Q4

PGIM QUANTITATIVE SOLUTIONS

September 2023

Q4 2023 OUTLOOK

PGIM Quantitative Solutions Multi-Asset Team

Executive Summary

Economic Outlook

- Global economic activity remained resilient through the third quarter of 2023 despite considerable monetary tightening by global central banks over the past 18 months, which prompted speculation earlier this year that a US recession was imminent.
- Strong labor demand in the US has provided a buffer to household incomes and supported private consumption, while fiscal stimulus continues to boost the economy. The most likely economic scenario is one of modest US growth in the back half of 2023 and into 2024, with a lower risk of recession in the near term.
- Europe's post-COVID recovery has already faded, with Q2 GDP growth just barely positive in the Eurozone, UK, and Switzerland. The risks of a European recession are significant. Available hard data for Q3 is mixed, while soft data is dreadful.
- In contrast to Europe and China, Japan is a relative bright spot, helped by a relatively more supportive central bank. The Japanese economy remains underpinned by solid consumption and business spending.
- Weak growth is likely to continue in China, barring significant measures by the government to jumpstart the economy. Consumption spending and industrial activity remain anemic, while the real estate sector continues to struggle.
- Central banks are making progress in their fight against inflation. US headline inflation remains driven by geopolitics and OPEC+ supply cuts, but core inflation has declined from its peak. Eurozone core has moderated slightly from its recent high.
- Although their hiking cycles appear to be ending, the US Federal Reserve and European Central Bank are likely to keep monetary policy tight until they have more confidence that they can reach their inflation goals.
- The Bank of Japan has kept interest rates low as other central banks raised rates and is just beginning to allow more flexibility in its yield curve control program.
- While the People's Bank of China has continued to cut interest rates marginally in Q3, it continues to hold back from a "bazooka" stimulus to restart the economy.

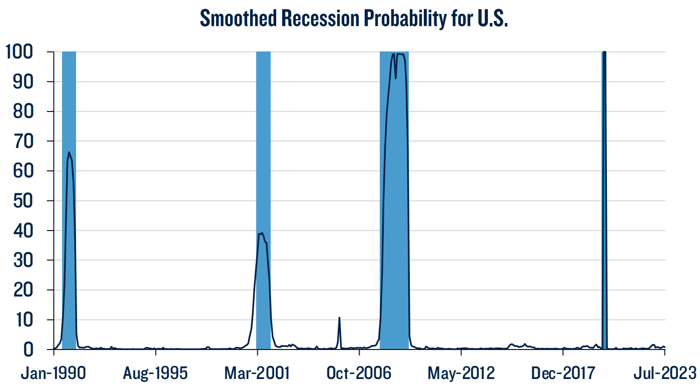
Market Outlook

- Global equity markets delivered mixed performance for much of the third quarter, with US stocks pulling back modestly despite better-than-expected corporate quarterly results.
- The dominance of a narrow field of mega-cap stocks moderated this quarter following exceptional performance in H1. Flat-ish to negative returns for this group, as well as most other global asset classes, defined Q3.
- Our view has shifted to a more balanced one, as the incoming hard economic data in the US lessens the possibility of a near-term recession occurring.
- The third quarter also likely marked the trough in the earnings cycle as growth expectations for future quarters turn positive and move past the negativity of Q2.
- However, we are cognizant that the high valuations of US equities already price in an optimistic scenario, so it's difficult to see much further upside.
- While sector composition often explains much of the difference in valuation between the US and the rest of the world, US stocks are expensive even after accounting for composition effects.
- Within equities, we prefer US and Japan over Europe, as Europe will likely experience more challenges in its fight with stagflation.
- On a cross-asset basis, the equity risk premium of the S&P 500 has recently dipped below the risk premium for high yield bonds, making the former relatively less attractive on valuations.
- Fixed income assets are attractive, especially the higher rates found in lower duration assets. Although declining inflation and economic weakness potentially on the horizon are supports, persistent risks include inflation remaining sticky and central banks keeping rates higher.
- While commercial real estate was calm in Q3, underlying problems linger and the sector is likely to remain an overhang on banks.
- Following a strong quarter for commodities, energy is expected to remain supported by supply-side issues, while industrial metals have a muted outlook on soft recovery-related demand-side factors.

Economy Defies Concerns, at Least for Now

Early indications are that global economic activity remained resilient through the third quarter of 2023 despite considerable monetary tightening by global central banks over the past 18 months, which prompted speculation earlier this year that a US recession was imminent. Recession calls have quieted recently as hard economic data in the US have come in stronger than expected, even as soft survey data remained weak. Strong labor demand has provided a buffer to household incomes and supported private consumption, while fiscal stimulus continues to boost the economy. Smoothed recession probabilities (Figure 1) based on coincident indicators suggest that the probability of recession in July 2023 was less than 1%.

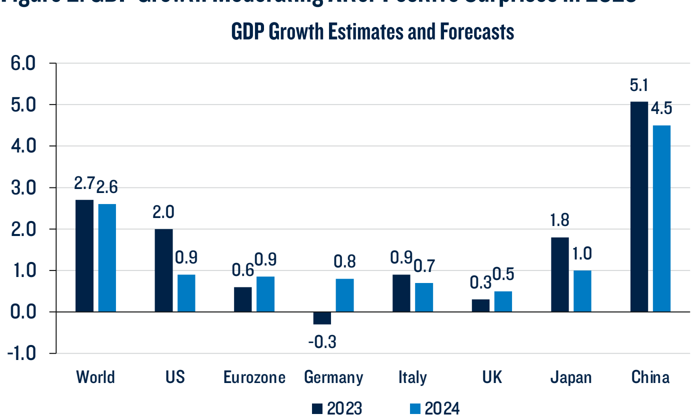
Figure 1: U.S. Recession Probability Remains Low



Source: St. Louis Federal Reserve as of 7/31/2023

In addition, the Q3 Atlanta GDPNow forecast is just shy of 5% (as of mid-September), although closer to a trend pace of around 2% may be likely in Q4. Therefore, the most likely economic scenario is one of modest US growth in the back half of 2023 and into 2024 (Figure 2), with a lower risk of recession in the near term than we had considered in our Q3 update. Nevertheless, a number of cross currents still obscure the global economic outlook.

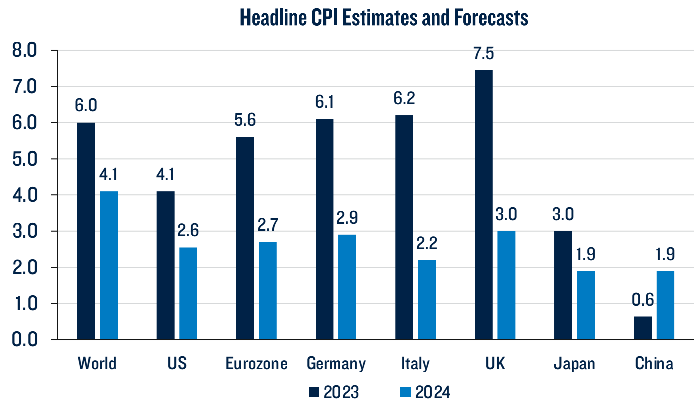
Figure 2: GDP Growth Moderating After Positive Surprises in 2023



Source: Bloomberg as of 9/12/2023

Central banks are making progress in their fight against inflation. While US headline CPI inflation (Figure 3) remains too high for comfort, influenced by geopolitics and supply cuts from OPEC+, US core CPI declined to 4.3% YoY in August from a peak of 6.6% last September. Eurozone core inflation has also moderated to 5.3% from its recent 5.7% peak. Nevertheless, inflation is still above target in the US and Europe. Although their hiking cycles appear to be ending, the US Federal Reserve (Fed) and European Central Bank are likely to keep monetary policy tight until they have more confidence that they can reach their inflation goals.

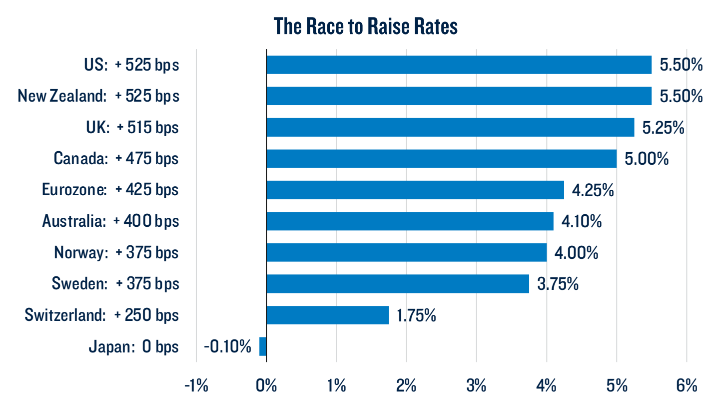
Figure 3: Inflation Remains on Easing Path



Source: Bloomberg as of 9/12/2023

Even in the absence of a recession, elevated interest rates (Figure 4) will have a negative impact well into 2024. Business and residential investment are often at the recession vanguard due to their sensitivity to interest rates. High mortgage rates have pushed US residential investment significantly lower in 2022 and so far in 2023. This weakness comes as historically low home inventories – driven in part by continued population growth amid supply shortages – have driven home prices to elevated levels, contributing to the recent bout of inflation.

Figure 4: Policy Rates Remain High With Inflation Still Above Targets

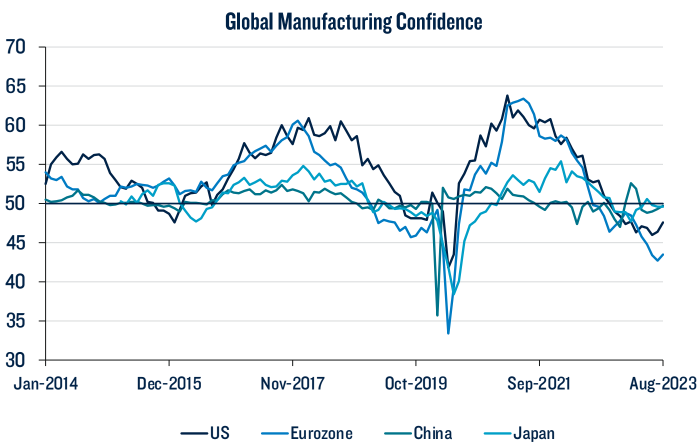


Source: Datastream as of 8/31/2023

In contrast, the corporate environment is healthier. Margins have pulled back from their post-COVID highs in 2021 but are comfortably at pre-COVID averages in spite of rising labor costs and debt service pressures. US business investment has held up relatively well, supported by Biden administration initiatives such as the Inflation Reduction Act, CHIPS Act, and Bipartisan Infrastructure Bill, which all encouraged firms to expand production. Even if there is a downturn, we assess that the most likely scenario is for a shallow one.

Although business activity data has held up, surveys (Figure 5) suggest signs of weakness, with ISM manufacturing remaining below 50 since November 2022, roughly the time when the yield curve inverted. Recent auto worker strikes may also temporarily depress production and send confidence even lower. While firms may be more cautious than would be implied by the hard data, a corporate re-evaluation of the state of the economy could prompt a wave of new investment spending. Still, the full impact of the Fed rate hikes on firms' cost of capital is yet to be realized, while bank lending is likely to remain tight in coming quarters as the commercial real estate overhang persists.

Figure 5: Manufacturing Confidence Weak Across Major Regions



Source: Bloomberg, Datastream as of 8/31/2023

The impact of tight monetary policy tends to hit consumers with a lag compared to investment spending. So far, the US consumer outlook remains supported by the strong labor market. However, the rising cost of living and phaseout of stimulus checks has eroded the record savings accumulated during the COVID pandemic. The US savings rate fell below the 20-year median in July to around 3.5%, suggesting that consumers are more sensitive to a potential downturn in the economy. Already, we are seeing some cracks with second-quarter auto loan delinquencies at their highest level since late 2010 and credit card delinquencies climbing above pre-COVID levels. Restarting student loan payments in October will also weaken the financial position of young households relative to the post-COVID recovery period.

Overall, US growth is expected to be strong in Q3, but slower in coming quarters as monetary policy remains tight and short rates are likely to stay elevated into 2024. Nevertheless, there are some structural risks to the US outlook that may still play out in the coming quarters. For instance, US Gross Domestic Income (GDI) paints a much weaker picture of recent economic performance than GDP. The two measures are expected to converge over the long term, but GDI has historically provided a more accurate measure of true economic conditions. This implies a risk that currently strong GDP estimates are overstating the health of the economy.

While the US outlook has some risks on the horizon, the international outlook is cloudier. Europe's post-COVID recovery has already faded, with Q2 GDP growth just barely positive in the Eurozone, UK, and Switzerland. The risks of a European recession are significant. Available hard data for Q3 is mixed, while soft data is dreadful. Consumers and businesses continue to struggle under the weight of higher interest rates and elevated energy costs. Rate hikes have made borrowing costlier, particularly for variable rate borrowers, prompting households and firms to tighten their purse strings. Meanwhile, extended OPEC+ supply cuts have sent global oil prices higher, while Europe is likely to contend with natural gas price spikes again this winter. Weak international demand, particularly from China, has suppressed activity and depressed confidence. Manufacturing PMIs suggest contracting activity in the Eurozone, the UK, and Switzerland for 2023.

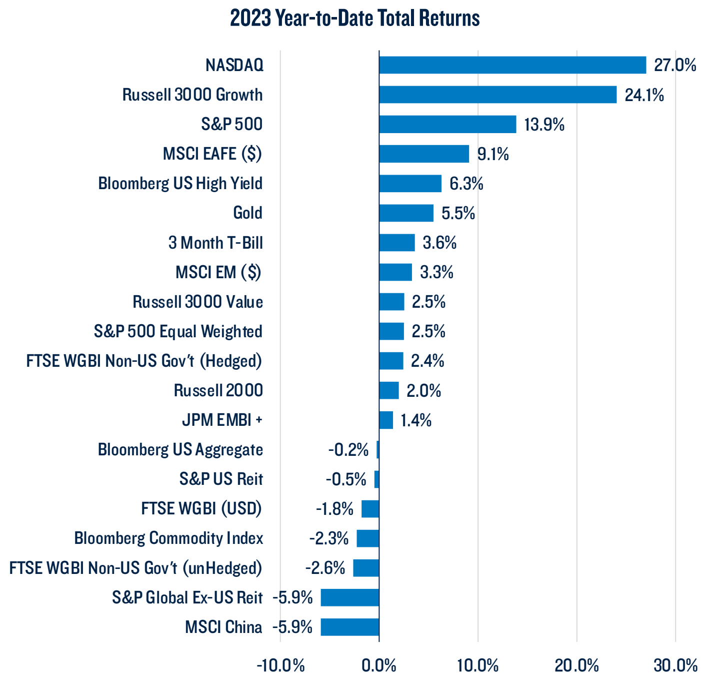
Weak growth is likely to continue in China, barring significant measures by the government to jumpstart the economy. Previously a major engine for China's growth, the real estate sector began sputtering after President Xi restricted credit and increased regulation in an attempt to wean the economy from its reliance on the sector. However, the significant debt burdens of local governments and their reliance on real estate has proved difficult. While the People's Bank of China (PBOC) has cut interest rates, it has held back from a "bazooka" stimulus to restart the sector. Nevertheless, while growth expectations have weakened, 2023 GDP growth estimates for China remain close to the government's 5% target.

In contrast to Europe and China, Japan is a relative bright spot, helped by a relatively more supportive central bank. While other central banks raised rates, the Bank of Japan (BoJ) has kept interest rates low and is only just beginning to allow more flexibility in its yield curve control program. As a result, after years of deflation, Japanese CPI excluding fresh food and energy hit 4.3% in July, the highest level since the series began in the early 2000s, and the yen has depreciated against the US dollar by nearly -10% this year. The weaker yen has made the Japanese economy more competitive, supporting the export sector and tourism. However, like some other East Asian countries, longer-term demographic trends remain a negative.

Magnificent Moderation

Although market consensus is a rarity, investors united this quarter to cast aside a clutter of acronyms and settle on a palatable 'Magnificent Seven' moniker for the mega-cap stocks that have driven US equity returns this year[1]. The dominance of the Magnificent Seven moderated this quarter following an exceptional performance in the first half. Flat-ish to negative returns for this group, as well as most other global asset classes (Figure 6), defined Q3. Even with a Q2 earnings report from NVIDIA that handily beat already-lofty expectations, equity investors largely shrugged. Risk assets experienced cross currents from uncertainty regarding economic growth, central bank policy, and commercial real estate fragility, which were offset by optimism surrounding AI and a resumption in interest rate increases across the yield curve. Uncertainty trumped enthusiasm and balanced risks flattened returns.

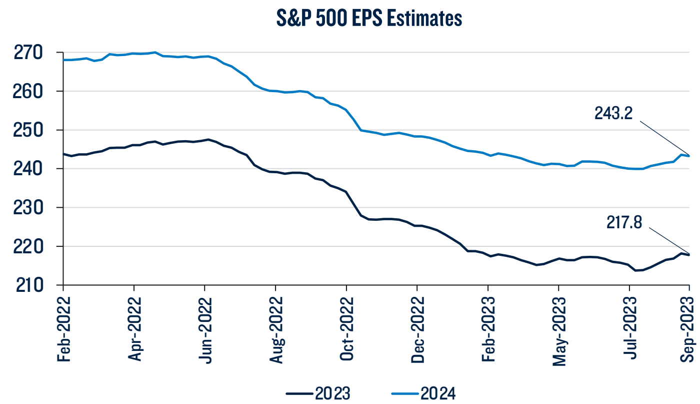
Figure 6: Strong Rebound for Risk Assets Despite Q3 Moderation



Source: FactSet as of 9/22/2023

Our previous outlooks took a more skeptical tone compared to the optimism seen in equity and other risk markets. This view has shifted to be more balanced as the recent economic data in the US lessens the probability of a near-term recession occurring. The third quarter also likely marked the trough in the earnings cycle, as growth expectations for future quarters turn positive and move past the negativity of Q2 (Figure 7).

Figure 7: Better Economic Prospects Reflected in Earnings Expectations



Source: Datastream as of 8/31/2023

However, we are cognizant that the entry point of an investment matters, and high valuations of US equities already price in an optimistic scenario, so it's difficult to see much further upside. While the Magnificent Seven appear priced for perfection, valuations of the remaining 'Frail 493' tell a different story. The sober returns of this bottom cohort reflect global economic uncertainty. In fact, the single-digit return of the median S&P 500 stock underperformed the median stock in Europe's STOXX 600 Index this year, despite the much more favorable economic environment in the US.

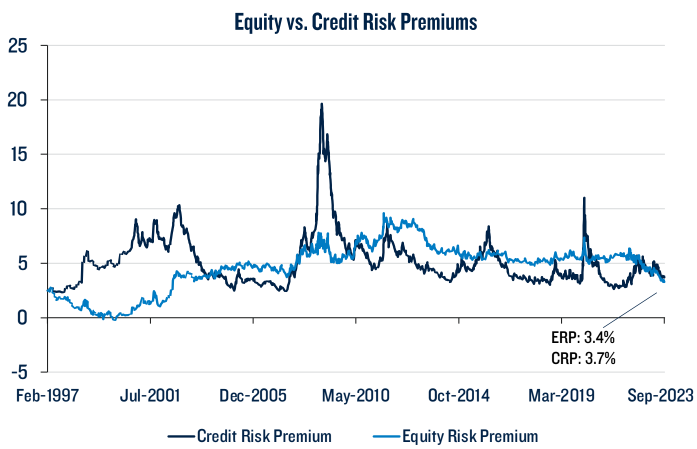
Earlier this year we highlighted the growing disparity of valuations in the US relative to the rest of the world. While sector composition often explains much of the difference, US stocks are expensive even when accounting for composition effects. For example, the forward PE ratio of the US is almost twice as large (~20X vs. 10X) as that of Germany, but the weight of the Information Technology sector (which deservedly holds a higher valuation ratio due to high growth and profitably) is also about twice the size (28% vs 15%). However, looking at valuations at the individual industry group level, 20 of the 24 industry groups in the S&P 500 were trading above their long-term median PE ratios, while over half were trading in the top quintile.

All this is not to say that valuations are too high. Only that various industries in the US are pricing in faster growth or profitability than has historically been the case, which may turn out to be the case if the AI theme is as powerful as pundits claim. Regardless, one side effect is that other assets look relatively more attractive.

[1] The "Magnificent Seven" include Nvidia, Meta Platforms, Amazon, Microsoft, Apple, Alphabet, and Tesla.

In a simple exercise we compare the equity risk premium, calculated by subtracting the S&P 500's forward earnings yield (inverse of the PE ratio) from a risk-free real yield (US Government 10Y TIPS), to a comparable risk premium for high yield bonds, which is measured by their option-adjusted spread (OAS). Since high yield bonds are senior to equities in the capital structure, their risk premium is, on average, lower. However, in recent months the equity risk premium has dipped below that of credit (Figure 8). Although the assets are not perfectly comparable, and sector composition will be a factor here as well, it is an example of developing opportunities for the multi-asset investor.

Figure 8: High Yield Credit Has Higher Risk Compensation vs. Equities



Credit Risk Premium (CRP) measured as the Bloomberg High Yield OAS; Equity Risk Premium (ERP) measured as the S&P 500 forward 12M PE Ratio - 10Y TIPS Yield

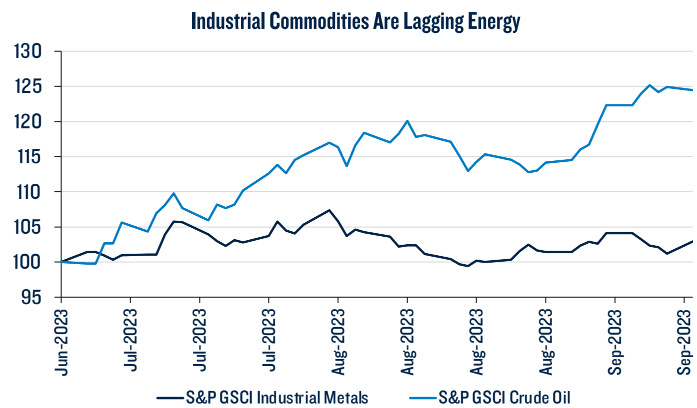
Source: Datastream as of 9/12/2023

The third quarter was unkind to fixed income as interest rates moved higher. This was driven by higher real rates rather than fears of another bout of inflation. With declining inflation and economic weakness potentially on the horizon, one would expect this recent rise to reverse soon. However, we think that won't be the case for some time yet. First, the Fed has consistently communicated its aim of keeping interest rates higher for longer to ensure inflation returns to target. And although this stance has proven effective in pushing core inflation lower, even more progress will have to be made before cuts are considered. Second, the recent rise in energy and food prices will begin to add pressure to headline inflation. In addition, base effects are expected to add to upward pressure on inflation. While this is not news to the Fed, and incrementally higher headline inflation in the coming months is not a major concern of the Fed, it does mean that the inflation fight is not yet over, and upside risks remain.

Internationally, bond investors focused on Japan. After more than seven years of yield curve control, the BoJ announced new flexibility to its program and market expectations have risen that this may be the start of its eventual conclusion. Although Japanese inflation sits well below that of the US and Europe, it has been ticking higher, prompting the central bank to consider this gradual transition.

Within commodities (Figure 9), energy burst back on stage after a lackluster first half of 2023. Some have pointed to this performance as evidence of economic recovery. However, supply-side issues are more prominent drivers of the upswing in energy prices, rather than recovery-related demand-side factors that would have also pushed assets like industrial metals higher. OPEC+ has successfully focused on cutting supply in recent months, and the Strategic Petroleum Reserve (SPR) in the US has been rapidly shrinking and is now at levels last seen in the 1980s. Given the increasingly delicate geopolitical situation with Russia/Ukraine and China/Taiwan, further decreases in the SPR are unlikely, sapping an alternative supply source that could combat the OPEC+ supply cuts.

Figure 9: Energy and Metals Performance Diverge



Source: Datastream as of 9/11/2023

The improved economic picture in the US has prompted us to shift our outlook to a more balanced position. We are broadly neutral on equities as much of the positivity seems to have already been priced in, while possible negative scenarios remain on the horizon. Within equities, we prefer US and Japan over Europe, as Europe will likely experience more challenges in its fight with stagflation. We think credit has a more attractive risk-reward tradeoff. With the Fed near the end of its rate hike cycle, our view is that opposing forces will keep interest rates relatively stable in the US, so the higher rates of lower duration assets appear more attractive. Although energy is recovering, it is supply-side driven and other industrials look poised to stay depressed given China's economic weakness. We remain concerned about the commercial real estate sector and the resultant overhang on the banking sector. We highlighted some of these issues last quarter, and although Q3 has been calm, we don't think we're out of the woods yet.

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PGIM QUANTITATIVE SOLUTIONS

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