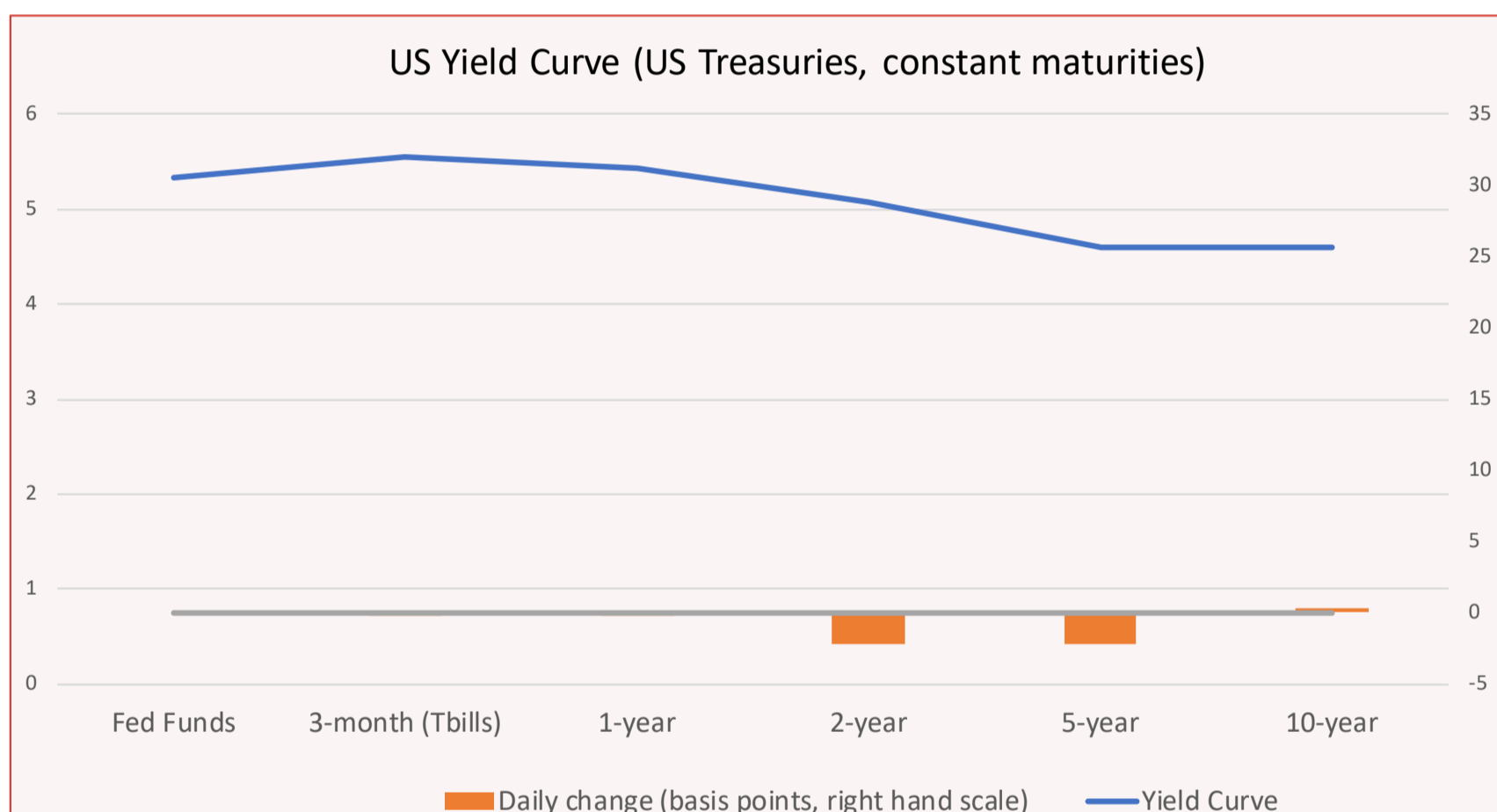# RISK PREMIUM INVEST

Daily analysis of the US Treasuries Market

29 September 2023

	Fed Funds	3-month (Tbills)	1-year	2-year	5-year	10-year
Rates	5.33	5.55	5.43	5.07	4.60	4.59
Daily changes (bp)	0	0	0	-2	-2	0

US Yield Curve (US Treasuries, constant maturities)

Source: Federal Reserve, H15. (with small tweaks to smooth out the impact of benchmarks changes).

Highlights:

- *US Treasuries yields were broadly unchanged on Friday.*

- *There has been a very small decline in expected future Fed funds rates, due to slightly better than expected inflation figures, particularly in the eurozone. But risk premia on long-term bonds remained on an upward trend.*

PART I : Changes in expected Fed Funds.

PART II : Risk premia contributions.

PART III : Methodological annex.

Fed funds futures provide a biased estimate of investors' true expectations, as they are influenced by varying risk premia. The Fed Funds rates expected by investors are here estimated by our proprietary model using both different surveys (the monthly "Consensus Economics" survey and the quarterly "Survey of Professional Forecasters") and the rich information contained in the yield curve (see the methodological annex). Estimates are revised when more recent surveys become available (on September 18, the September "Consensus Forecast" was introduced).

On the inflation front, there was on Friday a good surprise in the eurozone, with core inflation in September significantly lower than expected (+4.5% in 12 months against +4.8% expected). In the US, the August core CPE index – the preferred Fed's measure of underlying inflation – was closer to expectations. The monthly increase was only 0.1% (against 0.2% expected), but the annual increase was as expected at +3.9%. It was the first time since June 2021 that annualized core PCE was below 4.0%. Expectations for Fed funds rates in the coming year did not move significantly on the news. At longer horizons, there was a slight decline of Fed funds rates expectations that was already apparent before the release, maybe encouraged by the good European news.

	Current	Expected in three months	Expected in six months	Expected in one year	Expected in three years	Expected equilibrium
Fed Funds	5.33	5.43	5.45	4.91	3.38	3.05
Daily changes (bp)	0	0	1	0	-3	-1

Fed Funds Rate (Current and expected in the future)
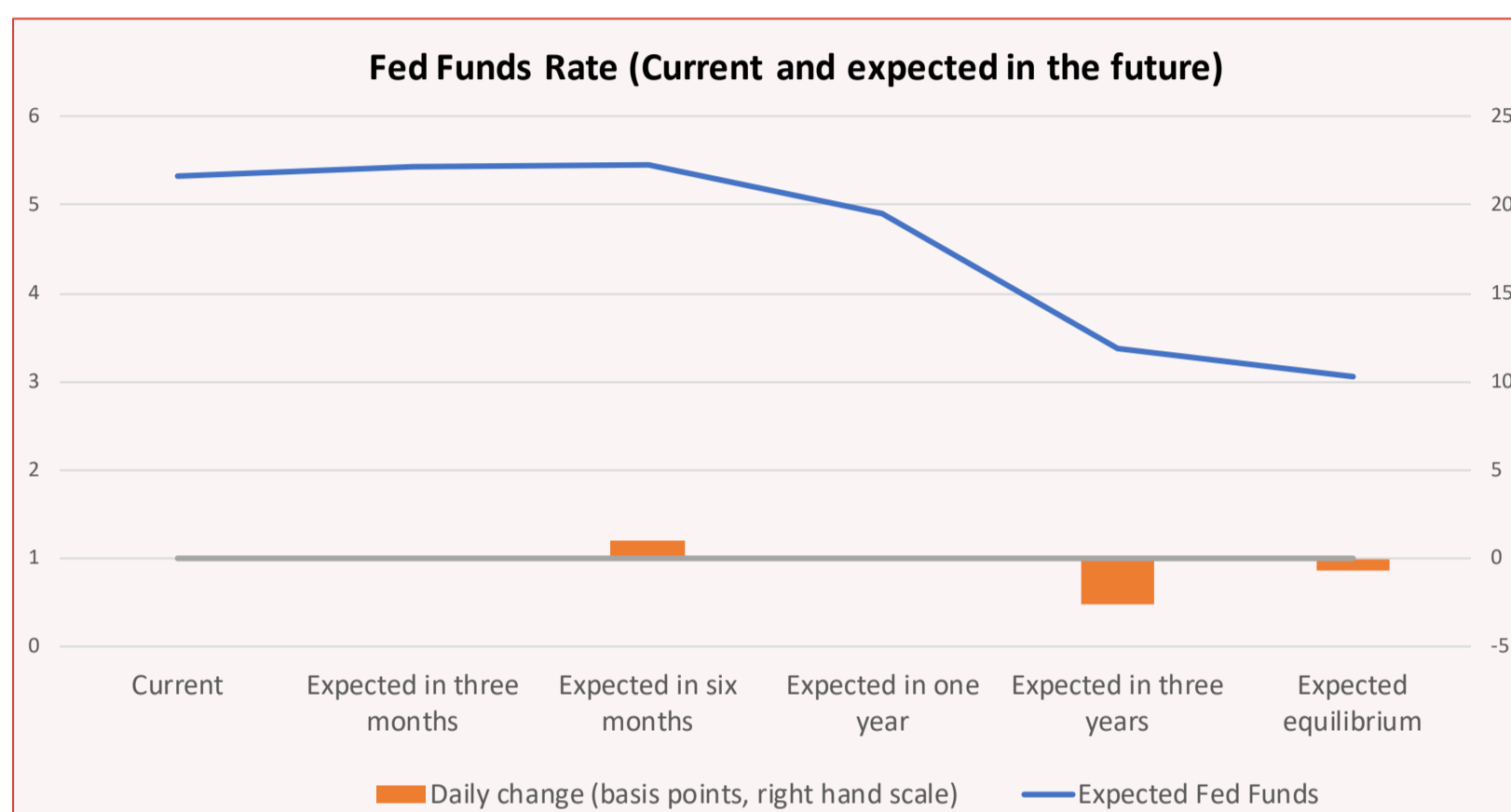
Even if a majority of FOMC members expect another rate hike before the end of the year, risks seem asymmetric with very little chance of two rate hikes and a significant probability of no hike if core inflation continues to improve despite higher energy prices. As a result, the average expected Fed funds rates at the end of the year is significantly lower than 5.58%. According to our estimates, investors have also in mind a different profile for future rate cuts. They still forecast slightly larger rate cuts in 2024 than expected by the "median" FOMC member, but after that they expect Fed funds rates to plateau at a higher level. Investors facing a very resilient economy have gradually become more pessimistic and have raised their average estimates for the long-term neutral rate from 2% at the start of 2022 to more than 3% currently (against 2.5% in the Fed's dot plots).

Expected Fed Funds rates at various horizons
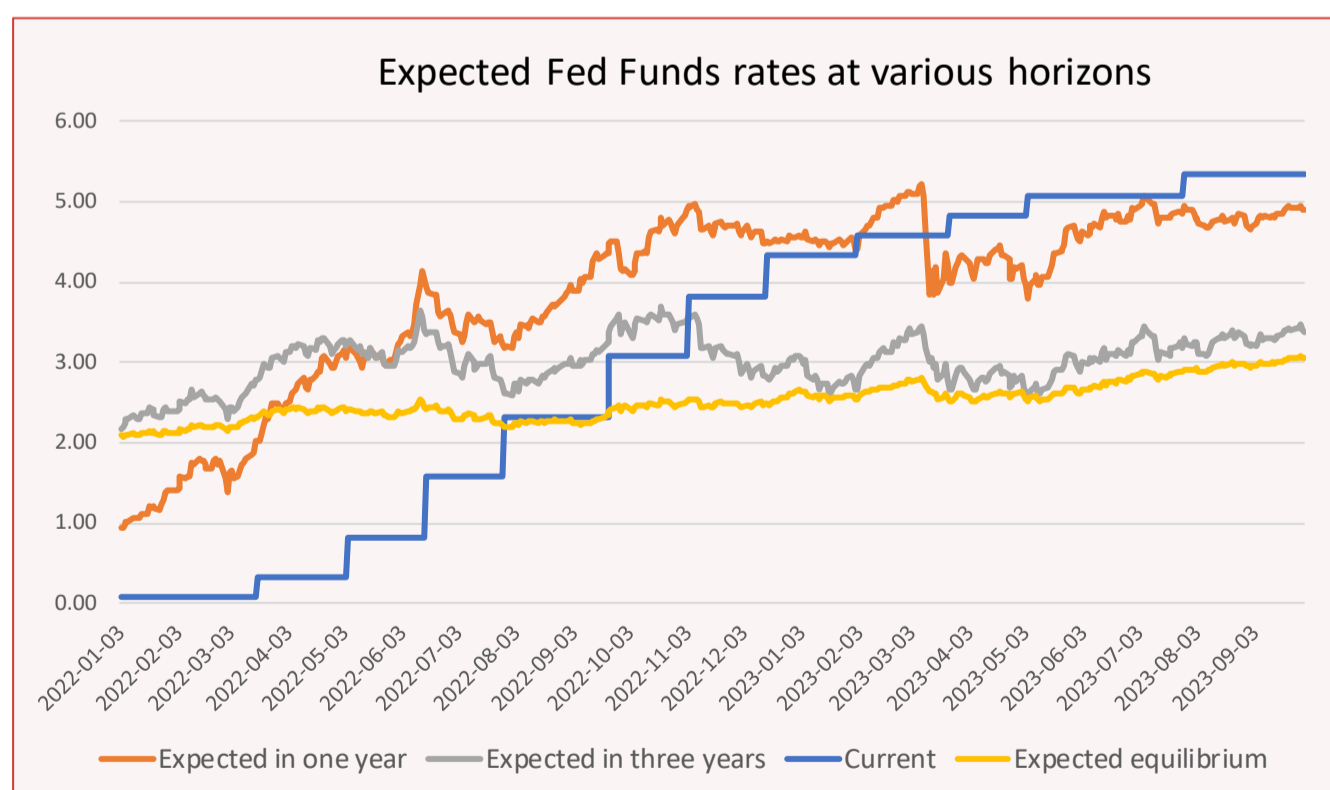
Main market-moving news: 29 September 2023

US Macroeconomics

Consumption for Aug at +0.4% MoM (Expected 0.4%; Prior 0.8% revised at 0.9%).
Core PCE price index for Aug at +0.1% MoM (Expected 0.2%; Prior 0.2%).
Core PCE price index for Aug at +3.9% YoY (Expected 3.9%; Prior 4.2% revised at 4.3%).
Chicago PMI for Sept at 44.1 (Expected 47.6; Prior 48.7).

Others

| |
|---|
| At +4.5% year-on-year, core inflation in September in the eurozone was significantly lower than expected. |

PART II : RISK PREMIA ANALYSIS

For US Treasuries, as for all financial assets, there are two key different types of risk premia:

- The short-term **tactical risk premia**: How much excess returns investors require to hold various risky assets at their tactical horizon (which depends on investors, but is often around 3 months)? The tactical positions taken by investors relative to their benchmarks ("neutral", "short", "long") depend on these tactical risk premia.

- The **"buy-and-hold" or "embedded" risk premia**. How much excess return **long-term investors** expect if they hold risky assets over an extended horizon? In the case of US Treasuries, the buy-and-hold risk premia are the differences between the zero-coupon rates of various maturities and the (annualized) expected return on a fund invested in Fed Funds over the same period.

We estimate both types of risk premia (see the methodological annex and our excel file) but we discuss here only the buy-and-hold risk premia.

Despite the relatively good news on the inflation front, risk premia on long-term US Treasuries stayed on an upward trend on Friday. As a result, 10-year rates were broadly unchanged despite the slight downward revision for expected future Fed funds rates.

Contributions of expected Fed Funds and risk premia to changes in rates
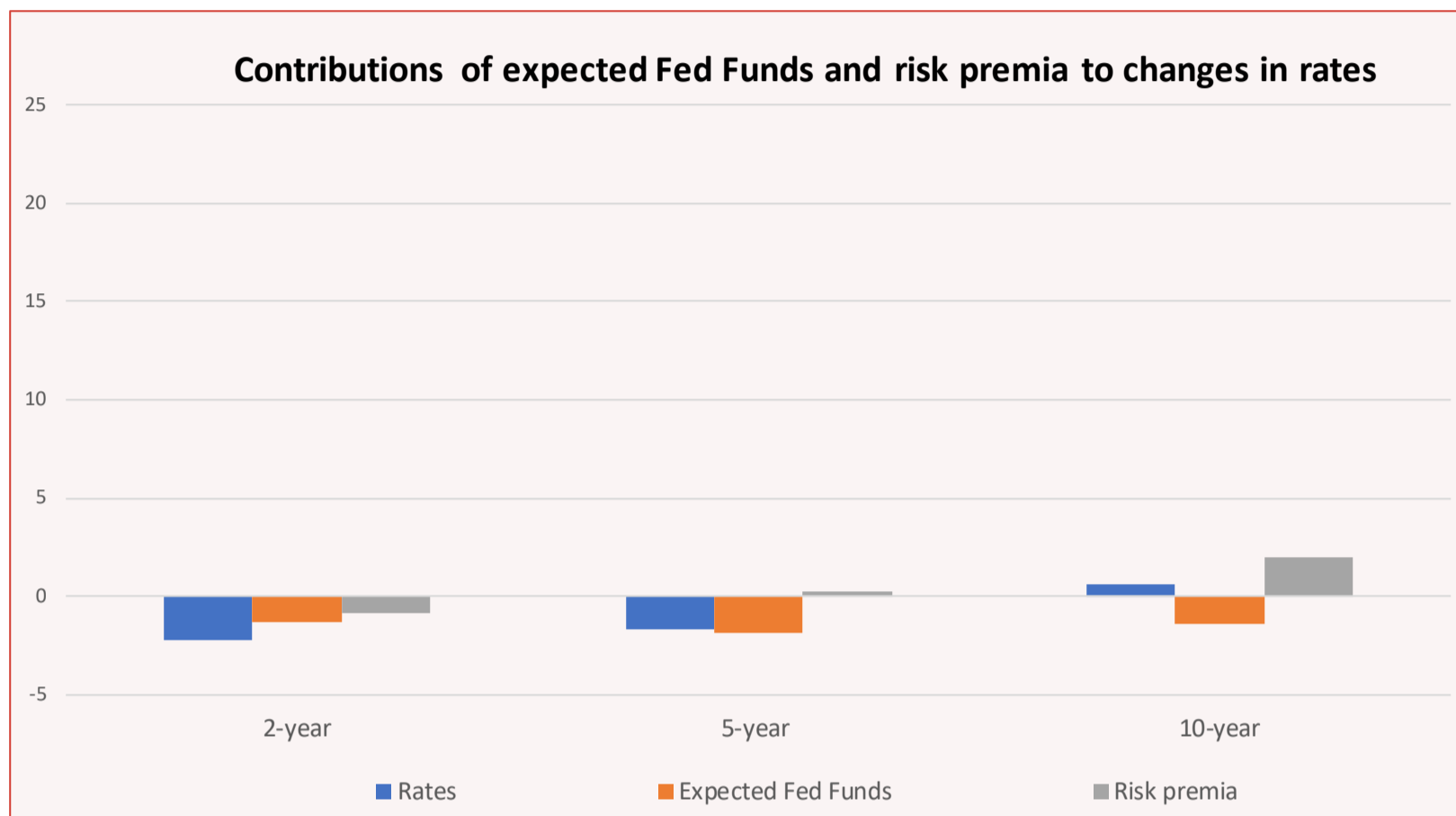
	2-year	5-year	10-year
Buy-and-hold risk premia	0.14	0.63	1.07
Daily changes (bp)	-1	0	2

Buy-and-hold risk premia since the beginning of 2022

Buy-and-hold risk premia (5-year and 10-year bonds)
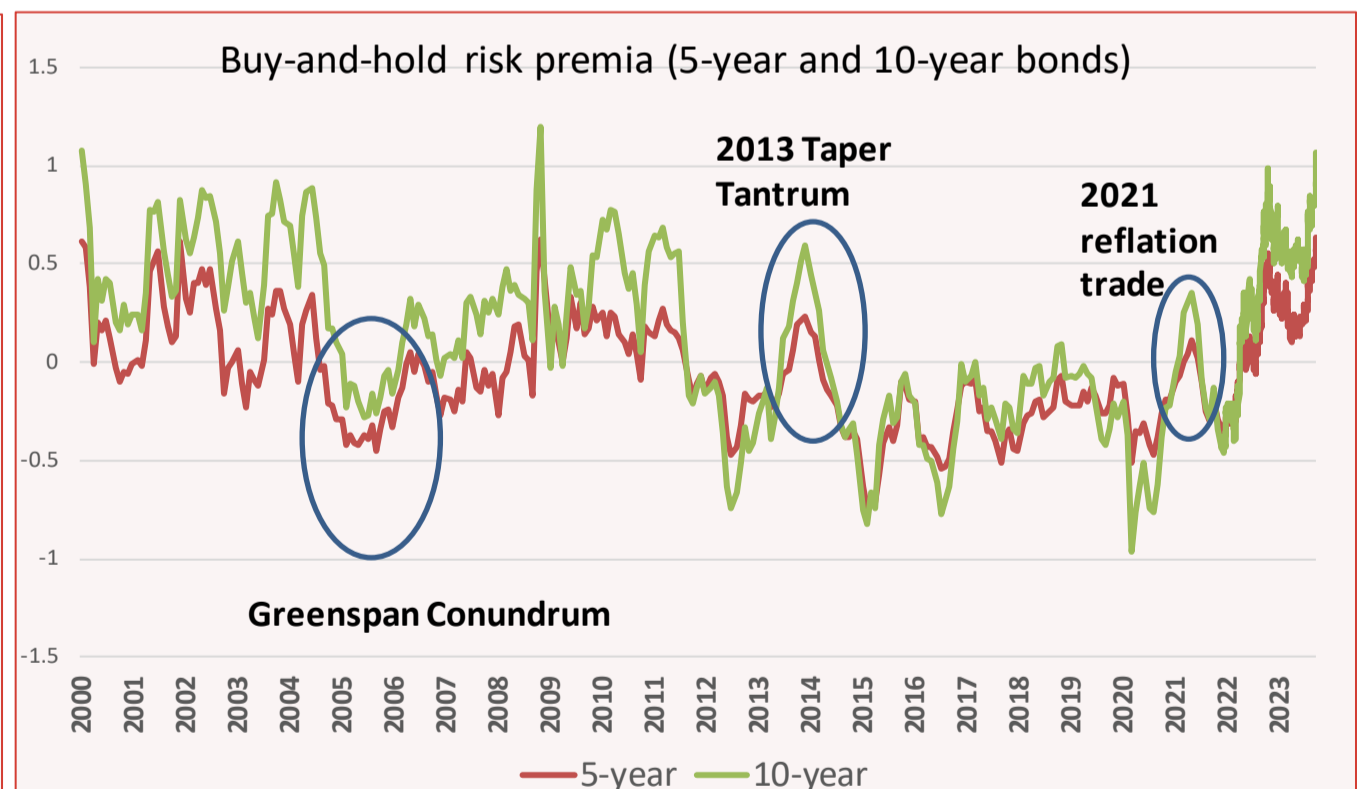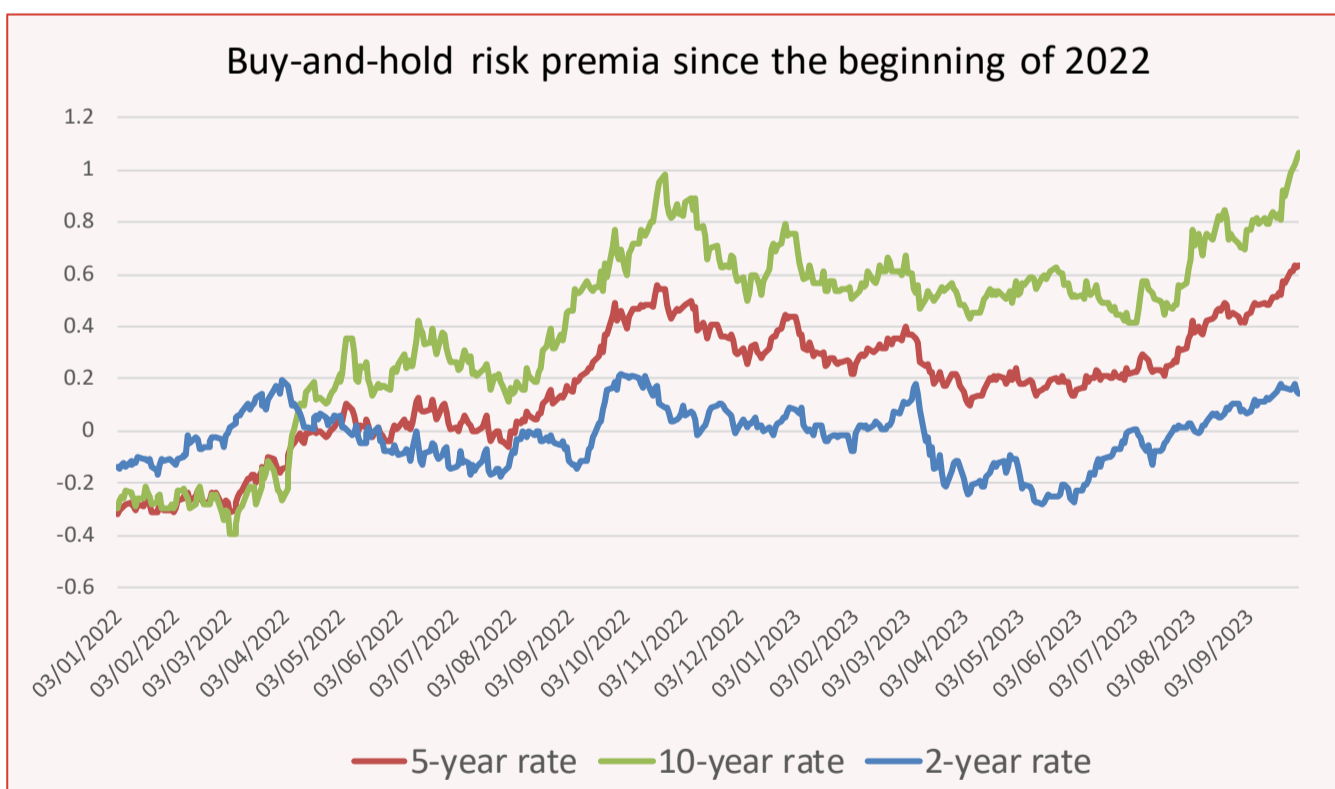
With a long-term perspective, it appears that the buy-and-hold risk premia on long-term Treasuries are now very high (see the right-hand side graph). This is also true for the short-term tactical risk premia that we don't discuss here (see the data in the excel file).

This may not come as a surprise with some inflationary risks remaining and often – but not always - a positive correlation between the price of long-term bonds and equities. Moreover, very high short-term rates may encourage investors to buy short durations bonds rather than long-term bonds. Yet, since the beginning of Fed's Quantitative Easing in 2010 and until 2022, there has been only two episodes where the buy-and-hold risk premia on 10-year US Treasuries have been significantly positive: the 2013 "taper tantrum" and the 2021 "reflation trade" episodes where investors introduced large short positions in Treasuries. Both time, these relatively high short positions and positive risk premia proved unsustainable and risk premia came back later on negative territory.

Looking forward, changing buy-and-hold risk premia could continue to introduce a lot of volatility in the US Treasuries markets. On the one hand, the lessons of the last 10 years should not be forgotten. There may be a tendency for risk premia to go back on negative territory as soon as inflationary risks recede (with at some stage lower short-term rates and the return of negative betas). On the other hand, the market will have in the future to absorb a larger supply with a large deficit to finance and the Fed cutting its holding of bonds ("Quantitative Tightening"). This may push many investors to introduce again large short positions in the belief that long-term rates are now on a structural upward trend.

There is an abundant academic literature trying to extract from the yield curve the monetary policy path expected by investors and the risk premia embedded in the observed US Treasuries rates.

One of the best-known statistical models is the model developed by the Federal Reserve Bank of New-York. Their estimates are published daily on the NY Fed website (see www.newyorkfed.org/research/data_indicators/term-premia-tabs#/overview). Strangely enough, these estimates don't seem to be used by many markets practitioners when they discuss the shape of the yield curve and how it can be explained by short-rates expectations and risk premia. One of the reasons is that the results of the model are often quite unrealistic. To illustrate that observation, we can compare the average short rates expected by investors over the next 10 years according to this model with what professional forecasters expect (answers, once a year in February, to the well-regarded survey managed by the Federal Reserve Bank of Philadelphia. See www.philadelphiafed.org/surveys-and-data/real-time-data-research/survey-of-professional-forecasters).

There are many reasons why the average investor's view priced into the market may differ somewhat from the answer given by professional forecasters, but the difference is often much too large to be realistic.

The truth is that the estimates published on the NY Fed website are rather imprecise. There is indeed a large academic literature stressing that the yield curve alone does not contain enough information to extract the investors' underlying views and that the results of surveys should be incorporated in the extraction process (see Kim, Don H., and Athanasios Orphanides, 2012, Term structure estimation with survey data on interest rate forecasts, Journal of Financial and Quantitative Analysis 47).

Our model belongs to this class of models that combine information coming from well-regarded surveys with the observed yield curve. But its key originality is elsewhere. Our model does not extract only the buy-and-hold risk premia, but it also extracts the important short-term tactical risk premia required by investors on bonds of various maturities. These tactical risk premia are very important to understand the shape of the yield curve (see the references at the end of this page). One very important result of our work is that until the recent inflationary fears and the sharp increase in short-term rates these tactical risk premia have been on average negative since the end 90s (the following graph represents the annualized excess return expected by investors on 10-year Treasuries at the 3-month horizon).
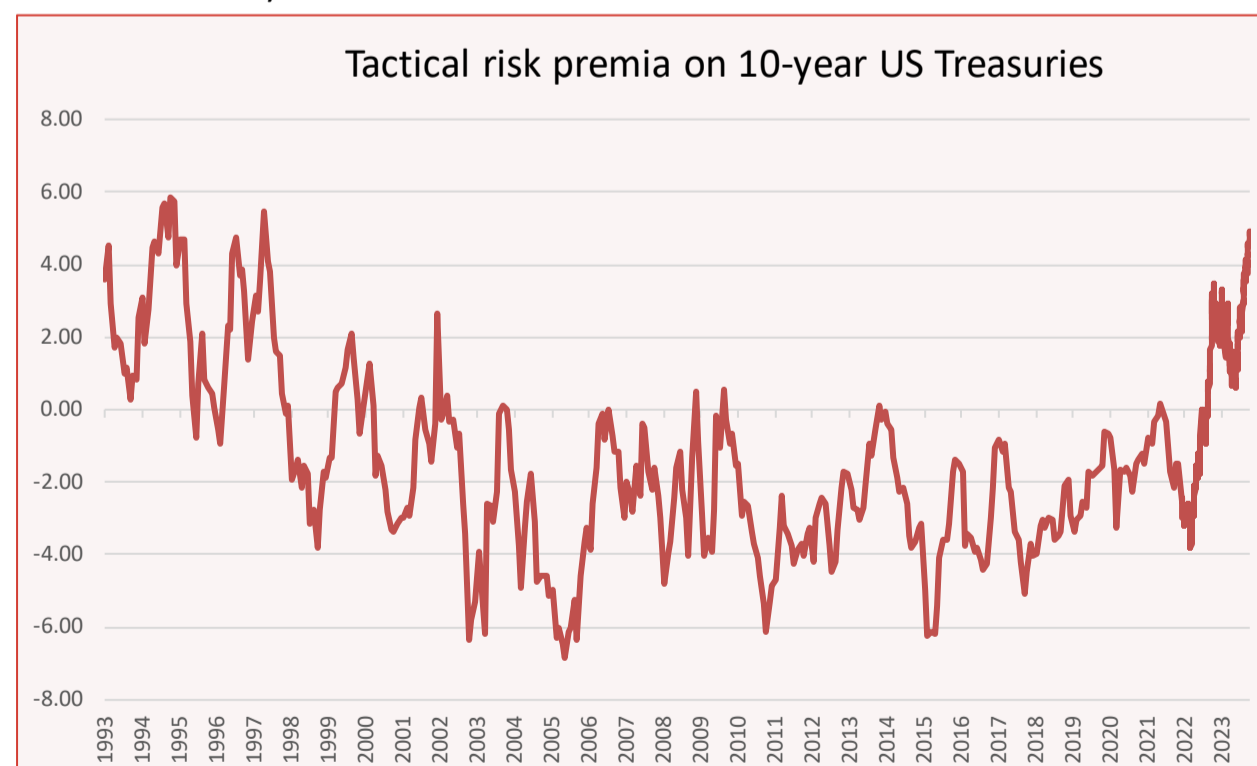
That means that a long time before the Fed introduced QE there was already an insufficient supply of risk-free Treasuries: tactical positions were on average structurally short in this key market. To keep it simple, this rich information about tactical risk premia is not discussed in this daily comment, but an excel file with the full information is available on our website (see the link on the homepage of www.riskpremium.com)

To know more about our modelling of the yield curve, and the key insights it provides on how markets price risks:
For a short presentation of the indicators we publish and how they can be used to understand the US yield curve, see https://riskpremium.com/wp-content/uploads/2022/07/RiskPremia-UST-guide-en.pdf
For a non-academic description of our modelling, see https://riskpremium.com/wp-content/uploads/2022/06/USTreasuries-Model-Guide.pdf