

The December calendar for central banks' meetings (FED, ECB, BoE, BoJ) is likely to shape investors' expectations for monetary policy in 2023

- Global equity markets lost ground in the past week, mainly due to profit-taking ahead of major central bank meetings. The S&P500 fell by -3.4% w/w, followed though by an increase of +1.4% on Monday December 12th. Softer-than-expected US CPI data on Tuesday (+7.1% yoy vs +7.5%) supported equities further.
- Note that price-to-earnings multiples of 17.1x (12-month forward) remain significant above the long-term average ratio (15.5x), suggesting that equity investors are relative optimistic. On the other hand, the inverted US Treasury yield curve signals stresses ahead (10Y/3m US Treasury: -66 bps, see graph below). In our view, equity and bond volatility is set to continue until inflation data allow central banks to, at least, slow the pace of rate increases (see graphs page 3).
- The Federal Reserve on December 14th is likely to decelerate the pace of interest rate hikes to +50 bps, instead of +75 bps steps in each of the past four meetings, to a range of 4.25% - 4.5%. New economic projections, including the appropriate path for FFR, and Chair Powell's comments will be top of mind for investors.
- In September, the median FFR pointed to 4.6% by end-2023, with Chair Powell having hinted at a probable upward revision due to, *inter alia*, stronger inflation, with a significant risk of a 50-bps upward shift to 5.125%. PCE inflation is on a path to average +5.8% yoy in Q4:2022 versus a FOMC projection in September of +5.4% yoy and +2.8% yoy in Q4:2023.
- Revisions to 2023 real GDP will likely indicate weaker economic activity. The median FOMC projection in September for US GDP growth pointed to +1.2% year-over-year growth in Q4:2023, with a significant risk of declining around +0.5%.
- On the other side of the Atlantic, the interest rate hike size is a close call (+50 bps vs +75 bps) after steps of +75 bps in the previous two ECB meetings (current Deposit Facility Rate: +1.5%, Main Refinancing Operation Rate: +2%, three-month Euribor: +2.05%).
- Guidelines on the reinvestment policy of the APP portfolio -- current holdings of €3.25 trillion or 25% of euro area GDP -- are likely to be released. The quarterly ECB economic projections will also be watched, particularly for inflation. In September, CPI inflation was projected at +8.1% yoy on average in 2022 and +9.2% in Q4:2022 (average so far in 2022: +8.3% and average so far in Q4:2022: +10.3%), before decelerating to +5.5% in 2023 and to +2.3% in 2024 (target: +2%).
- Lower natural gas prices (45% of euro area Energy CPI, including electricity prices), lower brent crude oil prices (45% of euro area Energy CPI), the appreciation of the euro exchange rate, as well as downward revisions to real GDP growth (2023: +0.9% in September) could support inflation returning to target by the end of the forecasting horizon. Note that current market pricing for natural gas and oil prices has decreased by -39% and -11%, respectively, compared with September's assumptions (€121/MWh for 2023/2024 versus €200/MWh in September and \$77 per barrel for 2023/2024 versus \$87 per barrel in September). In a similar vein (negative for inflation), EUR/USD market pricing has moved up to 1.08 for 2023/2024 versus 1.01 in September (+7%).

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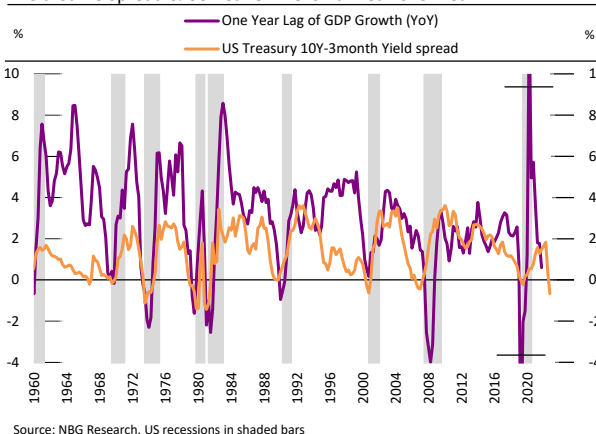
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Charts of the week

S&P500 12-month Forward Price/Earnings Ratio



Yield Curve Spread & US Real GDP Growth Year-over Year



The US goods trade deficit widened in October

- **Goods exports, in constant price terms, fell for a 2nd consecutive month in October (-2.5% mom following a -1.2% mom in September), whereas imports of goods moved in opposite direction (+1.6% mom from +2.0% mom).** Recall that compared with pre-pandemic (February 2020) levels, exports stood at +5.3% versus +22.3% for imports, in view of relatively stronger domestic demand compared with major trading partners. Overall, the (goods) trade deficit in constant price terms stood at \$112.6 bn in October, from \$104.3 bn in the previous month (and \$101.5 bn on average in Q3:22). In nominal terms, the goods trade deficit was \$99.6 bn, from \$93.5 in September (and \$90.4 bn on average in Q3:22). **As percent of GDP, on a 12-month rolling basis, i.e. the 12-month sum of the goods trade deficit divided by the average of the last four quarterly (annualized) GDP readings, the trade deficit stood at an elevated -4.9% of GDP, close to the widest since 2009 (-5.0%) reported in July 2022.**
- Note that the aforementioned ratio, had hovered in a tight range of -4.0% to -4.3% since 2013 (and up to the pandemic). By country, the bilateral (goods) trade deficit in nominal terms with China remains by far the largest (\$28.9 bn in October and 12-month average of \$33.9 bn | \$31.3 bn, on average per month in 2017, before the imposition of bilateral tariffs), followed by Mexico (\$12.4 bn in October and \$ 12-month average of \$10.7 bn).

US November PMIs were mixed, with services moving higher and manufacturing declining further

- **PMIs diverged sector-wise in November.** In the event, the ISM manufacturing PMI fell by -1.2 pts to 49.0, undershooting consensus estimates for 49.8 and below the expansion/contraction threshold of 50.0 for the first time since May 2020. Importantly, the relatively more forward-looking index of new orders underperformed, -2.0 pts to 47.2 pts. The ISM services PMI increased substantially, by 2.1 pts to a solid 56.5, well above expectations for 53.3 (new orders: -0.5 pts to a still robust 56.0).
- The aforementioned surveys painted a mixed picture also on pipeline price pressures, with the prices paid index declining by 3.6 pts to 43.0 in the manufacturing survey (below the expansion/contraction threshold of 50.0 for a 2nd consecutive month), whereas remaining at particularly elevated levels of 70.0 (even with a modest easing from 70.7 in October) in its services peer.
- In all, the Atlanta Fed's GDPNowcast model points to +3.2% qoq saar (+1.0% yoy) for GDP in Q4:22, from +2.9% qoq saar (+1.9% yoy) in Q3:22.

Euro area economic performance in Q3:2022 was slightly revised up in the final GDP estimate

- **The 3rd estimate for euro area GDP growth in Q3:22 (the first including analytical breakdown per expenditure component) came out at +0.3% qoq (+1.3% in annualized terms), versus +0.2% qoq (+0.8% annualized) in the previous estimate** (above consensus estimates for an unrevised reading) and following a +0.8% qoq (+3.2% annualized) in the previous quarter. The annual growth was +2.3% from +4.2% in Q2:22. **Private consumption** rose by 0.9% qoq (+1.7% yoy), after a +1.0% qoq (+5.4% yoy) in Q2:22, with both outcomes being boosted by the (largely free of pandemic-related restrictions) tourism season and added +0.4 pps to headline growth. The major contribution (+0.8 pps) came from **capital formation**, which increased by +3.6% qoq (+7.4% yoy), with strong business investment (+5.1% qoq | +9.5% yoy), more than offsetting a fall in residential investment (-0.7% qoq | +1.2% yoy). At the same time, **inventories** (including acquisitions less disposals of valuables) added further +0.2 pps, while **government consumption** posed a minor contribution to overall growth, up by +0.1% qoq (+0.4% yoy). On the other hand, **net exports** subtracted 1.1 pp, as imports (+4.3% qoq | +10.8% yoy) outpaced exports (+1.7% qoq | +7.7% yoy).
- Notably, the aforementioned sharp rise for both business investment and imports was heavily distorted to the upside by erratic (related to activities of multinational corporations) data for Ireland (+100% qoq & +27% qoq, respectively). Recall that excluding Ireland, euro area business investment would have risen by +0.6% qoq, imports by +2.3% qoq and overall GDP by +0.2% qoq (Irish GDP increased by +2.3% qoq).

Euro area retail sales fell substantially in October

- **Retail sales were roughly in line with consensus estimates in October**, down by -1.8% mom (in seasonally adjusted volume terms | -2.6% yoy), from an upward revised (by +0.4 pps) +0.8% mom in September (stable on a year-over-year basis). Compared with the average in Q3:22, retail sales were at -1.3% in October. On the other hand, new passenger car registrations rose by +1.7% mom (+14.9% yoy) in October, after a + 7.4% mom in September (+10.5% yoy) and stood at +10.4% compared with the Q3:22 average (seasonally adjusted data). Note that car sales are not included in the aforementioned retail sales report.

China's external trade data disappointed in November

- **Both exports and imports substantially deteriorated in November, well below consensus estimates.** Specifically, the annual pace of growth of exports -- in USD terms -- came out at -8.7%, from -0.3% in October, versus expectations for -3.6% yoy. At the same time, total imports came out at -10.6% yoy compared with -0.7% yoy in October, versus expectations for -5.0% yoy. In all, the latest data suggest that the impetus for demand eased in November, both domestically and abroad, albeit the latest reading could also be weighed by operational challenges stemming from pandemic-related restrictions.

Equities

- Global equity markets lost ground in the past week, in view of economic growth pessimism and profit-taking.** Overall, the MSCI ACWI ended the week lower by 2.2% wov (-18% ytd), with Developed Markets underperforming their Emerging Markets peers (-2.6% wov vs +0.5% respectively). The latter has been benefited by the overperformance of Chinese Equities (CSI 200: +3.3% | MSCI China: +6.6%) on further easing of Covid policy. In addition, President Xi set a more pro-growth tone for 2023 policy stance. Note that in the upcoming Central Economic Work Conference (which is usually held one week after the December Politburo meeting), policymakers are set to discuss the economic targets for 2023, though these targets will not be officially announced until the “Two Sessions” next year. Recall that 2022 growth target was “around 5.5%”.

The S&P500 fell by 3.4% wov (-18% ytd), albeit it rose by +1.4% on Monday. All sectors ended the week in red, with the Energy (-8.4% wov) and Communication Services (-5.4% wov) recording the biggest losses. On the other side of the Atlantic, the EuroStoxx fell by 1% wov (-12% yoy) and by a further 0.5% on Monday, with the Energy sector underperforming (-3.1% wov). In Germany, the DAX40 index fell by 1.1% wov and has declined by c. -10% since the beginning of the year. Given its international exposure (<20% of its revenues derived from Germany), the index could have benefited from the EUR decline (-7% against the USD), instead it was under pressure given its exposure to the Chinese consumers, Russian energy, and global trade. In Italy, FTSE MIB fell by 1.4% wov. Italian equities (40% of their revenues derived from Italy) have modestly underperformed year-to-date (-11%) as sovereign spreads have widened (+64 bps ytd) and funding costs for corporates have increased (see Graph 3).

Fixed Income

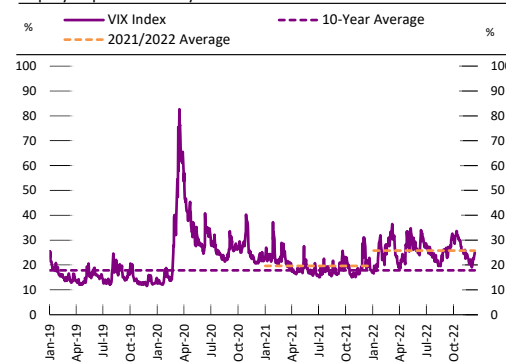
- Government bond yields were moderately up in the past week, mainly on Friday, due to stronger-than-expected economic data.** Specifically, the US Treasury 10-year yield ended the week up by 5 bps to 3.56%, while its 2-year peer rose by 6 bps to 4.39%. As a result, the inversion in key parts of the yield curve remains, with the 10Y/3m UST yield spread at -66 bps and 10Y/2Y at -80 bps. In Germany, the 10-year yield rose by 7 bps wov to 1.93%, while periphery government bond yields followed a similar path (Italy: +6 bps to 3.82%, Spain: +9 bps to 2.95%). **Corporate bond spreads were mixed in the past week.** Specifically, US high yield spreads were down by 4 bps to 446 bps, while their euro counterparts increased by 9 bps to 509 bps. In the Investment Grade spectrum, both USD and EUR spreads declined by 3 bps to 137 bps and 170 bps respectively.

FX and Commodities

- In foreign exchange markets, the euro appreciation continues.** Specifically, the EUR rose by +0.6% against the US Dollar to \$1.05 (+9.8% from September lows). Meanwhile, the Japanese yen fell in the past week by -0.8% to ¥136.6. Note however that it has increased by c. 7% since the beginning of November as 10-Year nominal yield differentials (US-JP) have narrowed by 43 bps.

In commodities, oil prices fell in the past week mainly due to demand pessimism, albeit they rose on Monday (+3%), in view of concerns regarding the timing of the return in operation of a major oil pipeline connecting Canada with the US (currently shut due to a leak). Meanwhile, US oil inventories continue to decline for a 4th consecutive week (-5.2 million barrels to 414 million barrels for the week ending December 2nd). Overall, Brent prices declined by -11.1% to \$76.1/barrel (-2% ytd), while WTI fell by -11.2% to \$71/barrel (-6% ytd). European Gas prices were highly volatile in the past week as Europe has entered severe cold conditions and high inventories are expected to decline due to increased consumption of natural gas for heating. Overall, on a weekly basis the price of the Dutch TTF increased by +2.6% to €139.6/MWh.

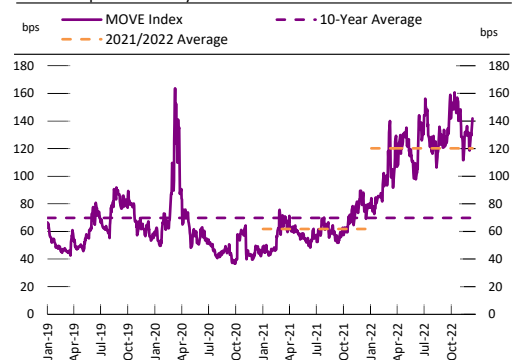
Equity Implied Volatility Index



Source: NBG Research, The VIX index calculates the 30-day expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of S&P 500 call and put options

Graph 1.

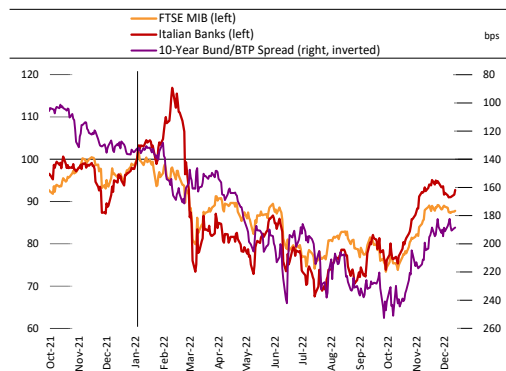
Bonds Implied Volatility Index



Source: NBG Research, the MOVE index is a measure of U.S. interest rate volatility that tracks the movement in U.S. Treasury yield volatility implied by current prices of one-month over-the-counter options on 2-year, 5-year, 10-year and 30-year Treasuries

Graph 2.

Italian Assets Performance



Source: NBG Research, January 2022 =100

Graph 3.

Quote of the week: “I believe by the end of next year you will see much lower inflation, if there's not an unanticipated shock... there's a risk of a recession. But it certainly isn't, in my view, something that is necessary to bring inflation down.”, **United States Secretary of the Treasury, J. Yellen, December 11th 2022.**

Interest Rates & Foreign Exchange Forecasts

10-Yr Gov. Bond Yield (%)	December 9th	3-month	6-month	12-month	Official Rate (%)	December 9th	3-month	6-month	12-month
Germany	1,93	2,15	2,25	2,25	Euro area	1,50	2,50	2,50	2,50
US	3,56	4,00	4,10	4,10	US	4,00	5,00	5,00	5,00
UK	3,17	3,69	3,64	3,49	UK	3,00	4,25	4,40	4,35
Japan	0,25	0,28	0,25	0,25	Japan	-0,10	-0,10	-0,10	-0,10

Currency	December 9th	3-month	6-month	12-month	December 9th	3-month	6-month	12-month	
EUR/USD	1,05	1,02	1,05	1,10	USD/JPY	137	151	147	141
EUR/GBP	0,86	0,88	0,89	0,90	GBP/USD	1,23	1,16	1,18	1,22
EUR/JPY	143	154	155	155					

Forecasts at end of period

Economic Forecasts

United States	2020a	Q1:21a	Q2:21a	Q3:21a	Q4:21a	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22f	2022f
Real GDP Growth (YoY) (1)	-2,8	1,2	12,5	5,0	5,7	5,9	3,7	1,8	1,9	0,3	1,7
Real GDP Growth (QoQ saar) (2)	-	6,3	7,0	2,7	7,0	-	-1,6	-0,6	2,9	2,6	-
Private Consumption	-3,0	10,8	12,1	3,0	3,1	8,3	1,3	2,0	1,7	2,2	2,3
Government Consumption	2,6	6,5	-3,0	-0,2	-1,0	0,6	-2,3	-1,6	3,0	0,9	-0,9
Investment	-2,3	9,7	5,8	-1,1	0,6	7,4	4,8	-5,0	-4,1	3,1	2,6
Residential	7,2	11,6	-4,9	-5,8	-1,1	10,7	-3,1	-17,8	-26,8	1,1	-3,4
Non-residential	-4,9	8,9	9,9	0,6	1,1	6,4	7,9	0,1	5,1	3,5	4,5
Inventories Contribution	-0,7	-3,0	-1,3	2,0	5,1	0,2	0,3	-2,1	-1,2	-0,3	0,6
Net Exports Contribution	-0,2	-1,3	-0,8	-1,3	-0,6	-1,7	-3,8	1,2	3,4	0,6	-1,1
Exports	-13,2	0,4	4,9	-1,1	23,5	6,1	-4,6	13,8	15,3	2,4	5,0
Imports	-9,0	7,6	7,9	6,6	18,6	14,1	18,4	2,2	-7,3	-1,7	9,1
Inflation (3)	1,2	1,9	4,9	5,4	6,7	4,7	8,0	8,7	8,3	8,1	8,3

Euro Area	2020a	Q1:21a	Q2:21a	Q3:21a	Q4:21a	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22f	2022f
Real GDP Growth (YoY)	-6,3	-0,8	14,2	3,9	4,8	5,3	5,5	4,2	2,3	0,8	3,0
Real GDP Growth (QoQ saar)	-	-0,2	8,2	9,3	2,2	-	2,5	3,2	1,3	-2,3	-
Private Consumption	-7,8	-7,2	14,3	19,1	-0,5	3,7	-0,1	4,2	3,5	-0,6	3,9
Government Consumption	1,0	-1,3	8,9	1,8	1,4	4,3	0,2	-0,4	0,6	1,0	1,9
Investment	-6,5	-9,0	7,4	-3,2	14,3	3,7	-2,9	3,8	15,4	-1,1	2,8
Inventories Contribution	-0,3	2,4	-2,1	0,1	2,7	0,2	-1,2	0,9	0,7	-0,2	0,2
Net Exports Contribution	-0,5	3,6	-0,3	-0,1	-3,4	1,3	4,4	-0,5	-4,4	-1,8	-0,3
Exports	-9,2	4,4	10,4	7,7	10,9	10,4	5,9	7,0	7,2	-3,5	6,2
Imports	-8,7	-3,1	12,4	8,6	20,3	8,2	-2,9	8,9	18,2	0,0	7,3
Inflation	0,3	1,0	1,8	2,9	4,7	2,6	6,1	8,0	9,3	10,3	8,4

a: Actual, f: Forecasts, 1. Seasonally adjusted YoY growth rate, 2. Seasonally adjusted annualized QoQ growth rate, 3. Year-to-year average % change

12-Month View & Key Factors for Global Markets

	US	Euro Area	Japan	UK
Equity Markets	<ul style="list-style-type: none"> + Households' balance sheets are healthy + Service-oriented sectors are re-opening + Sentiment (e.g. AAI) and positioning indicators are hitting extreme lows - Peaking profit margins - Recession risks are increasing - P/Es (Valuations) still remain above l-t means, despite the recent correction <p>● Neutral/Negative</p>	<ul style="list-style-type: none"> + Still high equity risk premium relative to other regions + Still loose fiscal policy in 2022 (plus RRF) - Geopolitical uncertainty (Ukraine-Russia, natural gas) could intensify - Logistic disruptions (vaccine) and renewed lockdowns in China delay the export-led recovery <p>● Neutral</p>	<ul style="list-style-type: none"> + Still aggressive QE and "yield-curve" targeting by the BoJ + JPY depreciation @ 20Y highs (¥130) support exporters - Signs of policy fatigue regarding structural reforms and fiscal discipline - Chinese growth deceleration <p>● Neutral</p>	<ul style="list-style-type: none"> + Significant exposure to commodities + Undemanding valuations in relative terms relative to other regions - Elevated domestic policy uncertainty <p>● Neutral/Positive</p>
Government Bonds	<ul style="list-style-type: none"> + Valuations appear rich despite the 200bps increase, with term-premium @ 0% (1% for 2000-2015) + Sizeable fiscal deficit + Underlying inflation pressures under Average Inflation Targeting + Fed: End of asset purchases - Global search for yield by non-US investors (e.g. Japan, repatriation from EM Economies) continues - Safe haven demand <p>▲ Slightly higher yields expected</p>	<ul style="list-style-type: none"> + Valuations still appear excessive compared with long-term fundamentals + ECB: End of APP purchases in June 2022, interest rate hikes in H2 - Political Risks - Fragile growth outlook - ECB QE "stock" effect <p>▲ Slightly higher yields expected</p>	<ul style="list-style-type: none"> + Sizeable fiscal deficits + Restructuring efforts to be financed by fiscal policy measures - Safe haven demand - Extremely dovish central bank - Yield-targeting of 10-Year JGB at around 0% <p>● Stable yields expected</p>	<ul style="list-style-type: none"> + Inflation expectations could drift higher due to supply disruptions (persistent post Brexit, temporary due to China) + The BoE is expected to raise rates towards 2% - Slowing economic growth post-Brexit <p>▲ Slightly higher yields expected</p>
Foreign Exchange	<ul style="list-style-type: none"> + Weak global growth / Safe-haven demand status + USD interest rate differential vs peers remain significant + Aggressive Fed tightening - Global political uncertainty to decline <p>● Broadly Flat USD against G10 FX</p>	<ul style="list-style-type: none"> + Current account surplus - Still negative interest rates - Global growth risks remain to the downside <p>● Broadly Flat/Stronger EUR against the USD</p>	<ul style="list-style-type: none"> + Safe haven demand + More balanced economic growth recovery (long-term) + Inflation is bottoming out - Additional Quantitative Easing by the Bank of Japan if inflation does not approach 2% <p>▲ Slightly higher JPY</p>	<ul style="list-style-type: none"> + Valuations appear undemanding with REER below its 15-year average - Sizeable Current account deficit <p>● Broadly stable GBP expected</p>

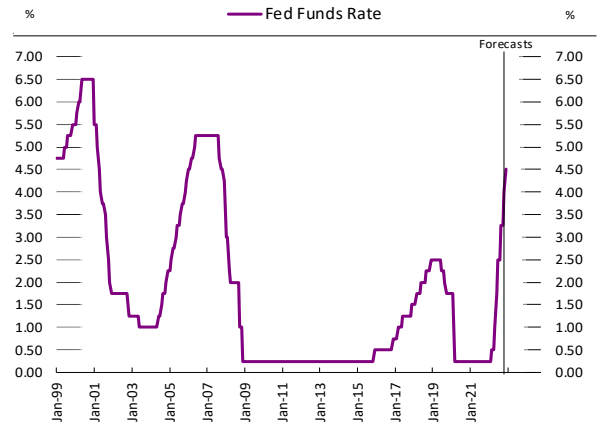
Economic Calendar

The Federal Reserve meets on December 14th and is expected to increase its Federal Funds Rate (FFR) by 50 basis points to 4.5%. November retail sales report will also be closely monitored. The monthly figure is expected to decelerate to -0.2% mom from 1.3% mom in October.

For the ECB the interest rate hike size is a close call (+50 bps vs +75 bps) after steps of +75 bps in the previous two meetings (current Deposit Facility Rate: +1.5%).

In the UK, attention turns to inflation data for November, due to be released on Wednesday. CPI is expected at 10.9% yoy from 11.1% yoy in October, while the core figure is expected to remain stable at 6.5% yoy. On Thursday, the BoE meets and is expected to increase its Bank Rate by 50 basis points to 3.5%.

US Federal Funds Rate



Source: NBG Research

Economic News Calendar for the period: November 06 - December 19, 2022

Tuesday 06				Wednesday 07				Thursday 08									
US		S	A	P	EURO AREA	S	A	P	US		S	A	P				
Trade balance (\$bn)	November	-80.0	+	-78.2	-74.1	GDP (QoQ)	Q3:22	0.2%	+	0.3%	0.2%	Initial Jobless Claims (k)	December 03	230	-	230	226
UK					GDP (YoY)	Q3:22	2.1%	+	2.3%	2.1%	Continuing Claims (k)	November 26	1600	-	1671	1609	
S&P Global/CIPS UK Construction PMI	November	52.0	-	50.4	53.2	Gross Fixed Capital Formation (QoQ)	Q3:22	..	3.6%	0.9%	JAPAN						
					Household Consumption (QoQ)	Q3:22	..	0.9%	1.0%	GDP (QoQ)	Q3:22	-0.3%	+	-0.2%	-0.3%		
					Government expenditure (QoQ)	Q3:22	..	0.1%	-0.1%	GDP Private Consumption (QoQ)	Q3:22	..	0.1%	0.3%			
					JAPAN					Eco Watchers Current Survey	November	49.3	-	48.1	49.9		
					Coincident Index	October	101.1	-	99.9	100.8	Eco Watchers Outlook Survey	November	47.9	-	45.1	46.4	
					Leading Index	October	96.6	+	99.0	98.2							
					GERMANY												
					Industrial Production (sa, MoM)	October	-0.6%	+	-0.1%	1.1%							
					Industrial Production (wda, YoY)	October	2.3%	-	0.0%	3.1%							
					CHINA												
					Exports (YoY)	November	-3.5%	-	-8.7%	-0.3%							
					Imports (YoY)	November	-6.0%	-	-10.6%	-0.7%							
Friday 09				Monday 12													
US		S	A	P	UK		S	A	P			S	A	P			
University of Michigan consumer confidence	December	56.9	+	59.1	56.8	GDP (MoM)	October	0.4%	+	0.5%	-0.6%						
Wholesale trade	October	..	0.4%	0.1%	Industrial Production (MoM)	October	0.0%	0.0%	0.2%	Industrial Production (YoY)	October	-2.8%	+	-2.4%	-3.1%		
CHINA					CHINA					Aggregate Financing (RMB bn)	November	2100	1990	908			
CPI (YoY)	November	1.6%	1.6%	2.1%	Money Supply M2 (YoY)	November	11.7%	12.4%	11.8%	New Yuan Loans (RMB bn)	November	1350	1210	615			
Tuesday 13				Wednesday 14				Thursday 15									
US		S	A	P	US		S	A	P	US		S	A	P			
CPI (YoY)	November	7.3%	..	7.7%	Fed announces its intervention rate	December 14	4.5%	..	4.0%	Empire Manufacturing	December	-1.0	..	4.5			
Core CPI (YoY)	November	6.1%	..	6.3%	UK					Initial Jobless Claims (k)	December 10	230	..	230			
UK					CPI (YoY)	November	10.9%	..	11.1%	Continuing Claims (k)	December 03	..	..	1671	
ILO Unemployment Rate	October	3.7%	..	3.6%	CPI Core (YoY)	November	6.5%	..	6.5%	Philadelphia Fed Business Outlook	December	-12.0	..	-19.4			
GERMANY					EURO AREA					Retail sales (MoM)	November	-0.2%	..	1.3%			
ZEW survey current situation	December	-57.0	..	-64.5	Industrial Production (sa, MoM)	October	-1.5%	..	0.9%	Retail sales ex-autos (MoM)	November	0.2%	..	1.3%			
ZEW survey expectations	December	-26.4	..	-36.7	Industrial Production (wda, YoY)	October	3.6%	..	4.9%	Industrial Production (MoM)	November	0.1%	..	-0.1%			
					JAPAN					UK							
					Industrial Production (MoM)	October	..	..	-2.6%	BoE announces its intervention rate	December	3.5%	..	3.0%	
					Industrial Production (YoY)	October	..	..	3.7%	ECB announces its intervention rate	December	2.0%	..	1.5%	
					Tankan - large manufacturers current index	Q4:22	6	..	8	ECB announces its deposit facility rate	December	2.5%	..	2.0%			
					Tankan - large manufacturers outlook index	Q4:22	6	..	9	JAPAN							
										Imports YoY	November	27.0%	..	53.5%			
										Exports YoY	November	19.8%	..	25.3%			
Friday 16				Monday 19													
US		S	A	P	GERMANY		S	A	P	CHINA		S	A	P			
S&P Global US Manufacturing PMI	December	47.7	..	47.7	IFO - Business Climate Indicator	December	..	..	86.3	Industrial production (YoY)	November	3.6%	..	5.0%	
UK					IFO - Current Assessment	December	..	..	93.1	Retail sales (YoY)	November	-3.6%	..	-0.5%	
Retail sales Ex Auto MoM	November	0.2%	..	0.3%	IFO-Expectations	December	..	..	80.0						
S&P Global UK PMI Manufacturing SA	December	46.2	..	46.5	US												
S&P Global UK Services PMI	December	48.5	..	48.8	NAHB housing market confidence index	December	36	..	33								
EURO AREA																	
S&P Global Eurozone Manufacturing PMI	December	47.1	..	47.1													
S&P Global Eurozone Services PMI	December	48.5	..	48.5													
S&P Global Eurozone Composite PMI	December	48.0	..	47.8													
JAPAN																	
PMI manufacturing	December	48.0	..	49.0													

Source: NBG Research
S: Consensus Analysts Survey, A: Actual Outcome, P: Previous Outcome

Equity Markets (in local currency)

Developed Markets		Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	Emerging Markets		Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)
US	S&P 500	3934	-3.4	-17.5	-15.7	7.1	MSCI Emerging Markets	58968	0.6	-15.8	-17.0	-15.6	
Japan	NIKKEI 225	27901	0.4	-3.1	-2.9	4.0	MSCI Asia	904	1.6	-15.5	-17.1	-17.5	
UK	FTSE 100	7477	-1.1	1.2	2.1	13.9	China	66	6.6	-20.6	-24.2	-37.0	
Canada	S&P/TSX	19947	-2.6	-6.0	-4.7	13.6	Korea	720	-1.4	-21.0	-22.3	-18.4	
Hong Kong	Hang Seng	19901	6.6	-14.9	-18.0	-24.9	MSCI Latin America	88894	-3.2	-3.7	-3.7	-6.8	
Euro area	EuroStoxx	424	-1.0	-11.5	-9.8	7.7	Brazil	291382	-4.0	-4.9	-6.6	-17.8	
Germany	DAX 40	14371	-1.1	-9.5	-8.1	7.7	Mexico	46954	-1.7	-5.9	-2.0	19.4	
France	CAC 40	6678	-1.0	-6.6	-4.7	20.4	MSCI Europe	2682	-0.4	-61.3	-61.5	-54.2	
Italy	FTSE/MIB	24277	-1.4	-11.2	-9.5	10.5	Russia	2178	-0.1	-42.5	-42.9	-32.2	
Spain	IBEX-35	8289	-1.1	-4.9	-1.3	0.7	Turkey	4876794	0.3	134.7	115.5	212.9	

World Market Sectors (MSCI Indices)

in US Dollar terms		Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	in local currency		Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)
Energy		235.4	-7.0	34.9	34.4	74.7	Energy		247.8	-6.9	39.9	38.6	82.3
Materials		321.1	-1.4	-10.8	-7.8	2.8	Materials		319.9	-1.5	-6.2	-3.6	10.2
Industrials		303.9	-1.9	-13.3	-12.2	0.6	Industrials		315.7	-1.9	-9.0	-8.0	8.4
Consumer Discretionary		308.7	-3.3	-30.1	-30.0	-14.7	Consumer Discretionary		307.9	-3.3	-27.9	-27.9	-10.3
Consumer Staples		273.6	-1.5	-6.7	-2.4	4.7	Consumer Staples		281.4	-1.6	-3.4	0.6	10.1
Healthcare		349.7	-0.9	-5.4	-1.2	13.3	Healthcare		351.4	-1.0	-3.3	0.8	17.5
Financials		131.0	-2.4	-12.3	-11.3	11.9	Financials		135.2	-2.4	-9.1	-8.3	17.5
IT		414.5	-3.2	-27.6	-26.7	-1.9	IT		406.5	-3.2	-26.8	-25.8	0.1
Telecoms		68.5	-4.6	-35.8	-35.6	-26.1	Telecoms		73.0	-4.5	-34.6	-34.4	-23.8
Utilities		153.3	0.0	-6.6	-2.6	2.1	Utilities		160.8	-0.1	-4.0	-0.2	6.7

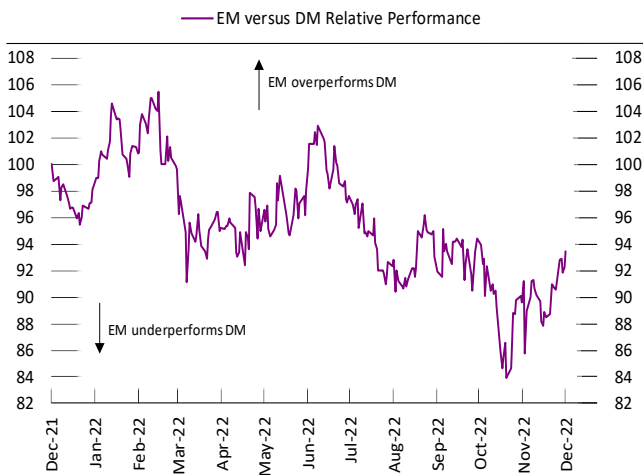
Bond Markets (%)

10-Year Government Bond Yields		Current	Last week	Year Start	One Year Back	10-year average	Government Bond Yield Spreads (in bps)		Current	Last week	Year Start	One Year Back	10-year average
US		3.56	3.51	1.51	1.48	2.14	US Treasuries 10Y/2Y		-83	-82	78	77	98
Germany		1.93	1.86	-0.18	-0.36	0.45	US Treasuries 10Y/5Y		-19	-16	25	23	49
Japan		0.25	0.25	0.07	0.05	0.19	Bunds 10Y/2Y		-22	-21	46	35	80
UK		3.17	3.15	0.97	0.74	1.47	Bunds 10Y/5Y		-1	0	28	24	54
Greece		3.98	3.87	1.32	1.36	5.43	Corporate Bond Spreads (in bps)		Current	Last week	Year Start	One Year Back	10-year average
Ireland		2.36	2.30	0.25	0.06	1.32	EM Inv. Grade (IG)		173	185	139	142	190
Italy		3.82	3.75	1.17	0.98	2.20	EM High yield		655	672	618	683	624
Spain		2.95	2.87	0.57	0.37	1.72	US IG		137	140	98	99	133
Portugal		2.84	2.78	0.46	0.32	2.44	US High yield		446	450	310	325	448
US Mortgage Market (1. Fixed-rate Mortgage)		Current	Last week	Year Start	One Year Back	10-year average	Euro area IG		170	173	98	99	119
30-Year FRM ¹ (%)		6.41	6.49	3.31	3.30	4.14	Euro area High Yield		509	500	331	343	405
vs 30Yr Treasury (bps)		278.8	285.5	138.9	139.9	138.9							

Foreign Exchange & Commodities

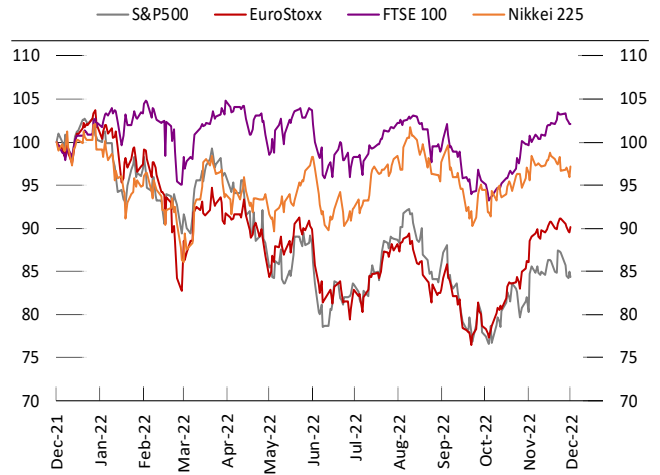
Foreign Exchange		Current	1-week change (%)	1-month change (%)	1-Year change (%)	Year-to-Date change (%)	Commodities		Current	1-week change (%)	1-month change (%)	1-Year change (%)	Year-to-Date change (%)
Euro-based cross rates							Agricultural		449	-0.6	-3.8	1.5	0.8
EUR/USD		1.05	0.6	5.1	-6.6	-7.3	Energy		262	-10.2	-16.1	8.7	3.9
EUR/CHF		0.98	-0.2	-0.4	-5.8	-5.1	West Texas Oil (\$/bbl)		71	-11.2	-17.3	0.1	-5.6
EUR/GBP		0.86	0.0	-2.7	0.3	2.1	Crude Brent Oil (\$/bbl)		76	-11.1	-17.9	2.3	-2.2
EUR/JPY		143.98	1.5	-1.9	12.5	9.9	HH Natural Gas (\$/mmbtu)		6.2	26.9	80.5	70.2	63.5
EUR/NOK		10.52	2.1	1.3	3.2	4.9	TTF Natural Gas (EUR/mwh)		139	2.6	23.0	38.5	97.8
EUR/SEK		10.89	0.0	0.1	6.2	5.8	Industrial Metals		462	0.2	7.9	-3.3	-7.4
EUR/AUD		1.55	0.3	-0.4	-1.8	-0.8	Precious Metals		2375	0.3	5.7	2.5	-0.7
EUR/CAD		1.44	1.8	6.3	0.2	0.0	Gold (\$)		1797	-0.1	5.3	1.2	-1.4
USD-based cross rates							Silver (\$)		23	1.5	11.1	6.9	1.3
USD/CAD		1.36	1.2	1.1	7.3	7.9	Baltic Dry Index		1386	4.7	-0.5	-58.5	-37.5
USD/AUD		1.47	-0.3	-5.2	5.1	7.0	Baltic Dirty Tanker Index		2110	-5.0	12.6	171.6	168.4
USD/JPY		136.60	0.8	-6.6	20.4	18.6							

EM vs DM Performance in \$



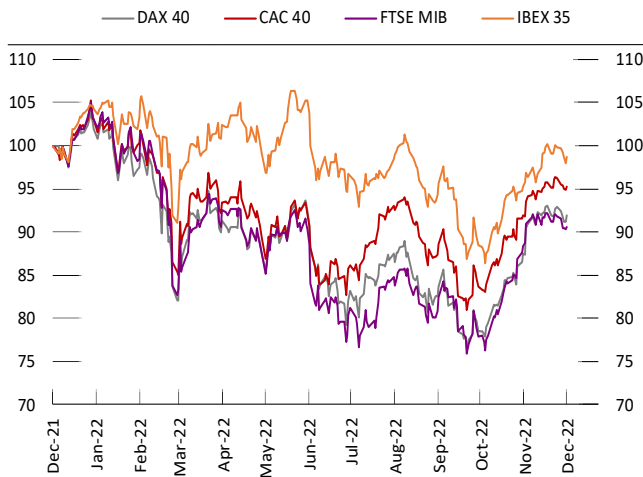
Data as of December 9th – Rebased @ 100

Equity Market Performance - G4



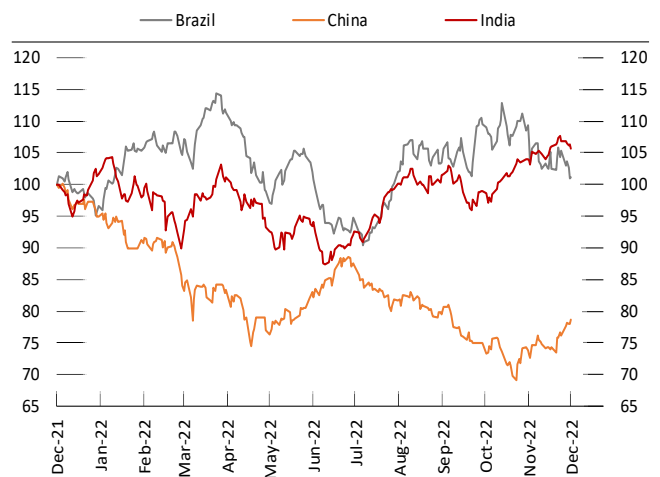
Data as of December 9th – Rebased @ 100

Equity Market Performance – Euro Area G4



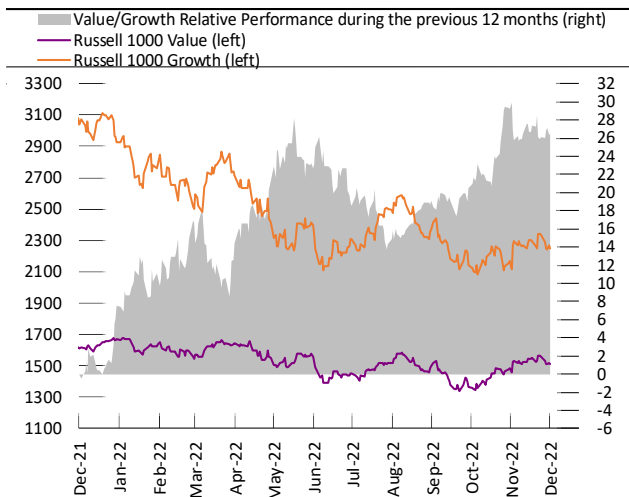
Data as of December 9th – Rebased @ 100

Equity Market Performance – Emerging Markets



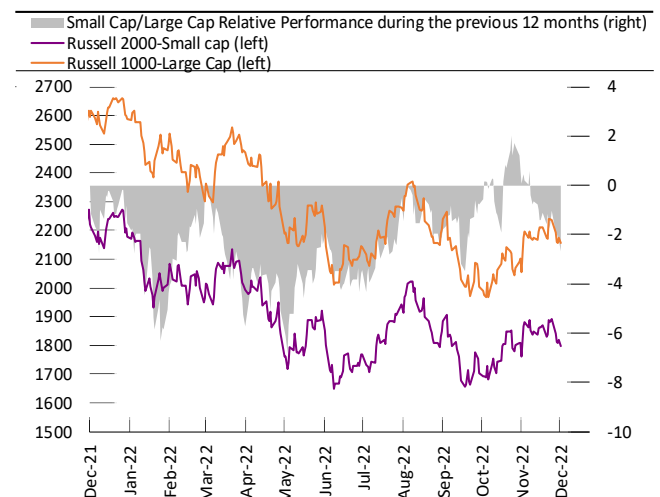
Data as of December 9th – Rebased @ 100

Russell 1000 Value & Growth Index



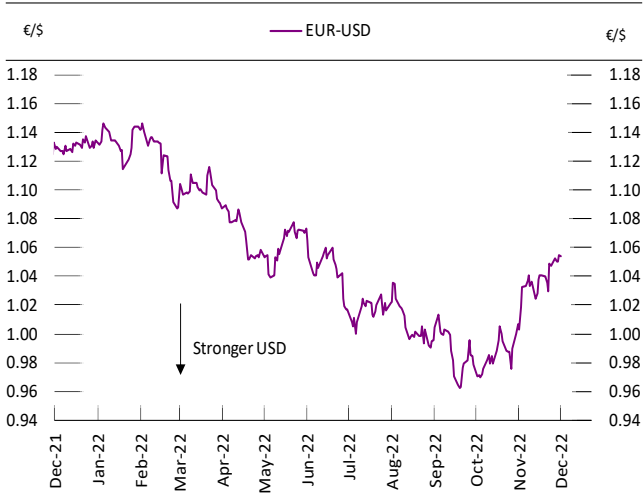
Data as of December 9th

Russell 2000 & Russell 1000 Index



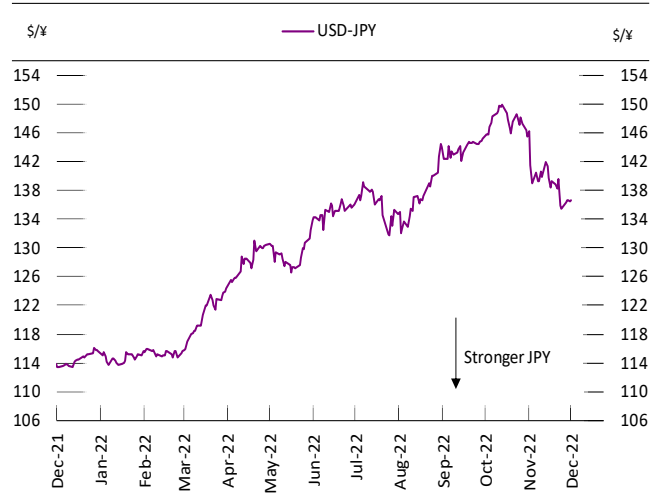
Data as of December 9th

EUR/USD



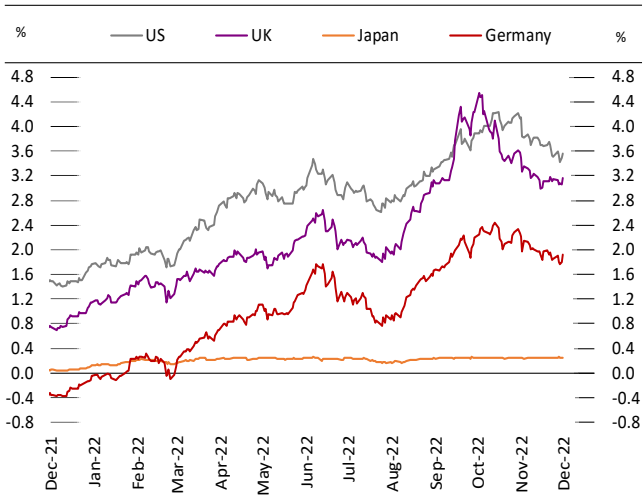
Data as of December 9th

JPY/USD



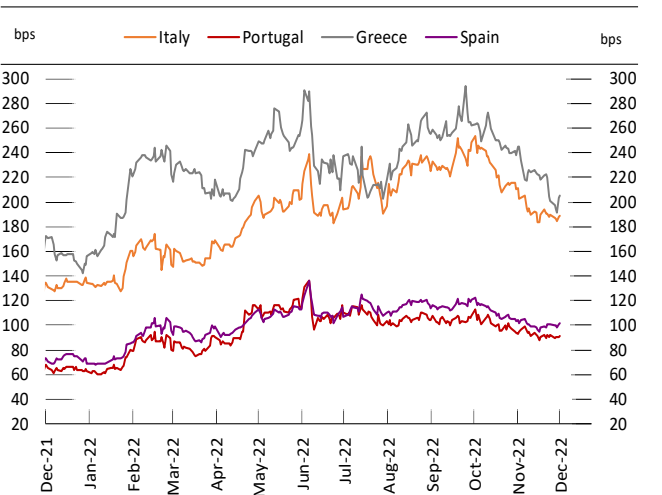
Data as of December 9th

10- Year Government Bond Yields



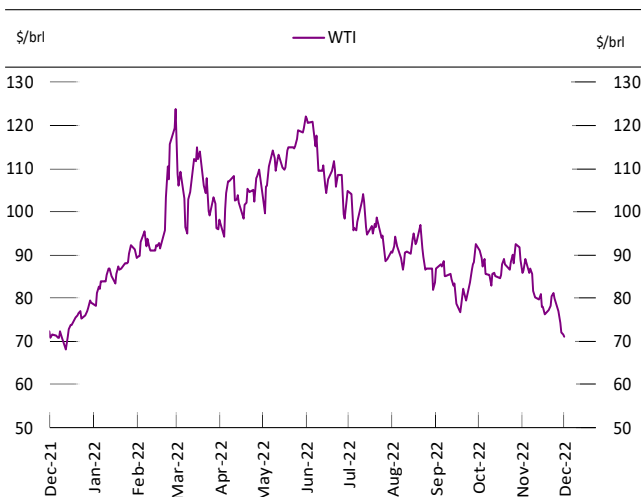
Data as of December 9th

10- Year Government Bond Spreads



Data as of December 9th

West Texas Intermediate (\$/bbl)



Data as of December 9th

Gold (\$/ounce)



Data as of December 9th

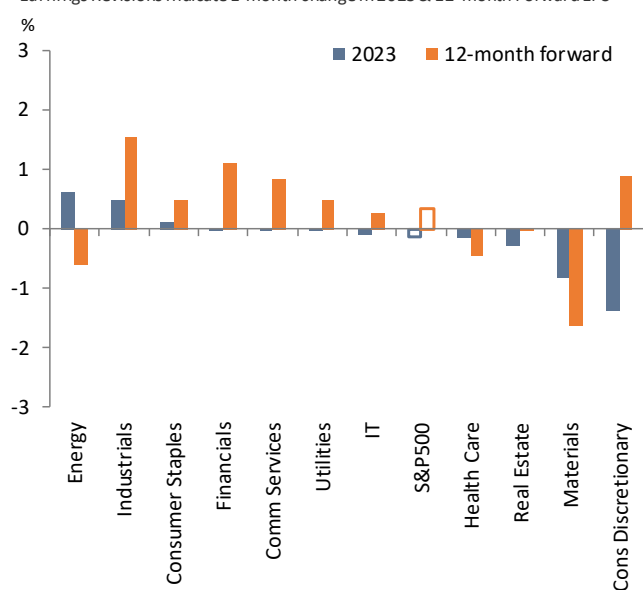
US Sectors Valuation

	Price (\$)			EPS Growth (%)		Dividend Yield (%)		P/E Ratio				P/BV Ratio			
	9/12/22	% Weekly Change	%YTD	2022	2023	2022	2023	2022	2023	12m fwd	10Yr Avg	2022	2023	Current	10Yr Avg
S&P500	3934	-3.4	-17.5	5.9	5.6	1.7	1.8	18.0	17.1	17.1	17.4	3.9	3.6	3.6	3.1
Energy	629	-8.4	48.9	158.2	-12.9	3.4	3.4	7.9	9.0	9.0	19.5	2.3	2.1	2.1	1.8
Materials	508	-3.3	-10.9	5.1	-9.3	2.0	2.1	15.0	16.5	16.4	16.2	2.9	2.7	2.7	2.7
Financials															
Diversified Financials	972	-3.1	-11.2	-13.4	8.2	1.6	1.8	16.2	15.0	15.1	15.0	2.0	1.8	1.9	1.7
Banks	325	-5.9	-22.2	-17.0	15.2	3.2	3.4	10.1	8.8	8.8	11.5	1.1	1.0	1.0	1.1
Insurance	595	-2.5	8.1	-13.3	29.0	1.8	2.0	17.1	13.3	13.5	11.9	2.2	2.0	2.0	1.3
Real Estate	240	-1.9	-26.2	10.7	2.8	3.7	3.6	17.3	16.8	16.8	18.7	2.7	2.9	2.9	3.3
Industrials															
Capital Goods	869	-3.1	-2.4	13.0	18.2	1.7	1.8	22.0	18.6	18.8	17.4	5.0	4.6	4.6	4.0
Transportation	928	-3.8	-17.7	125.7	8.6	2.0	2.1	15.6	14.4	N/A	14.0	5.3	4.5	4.5	4.2
Commercial Services	503	-2.8	-7.4	9.9	6.2	1.1	1.1	29.4	27.7	27.8	23.8	6.3	5.8	5.8	4.3
Consumer Discretionary															
Retailing	2838	-4.4	-32.8	-39.9	48.7	0.9	0.9	37.9	25.5	26.3	27.8	10.1	8.4	8.5	9.4
Consumer Services	1325	-2.6	-12.3	N/A	159.7	1.2	1.3	62.9	24.2	N/A	36.0	172.1	115.2	N/A	13.3
Consumer Durables	355	-2.5	-33.3	2.0	-15.9	1.8	1.9	12.3	14.6	14.5	17.0	3.0	2.7	2.7	3.4
Automobiles and parts	106	-7.5	-46.8	29.8	10.6	0.3	0.4	21.4	19.3	N/A	16.2	4.2	3.6	3.6	2.9
IT															
Technology	2719	-3.6	-20.3	5.9	3.4	0.9	1.0	20.9	20.2	20.3	15.9	15.5	13.7	13.8	7.2
Software & Services	2900	-4.0	-25.5	10.2	10.8	1.0	1.1	24.9	22.5	22.6	21.9	7.8	6.6	6.7	6.4
Semiconductors	1794	-1.4	-31.8	-3.8	-5.7	1.6	1.7	17.8	18.9	18.8	15.6	4.7	4.4	4.5	3.9
Communication Services	164	-5.4	-38.6	-16.7	10.7	1.0	1.1	16.3	14.7	14.8	19.0	2.6	2.4	2.4	3.2
Media	629	-5.9	-42.0	-17.5	11.0	0.3	0.4	18.4	16.6	16.7	22.4	3.1	2.8	2.8	3.7
Consumer Staples															
Food & Staples Retailing	649	-3.6	-7.5	1.4	6.2	1.5	1.6	22.8	21.4	21.5	18.7	5.2	4.7	4.8	3.7
Food Beverage & Tobacco	869	-1.8	6.5	4.7	2.7	3.0	3.1	20.2	19.6	19.7	18.6	5.6	5.3	5.3	5.1
Household Goods	859	-0.1	-12.0	-3.4	4.7	2.3	2.4	27.0	25.8	25.9	21.7	10.3	10.0	10.0	7.0
Health Care															
Pharmaceuticals	1312	-1.7	1.0	4.2	-8.0	1.8	1.9	15.6	17.0	16.9	15.5	5.7	5.1	5.2	4.4
Healthcare Equipment	1869	-0.7	-6.7	3.2	5.1	1.1	1.2	20.0	19.0	19.1	17.1	4.1	3.7	3.7	3.1
Utilities	358	-0.3	-1.6	2.0	7.1	2.9	3.1	20.0	18.7	18.8	17.2	2.2	2.0	2.1	1.8

Blue box indicates a value more than +2standard deviation from average, light blue a value more than +1standard deviation from average. Orange box indicates a value less than -2standard deviation from average, light orange a value less than -1standard deviation from average

1-month revisions to 2023 & 12-month Forward EPS

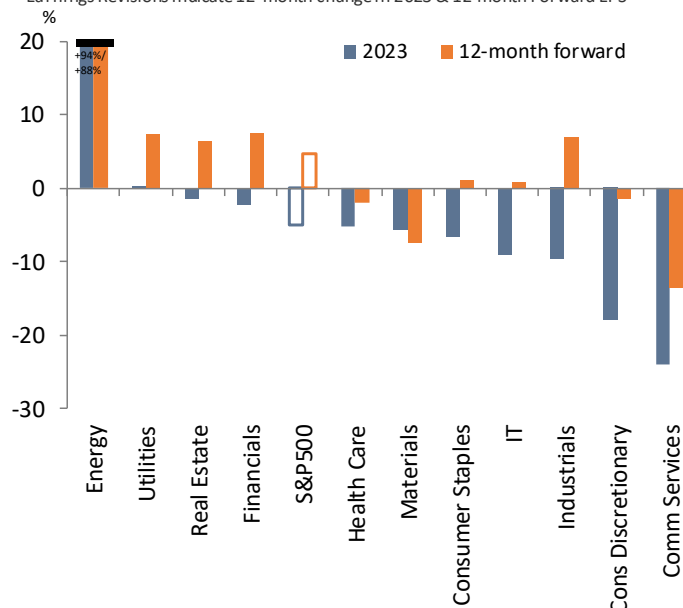
Earnings Revisions indicate 1-month change in 2023 & 12-month Forward EPS



Data as of December 9th
12-month forward EPS are 7% of 2022 EPS and 93% of 2023 EPS

12-month revisions to 2023 & 12-month Forward EPS

Earnings Revisions indicate 12-month change in 2023 & 12-month Forward EPS



Data as of December 9th
12-month forward EPS are 7% of 2022 EPS and 93% of 2023 EPS

National Bank of Greece | Economic Research Division | Global Markets Analysis

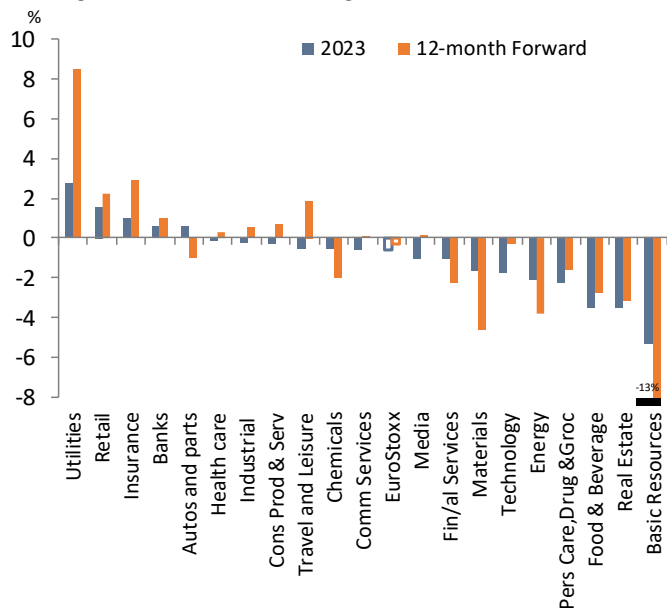
Euro Area Sectors Valuation

	Price (€)			EPS Growth (%)		Dividend Yield (%)		P/E Ratio				P/BV Ratio			
	9/12/22	% Weekly Change	%YTD	2022	2023	2022	2023	2022	2023	12m fwd	10Yr Avg	2022	2023	Current	10Yr Avg
EuroStoxx	424	-1.0	-11.5	16.7	2.8	3.2	3.4	12.9	12.6	12.6	14.8	1.6	1.5	1.5	1.5
Energy	340	-3.1	17.8	132.3	-17.6	5.4	4.7	5.1	6.2	6.1	12.9	1.2	1.1	1.1	1.2
Materials	959	-1.2	-8.1	9.4	-26.8	3.1	3.0	11.0	15.0	14.8	15.8	1.7	1.6	1.6	1.7
Basic Resources	239	2.8	-3.8	-6.2	-51.6	2.9	3.0	4.7	9.6	9.3	9.8	0.7	0.7	0.7	0.8
Chemicals	1388	-1.7	-8.6	19.7	-15.1	3.1	3.0	14.0	16.5	16.3	16.8	2.1	2.1	2.1	2.2
Financials															
Banks	93	-0.5	-7.1	14.0	3.3	6.6	7.0	7.0	6.8	6.8	10.2	0.6	0.6	0.6	0.7
Insurance	315	1.1	2.9	-4.6	22.7	5.3	5.7	11.0	8.9	9.0	9.7	1.3	1.2	1.2	0.9
Financial Services	511	-2.6	-11.8	25.1	-0.2	3.0	3.1	12.2	12.2	12.2	16.1	1.2	1.2	1.2	1.3
Real Estate	137	0.0	-38.5	5.7	-0.2	6.2	6.6	10.7	10.7	10.7	16.9	0.6	0.6	0.6	1.0
Industrials															
Industrial Goods & Services	997	-1.1	-14.8	20.7	11.0	2.3	2.6	17.8	16.1	16.2	17.5	2.5	2.3	2.4	2.7
Construction & Materials	479	-0.4	-11.8	-4.0	-0.2	3.7	3.9	12.0	12.0	12.0	14.8	1.6	1.5	1.5	1.5
Consumer Discretionary															
Retail	500	-2.6	-27.8	-1.0	6.1	4.3	4.6	20.2	19.1	19.1	26.0	4.0	3.8	3.9	5.6
Automobiles and parts	527	-1.7	-16.4	19.9	-16.5	6.2	5.6	4.7	5.7	5.6	8.0	0.8	0.7	0.7	1.0
Travel and Leisure	197	0.8	1.8	N/A	39.4	1.0	1.2	25.3	18.2	N/A	N/A	2.2	2.1	2.1	2.2
Consumer Products & Services	447	-0.9	-15.2	6.9	14.2	1.6	1.7	29.3	25.6	25.8	24.9	6.1	5.4	5.5	4.2
Media	271	-0.8	-5.2	19.5	15.4	2.3	2.5	21.3	18.5	18.7	18.6	2.9	2.8	2.8	2.2
Technology	783	-0.9	-20.3	-2.2	21.8	1.1	1.2	26.4	21.6	21.9	22.0	3.6	3.3	3.3	3.7
Consumer Staples															
Food, Beverage & Tobacco	168	-2.0	-12.2	12.0	8.6	1.8	2.1	19.5	18.0	18.1	20.1	2.1	2.0	2.0	2.6
Personal Care, Drug & Grocery	175	-0.3	-13.0	2.4	6.0	2.5	2.7	16.1	15.2	15.2	17.6	2.3	2.2	2.2	2.3
Health care	794	-1.1	-14.9	8.5	4.7	2.4	2.5	15.6	14.9	15.0	16.7	2.0	1.9	1.9	2.3
Communication Services	272	-2.3	-5.9	22.1	6.1	4.2	4.5	14.6	13.7	13.8	15.4	1.4	1.4	1.4	1.7
Utilities	359	0.1	-8.8	-42.5	85.3	4.5	4.6	23.5	12.7	13.3	14.2	1.7	1.6	1.6	1.3

Blue box indicates a value more than +2standard deviation from average, light blue a value more than +1standard deviation from average. Orange box indicates a value less than -2standard deviation from average, light orange a value less than -1standard deviation from average

1-month revisions to 2023 & 12-month Forward EPS

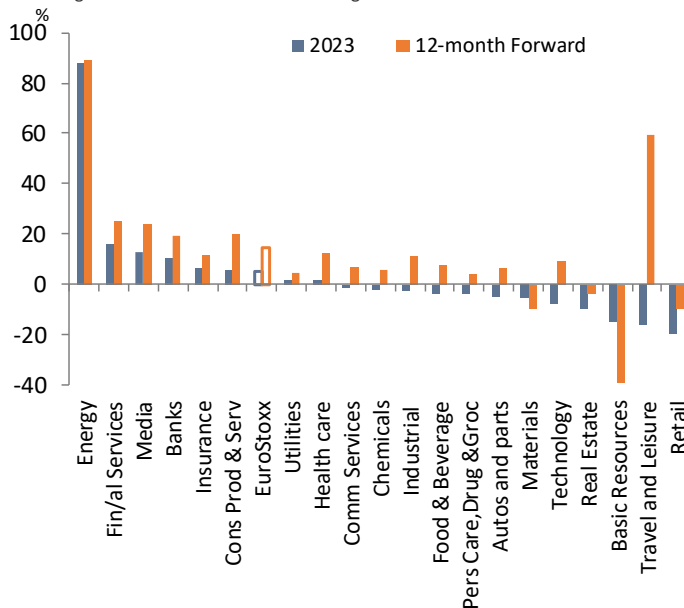
Earnings Revisions indicate 1-month change in 2023 & 12-month Forward EPS



Data as of December 9th
12-month forward EPS are 7% of 2022 EPS and 93% of 2023 EPS

12-month revisions to 2023 & 12-month Forward EPS

Earnings Revisions indicate 12-month change in 2023 & 12-month Forward EPS



Data as of December 9th
12-month forward EPS are 7% of 2022 EPS and 93% of 2023 EPS

National Bank of Greece | Economic Research Division | Global Markets Analysis

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