



MARKET PERSPECTIVE | JULY 2022

# The story so far



## Foreword

The investment mood has darkened since May's *Market Perspective*. Objectively, however, little has changed.

The risks posed by the conflict in Ukraine still dwarf all others. Its dreadful human cost continues to rise, but in impersonal logistical and territorial terms it has so far been contained. Its lasting geopolitical significance remains unclear.

Recent market volatility has been mostly driven instead by more familiar, cyclical concerns. Market expectations have traced a clear storyline – but it remains just that. There have been no game-changing data releases. Higher interest rates have long been on the cards. Risks are not as one-sided as pundits assert.

The US economy is closer to technical recession than we'd thought. But high-frequency indicators look less fragile. Recessions need not be accompanied by financial crisis. And just two short years ago of course we saw an economic downturn that put "typical" recessions in the shade.

Meanwhile, as the wall of worry has grown, value has become more visible. Even at their highs we felt stocks could deliver long-term inflation-beating returns, though projected returns were the smallest we'd compiled. Now, at today's lower valuations, headroom may be rising.

Even the bond market is looking less outlandishly expensive. US Treasury yields recently matched the trend inflation we expect, and we are a bit less wary.

Cash is the exception perhaps: money rates have not yet risen far. But it perhaps still has most going for it tactically: it is less volatile than securities. We also think it can be a good hedge for cryptocurrency risk.

We focus on the gap between narrative and fact below. We also show where inflation is most intense; we offer some historic perspective on industrial unrest; and we preview the autumn's US mid-terms.

As we write, a new UK administration looms, but we doubt this materially affects the outlook – even for UK-based portfolios.

**Kevin Gardiner / Victor Balfour / Anthony Abrahamian**  
Global Investment Strategists

Image sources: Dollar banknotes  
© Gettyimages

Wealth Management  
New Court  
St. Swithin's Lane  
London EC4N 8AL  
+44 20 7280 5000  
rothschildandco.com

© 2022 Rothschild & Co  
Wealth Management

Publication date: July 2022.  
Values: all data as at  
30 June 2022.

Sources of charts and tables:  
Rothschild & Co or Bloomberg unless  
otherwise stated.



# Narrative and reality

## UNFAMILIAR RISKS...

This continues to be the most difficult investment situation we have had to analyse. Not because of inflation and interest rate risk: we have been around that course many times before, albeit not recently, and we think we know what is at stake. But the conflict in Ukraine threatens to reverse an important component of the incremental progress that has implicitly supported investors' collective risk appetite in recent times. Tens of thousands of our neighbours have lost their lives unexpectedly and violently.

Since perhaps 1962 the world has, most of the time, been getting safer. There have been some terrible interruptions to that trend, but it has allowed business and investors mostly to take for granted an increasingly more integrated and open global economy. The rules of the game were flawed – they failed for example to address the market externalities that threaten the environment – but they were known. Suddenly, it is easier to imagine a great unravelling, and the grimmest of global outcomes.

Nonetheless, we continue to advise against adopting a new “Big Picture” just yet. It is way too soon to talk of Western decline, the end of globalisation, a global energy shortage or worse. China seems to be keeping a distance from its ally, and has not pressed its claim on Taiwan more forcefully. Alongside the grim scenarios we can imagine more constructive outcomes too.

Our central assumption then remains that neither wider conflagration nor peace is upon us, but that the attrition continues. Awful though it is, it may not be transformative for the global economy.

## ... AND FAMILIAR ONES

### Inflation risk...

Higher oil prices, and the possibility of localised energy rationing in parts of Europe this winter, have augmented and amplified short-term inflation risk, but there was an underlying threat even before the conflict. If peace were to break out, inflation would still be an issue.

The inflation risk we identified in our January 2021 report “Inflation: revision notes” was rooted not in energy and food prices, but in a global economy that would have less spare capacity than usual, and in which aggregate demand was being boosted by needlessly low interest rates.

The heatmaps below (figures 2 and 3) show how widespread the upturn has been. That said, there are a few clear outliers – notably Turkey, where prices have almost doubled in the last year; and at the more benign end of the scale, China.

### ... leads to interest rate risk...

Central banks have belatedly realised their mistake. The prospect of faster and bigger rate rises than markets had previously been encouraged to believe has been one of the reasons for the recent sell-off in bonds and stocks. The rethink ought not to have been a major surprise.

(Of course, if rates didn't rise now, we'd have to take seriously the possibility of lost monetary credibility and a more dramatic sell-off further on up the road. There is no escaping the fact that interest rates have been unsustainably low – the issue for asset allocators is how best to navigate the likely normalisation.)

Among the big central banks, market expectations for US policy rates have risen most. Talk of allowing the economy to run hot for a while – the hubristic approach to monetary policy unveiled in 2020 – has been quietly dropped. At the start of the year the prospective rise in rates in 2022 was put at 75bp, with a projected peak of just over 1.5%. At the height of the recent sell-off, those figures had risen to almost 300bp and 4% respectively. The Fed's latest hike was a striking 75bp, its largest move since 1994, taking rates to 1.5–1.75%. That peak rate (in 2023) has just fallen back to 3.4% as expectations of recession have taken root (see below).

The ECB may not have started to raise rates yet, but it is about to do so, and the change in its language since the end of 2021 (when it was saying rates would stay put in 2022) is in some ways more striking than the Fed's. Euro rates are not expected to peak for several years, albeit at around 2% only (current: -0.5%). The Bank of England was the first of the big banks to raise rates, in December, but has since sounded less, not more, decisive. Peak UK rates are projected at 3.0% in early 2023 (current: 1.25%).

The prize for a determined defence of monetary credibility should perhaps go to the Swiss National Bank, which stepped out of the ECB's shadow with a 50bp hike in June, and signalled that it would also tolerate a stronger exchange rate (a further tightening of monetary conditions). The SNB's move was particularly impressive because its inflation rate at the time was less than 3% – one of the lowest around – and Switzerland tends to be relatively sheltered from both external commodity-led surges and from domestic wage-price tensions. That said, policy rates are still only -0.25%.

The prospect of sharply higher policy rates has directly hit bonds, mostly by pushing real yields higher – the break-even inflation rates priced into longer-dated (10-year) inflation-linked bonds have actually been falling in recent months. Higher interest rates and bond yields in turn undercut equity valuations; they also raise expectations of an economic downturn, and hit expected corporate profits too, undercutting stock prices further. That expected economic downturn helps explain why those implied long-term inflation expectations have been falling – and most recently, why prospective peak policy rates have themselves started to fall back.

#### **... and recession risk**

A more dramatic near-term monetary tightening, a bigger risk of recession, an earlier renewed reduction in interest rates – markets have comprehensively redrawn their view of the prospective business cycle in the space of a few weeks. In combination with the news industry, the result has been a compelling fast-forward narrative in which economists compete to raise their estimated probabilities of recession, and in which a material, imminent downturn is inevitable.

But that is all it is for the time being: a story. It seems compelling, but data are currently pointing to a slowdown, not yet a collapse. Economists – and markets – are hugely fallible. As Paul Samuelson said, "The stock market has predicted nine of the last five recessions", and we think the bond market – where part of the US yield curve has inverted – is fallible too. Confident talk of "X% probability of recession" is grandstanding, not analysis.

It does look as if the US economy has not grown much, if at all, in the second quarter. If it turns out to have shrunk, that would be a second consecutive quarterly dip in GDP – and this is a widely used definition of recession. But the GDP arithmetic is not always a good guide to the severity of a downturn – quarterly movements can be affected by such volatile components as net trade and inventories – and higher frequency data such as the manufacturing ISM survey are still at levels some way above those seen during “official” (NBER-defined) recessions (figure 1). Weekly unemployment claims are also still close to multi-decade lows, and job openings close to record highs, both far from recessionary levels. And again, even “official” recessions vary hugely in severity and length.

### HOW BAD A DOWNTURN?

We would focus less on how we label the downturn, and more on how significant it will prove. We think there are good reasons for thinking it may not be dramatic – including the widely overlooked point that the prospective interest rates that are shaping the downturn story are lagging inflation, not leading it. Projected long-term real interest rates have risen in the last year – but current short-term real rates have fallen, and are much lower than seemed likely, because inflation has overshot so.

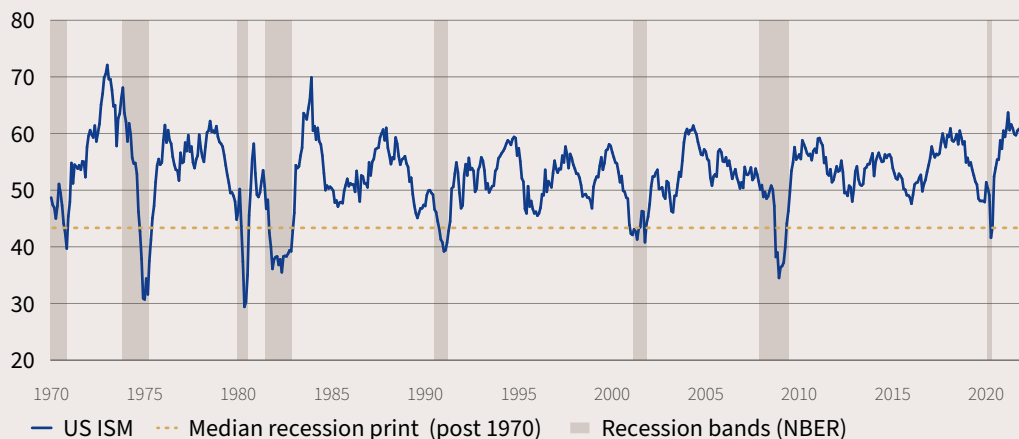
Of course, wages have not kept pace with those higher prices. But they have still accelerated, while many mortgage rates have been fixed. And some debt burdens will turn out significantly lower than feared – for example, those of many Western governments, who will have correspondingly more room for fiscal manoeuvre should they need it.

Meanwhile, as we noted in May, oil prices are not that high in real terms, and represent more of a distributional problem (a painful one for sure) than a macroeconomic one. There is still a lot of postponed spending and re-stocking to be made good after the pandemic. More prosaically, at the global level China is following a different cyclical path thanks to its rigid Covid suppression, and is currently accelerating as the West slows.

Corporate profitability may even be less at risk than usual, thanks to oil earnings: the big stock market indices contain many oil producers, but few companies for whom oil is a major cost. Most companies feel the pain from higher oil prices only when consumers cut back on other spending – which may not be happening yet.

**FIGURE 1: US ECONOMY SLOWING NOT SHRINKING**

Manufacturing ISM and NBER-defined recessions



Source: NBER, Institute of Supply Management, Rothschild & Co



Consumers are certainly pessimistic, but indices of consumer “confidence” are (by definition) hugely subjective. In the UK, a widely-followed confidence index is at the lowest levels on record – lower even than during the pandemic, the Global Financial Crisis, the seventies. Really? Nobody likes spending more on petrol or food, but most people have to do so – and many are able to do so without spending less elsewhere.

Perhaps most importantly, we have not yet changed our assessment of the nature of the inflation threat (and of the scale of the warranted interest rates response). We do see it as having a stubborn core beneath the transitory froth: we doubt it will dip sustainably below target again any time soon, and see it sticking in the 2–4% range, keeping central banks and capital markets on their toes. But that range is of course far below today’s levels, and not elevated enough to make a material difference to the business climate. We continue to think talk of stagflation – higher ongoing inflation alongside continued economic stagnation – is premature.

When the headline US inflation rate ticked higher again to 8.6% in May, pundits were quick to conclude that current inflation levels are not “transitory” but permanent. It is way too soon to say that: see the essays below. Some bottlenecks are loosening, and some commodity prices softening; labour participation rates can rise; and the global economy is much improved since the 1970s. A wage-price spiral seems unlikely to us. Supply may be more elastic than feared.

### INVESTMENT CONCLUSION

When inflation and interest rates are in play, there are few places in which investors can hide. Both stocks and bonds are down sharply – and while stocks are often volatile, bonds aren’t, and for fixed income investors this has been a seismic six months.

We can imagine the market narrative changing yet again. We would not be surprised to see yet another, more modest upward rethink on interest rates, driven not so much by a further spike in headline inflation rates as by a less-fragile-than-feared global economy, which does not have to follow the script written for it. There are few imperatives in economics.

Together with ongoing risk of wider disruption from the conflict, we think this possibility may keep a lid on collective risk appetite for the time being: tactically, cash still has a lot going for it. But valuations are moving on.

Value is starting to creep back into bonds, where (in the US segment) we are less wary than for some years. That said, yields are not yet high enough to offer convincingly positive real returns.

Stocks have already fallen by amounts equivalent to losing several years’ earnings, consistent with a major downturn. If we were right, and stocks were not outlandishly expensive to begin with, they still offer the best chances of beating the stubborn – but not daunting – inflation we expect. But this does not feel like an urgent call, and our tactical conviction remains lower than for some years. We advised more caution back in January (on rates) and February (on the conflict) and would not yet reverse that call – our long-standing scepticism of attempts to time the market notwithstanding...

A final note on currencies. With the exception of (for example) the yen and the franc, the major exchange rates have not broken decisively out of recent trading ranges, though the dollar has gained some momentum.

This could yet change if interest rates – and economic fortunes – now diverge more visibly, but for the time being we continue to hold few strong convictions here. It is not possible to systematically add value by forecasting currency moves anyway, and of late the big portfolio-shaping moves have been driven by assets, not currencies.

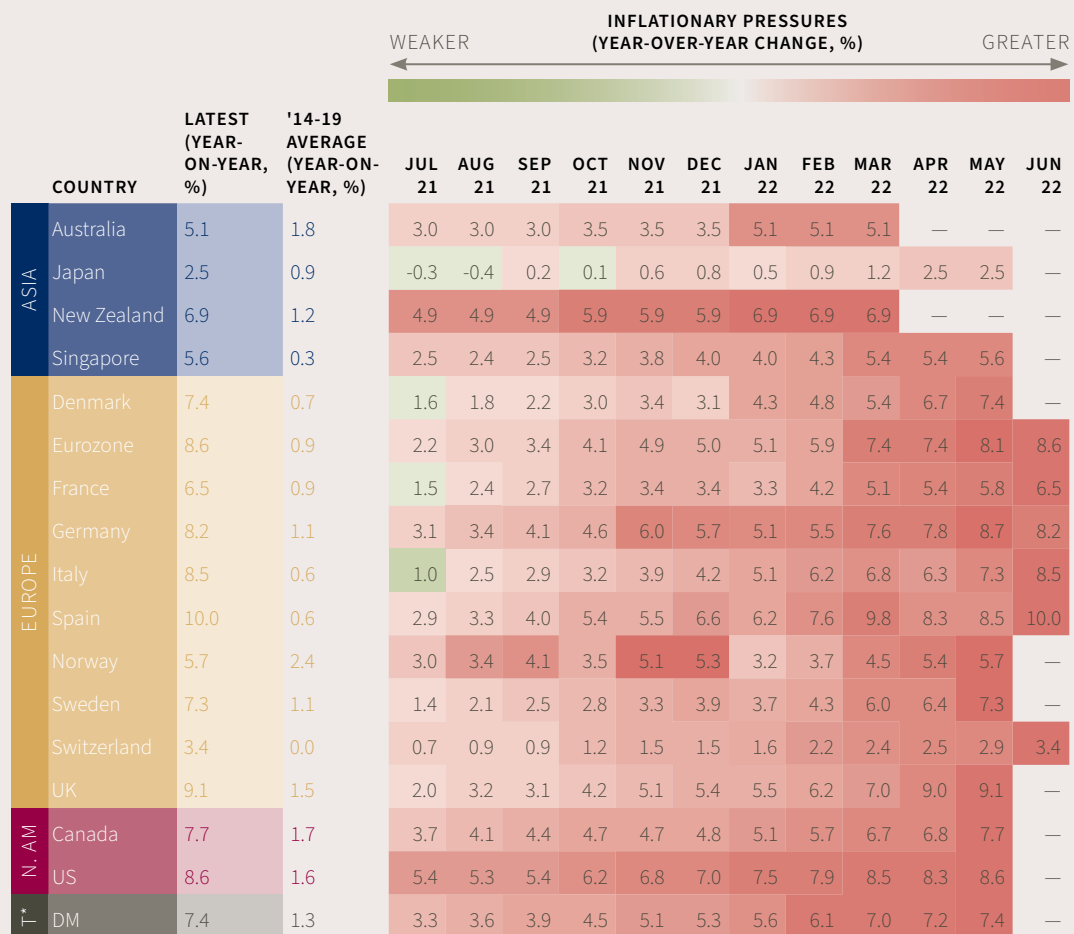
# Inflation: heatmaps and near-term prospects

Headline inflation rates have risen to new multi-decade highs in the US and Europe, and are elevated across a wide range of developed markets (figure 2).

In the US, consumer price inflation has reached a 40-year high of 8.6%. In the UK, it has hit 9.1%, and is likely to exceed 11% towards year-end as the energy price cap gets lifted again. In the euro area, headline inflation at 8.6% is a record high. Even Switzerland – where consumer prices were broadly stable before the pandemic – has seen inflation rise to 3.4% in June. Our developed market inflation aggregate rose to 7.4% in May.

**FIGURE 2: DEVELOPED MARKET INFLATION HEATMAP**

Headline inflation rates, % y/y



Source: Rothschild & Co

Heatmap reflects the year-over-year percentage changes for headline inflation rates. DM aggregate is a GDP-weighted series.

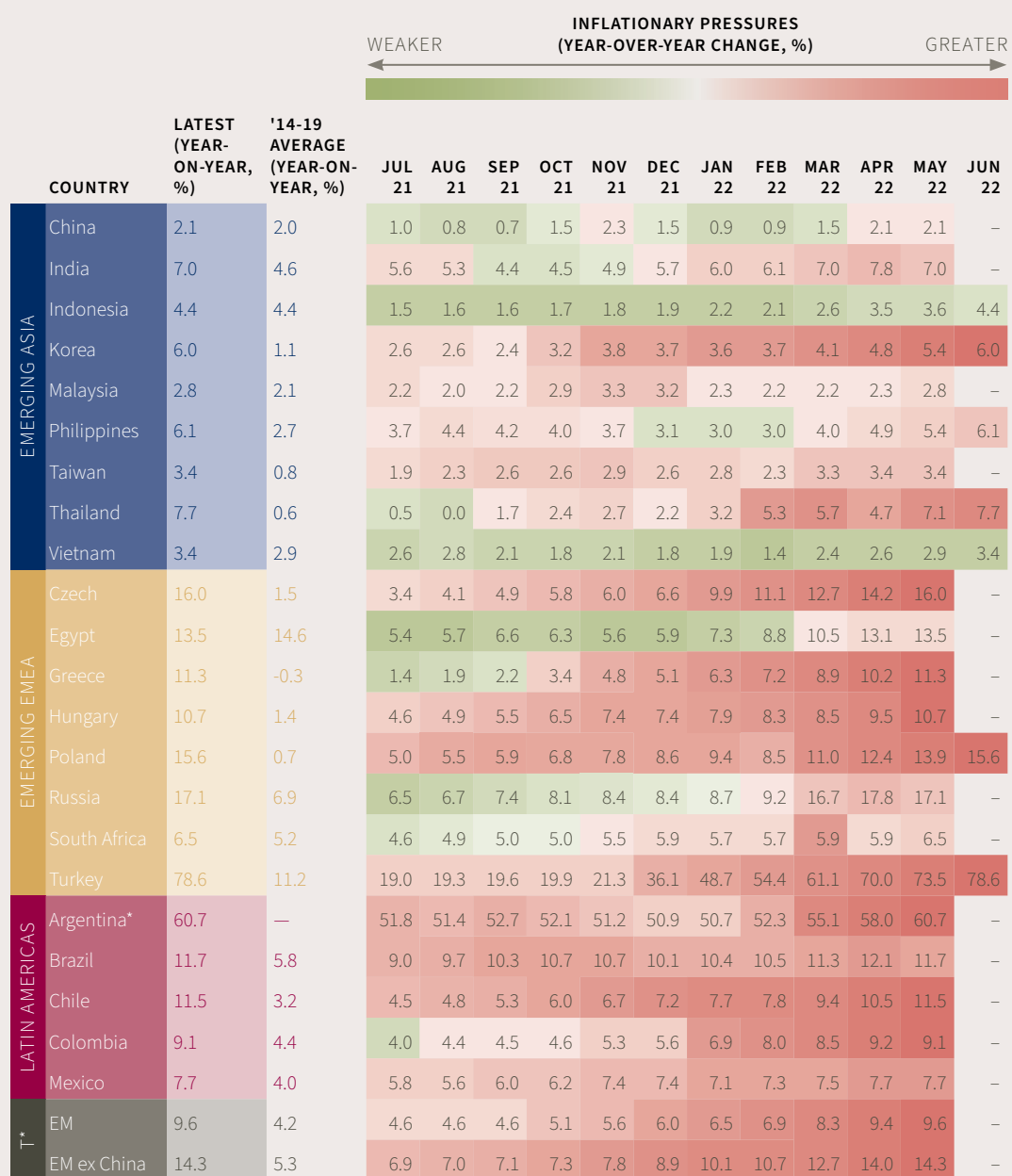
Shading is based on each individual item's history from 2000 onwards. Euro area countries headline rates are based on the HICP. \*T = total.

Emerging and frontier market countries have also suffered from accelerating consumer prices (figure 3). Inflationary episodes aren't such a recent phenomenon for developing nations. Yet, the latest CPI readings for almost all developing countries are above their 2014–19 average. Excluding China, our emerging market inflation rate measure exceeded 14% in May.

Regionally, broad inflationary pressure was first evident in the major Latin American economies in mid-2021. Then, towards the end of last year, these strains spread to emerging EMEA nations, with Russia's invasion of Ukraine in late February adding to pressure.

**FIGURE 3: EMERGING MARKET INFLATION HEATMAP**

Headline inflation rates, % y/y



Source: Rothschild & Co

\*Argentina's series only starts in 2018. As a result, our EM aggregate (GDP-weighted) also only starts in 2018.

Heatmap reflects the year-over-year percentage changes for headline inflation rates. Shading is based on each individual item's history from 2000 onwards (to avoid sky-high inflationary periods). \*T = total.





Emerging Asia has so far experienced a more modest surge, perhaps because of its different position in the business cycle (China's economy was partially locked down in recent months). Better governance (or stricter government controls) will have also been a driver, as may its greater reliance on rice than wheat.

Nonetheless, despite the swathes of red on our heatmaps, some cooling might become visible soon. Beneath the surface, some pressures seem to be fading – and not just because of weak demand: supply bottlenecks may be easing.

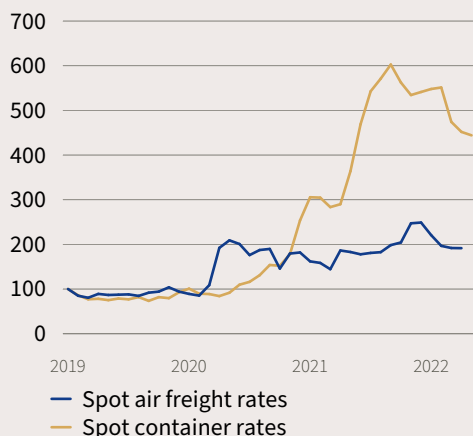
The most intense supply chain stress – most relevant to goods prices, the source of the initial inflation momentum – may be behind us. Freight rate indices have rolled over for both container shipping and air transport, which account for roughly 80% of global trade volumes (figure 4). Freight charges are still above pre-pandemic levels, but the supply-demand balance may have improved of late. Similarly, the Federal Reserve Bank of New York's Global Supply Chain Pressure Index peaked at the end of last year. This improvement may be starting to show up in consumer price indices beneath the headline level: US, UK and euro area core inflation rates – that is, excluding food and energy – have edged lower.

And as noted above, commodity prices may have topped out. Oil peaked in early March, and Chicago-traded wheat in mid-May (the latter is below its pre-invasion level). Some industrial metal prices have been notably weak: the price of copper, for example, has fallen to its lowest since early 2021.

Even if energy prices remain at these elevated levels, their earlier increases will eventually drop out of the annual inflation calculation – base effects will eventually kick in (figure 5). Energy's contribution to the US annual inflation rate could be less than a percentage point by early 2023, compared to 2–3 points recently.

**FIGURE 4: CONTAINER SHIPPING AND AIR FREIGHT RATES**

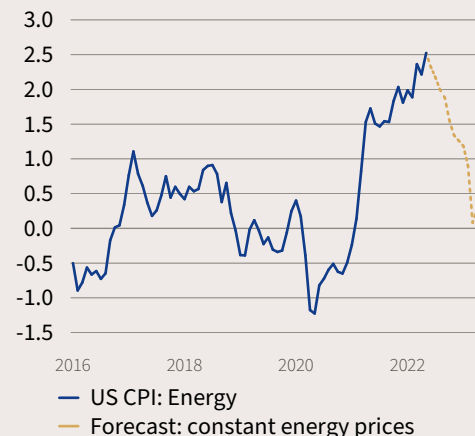
Rebased index (January 2019 = 100)



Source: Drewry Research, Rothschild & Co

**FIGURE 5: ENERGY'S CONTRIBUTION TO US HEADLINE CPI**

Percentage point contribution to annual rate



Source: U.S. Bureau of Labor Statistics, Rothschild & Co

# Industrial unrest: what chance of a wage-price spiral?

Industrial action seems to be spreading. The evidence here in the UK is hard to ignore: tube and train strikes are set to be followed by ballots from public sector workers, including nurses and teachers, and reportedly perhaps even doctors. There have even been distinct echoes of 1978/9 as some refuse has gone uncollected.

In the US private sector, Apple workers have just formed their first trade union, following similar collective action at Amazon and Starbucks. The technology and logistics sector has prided itself on its inclusive models, but this has not stopped it in some cases from using dominant market positions to keep pay low – until now. Labour participation rates have not rebounded from their pandemic-led declines, and labour’s bargaining power is higher.

So, does this finally mark the oft-predicted turning point in the balance of power between workers and employers?

We are unconvinced, but watching carefully. Labour markets are tight, and real pay has been squeezed by energy costs, but the industrial relations landscape is qualitatively different to that of the 1970s, and may remain so.

Unionisation is much lower than it was. This is of course a sensitive subject. Here in the UK, the legal emasculating of union power during the 1980s, and the staged showdown with the miners, were deliberate policies pursued by the Thatcher administrations – but she could not have succeeded had there not been a groundswell of public opinion to the effect that the pendulum had previously swung too far towards labour. Globalisation and the relative decline of manufacturing – and, more recently the rise of informal and distanced working – have also played a role.

Today, US and UK unionisation rates are close to 10% and 25% of the workforce, respectively (figure 6). The situation in the euro area is complicated by their relatively rigid labour markets and varying – but generally stricter – levels of worker protection. In France, most employees are covered by collective bargaining agreements, even if not in a union; in Germany, unionisation has if anything been falling faster than in the UK since the Hartz reforms of the 1990s.

The sheer scale of labour – and management – unrest during the 1970s offers some perspective. During that challenging decade an average of 12 million days in the UK were lost each year during to strike action (and the workforce was of course much smaller) (figure 7). As yet, today’s disputes are unlikely to challenge even the foothills of the historic charts, let alone the peaks. The biggest ever industrial dispute in the UK was of course the General Strike of 1926, which dwarfs even the peaks of the 1970s. Nearly the same numbers of workdays were lost in 1926 as in the past half-century – and again, the workforce was much smaller then.

With unemployment back at half-century lows in the US and UK – levels witnessed briefly at the end of the last cycle in 2019 – and the cost of living rising, pressure will not abate soon. But as yet the response of pay has been moderate – and if food and energy costs are about to roll over, cost of living pressures will slow.

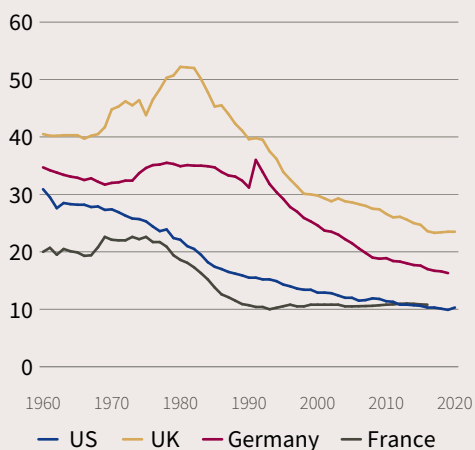
US private sector pay is growing at a 6.5% annual rate – its fastest pace since 1981 – but still below the current rate of inflation. The equivalent figures in the UK and Europe are 4.2% and 3.1%, respectively (the euro area figure is somewhat lagged).

Pay is surely set to accelerate further. But even as it does so, we need to remember that the prospects of the feared wage-price spiral will be further muted by ongoing productivity growth, which drives a 1–2% wedge between growth in wages and in unit costs. For pay to keep inflation at today’s 8–9%, it needs to trend at around 10%.

So far, then, we are seeing only a slow revival of the “Phillips Curve” linking low unemployment to high wage inflation. This is still enough for us to believe that a return to sub-2% rates of consumer price inflation is unlikely any time soon, and for central banks to tighten further. But that historic perspective, and the fact that there are so many other moving parts in the economy, suggests that the wage-price spiral is unlikely to return.

**FIGURE 6: UNIONISATION RATES**

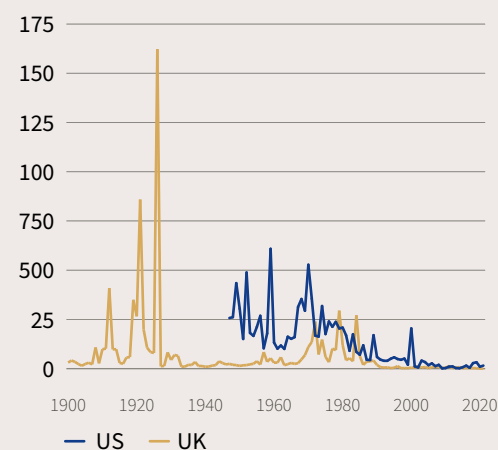
Percentage of employees (%)



Source: OECD, Rothschild & Co

**FIGURE 7: WORKING DAYS LOST TO INDUSTRIAL ACTION**

Millions



Source: U.S. Bureau of Labor Statistics, Office for National Statistics, Rothschild & Co

# US mid-term elections: the lame duck?

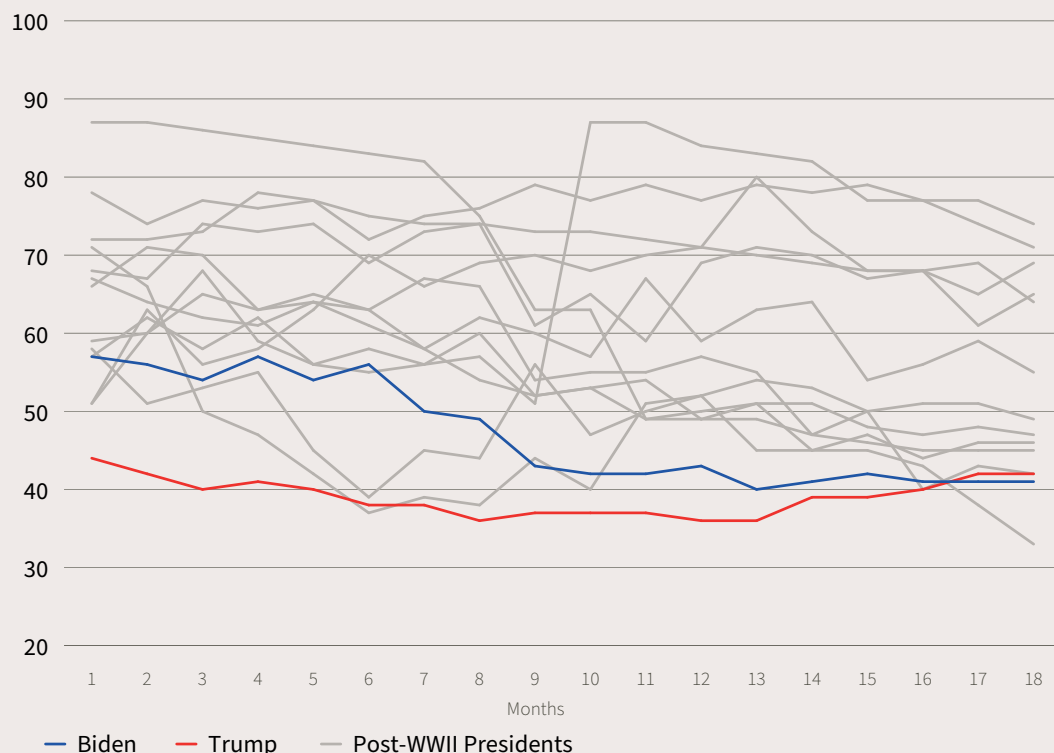
The US election cycle seems to fly by – in early November, the US will once again be heading to the polling stations to vote on the complexion of Congress. If received wisdom is true and the US midterms are truly a barometer of the president's popularity, then the Democrats across both chambers of Congress face a very challenging outturn (figure 8).

The bicameral legislature faces two different cycles: every member of the larger House of Representatives is up for re-election every two years, while only a third of the smaller upper house, the Senate, is up for re-election. Regardless, the arithmetic is on a knife-edge: the Democrats have 220 seats of the 435-strong House – only a whisker above the 218 seats required for a majority. The Senate is even closer, split evenly between both parties.

In reality, Biden has been something of a lame duck for much of the past year, with internal party politics obstructing some of his key election pledges. His ambitious 'Build Back Better' bill – which incorporates many environmental-related policies – continues to be watered down and faces little chance of being passed. In practice, this means that the loss of Congress – whether wholly or in part – will do little to change his legislative momentum, since there isn't much to begin with.

**FIGURE 8: PRESIDENT BIDEN'S LOW APPROVAL RATINGS**

Net approval rating over first term



Source: Gallup, Rothschild & Co

# Economy and markets: background

## GROWTH: MAJOR ECONOMIES

Business optimism: standard deviations from trend



Source: Bloomberg, Rothschild & Co  
Composite of the forward-looking components of manufacturing surveys from China, Germany, Japan, UK and US loosely weighted by GDP

## G7 INFLATION

%, year-on-year



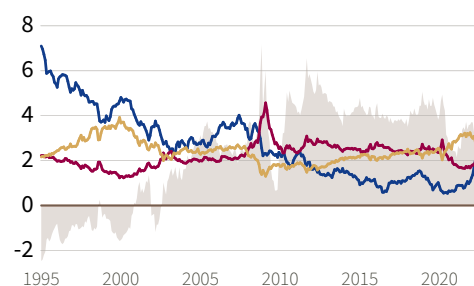
Source: OECD, Bloomberg, Rothschild & Co

## STOCKS/BONDS — RELATIVE RETURN INDEX (%)



Source: MSCI, Bank of America Merrill Lynch, Bloomberg, Rothschild & Co

## STOCKS/BONDS — RELATIVE VALUATIONS



Source: MSCI, Bank of America Merrill Lynch, Bloomberg, Rothschild & Co

## SELECTED BONDS

Current yields, recent local currency returns

	YIELD (%)	1YR (%)	3YR (%)
10-yr US Treasury	2.9	-9.6	-2.4
10-yr UK Gilt	2.1	-8.1	-6.3
10-yr German bund	1.2	-10.8	-11.8
10-yr Swiss Govt. bond	0.9	-6.8	-9.5
10-yr Japanese Govt. bond	0.2	-1.5	-2.5
Global credit: investment grade (USD)	2.8	-8.4	-2.8
Global credit: high yield (USD)	9.4	-15.2	-5.2
Emerging (USD)	7.1	-17.5	-10.0

Source: Bloomberg, Rothschild & Co

## SELECTED STOCK MARKETS

Dividend yields, recent local currency returns (MSCI indices)

	YIELD (%)	1YR (%)	3YR (%)
World: all countries	2.3	-12.1	23.3
Developed	2.2	-10.9	25.5
Emerging	2.9	-20.5	8.6
US	1.7	-12.6	33.2
Eurozone	3.5	-14.2	5.3
UK	4.1	7.8	7.6
Switzerland	2.9	-9.5	12.6
Japan	2.5	-3.2	25.5

Source: Bloomberg, Rothschild & Co

## SELECTED EXCHANGE RATES

Trade-weighted indices, nominal (2000 = 100)

	LEVEL	1YR (%)	3YR (%)
US Dollar (USD)	114.7	7.7	6.1
Euro (EUR)	125.3	-3.4	0.7
Yen (JPY)	76.5	-13.4	-18.1
Pound Sterling (GBP)	79.5	-2.3	4.3
Swiss Franc (CHF)	176.7	7.3	11.6
Chinese Yuan (CNY)	146.4	6.1	11.7

Source: Bloomberg, Rothschild & Co

## COMMODITIES AND VOLATILITY

	LEVEL	1YR (%)	3YR (%)
CRB spot index (1994 = 100)	291.8	36.0	61.1
Brent crude oil (\$/b)	111.6	47.2	71.6
Gold (\$/oz.)	1,811.4	1.9	30.9
Industrial metals (1991 = 100)	325.2	-1.5	38.1
Implied stock volatility: VIX (%)	26.7	72.5	89.9
Implied bond volatility: MOVE (bps)	144.2	150.6	116.7

Source: Bloomberg, Rothschild & Co

Data correct as of 30 June 2022.

Past performance should not be taken as a guide to future performance.



## Important information

This document is produced by Rothschild & Co Wealth Management UK Limited for information and marketing purposes only and for the sole use of the recipient. Save as specifically agreed in writing by Rothschild & Co Wealth Management UK Limited, this document must not be copied, reproduced, distributed or passed, in whole or part, to any other person. This document does not constitute a personal recommendation or an offer or invitation to buy or sell securities or any other banking or investment product. Nothing in this document constitutes legal, accounting or tax advice.

The value of investments, and the income from them, can go down as well as up, and you may not recover the amount of your original investment. Past performance should not be taken as a guide to future performance. Investing for return involves the acceptance of risk: performance aspirations are not and cannot be guaranteed. Should you change your outlook concerning your investment objectives and/or your risk and return tolerance(s), please contact your client adviser. Where an investment involves exposure to a foreign currency, changes in rates of exchange may cause the value of the investment, and the income from it, to go up or down. Income may be produced at the expense of capital returns. Portfolio returns will be considered on a "total return" basis meaning returns are derived from both capital appreciation or depreciation as reflected in the prices of your portfolio's investments and from income received from them by way of dividends and coupons. Holdings in example or real discretionary portfolios shown herein are detailed for illustrative purposes only and are subject to change without notice. As with the rest of this document, they must not be considered as a solicitation or recommendation for separate investment.

Although the information and data herein are obtained from sources believed to be reliable, no representation or warranty, expressed or implied, is or will be made and, save in the case of fraud, no responsibility or liability is or will be accepted by Rothschild & Co Wealth Management UK Limited as to or in relation to the fairness, accuracy or completeness of this document or the information forming the basis of this document or for any reliance placed on this document by any person whatsoever. In particular, no representation or warranty is given as to the achievement or reasonableness of any future projections, targets, estimates or forecasts contained in this document. Furthermore, all opinions and data used in this document are subject to change without prior notice.

Where data in this presentation are source: MSCI, we are required as a condition of usage to advise you that: "Neither MSCI nor any other party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of such data. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in or related to compiling, computing or creating the data have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. No further distribution or dissemination of the MSCI data is permitted without MSCI's express written consent."

This document is distributed in the UK by Rothschild & Co Wealth Management UK Limited and in Switzerland by Rothschild & Co Bank AG. Law or other regulation may restrict the distribution of this document in certain jurisdictions. Accordingly, recipients of this document should inform themselves about and observe all applicable legal and regulatory requirements. For the avoidance of doubt, neither this document nor any copy thereof may be sent to or taken into the United States or distributed in the United States or to a US person. References in this document to Rothschild & Co are to any of the various companies in the Rothschild & Co Continuation Holdings AG group operating/trading under the name "Rothschild & Co" and not necessarily to any specific Rothschild & Co company. None of the Rothschild & Co companies outside the UK are authorised under the UK Financial Services and Markets Act 2000 and accordingly, in the event that services are provided by any of these companies, the protections provided by the UK regulatory system for private customers will not apply, nor will compensation be available under the UK Financial Services Compensation Scheme. If you have any questions on this document, your portfolio or any elements of our services, please contact your client adviser.

The Rothschild & Co group includes the following wealth management businesses (amongst others): Rothschild & Co Wealth Management UK Limited. Registered in England No 04416252. Registered office: New Court, St Swithin's Lane, London, EC4N 8AL. Authorised and regulated by the Financial Conduct Authority. Rothschild & Co Bank International Limited. Registered office: St Julian's Court, St Julian's Avenue, St Peter Port, Guernsey, GY1 3BP. Licensed and regulated by the Guernsey Financial Services Commission for the provision of Banking and Investment Services. Rothschild & Co Bank AG. Registered office: Zollikerstrasse 181, 8034 Zurich, Switzerland. Authorised and regulated by the Swiss Financial Market Supervisory Authority (FINMA).