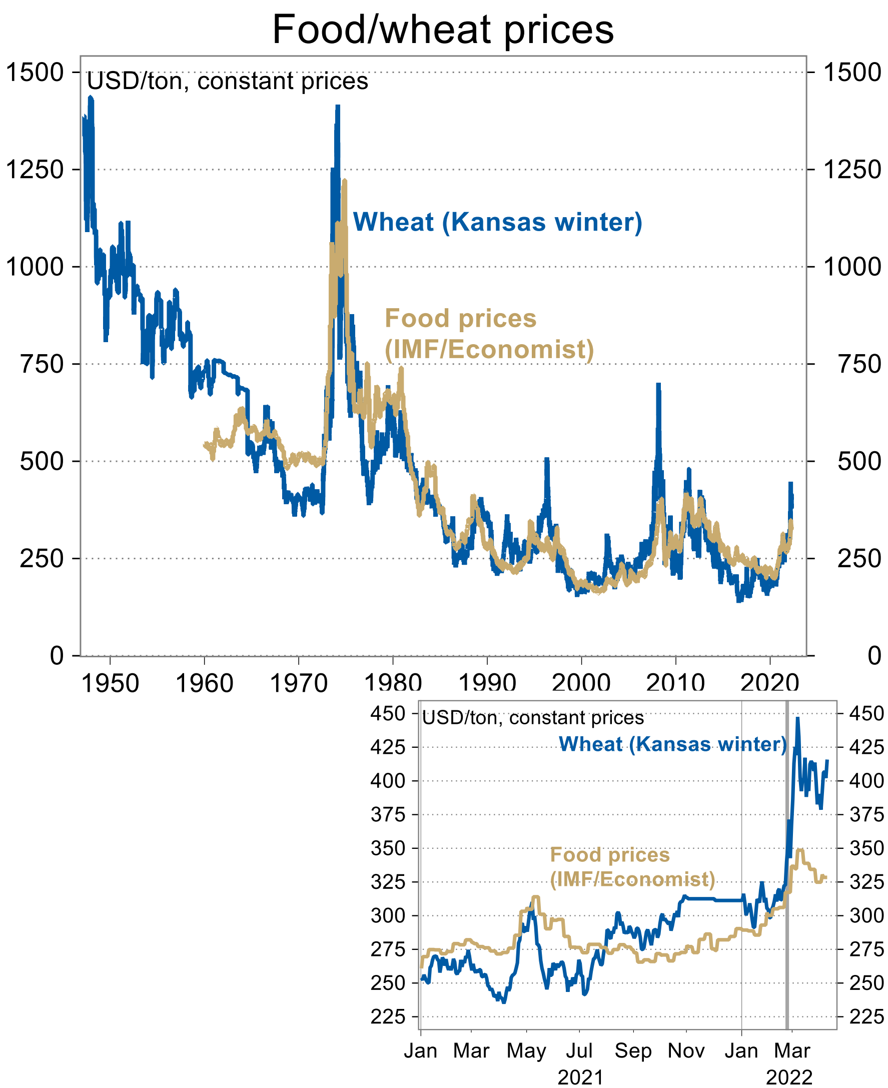
Gas prices down last week but uncertainty on Russian gas deliveries remains





- The (strange) payment debate (oil, gas in EUR/USD or RUB) is not settled but we doubt that hurdle will decide the fate of Russian deliveries to Europe. How the Russians behave in Ukraine will be more important
  - » Last week, revelations about the Russian army's (likely war crime like) treatment of civilians in Northern Ukraine led to a new wave of Western sanctions and an even more united front against the Russian regime

Wheat prices up last week but prices are still trending down recent weeks

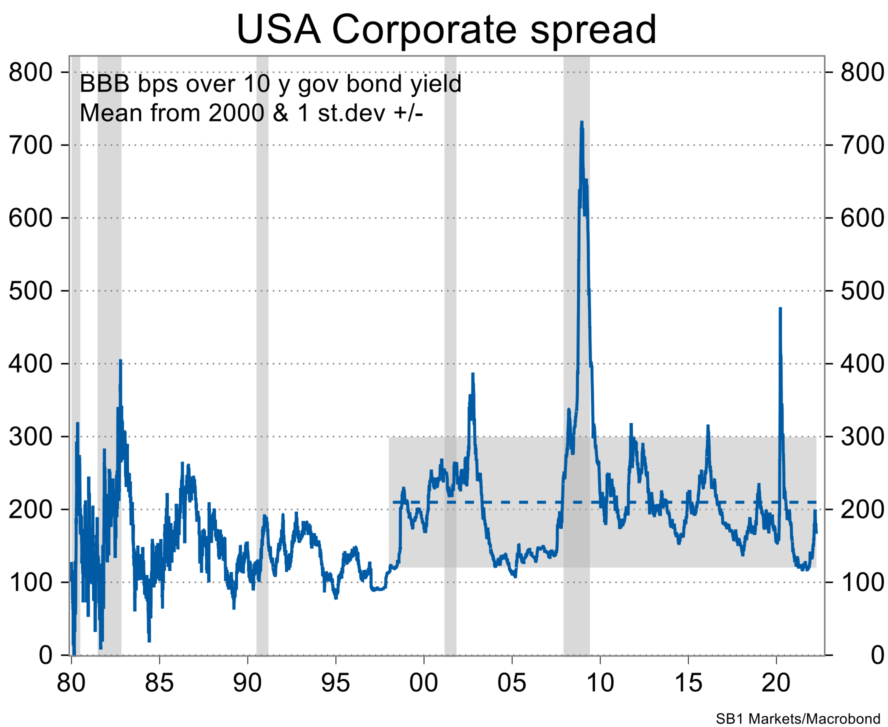


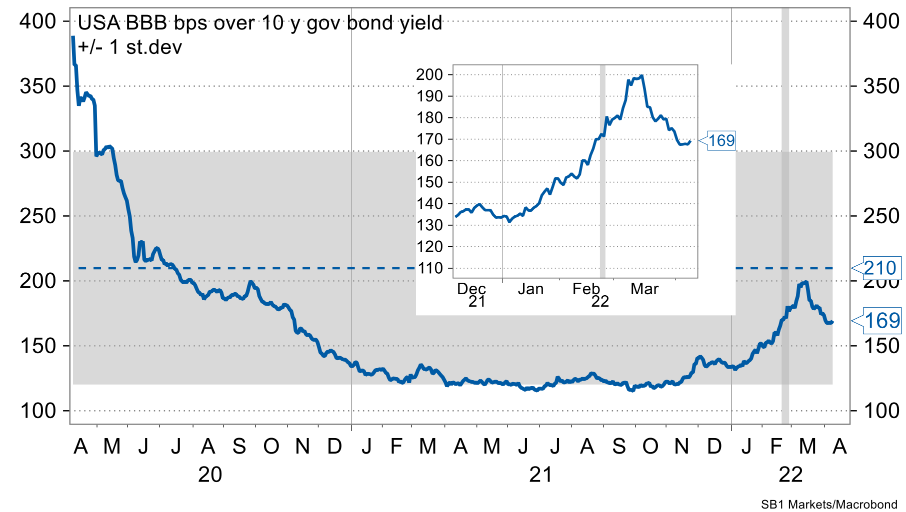
- **The Economist's broad food commodity index** is up just 7% vs the pre-invasion level following a 6% decline past 4 weeks – and real prices are far from record high
  - » Is the impact of (a very likely) intense **hoarding** through the food value chain already fading?

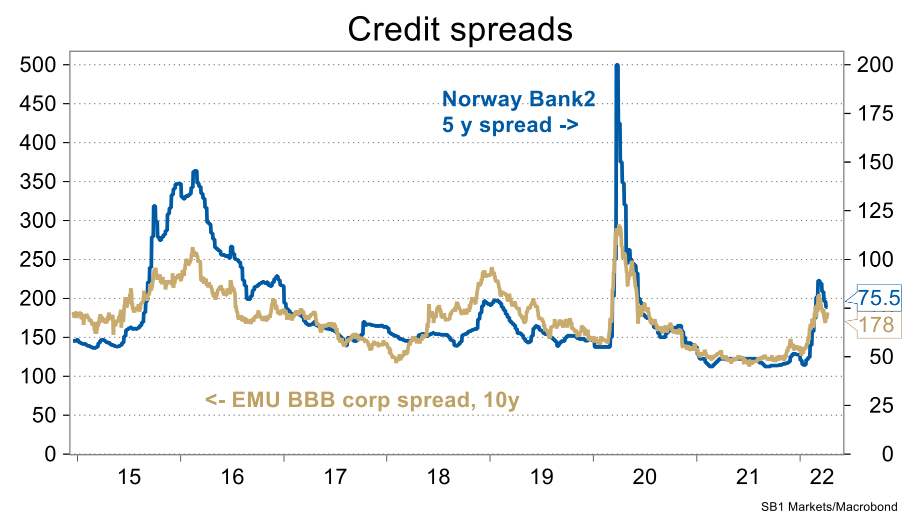
SpareBank 1 MARKETS

Credit spreads flattened last week – level lower than before the invasion

Almost 2/5 of the lift in credit spreads since last autumn was reversed the previous 3 weeks





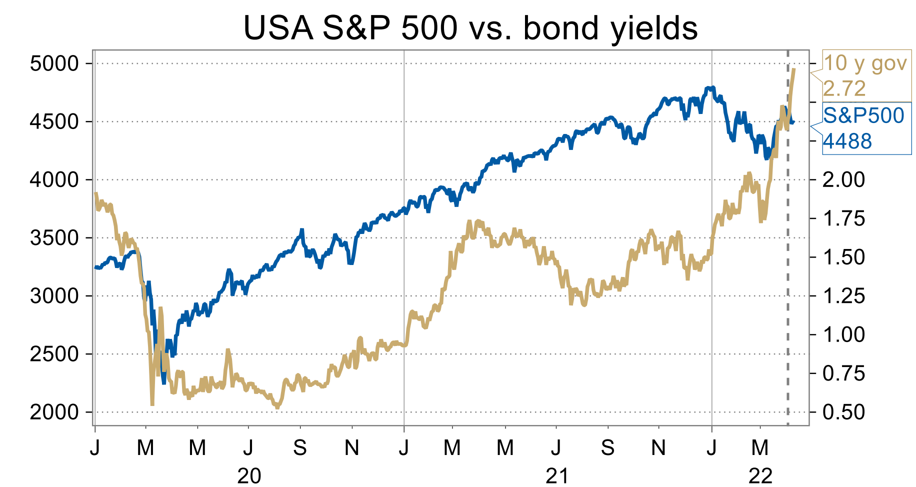


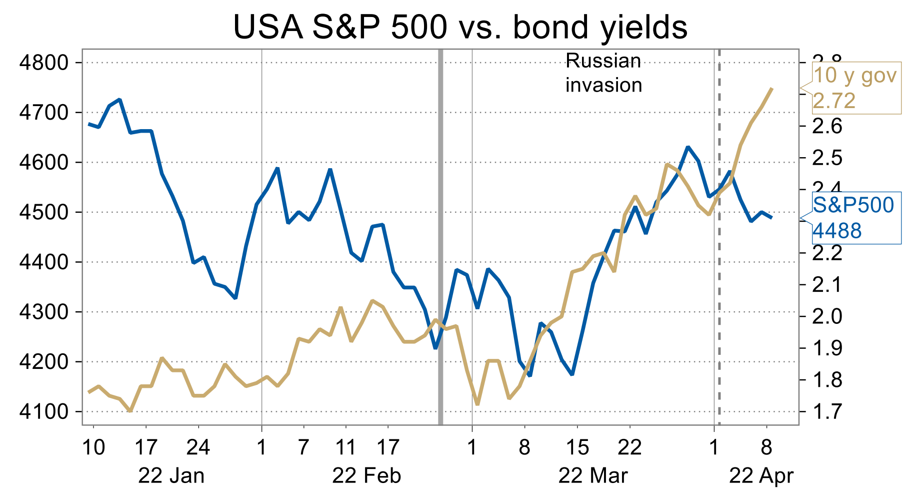
- Norwegian bank spreads down too, as usual in tandem with spreads abroad

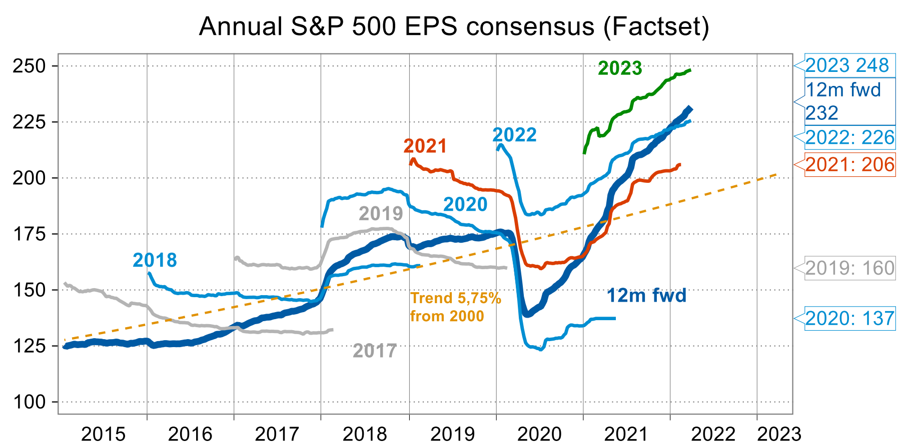
SpareBank 1 MARKETS

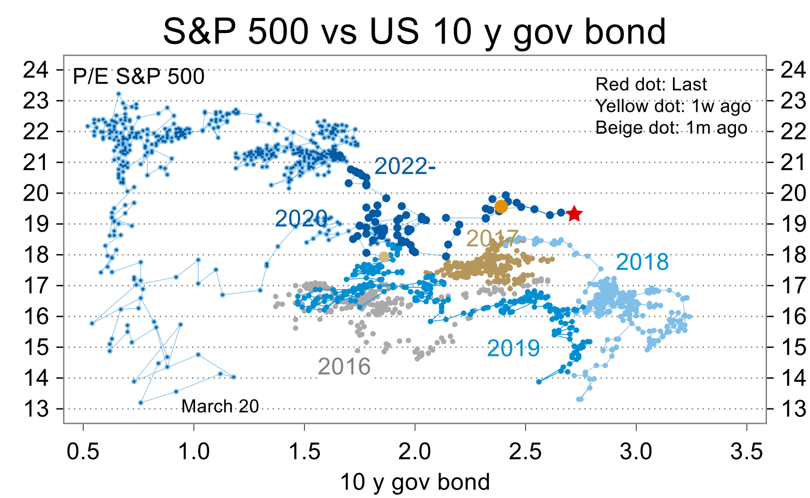
The 10 y bond yield up 33 bps to 2.72%! The S&P down 1.6% (Nasdaq -3.6%)

Expected earnings growth is still impressive – at a >20% pace! For how long can that last?





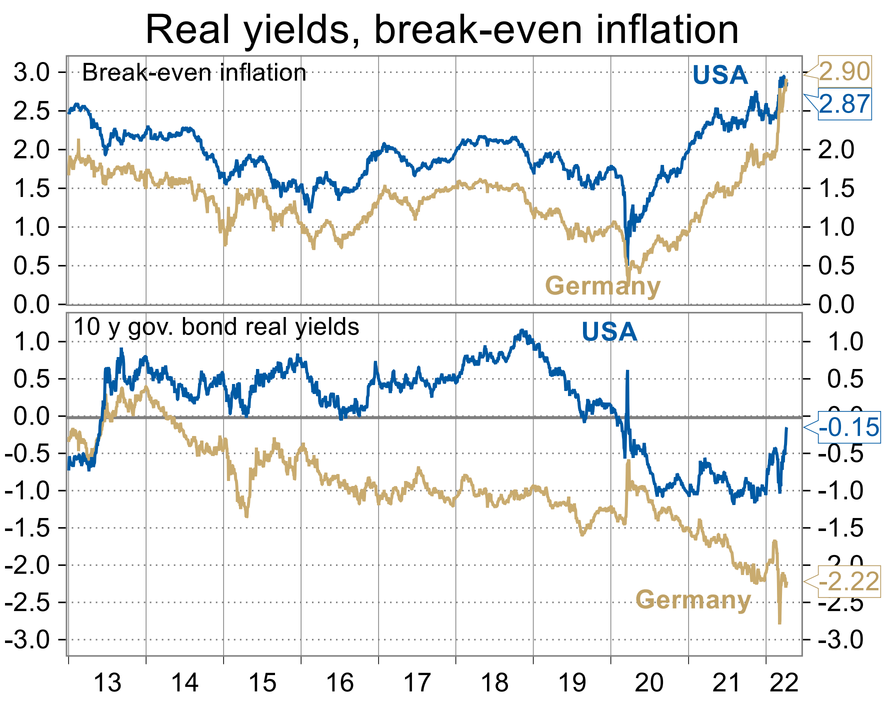


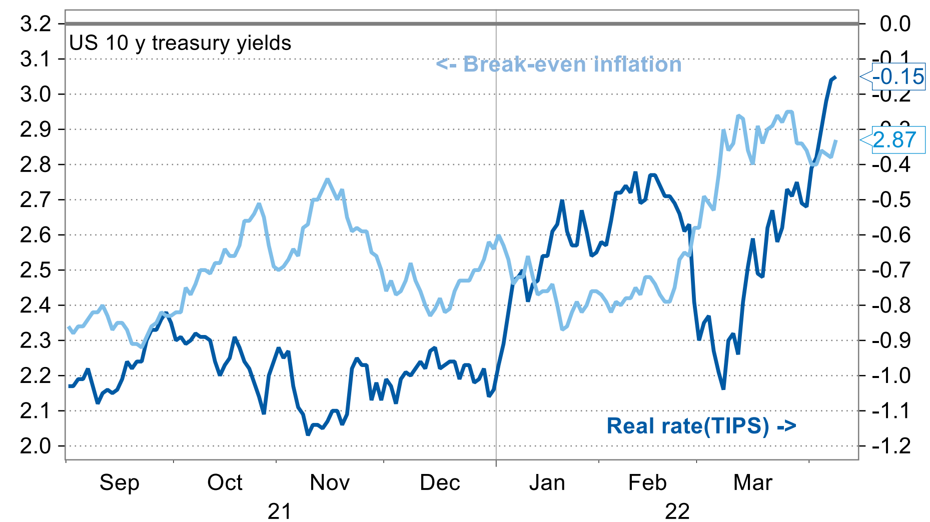


SpareBank 1 MARKETS

What a week: the US 10 y up 33 bps, the TIPS real rate +26, infl. expect. +7 bps!

The real rate the highest since March-20, still just at -0.15%. German infl. expectations down to 2.9%!!





US & Germany 10 y Gov bond yield

	Yield	Change 1w	Change 1m	Since Feb 18	Min since April-20
USA nominal treasury	2.72	0.33	0.86	0.80	0.52
.. break-even inflation	2.87	0.07	-0.03	0.46	1.06
.. TIPS real rate	-0.15	0.26	0.89	0.34	-1.19
Germany nominal bund	0.68	0.09	0.63	0.46	-0.65
.. break-even inflation	2.90	0.13	0.11	0.92	0.40
.. real rate	-2.22	-0.04	0.52	-0.46	-2.80

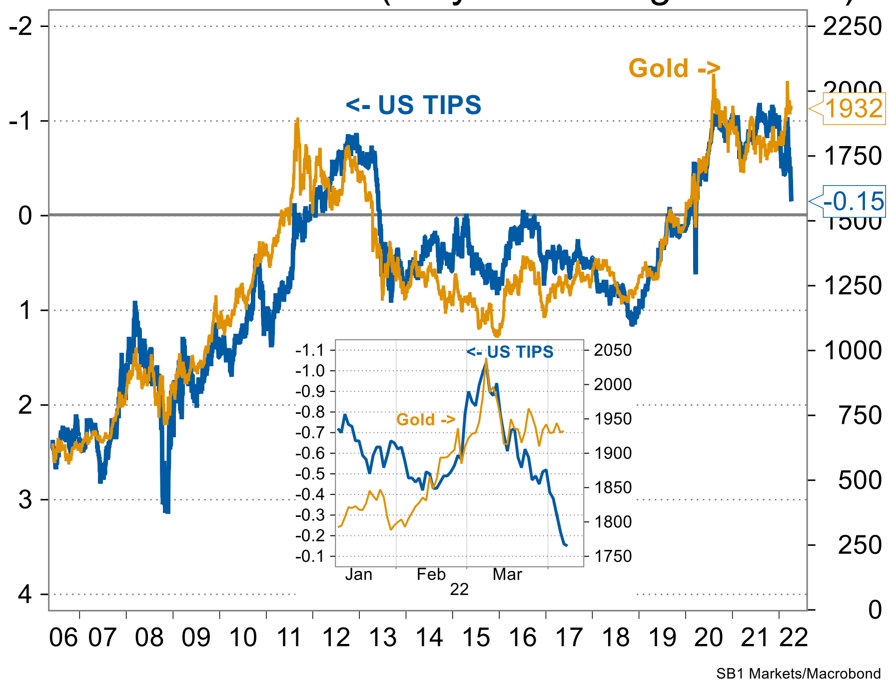
SB1 Markets/Macrobond

- **Inflation expectations** are close to 3%, both in USA and Germany
- **Real rates in the US** fell to 1.03% after the Russian invasion in Ukraine, down from -0.42%. At Friday, the 10 y TIPS closed at -0.15%, the highest level since March 24 2020
  - » Still, the real rate is very low, historically
- **Real rates in Germany** remain extremely low, at -2.22%. Per year, the next 10 years

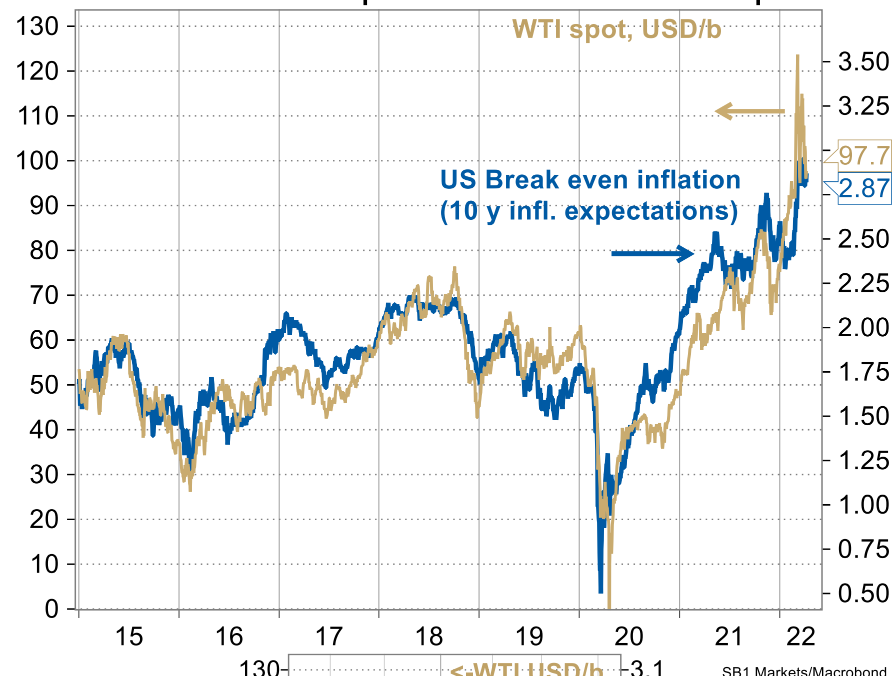
The normal relationships: Gold ⇔ –TIPS real rates. Oil ⇔ Inflation expectations

Last weeks: The gold prices has kept up even if US real rates has shot up. Oil & infl. expect. still corr.

Gold vs. US TIPS (10 y real rate gov bonds)



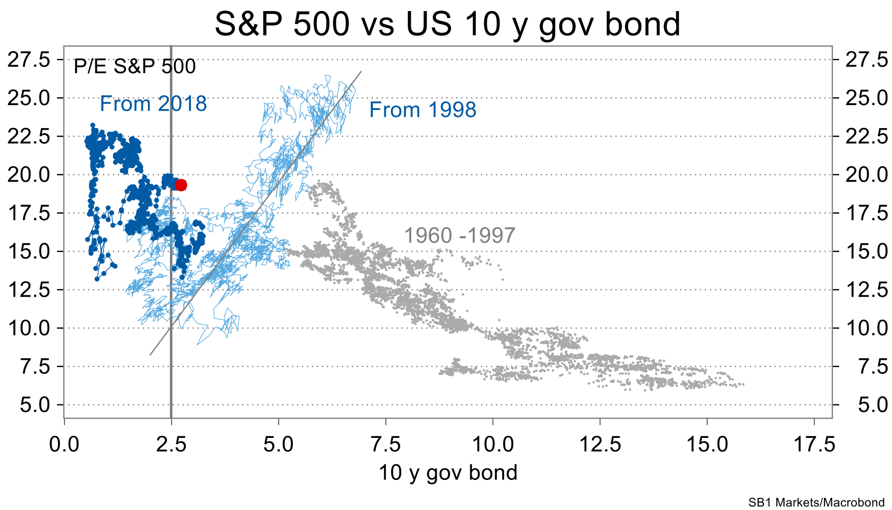
USA Inflation expectations vs. the oil price

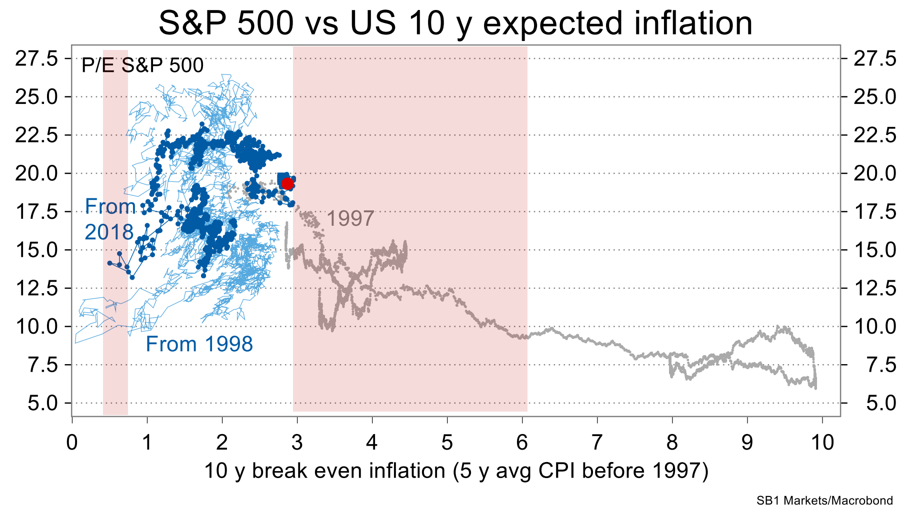


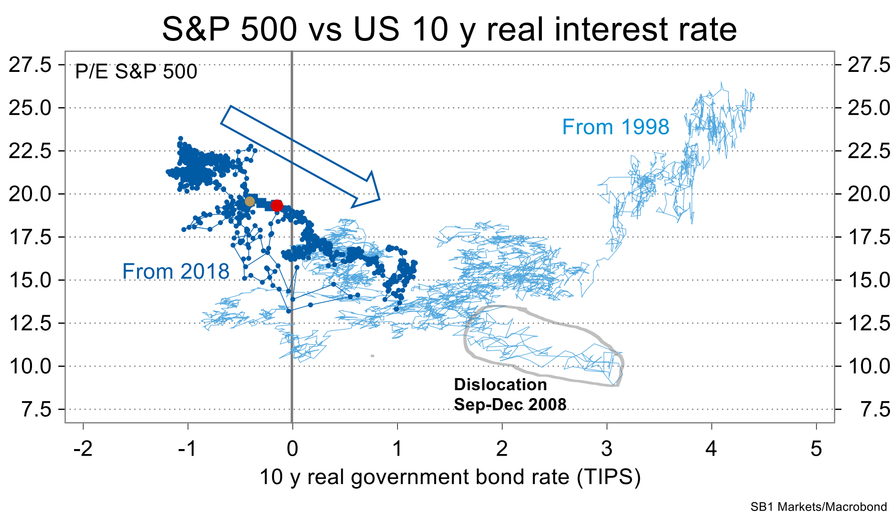
- Very likely a war premium in the gold price
- The 10 y inflation expectations in the US yield curve are rather closely correlated to the spot oil price – and both fell last week

Bonds vs. equities: What's next? Central banks are now fighting inflation!

.. And they will probably succeed. But at a price: Higher real rates + 'some' earnings surprises…







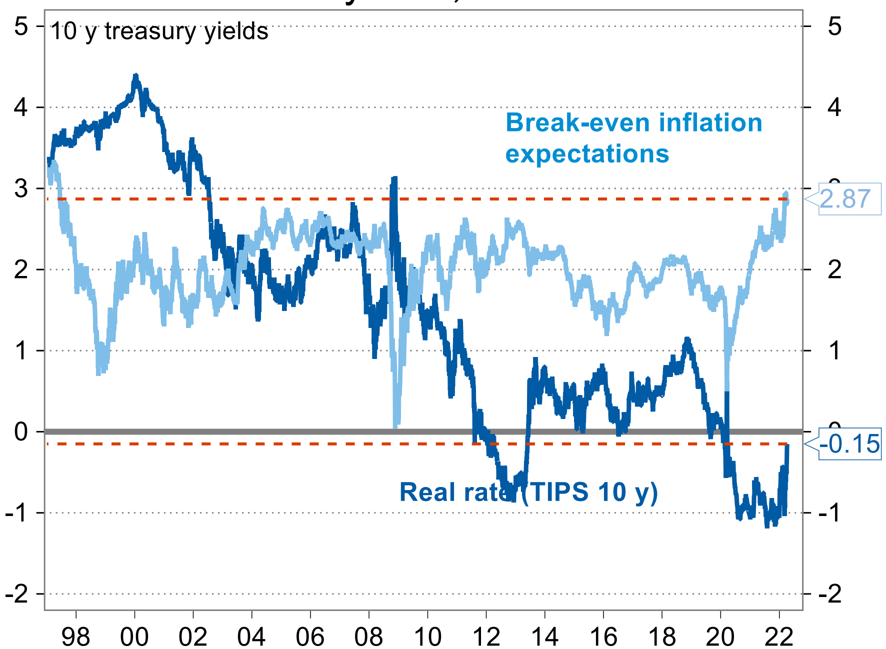
- **Expected inflation**
  - » ***If its not too low or too high: No problem***
    - 'Real' expected earnings are unaffected, higher inflation implies stronger growth in earnings, and vice versa
  - » ***If its too low or too high: A problem***
    - Something is rotten: Deflation or far too high inflation. The economy is not stable. Risk are increasing, earnings are exposed.
  - » Now: Infl. expectations at close to 3% - on the border to become a problem?
- **Expected long term real interest rates**
  - » ***Low real rates normally not good news, high rates were OK***
    - Real rates were low when the economy was weak, the outlook uncertain
    - High real rates when the economy was booming, with high P/Es
  - » **2018-21:** real rates have been low even if the economic outlook has been OK
    - Central banks wanted to lift growth, inflation was anyway not a problem – we entered the 'Goldilocks' corner'
  - » **Now:** Central banks engaged in a HUGE policy shift, to contain inflation. The risk: A further increase in REAL rates, at the same time as growth expectations slows!

SpareBank 1 MARKETS

Real rates up. And we are quite sure, not because growth expectations rose

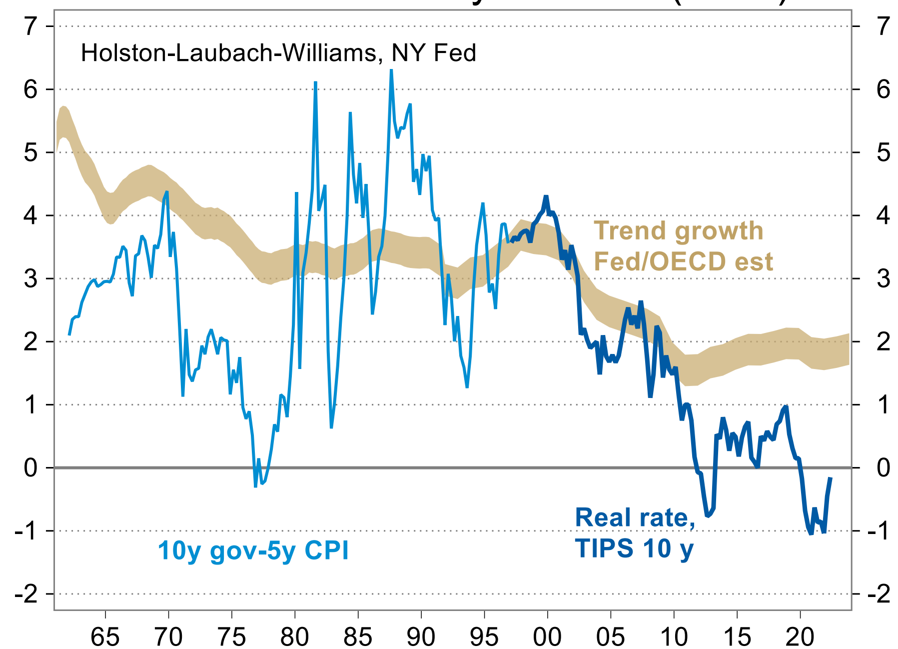
If inflation is at 3%, and the real rate is at -0.4%, *we assume it is because the growth outlook is weak*

USA TIPS Real yields, break-even inflation



SB1 Markets/Macrobond

USA Growth vs 10 y real rate (TIPS)

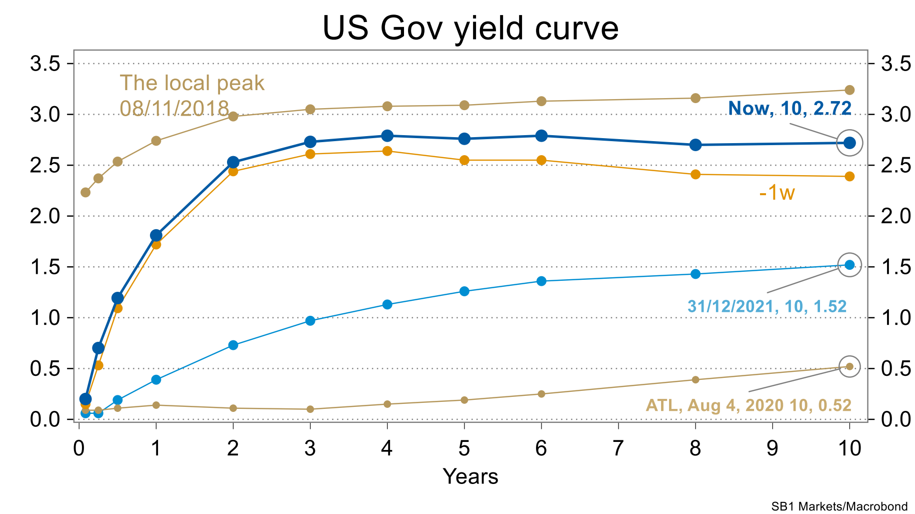


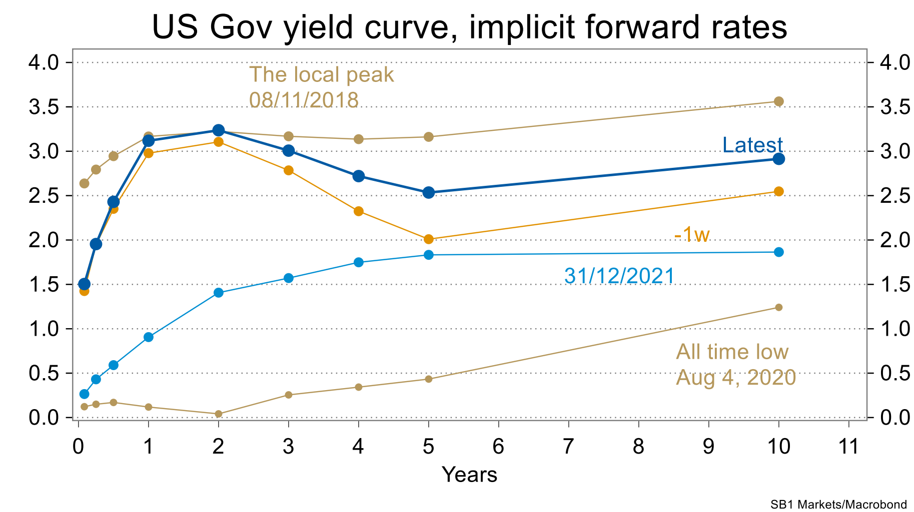
SB1 Markets/Macrobond

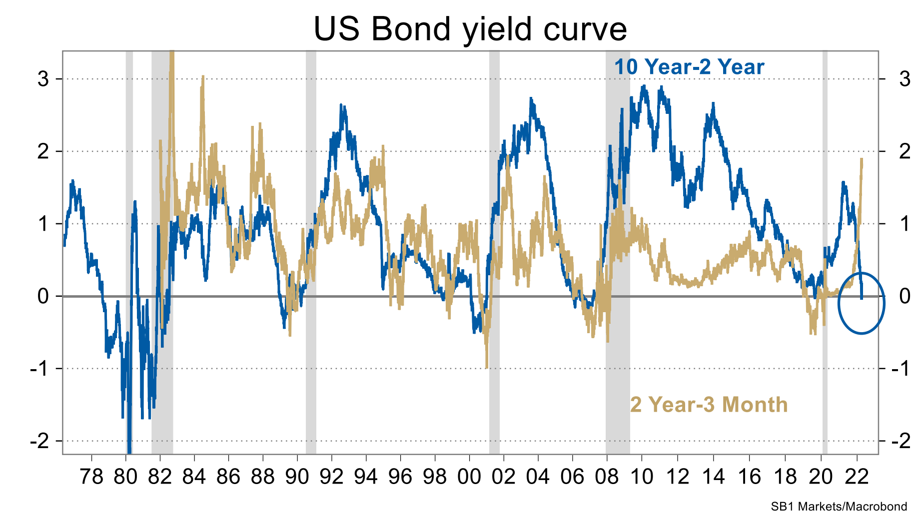
- If the economy is not really weak, we think central banks will tighten monetary policy by hiking rates, selling bonds in order to bring real rates further up to inflation under control <u>by slowing the economy to below trend growth</u>
  - Profit margins are exposed
  - Demand for labour will slow too, and unemployment will increase – in order to get wage inflation down
- The big question: Are other markets discounting the bleak growth outlook that seems to be discounted in the bond market?

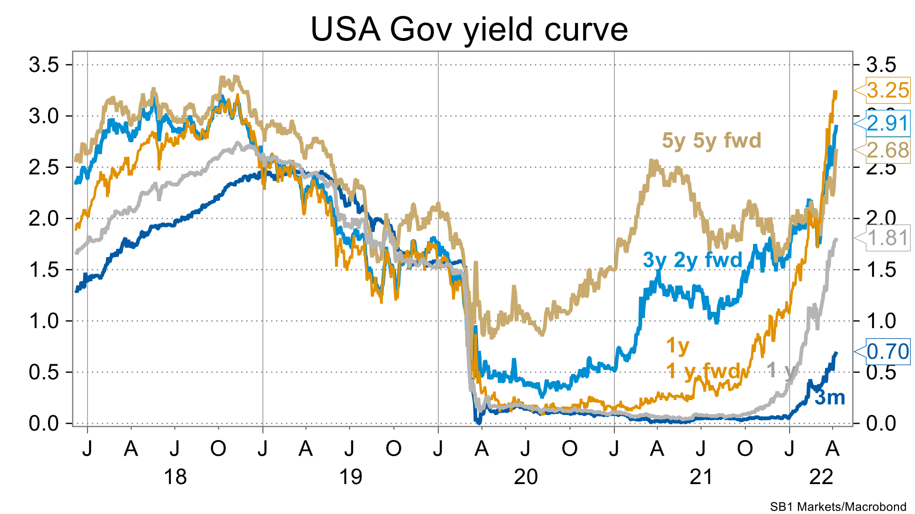
A substantial lift in the long end of the curve, as QT is approaching rapidly

The 10y – 2y curve dis-inverted – and the 2y-3m is still the steepest since 1994



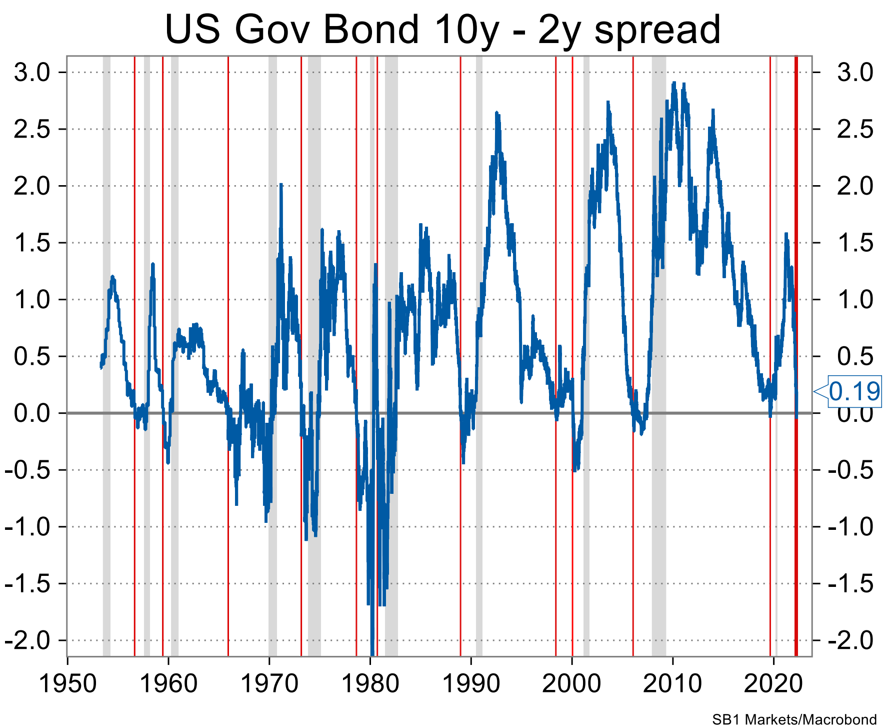


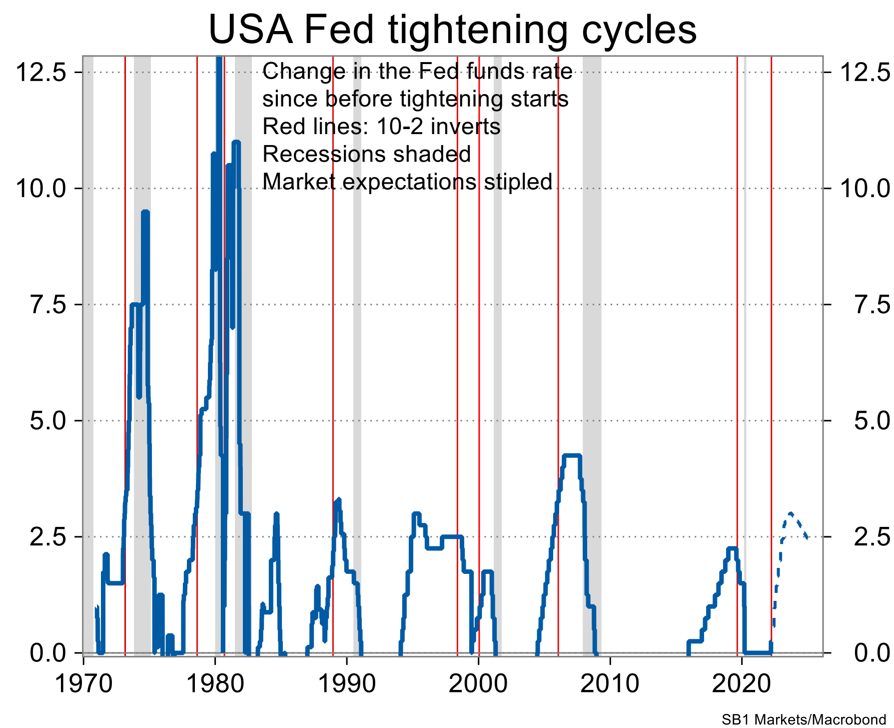




The side show: The curve flattens/inverts when the Fed tightens

– when growth has been too strong for too long. And not because long term interest rates fall

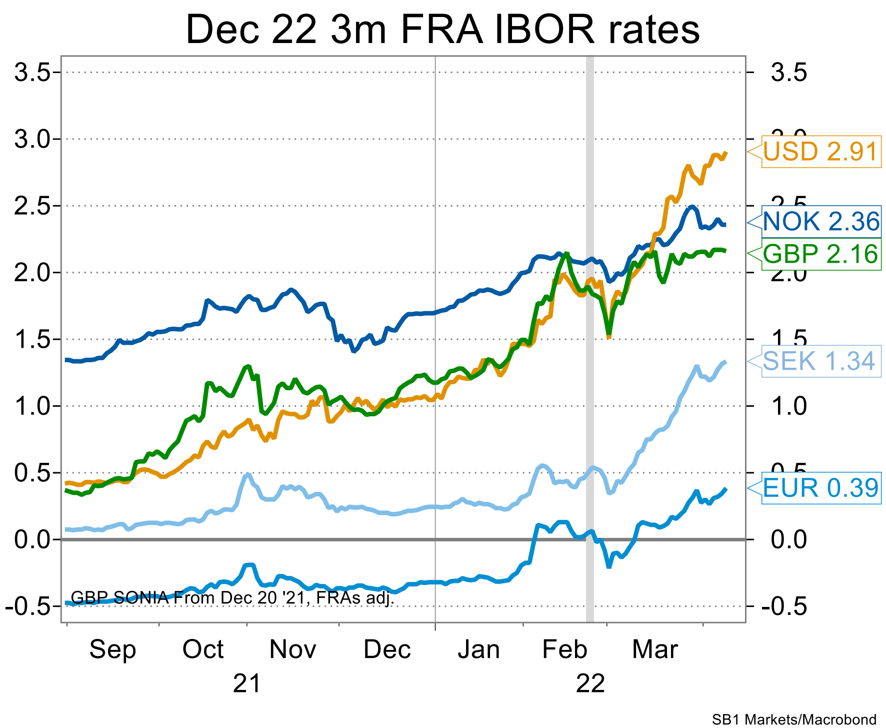


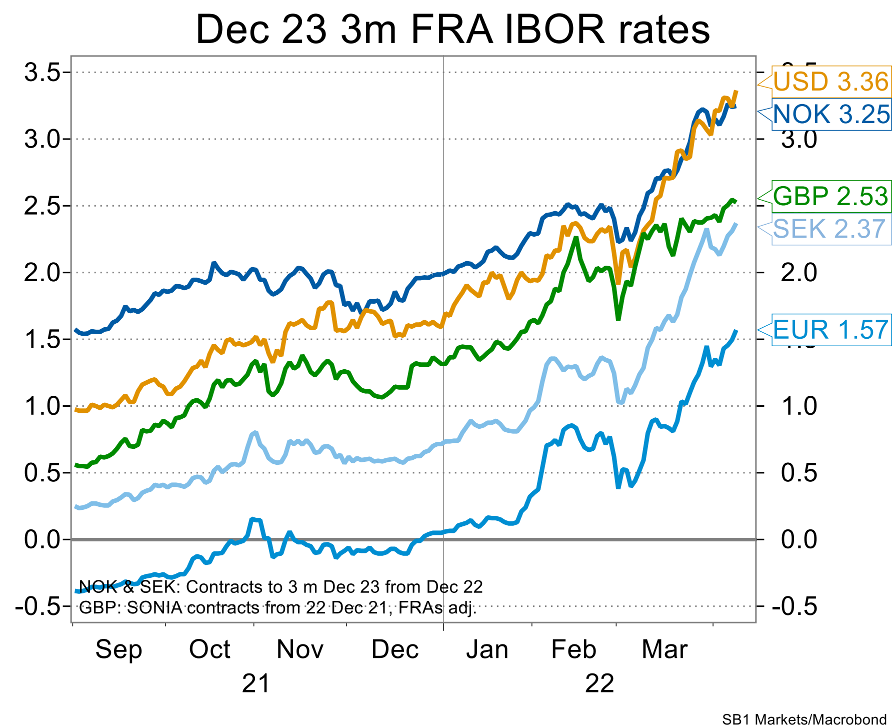


- Thereafter, normally a recession. Not because the curve had flattened but because growth had been too high for too long – and the Fed tried to calm the economy down – and succeeded somewhat too much
- Fed tightened in 1971, 1983 and in 1994 without 'creating' a recession but a recession was the outcome of the 6 other tightening campaigns (but we would not blame the Fed for the 2 months' 2020 'pandemic recession', it was not an 'economic' recession)
- The 10 y -2 y curve has inverted ahead of all recessions, from some few months before up to 2 years before. In 1966 and 1998 the curve inverted without any recession around the corner
- Last week, the 10 y – 2y spread climbed 22 bps to +0.19%. So no more recession risk? Of course, the risk was exactly the same – perhaps a tad higher since the whole curve rose

FRA-rates further up (just the shortest NOK & GBP FRAs flat)

The Dec 22 FRAs 0 (NOK, GBP) to +12 bps (SEK), the DEC 23 FRAs 9 (GBP) to 22 bps (EUR!)

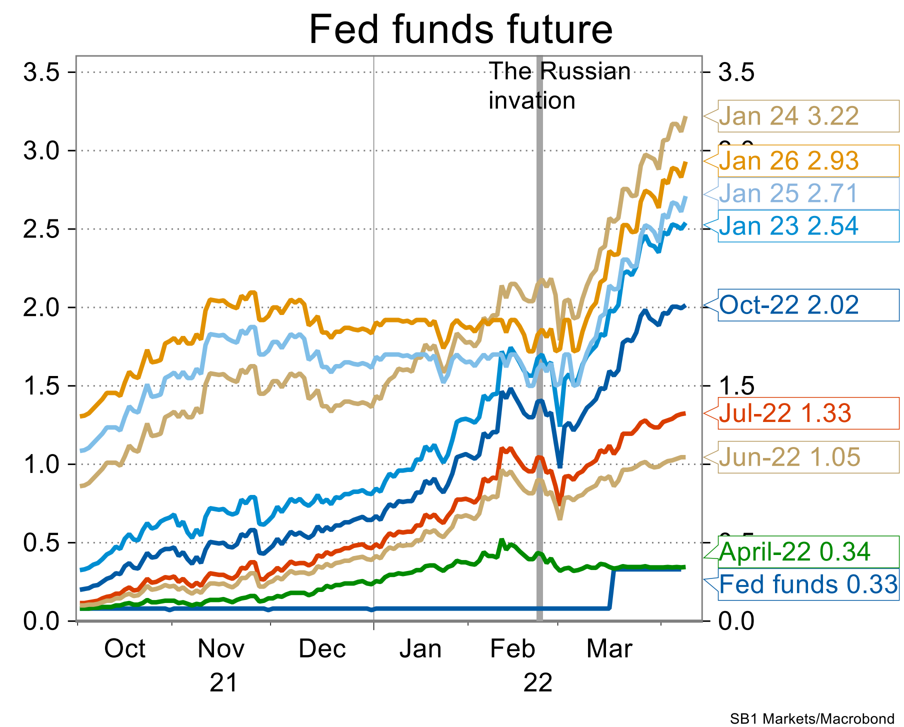


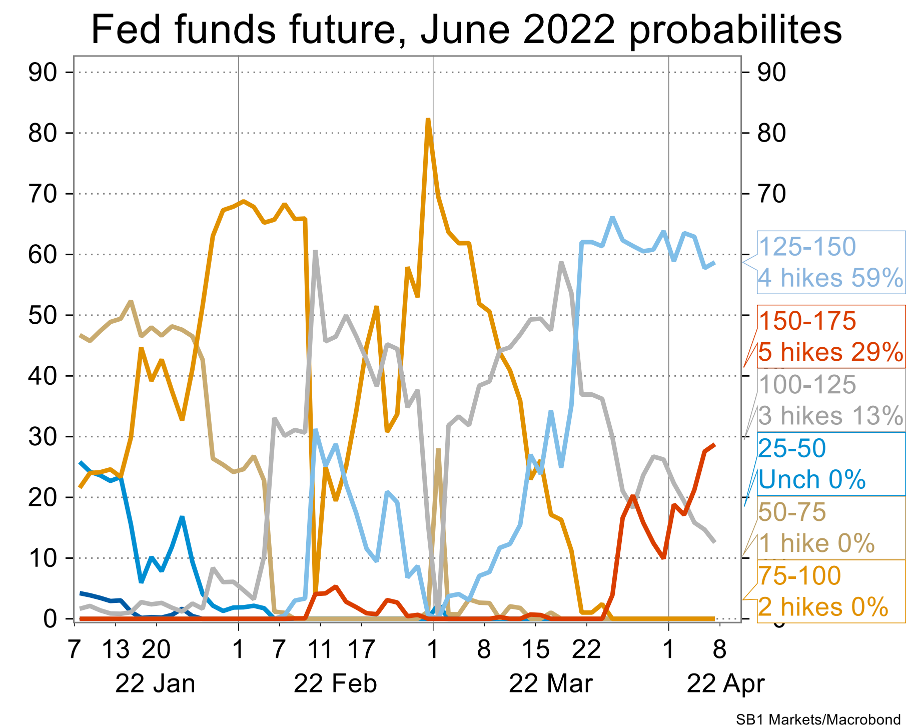


- This is the largest and most ‘co-ordinated’ (anticipated) change in monetary policy we have ever seen in modern times

Fed funds future curve is steeping rapidly. +50 in May, and +50 in June is discount.

And a 75 bps in one go, is more likely than just 25 bps at one of these meetings



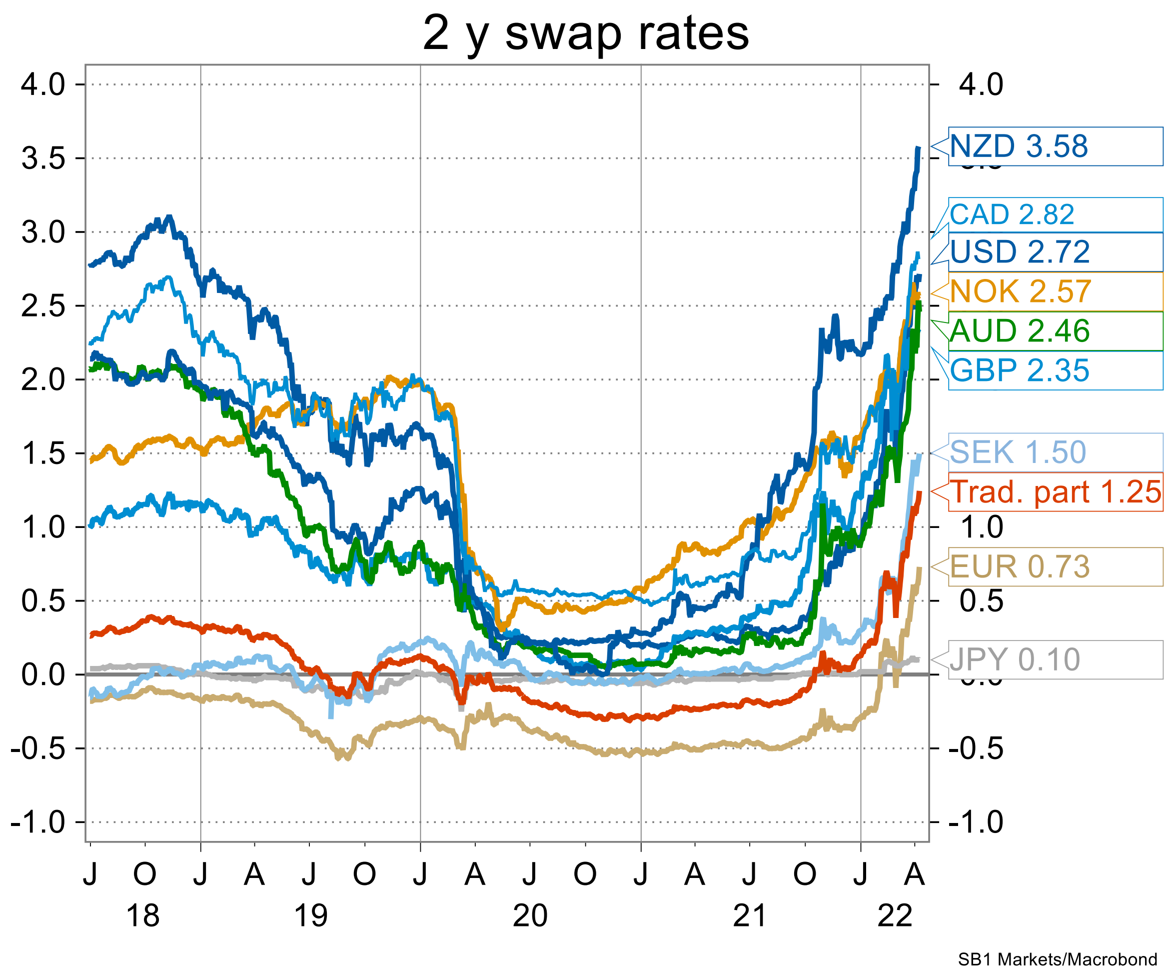


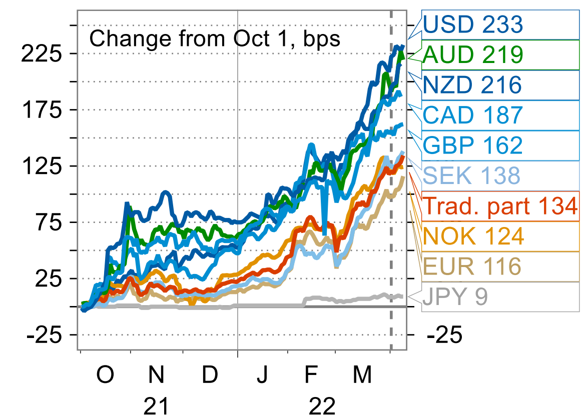
- Is the market going bananas? Well, the Fed has recognised that it is far behind the curve, and the market expect the Fed to reach 1.25% in Q2 – which is still far below a neutral rate
- By the end of 2022, at 2.5% rate is discounted, and then monetary may have become marginally contractive, vs Fed's 2.4% estimated neutral rate

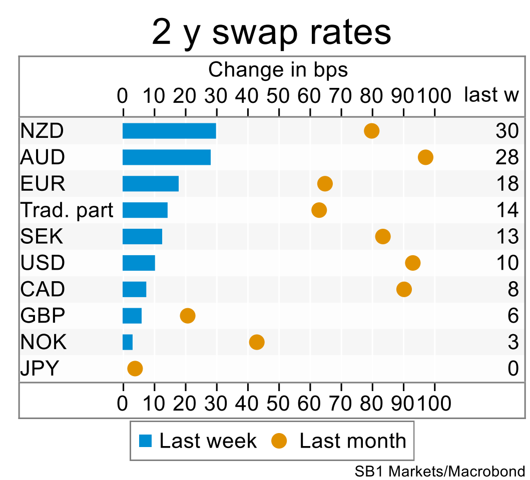
SpareBank 1 MARKETS

The NOK 2 y swap just up 3 bps, trading partners +14 bps (and EUR 18!)

Just JPY rates are well anchored – and the JPY is rapidly losing ground

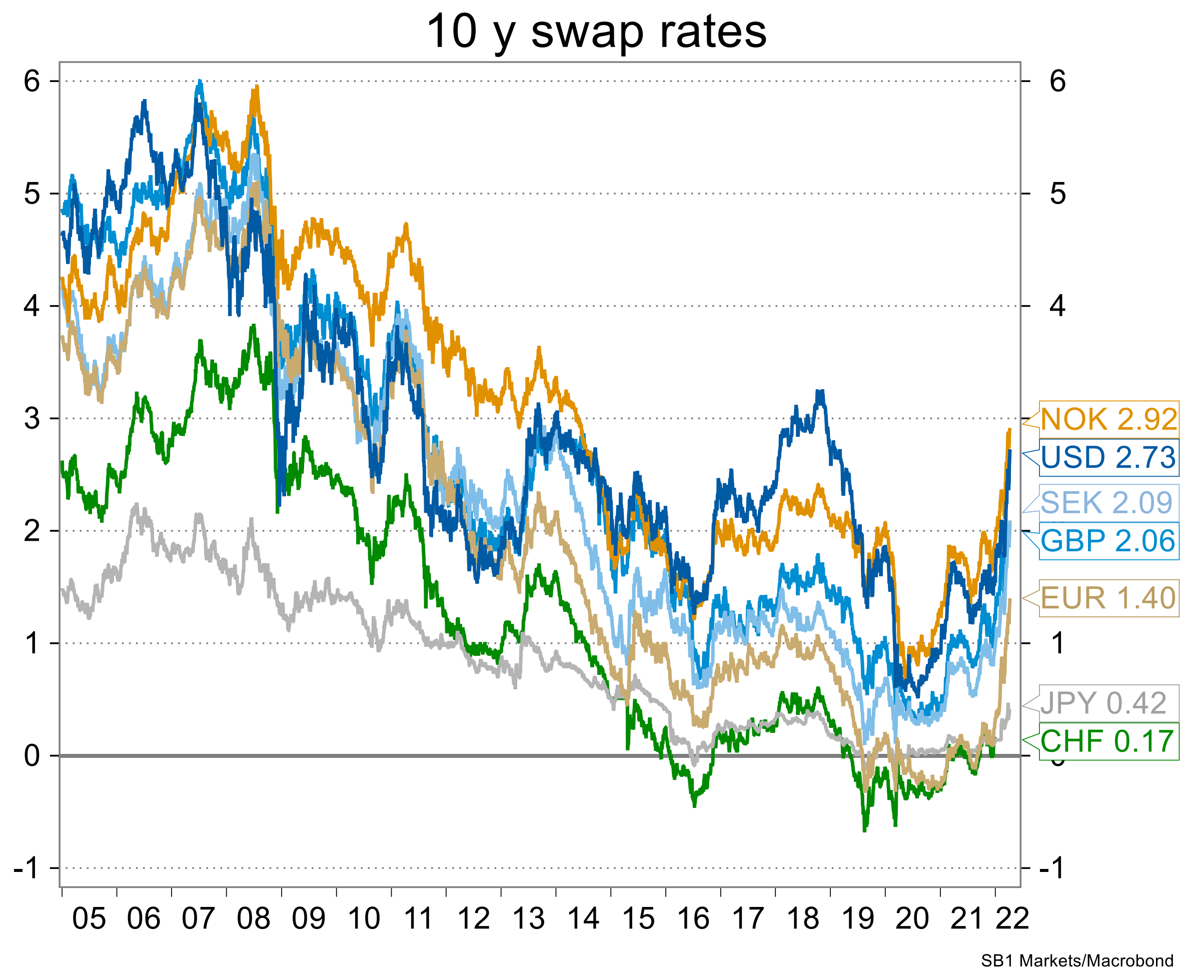


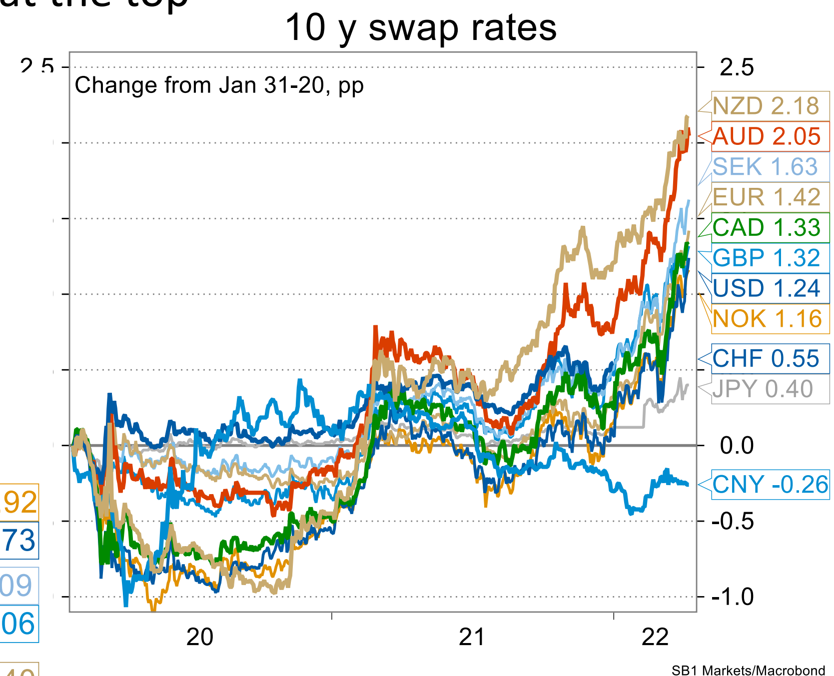


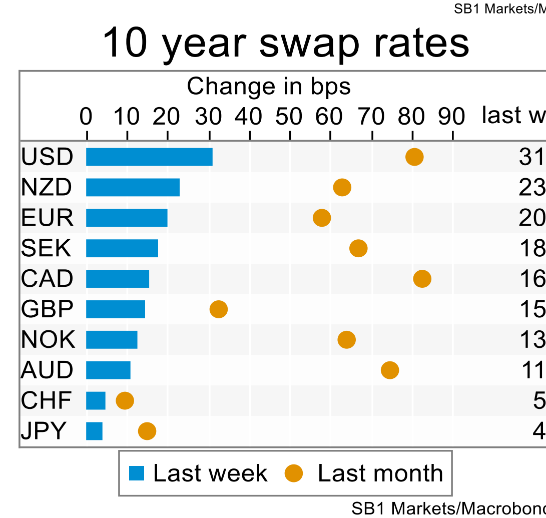


Unusual steep increases in the long end of the curve

Even Japanese yields are creeping upwards. The NOK 10 y at the top

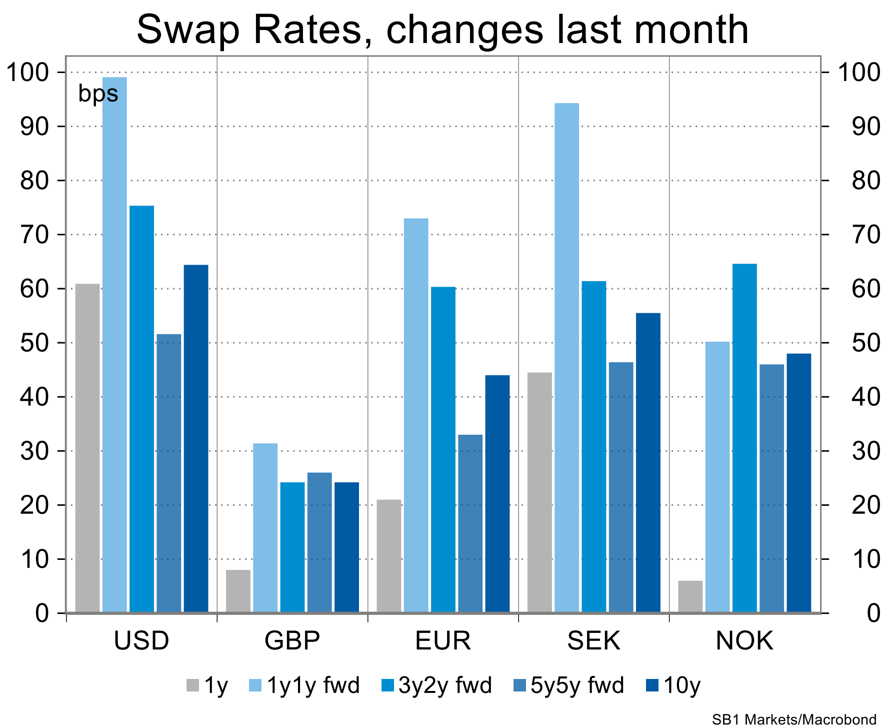


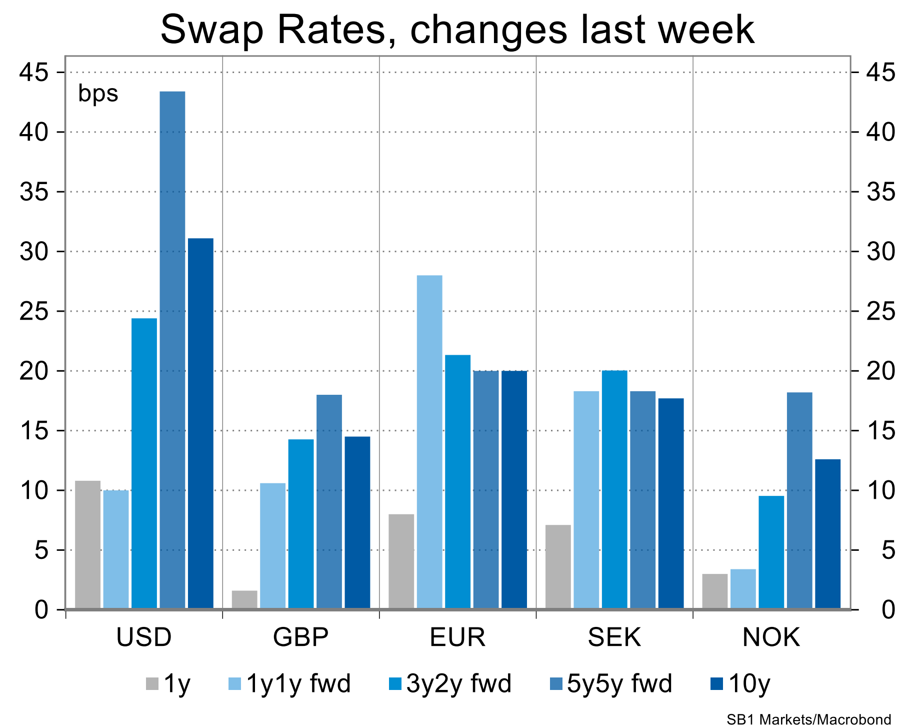




A huge shift in the long end in the US, the QT is coming closer!

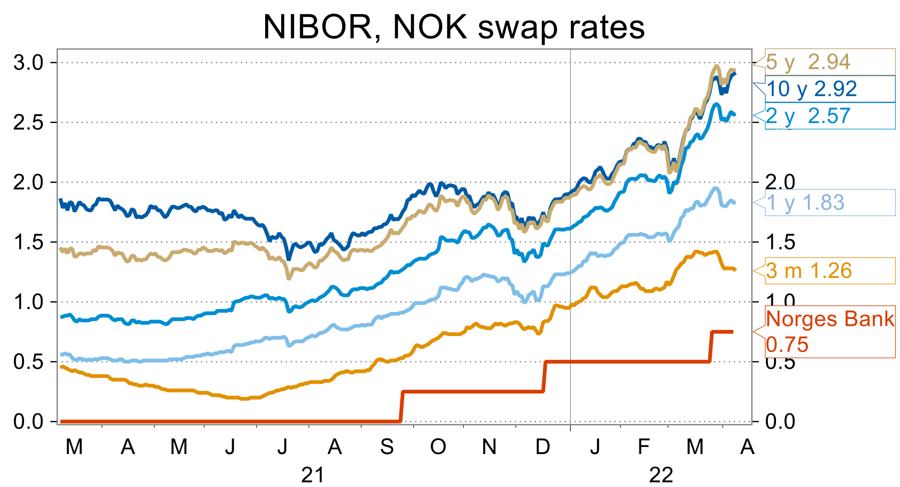
The USD 5 y 5 y fwd up 43 bps in one go! All rates up everywhere. The least in Norway

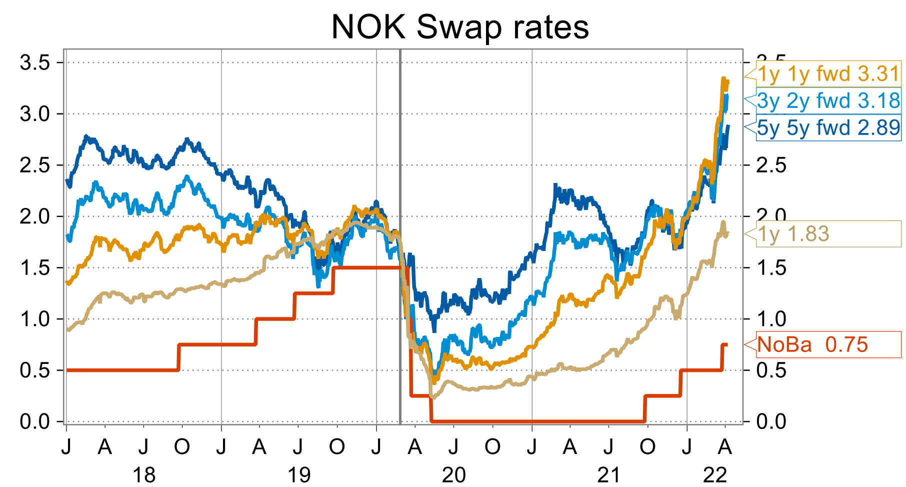


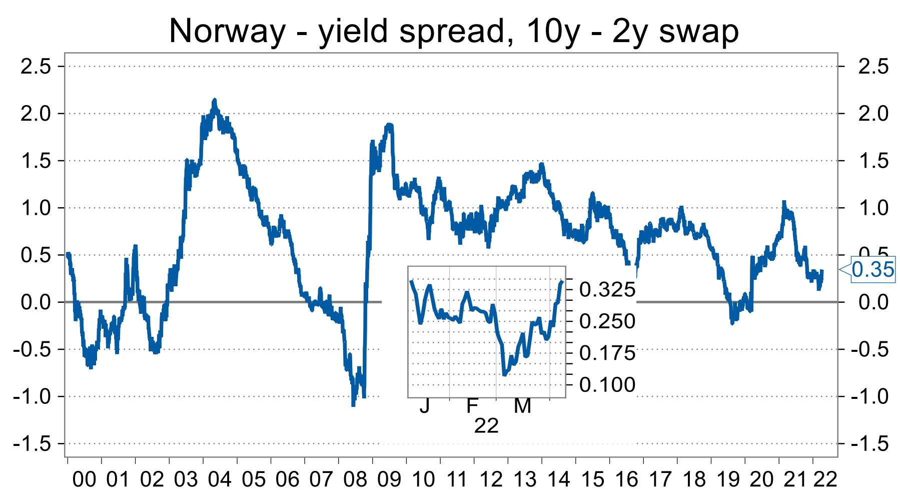


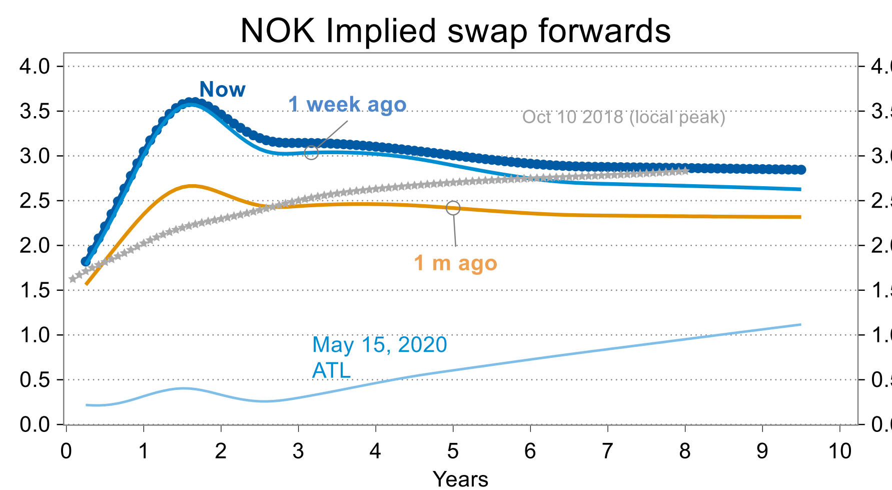
-

All rates up, except the 3m NIBOR – but just the 10 y up to cycle high



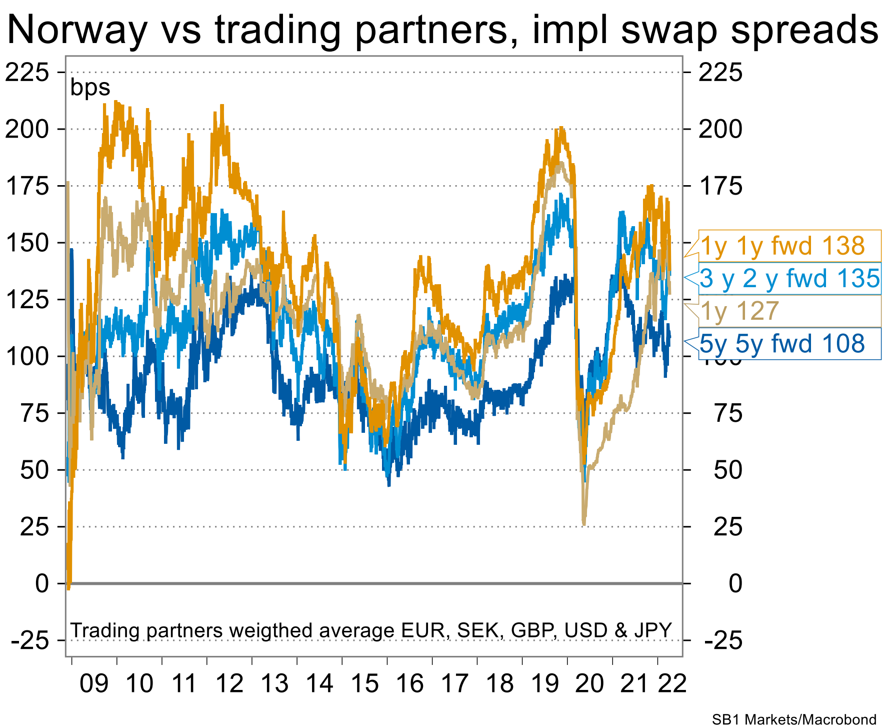


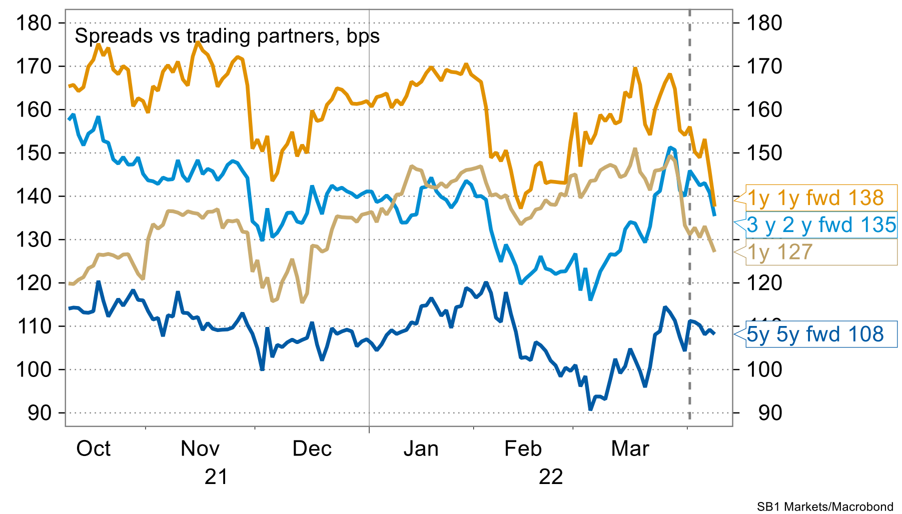


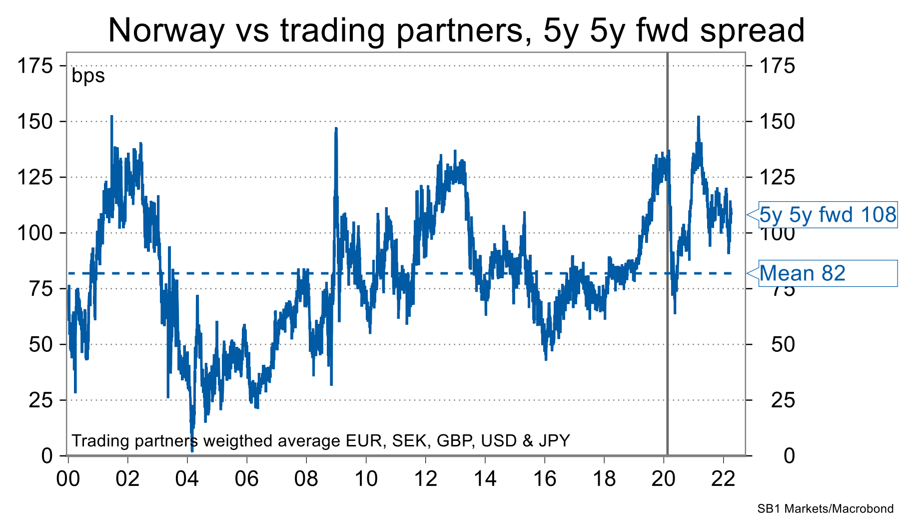


SpareBank 1 MARKETS

Spreads further down last week – most in the short end of the curve

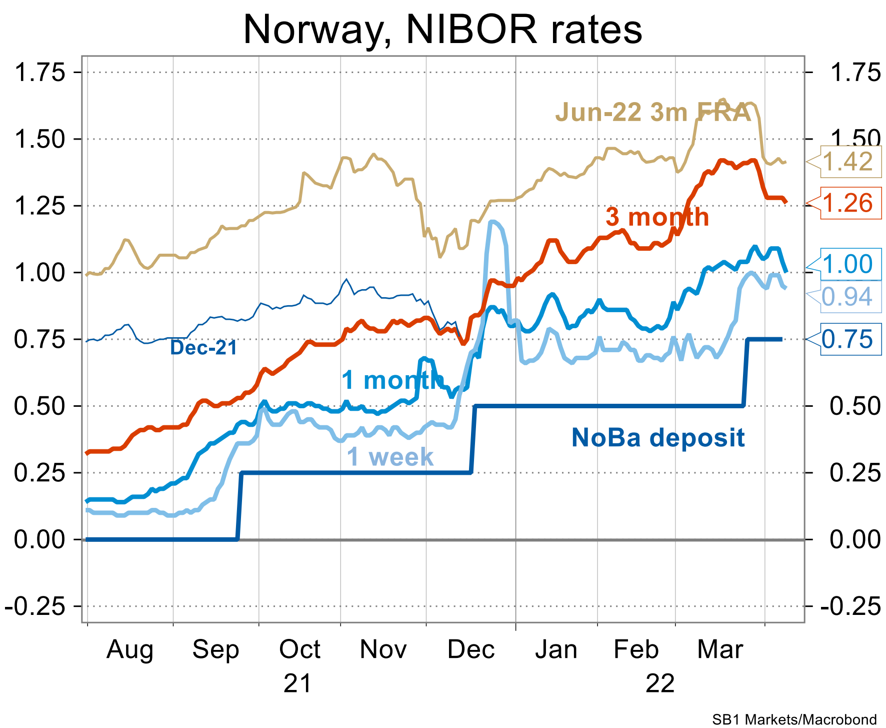


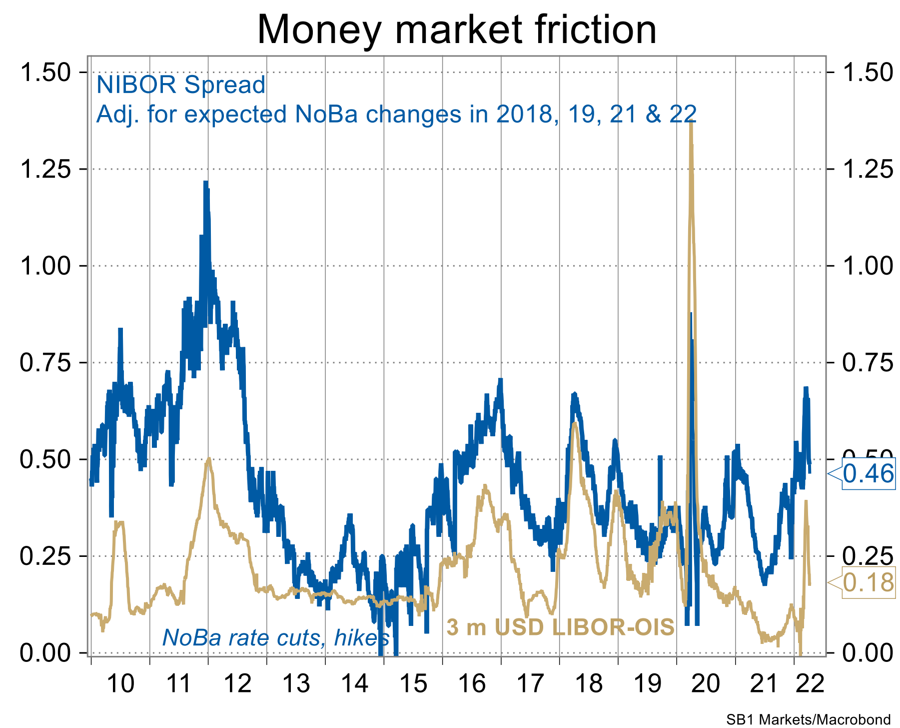




The 3m NIBOR down 2 bps to 1.26%, the NIBOR spread down to 46 bps

(if no hike in May). The USD LIBOR-OIS spread is on the way down too, -5 bps to 18 bps last week



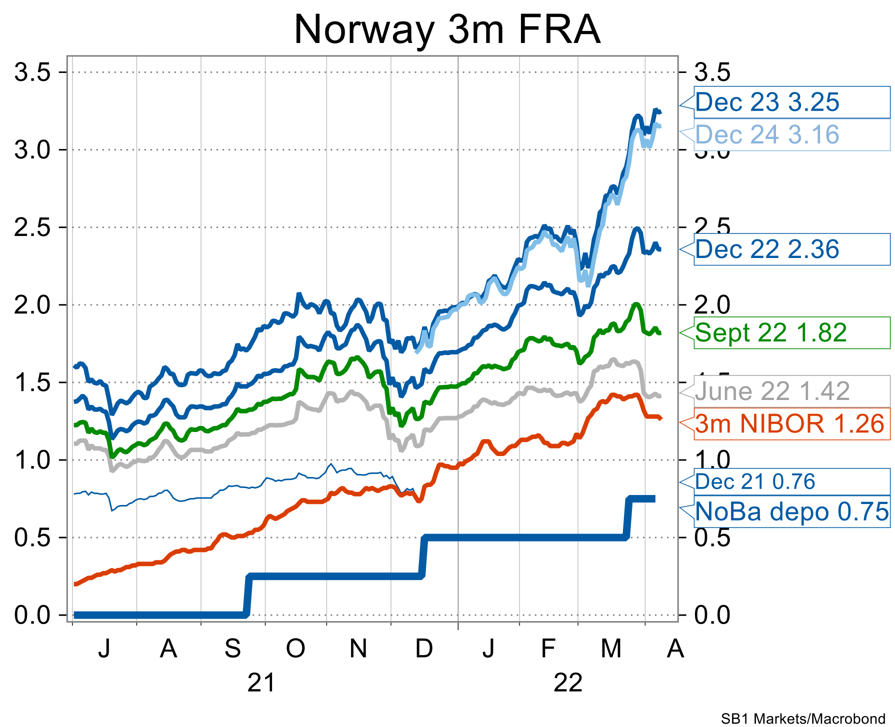


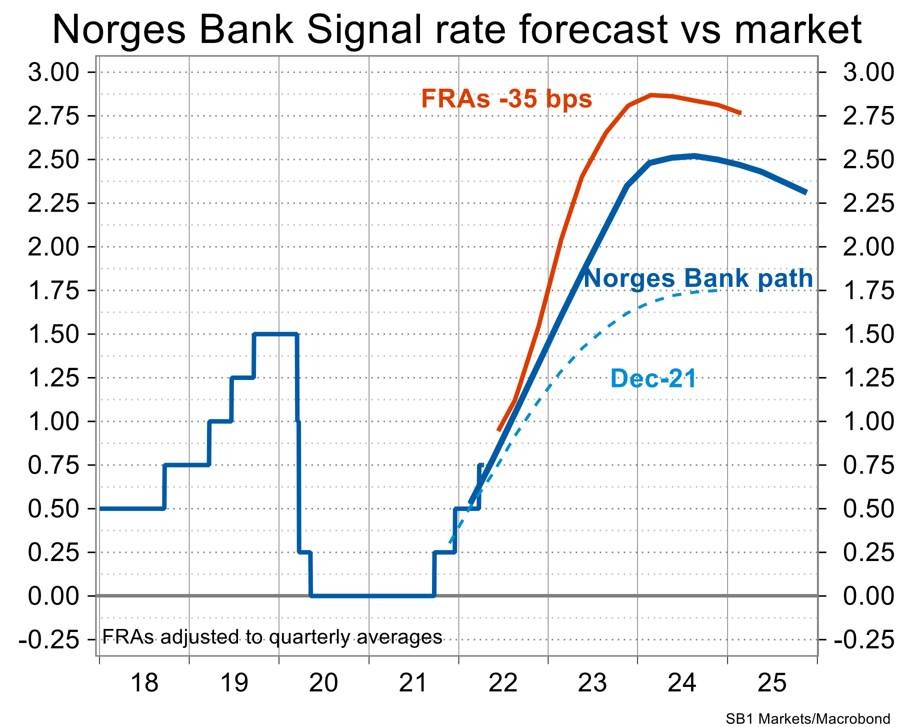
- Both the US and the NOK money market spread has narrowed by some 20 bps the last 3 weeks

SpareBank 1 MARKETS

Longer dated FRAs further up – while the shorter contracts have calmed down

... due to a more normal NIBOR spread, not lowered NoBa expectations





- The **June 3 m FRA** has stabilised at just above 1.4%, down more than 20 bps from before the announcement of NOK 2 bn/day sale against f/x for the Oil fund, which strengthened liquidity in the money market (but money market spreads are down in USD as well)
  - If NoBa hikes to 1% from the present 0.75% at June 23, the average deposit rate in the duration of the June 3 m FRA contract will be 0.98%
  - A 100% probability for a 25 bp hike if the assumed Q3 NIBOR spread is 44 bps. This is not an unreasonable spread – but higher than we would assume market participants shared today. So a small probability for a 50 bps hike is probably priced in. The best counter argument: The current NIBOR spread is 46 bps
- The FRA market still discounts 3 to 4 hikes in H2 (that is, in addition to the March hike, and the expected June hike), well above NoBa's interest rate path which signalled 2 hikes in H2 (total 4 in 2022), with a minor probability for a 3rd hike

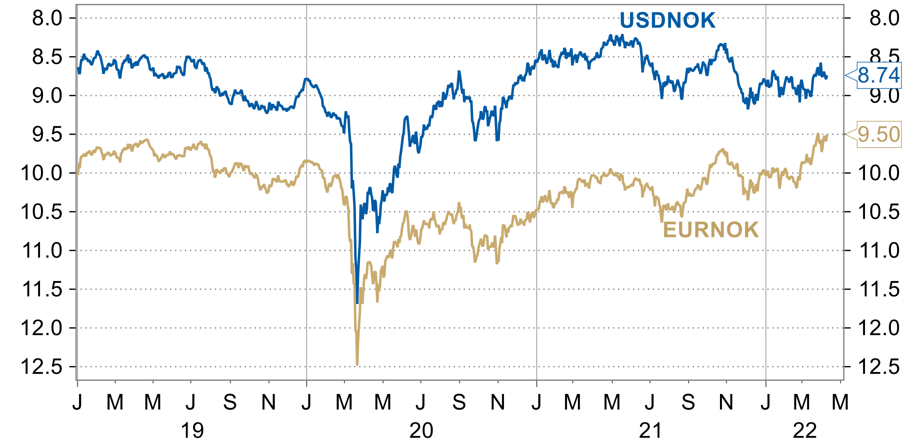
The EUR on a slippery slope, together with the JPY. NOK top of the pop

… from the bottom last week, and the top 2 weeks ago! EUR is hit by war & sanctions, the energy bill

EURUSD

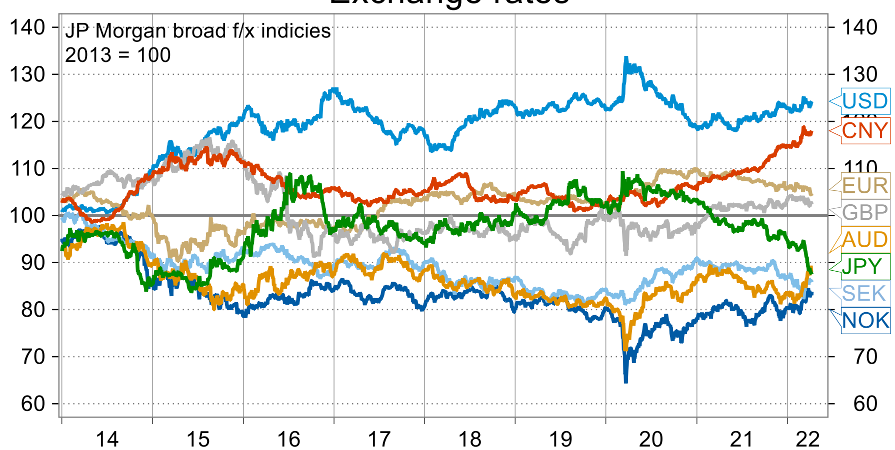
SB1 Markets/Macrobond

NOK vs EUR & USD



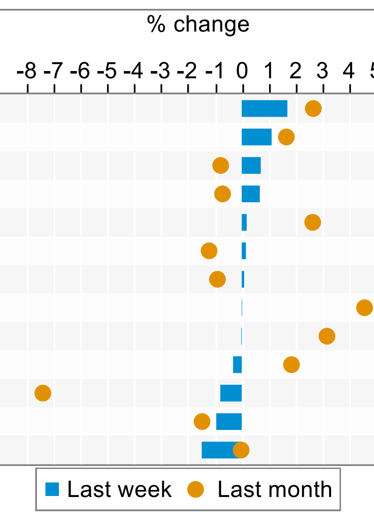
SB1 Markets/Macrobond

Exchange rates



SB1 Markets/Macrobond

F/x markets

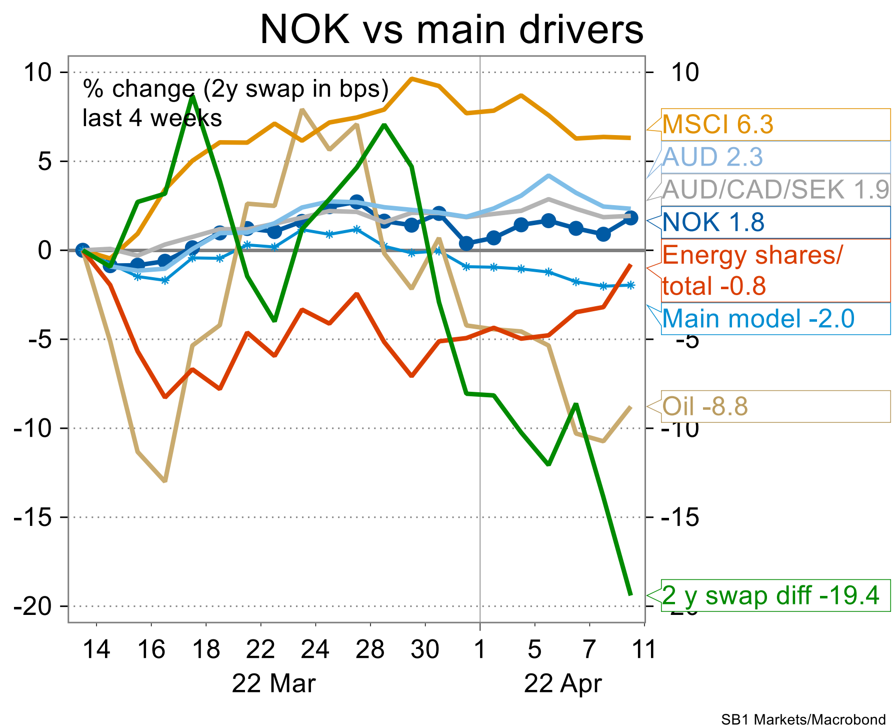


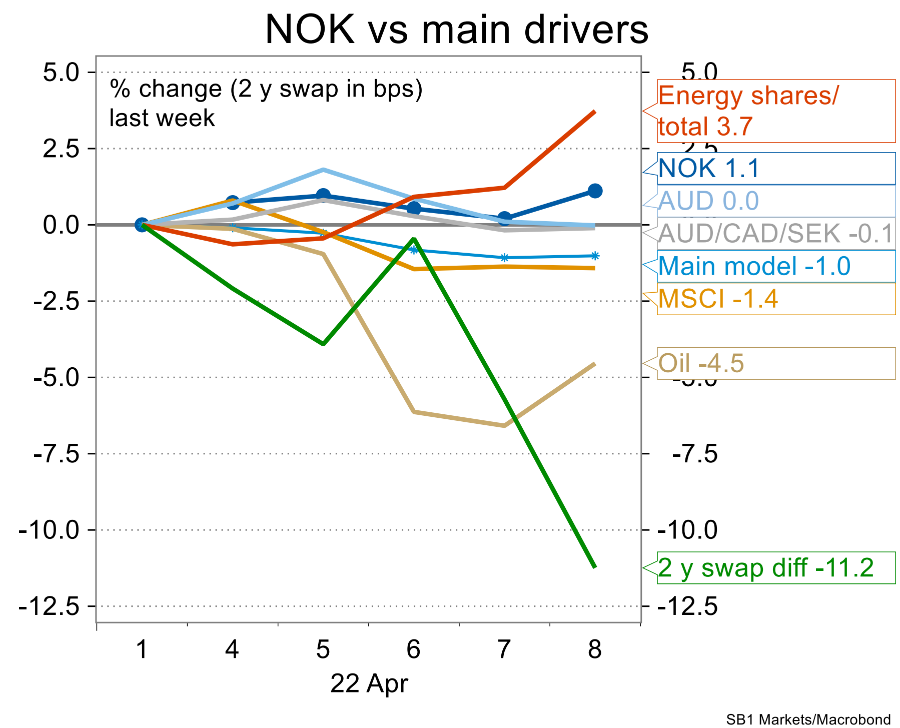
JP Morgan f/x broad indices + 3 f/x crosses	Last week	Last month
NOKEUR	1.7	2.7
NOK	1.1	1.7
USD	0.7	-0.8
CNY	0.7	-0.7
NOKUSD	0.2	2.6
GBP	0.2	-1.2
CHF	0.1	-0.9
SEK	0.0	4.6
AUD	0.0	3.2
CAD	-0.3	1.9
JPY	-0.8	-7.4
EUR	-0.9	-1.5
EURUSD	-1.5	0.0

SB1 Markets/Macrobond

The oil price & NOK swap rates fell further – but the NOK gained 1.1%!

Our model suggested -1.0%. NoBa's NOK 2bn/d sales have not depressed the marked (for good reasons)





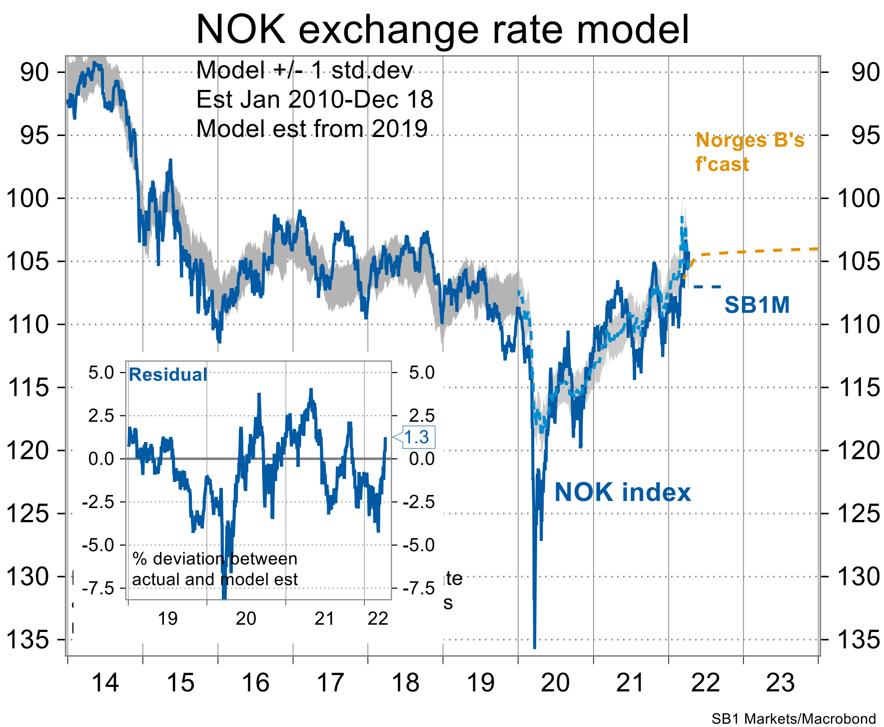
The status vs. the normal drivers:

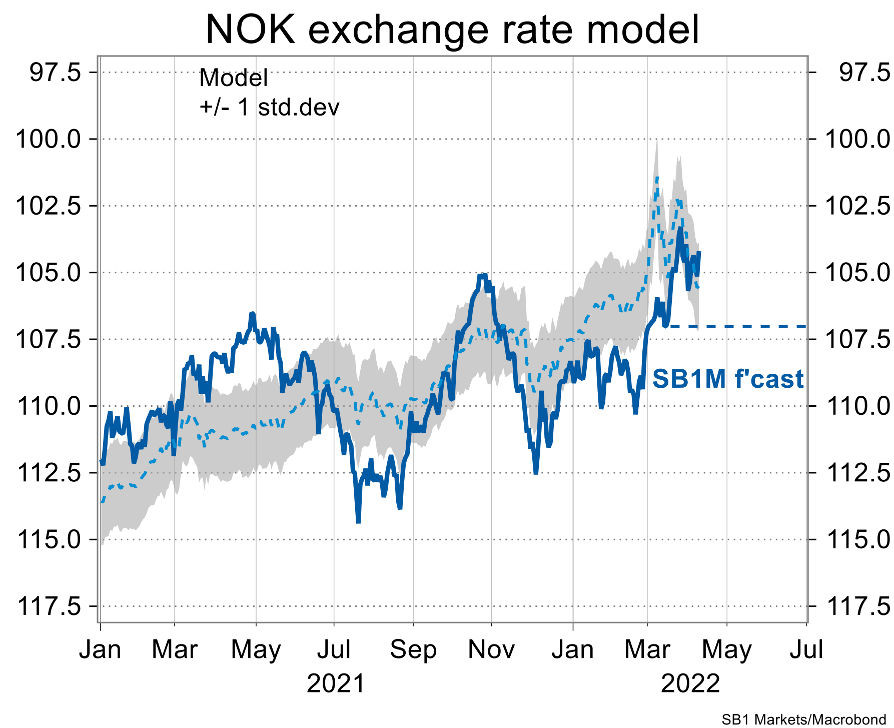
- ***The NOK up 1.1% - and the NOK is 1.3 above our model est (from -0.9%)***
  - » The previous week, the NOK fell when NoBa announced larger NOK sales than expected (to transfer f/x to the oil fund). However, as we showed last week, the underlying correlation is the opposite, the NOK is strong when NoBa sells more NOK, because the reason is higher tax revenues from oil companies when petroleum prices are high! Last week, the NOK rose, even if the oil price fell, and the 2 y interest rate spread vs trading partners narrowed further!
- The NOK is 2.5% weaker than our AUD/CAD/SEK-model, our 'super-cycle peers', predicts (from -3.5%)
- NOK is 5% stronger than a model which includes global energy companies equity prices (vs the global stock market) (unch)

At this and the following pages we have swapped Norges Bank's I44 index for JP Morgan's broad NOK index and rebased it to the current index value for the I44. The I44 has an earlier closing time than the 'official' closing time for f/x crosses. There are no substantial difference between these two indices over time

SpareBank 1 MARKETS

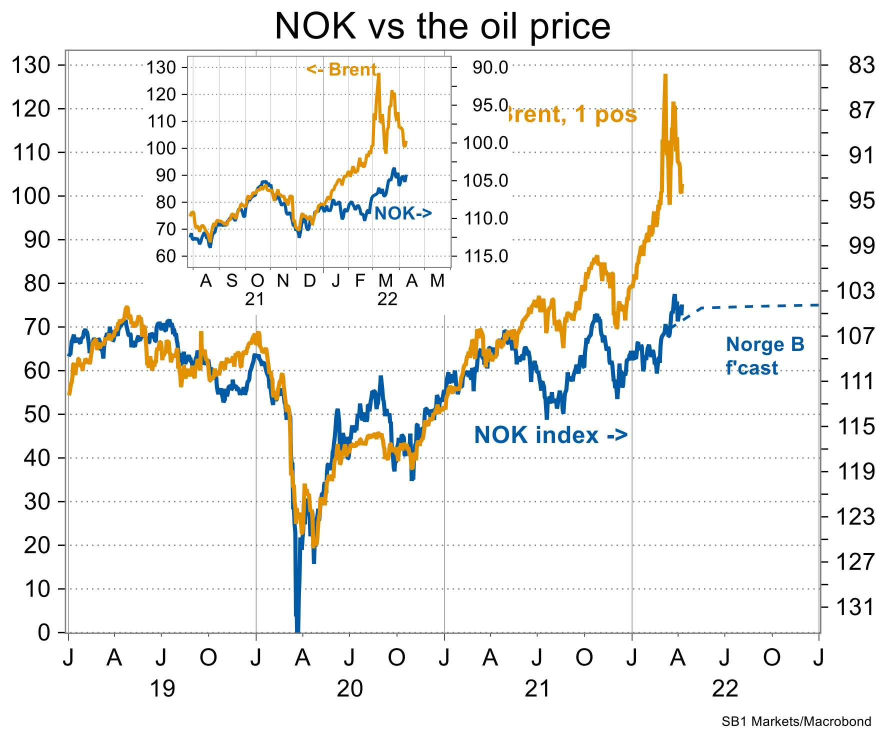
The NOK jumped to 1.3% above our model estimate!

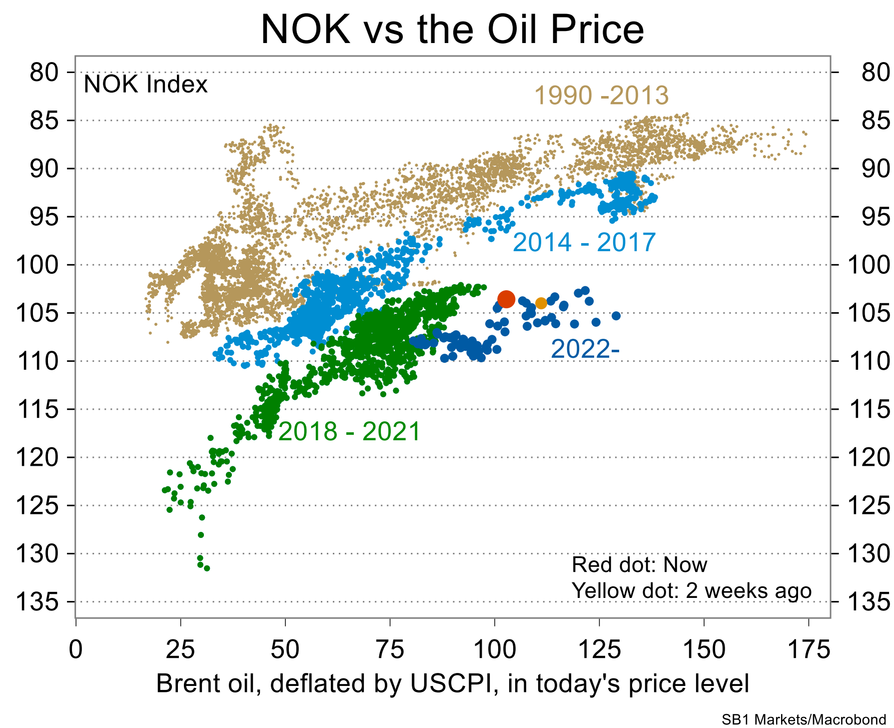




The NOK up, even if the oil price fell. NO impact of NoBa's NOK 2bn/day sales

Yes, the NOK fell the day sales were announced but that's all. Over the past 2 weeks: Oil down, NOK up

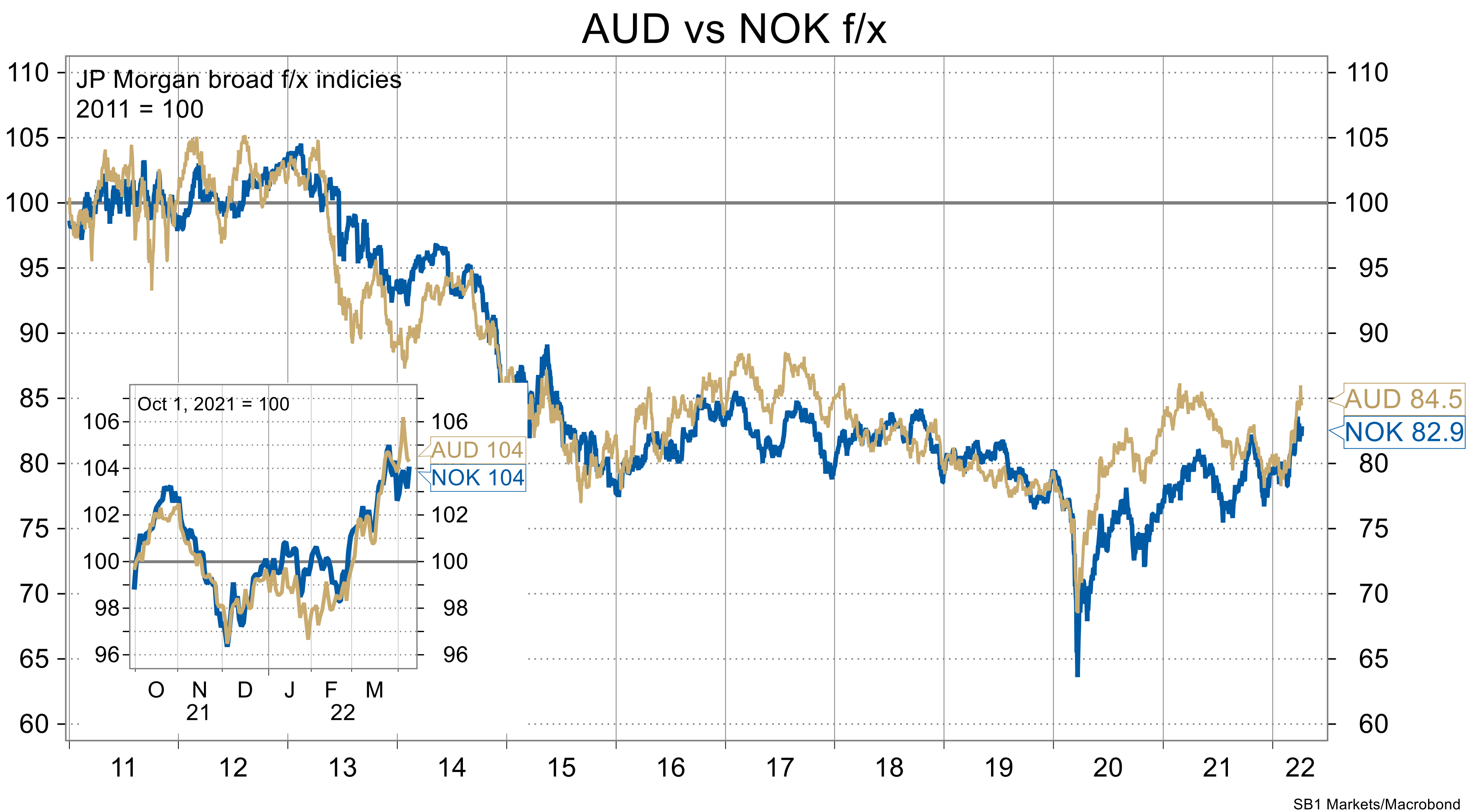




- The NOK fell Thursday March 31, but over the week not more than our model suggested – though partly due to a decline in the interest rate spread vs our trading partners, which very likely was induced by the supply of NOK liquidity through the NOK sales (which were somewhat larger than anticipated)

SpareBank 1 MARKETS

The NOK and AUD came closer again last week

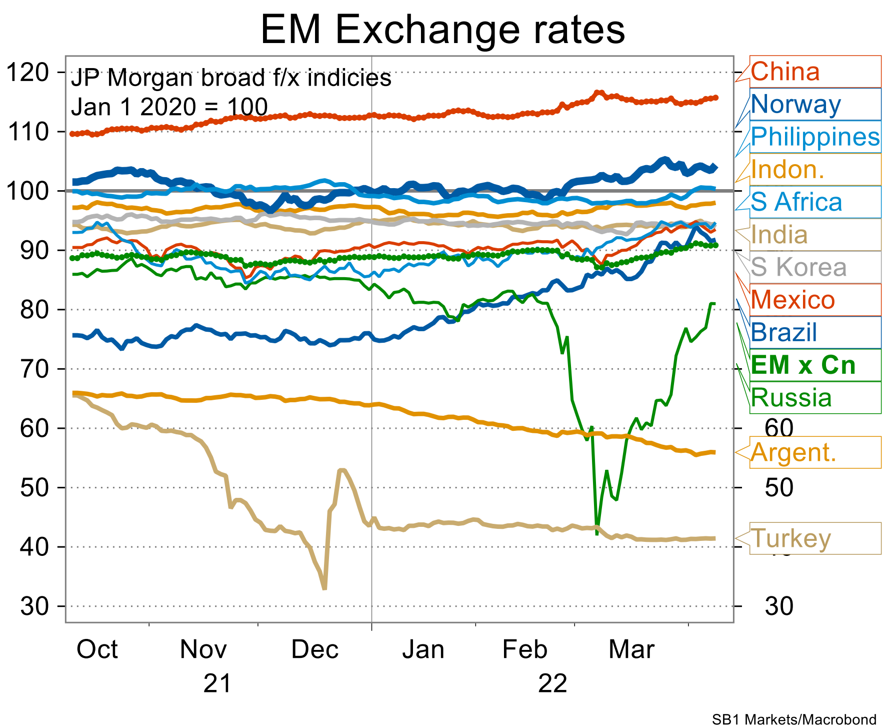


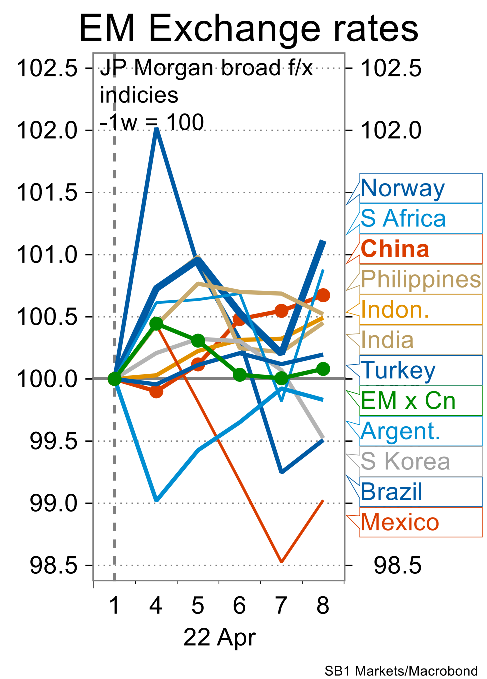
The two f/x indices are back to the 2011 ‘parity’ (vs each other, from which they never since have deviated much)

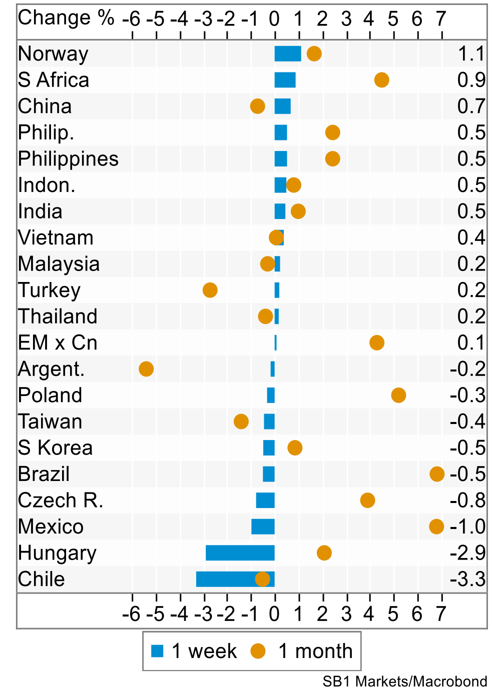
SpareBank 1 MARKETS

The rouble back to start, at least in the official market

Most other EM currencies up too – but the strong CNY has been sagging since early march







DISCLAIMER

SpareBank 1 Markets AS ("SB1 Markets")
This report originates from SB1 Markets' research department. SB1 Markets is a limited liability company subject to the supervision of The Financial Supervisory Authority of Norway (Finanstilsynet). SB1 Markets complies with the standards issued by the Norwegian Securities Dealers Association (VPFF) and the Norwegian Society of Financial Analysts. This message, and any attachment, contains confidential information and is intended only for the use of the individual it is addressed to, and not for publication or redistribution.

No investment recommendation
Any views and opinions relating to securities mentioned in this report should be interpreted as general market commentary, and not as investment recommendations within the meaning of Regulation (EU) No 596/2014 on market abuse (market abuse regulation) and associated rules, as implemented in the relevant jurisdictions.

No personal recommendation
The information contained in this publication is general and should not be construed as a personal recommendation within the meaning of the Norwegian Securities Trading Act, section 2-3 (4). It does not provide individually tailored investment advice regarding a particular financial situation, investment experience, risk profile or preferences of the persons who may receive this report. For tailored investment advice regarding stocks mentioned in this publication, please consult our brokerage desk or your individual investment advisor.

Research for the purposes of unbundling
This report is deemed to constitute a minor non-monetary benefit for the purposes of the inducement rules under MiFID II. The report is publicly available on our website (no log-in required).

Conflicts of interest
The authors of this report do not (alone or jointly with related persons) own securities issued by the companies mentioned in this report. SB1 Markets, affiliates and staff may perform services for, solicit business from, hold long or short positions in, or otherwise be interested in the investments (including derivatives) in any stock mentioned in this publication. To mitigate possible conflicts of interest and counter the abuse of confidential information and insider knowledge, SB1 Markets has set up effective information barriers between divisions in possession of material, non-public information and other divisions of the firm. Our research team is well versed in the handling of confidential information and unpublished research material, contact with other divisions, and restrictions on personal account dealing. The views expressed in this report accurately reflect the analyst's personal views about the companies and the securities that are subject of the report, and no part of the research analyst's compensation is related to the specific recommendations or views expressed in this report. Please refer to our webpage for an overview of all investment banking assignments carried out in the last 12 months: www.sb1markets.no. Note that assignments subject to confidentiality are excluded

Accuracy of sources
All opinions and statements in this publication are, regardless of source, given in good faith, and may only be valid as of the stated date of this publication and may be subject to change without notice. SB1 Markets has taken all reasonable steps to ensure that the information contained in this report is true and not misleading. Notwithstanding such efforts, we make no guarantee as to its accuracy or completeness.

Risk information
Return on investments is inherently exposed to risks. The value of an investment position may both rise and fall during the investment period. If the return on investments is positive at one time, there is no guarantee that it will remain such in future. In certain cases, losses may exceed the sum of the original investment.

Limitation of liability
Any use of information contained in this report is at your own individual risk. SB1 Markets assumes no liability for any losses caused by relaying on the information contained in this report, including investment decision taken on the basis of this report.

Limitation on distribution
This publication is not intended for, and must not be distributed to, individuals or entities in jurisdictions where such distribution is unlawful.