

Investors' attention is turning to Thursday's ECB meeting

- The ECB will convene this week. Whether monetary policy interest rates will remain unchanged following nine consecutive interest rate hikes of 425 basis points cumulatively, or another increase of +25 basis points will take place, remains a close call. In our view, the ECB will stop its tightening cycle at a terminal rate of 4.0% (current DFR: 3.75%).
- Arguing against the necessity of further interest rate hikes and the risk of tipping the euro area economy into recession, real GDP growth has been roughly stagnant in the past three quarters, leading the annual growth to a weak +0.5% in Q2:2023 (see graph below).
- In addition, leading business indicators (PMI) suggest a subdued momentum in the current quarter. Specifically, the composite PMI index has averaged 47.7 in July-August, below the expansion/contraction threshold of 50.0, from 52.3 in Q2:2023 and 52.0 in Q1:2023.
- On the other hand, persistent inflation pressures call for vigilance in the fight against inflation. Note that the euro area headline CPI has decelerated to +5.3% yoy from a peak of +10.6% yoy in October 2022 mainly driven by negative energy (dis)inflation and declining food inflation, albeit upward pressures on the costs of energy and food are re-emerging. Underlying inflation remains high overall, with the annual growth rate of core CPI at +5.3% and the three-month on three-month annualized rate of change at circa +4.0%.
- Regarding the inflation forecasting horizon up to 2025, ECB staff's technical assumptions in June 2023 called for (average) Brent oil prices of €74/barrel, natural gas prices of €47/Mwh, EUR/USD of \$1.09 and an average 3-month Euribor of +3.2%. Based on future and FRA average prices in September, so far, mean expected values for 2023-2025 are €82/barrel (+11% higher compared with June), €49/Mwh (+4%), \$1.095 (+1%) and +3.4% (+20 basis points). All told, the above-mentioned offsetting factors suggest that core CPI ECB projections for end-2025 will remain slightly above 2% (see graph below).
- DBRS Morningstar upgraded the Hellenic Republic's issuer rating from BB (high) to BBB (low), with a stable outlook (see graph page 3). The revised rating represents a re-introduction of Greece to Investment Grade status, the first from one of the four major rating agencies (the others being S&P Global, Moody's and Fitch) that the ECB considers in terms of collateral and large-scale asset purchase policies.
- Greek government bonds had a muted reaction, as the rating upgrade was generally anticipated, with the GGB/Bund spread having narrowed by -118 bps in the past twelve months (see graph page 3). The 10-Year GGB yield was 3.97% on Monday, little changed (+1 bp) from Thursday's close of business (-2 bps in spread terms over Bund to 133 bps).
- Attention now turns to the next rating from S&P Global on October 20th. A move to Investment Grade status from at least one of S&P Global, Fitch or Moody's (Moody's holds its next rating on September 15th but currently stands three notches below IG) could pave the way for an inclusion of Greek government bonds to tradeable active and passive bond indices, broadening the pool of potential investors.

Ilias Tsirigotakis^{AC}
Head of Global
Markets Research
210-3341517
tsirigotakis.ilias@nbg.gr

Panagiotis Bakalis
210-3341545
mpakalis.pan@nbg.gr

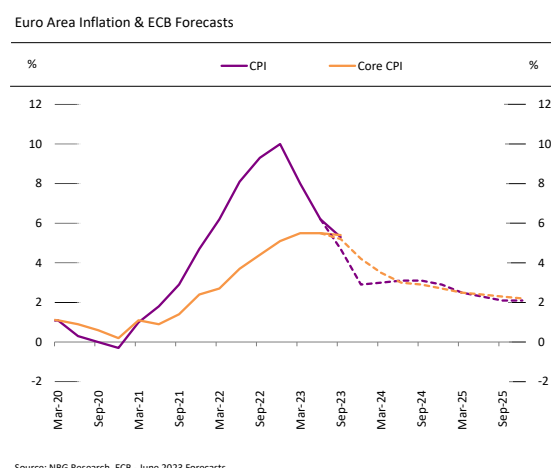
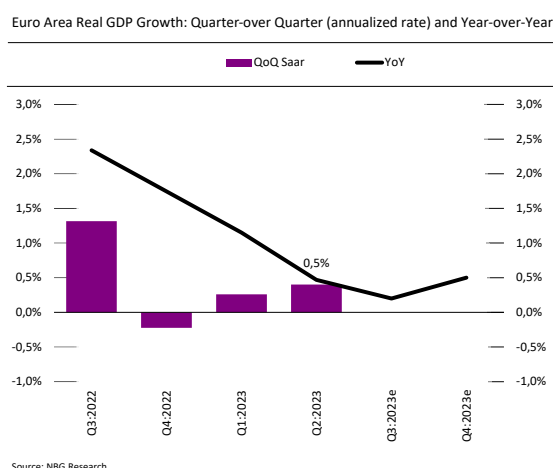
Vasiliki Karagianni
210-3341548
karagianni.vasiliki@nbg.gr

Leonidas Patsios
210-3341553
Patsios.Leonidas@nbg.gr

[Table of Contents](#)

Overview_p1
Economics & Markets_p2,3
Forecasts & Outlook_p4
Event Calendar_p5
Markets Monitor_p6
ChartRoom_p7,8
Market Valuation_p9,10

Charts of the week



US PMIs improved in August across sectors

- **PMIs suggest a partial stabilization of activity in manufacturing and a stronger expansion in services.** In the event, the ISM manufacturing PMI rose by +1.2 to 47.6, above consensus estimates for 47.0, albeit remaining below the expansion/contraction threshold of 50.0 for a 10th consecutive month. Looking forward though, the new orders index remains subdued (-0.5 pts to 46.8). At the same time, the ISM services PMI rose by +1.8 pts to 54.5 in August (in expansionary territory for an 8th consecutive month), also beating consensus (52.5) and with the new orders component overperforming (+2.5 pts to 57.5).
- Notably, on the prices front, pipeline (downward) pressures appeared to be stabilizing in manufacturing, with prices paid index up by +5.8 pts to 48.4, while the respective indicator in the services survey pointed to an acceleration of upward pressures (58.9 from 56.8 in July).

The US trade deficit has roughly returned to its pre-pandemic "norm"

- **The US goods trade deficit increased modestly in July.** In constant price terms, exports and imports of goods, rose by +1.1% mom & +1.8% mom, respectively. Recall that compared with pre-pandemic (February 2020) levels, exports stood higher by +3.6% versus +16.9% for imports, in view of strong US domestic demand due to strong fiscal transfers and investment initiatives by the Federal Government. In all, the (goods) trade deficit in constant price terms stood at \$88.4 bn in July, from \$85.8 bn in the previous month, albeit below its Q2:23 average (\$90.4 bn). In nominal terms, the goods trade deficit was \$90.0 bn, from \$88.0 bn in June (\$91.7 bn on average in Q2:23). 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 was roughly stable in August, at -4.1% of GDP, down from -4.9% in July 2022 (the widest since March 2009).** As a result, the aforementioned ratio, has largely aligned with its average since 2013 and up to the pandemic (it had hovered in a very tight range of -4.0% to -4.3% in that period).
- By country, the bilateral (goods) trade deficit in nominal terms with China remains by far the largest (\$25.4 bn in August and 12-month average of \$25.4 bn | \$31.3 bn, on average per month in 2017, before the imposition of bilateral tariffs), followed by Mexico (\$12.5 bn in July and \$ 12-month average of \$12.0 bn).

Euro area real GDP growth was revised lower

- **According to the 3rd estimate (the first including analytical breakdown per expenditure component), real GDP rose by +0.1% qoq (+0.5% annualized) for a 2nd consecutive quarter,** following a -0.1% qoq in Q4:22. The previous estimate suggested growth of +0.3% qoq in Q2:23 and a roughly unchanged GDP in Q1:23. The annual growth came out at +0.5% in Q2:23, instead of +0.6% yoy in the previous estimate and +1.1% in Q1:23. **Government consumption** increased by +0.2% qoq (+0.1% yoy), following a -0.6% qoq (-0.4% yoy) in Q1:23, contributing +0.1 pp to overall growth. **Gross Fixed Capital Formation** ("GFCF") rose by +0.3% qoq (+1.3% yoy), following similar quarterly growth in Q1:23 (+1.9% yoy), adding further +0.1 pp to overall GDP growth, with business investment (75% of GFCF) up by +0.2% qoq (+3.3% yoy), offsetting a decline for residential investment (25% of GFCF), by -1.0% qoq (-2.5% yoy). The largest contribution though (+0.4 pps) came from **inventories** (including acquisitions less disposals

of valuables). On the other hand, net exports posed a drag of -0.4 pps from headline growth, as imports rose by +0.1% qoq (-0.2% yoy) and exports decreased by -0.7% qoq (+0.2% yoy).

- **Finally, private consumption** was roughly stable for a 2nd consecutive quarter in Q2:23 (+0.2% yoy from +1.4% yoy in Q1:23), being neutral to overall growth, while initial indications for the current quarter's impetus have been mixed. In the event, retail sales decreased by -0.2% mom (in seasonally adjusted volume terms | -0.9% yoy) in July. Compared with the average in Q1:23, retail sales were at +0.1% in July. At the same time, new passenger car registrations (seasonally adjusted) rose by +3.7% mom (+15.7% yoy) in July and stood at +4.8% versus the Q1:23 average. Note that car sales are not included in the aforementioned retail sales report. **All told, the European Commission**, on September 11th, downgraded its economic growth forecasts by -0.3 pts to +0.8% for 2023 and to +1.3% for 2024, due to, *inter alia*, the weakness in consumption, banks' tighter lending conditions due to higher interest rates and the economic slowdown in China.

Japanese real GDP growth in Q2:2023 was meaningfully revised down, albeit remaining strong

- **Japanese real GDP rose by +1.2% qoq in Q2:23 (+4.8% in annualized terms)** according to the 2nd estimate (+1.6% yoy), versus +1.5% qoq in the preliminary estimate (+6.0% annualized) and following a +0.1% qoq (+0.4% annualized | +2.0% yoy) in Q1:23. The downward revision was mostly due to **business investment** (the 2nd GDP estimate incorporates far more comprehensive data for the business sector compared with the preliminary one, thus substantial revisions are not extraordinary), -1.0% qoq (drag of -0.2 pps to GDP's quarterly growth | +1.4% yoy) instead of being unchanged on a quarterly basis (in the preliminary estimate) and following a +1.6% qoq (+4.7% yoy) in Q1:23. In addition **private consumption** came out at -0.6% qoq (-0.4 pps subtraction | +0.1% yoy) in Q2:23 instead of -0.5% qoq and following a +0.6% qoq (+2.7% yoy) in Q1:23. A substantial downward revision also took place for **public investment**, to +0.2% qoq (neutral to headline growth | +2.9% yoy) instead of +1.2% qoq and after a +1.4% qoq (+3.0% yoy) in Q1:23. Revisions for the rest of expenditure components were minor. **Government consumption** was steady on a quarterly basis (neutral to the headline GDP growth | +0.2% yoy), compared with +0.1% qoq (+0.6% yoy) in Q1:23. **Residential investment** was up by 2.0% qoq (+3.5% yoy), from +0.7% qoq (-0.4% yoy) in the previous quarter adding +0.1 pp to headline GDP growth. The largest contribution though came from **net exports** (+1.8 pps), as imports fell by -4.4% qoq (-1.7% yoy), whereas exports increased by +3.1% qoq (+3.0% yoy). Finally, **inventories** subtracted -0.2 pps from GDP's quarterly growth.

China's PMIs for August, point to a stabilization of economic momentum

- **Both exports and imports contracted on an annual basis in August, albeit by somewhat less than expected.** Specifically, the annual pace of growth of exports -- in nominal USD terms -- came out at -8.8%, from -14.5% in July, versus consensus for -9.2% yoy. At the same time, total imports came out at -7.3% yoy compared with -12.4% yoy in July, above expectations for -9.0% yoy). Export prices stood at -17.4% yoy in July from -19.4% yoy in June, while the respective trend for import prices came out at -21.4% yoy from -19.9% yoy.

Equities

- Global equity markets declined in the past week (MSCI ACWI: -1.3%).** The S&P500 was down by -1.3% wow (+16% YtD). Sector-wise, the Information Technology sector fell by -2.3% wow, with Apple underperforming (-6% wow), following media reports that China ordered officials at central & local government agencies as well as employees at state-owned enterprises not to use Apple's iPhones for work or bring them into the office. Apple will hold its annual event for 2023 on September 12th, at which it is expected to launch the new iPhone 15 models and Apple Watch 9. On the contrary, Automobiles & Components increased by +1% wow, with Tesla rising by +1.4% wow and by further +10.1% on Monday, following an +60% upwardly revised target price by Morgan Stanley (to \$400/share from \$250/share). Attention turns to the negotiations between the United Auto Workers (UAW) union and the "Big Three" Detroit automakers (General Motors, Ford and Stellantis), with the union's president threatening that about 146k workers will go on strike if no new contract agreement has been reached before the current contract expires on September 14th. Notably, General Motors had calculated the cost for the company of the previous six-week strike by the UAW in 2019 at \$2.9 bn. On the other side of the Atlantic, the EuroStoxx index ended the past week down by -1.2% (+9% ytd), with a downward revision to the euro area second-quarter economic growth weighing on sentiment. In Greece, the ASE Index declined by -3.1% wow (+36% ytd) with Banks underperforming (-4.5% wow | +55% ytd), recording though high volatility ahead of the DBRS announcement on last Friday. The ASE index, in early trading hours was recording losses of up to -1.0% but eventually closed with gains of +1.0%. Volatility continued on Monday September 11th as well, with a low to high intraday range of -1% to +1.8% (ASE last price: -0.7%).

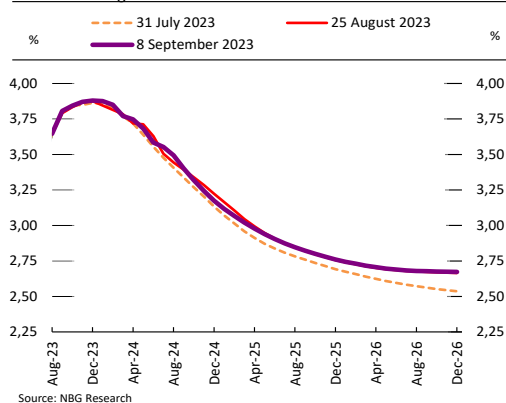
Fixed Income

- Government bond yields rose in the past week in the US,** with the 10-year yield increasing by +8 bps wow to 4.26% and the 2-year yield also by +8 bps wow to 4.97%, due to, *inter alia*, expectations for a potential further interest-rate increase in the coming months by the Federal Reserve. In Germany, the 10-year Bund yield was up by +8 bps wow to 2.60%, with investors' attention turning to the upcoming interest rate decision by the European Central Bank on September 14th. Periphery spreads over the 10-year Bund widened slightly in the past week in Italy (+5 bps to 173 bps), Spain (+1 bp to 104 bps) and Greece (+8 bps to 135 bps). Notably, DBRS Morningstar upgraded the Hellenic Republic's credit rating from BB (high) to BBB (low) with stable outlook, being the first out of the 4 major rating agencies that their ratings are being recognized by the ECB, to restore the country to investment grade status after 12 years. **Finally, corporate bond spreads were mixed in the past week.** Indeed, USD HY bond spreads were up by +4 bps to 385 bps, while their EUR counterparts declined by 11 bps to 436 bps. Regarding issuance, activity in the USD IG and HY markets are broadly similar to 2022 levels. Specifically, gross issuance of US IG corporate bonds stands at \$900 bn in 8M:2023 (January – August) compared to \$960 bn in the same period in 2022 (a -6.2% decline). On the contrary, in the US HY market 8M:2023 volumes stand at €114 bn from \$89 bn (+27.9%).

FX and Commodities

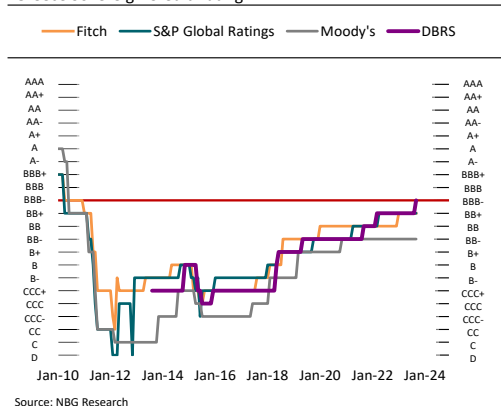
- In foreign exchange markets, the US Dollar appreciated by +0.9% wow against the euro in the past week to \$1.07,** extending its rebound from its mid-July 17-month low of \$1.12 to +4.4%. The USD has recorded gains against the euro in 7 out of the 8 past weeks, as interest rate differentials of government bond yields at the 10-year spectrum widened by 34 bps to +1.65% since July 14th due to, *inter alia*, robust US growth momentum (+2% qoq saar on average in H1:2023). **In commodities, oil prices increased in the past week** (Brent: +2.4% to \$90.7/barrel, to their highest level since November 2022, due to Saudi Arabia's announcement that the voluntary cut of its oil production by 1 million barrels / day will be extended at least until the end of 2023 and Russia's announcement that it will extend similarly its oil exports cut by 300k barrels / day until the end of the year.

Market Pricing of €STR: Forward OIS Curves



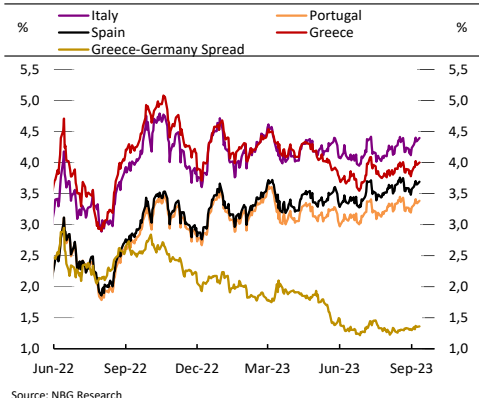
Graph 1.

Greece Sovereign Credit Rating



Graph 2.

10-Year Government Bond Yields



Graph 3.

Quote of the week: "I think we are much nearer now to the top of the cycle. I am not saying that we are at the top of the cycle, because we have a meeting to come, but I think we are much nearer to it on interest rates, on the basis of current evidence", **Bank of England Governor, A. Bailey, September 6th 2023.**

Interest Rates & Foreign Exchange Forecasts

10-Yr Gov. Bond Yield (%)	September 8th	3-month	6-month	12-month	Official Rate (%)	September 8th	3-month	6-month	12-month
Germany	2,60	2,60	2,70	2,70	Euro area	3,75	4,00	4,00	4,00
US	4,26	4,10	4,20	4,20	US	5,50	5,50	5,50	5,50
UK	4,43	4,27	4,15	3,86	UK	5,25	5,50	5,70	5,55
Japan	0,64	0,67	0,70	0,70	Japan	-0,10	-0,10	-0,10	-0,10

Currency	September 8th	3-month	6-month	12-month	September 8th	3-month	6-month	12-month	
EUR/USD	1,07	1,08	1,09	1,10	USD/JPY	148	143	141	138
EUR/GBP	0,86	0,86	0,87	0,87	GBP/USD	1,25	1,25	1,25	1,26
EUR/JPY	158	155	154	151					

Forecasts at end of period

Economic Forecasts

United States	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22a	2022a	Q1:23a	Q2:23a	Q3:23f	Q4:23f	2023f
Real GDP Growth (YoY) (1)	5,9	3,7	1,8	1,9	0,9	2,1	1,8	2,5	2,5	2,1	2,2
Real GDP Growth (QoQ saar) (2)	-	-1,6	-0,6	3,2	2,6	-	2,0	2,1	3,5	1,0	-
Private Consumption	8,3	1,3	2,0	2,3	1,0	2,7	4,2	1,7	3,8	1,4	2,5
Government Consumption	0,6	-2,3	-1,6	3,7	3,8	-0,6	5,0	3,3	0,7	1,0	3,1
Investment	7,4	4,8	-5,0	-3,5	-3,8	-0,2	-0,4	3,9	8,7	1,6	0,2
Residential	10,7	-3,1	-17,8	-27,1	-25,1	-10,6	-4,0	-3,6	7,0	3,0	-10,9
Non-residential	6,4	7,9	0,1	6,2	4,0	3,9	0,6	6,1	0,9	1,3	3,0
Inventories Contribution	0,2	0,3	-2,1	-1,4	2,0	0,7	-2,6	-0,1	0,4	-0,3	-0,6
Net Exports Contribution	-1,7	-3,8	1,2	3,3	0,6	-0,6	0,6	-0,1	-0,1	-0,1	0,7
Exports	6,1	-4,6	13,8	14,6	-3,7	7,1	7,8	-10,6	3,0	1,6	2,0
Imports	14,1	18,4	2,2	-7,3	-5,5	8,1	2,0	-7,0	2,6	1,8	-2,3
Inflation (3)	4,7	8,0	8,7	8,3	7,1	8,0	5,8	4,0	3,5	3,7	4,3

Euro Area	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22a	2022a	Q1:23a	Q2:23a	Q3:23f	Q4:23f	2023f
Real GDP Growth (YoY)	5,6	5,4	4,2	2,3	1,7	3,4	1,1	0,5	0,6	0,9	0,8
Real GDP Growth (QoQ saar)	-	2,6	3,3	1,3	-0,2	-	0,3	0,5	1,3	1,3	-
Private Consumption	4,1	0,0	4,7	3,6	-2,8	4,3	0,1	-0,3	1,3	1,4	0,6
Government Consumption	4,1	1,5	-1,1	-0,1	2,1	1,4	-2,4	-3,3	0,8	1,8	0,1
Investment	3,6	-2,3	3,5	3,5	-0,8	2,9	1,3	1,4	1,9	1,9	0,3
Inventories Contribution	0,3	-0,4	0,7	1,0	-1,1	0,4	-2,1	1,8	-0,4	-0,1	0,1
Net Exports Contribution	1,4	3,2	-0,4	-2,3	2,1	-0,1	2,6	-1,0	0,5	-0,1	0,3
Exports	11,0	6,4	6,8	5,0	-1,4	7,2	0,1	2,8	4,1	2,5	3,3
Imports	8,7	0,2	8,2	10,5	-5,6	8,1	-5,1	5,2	3,5	3,0	2,9
Inflation	2,6	6,1	8,0	9,3	10,0	8,4	8,0	6,2	4,8	3,6	5,6

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

6-12-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 (low debt, still elevated excess savings) + Sentiment (e.g. AAI) and positioning indicators are low, despite the recent rally - Peaking profit margins - Recession risks remain considerable - P/E's (Valuations) above long-term means <p>● Neutral/Negative</p>	<ul style="list-style-type: none"> + Higher equity risk premium (lower P/E ratio) relative to benchmark market (US) despite the recent rally of +27% since October 2022 lows + Fiscal policy will remain supportive in 2023 (plus RRF) + China's covid policy pivot could accelerate an export-led recovery - Geopolitical uncertainty (Ukraine-Russia, natural gas) could re-intensify <p>● Neutral/Positive</p>	<ul style="list-style-type: none"> + Higher equity risk premium (lower P/E ratio) relative to benchmark market (US) + China's covid policy pivot could accelerate an export-led recovery + JPY appreciation from ¥150 to ¥135, if continues, could hurt exporters - Signs of policy fatigue regarding structural reforms and fiscal discipline - Yield-Curve Control twists, let alone a sustained shift in ultra-loose monetary policy, could hurt market benchmarks (but support Banks) <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 - The BOE is expected to continue increasing interest rates aggressively as inflation remains very high and labor market extremely tight <p>● Neutral</p>
Government Bonds	<ul style="list-style-type: none"> + Valuations appear somewhat rich (18.2x), with term-premium @ -0.5% (1% for 2000-2015) + Fiscal deficits to remain sizeable in following years + Underlying inflation pressures remain acute + FED: passive (lower rollover) Quantitative Tightening + Global search for yield by non-US investors (e.g. Japan, repatriation from EM Economies) could reverse - Safe-haven demand bid to support prices assuming geopolitical risks re-intensify - The FED is likely close to be done with rates <p>▲ Slightly higher yields</p>	<ul style="list-style-type: none"> + Valuations (13.1x) are close to historical averages + ECB to halt the reinvestments under the APP as of July 2023 + ECB to continue with interest rate hikes in 2023 as core inflation pressures remain strong - Fragile economic growth outlook due to the war in Ukraine - ECB QE "stock" effect, with government bond holdings of €4.2 trillion (32% of GDP) <p>▲ Slightly higher yields</p>	<ul style="list-style-type: none"> + Sizeable fiscal deficits + The range of Yield-Targeting of 10-Year JGB at around 0% could widen further (current: +/- 50 bps) - Safe-haven demand - Monetary stance remains extremely dovish, despite the unexpected shift in YCC range in December 2022 - QE "stock" effect, with government bond holdings of ¥581 trillion (104% of GDP) <p>▲ Slightly Higher yields</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 continue increasing interest rates aggressively as inflation remains very high and labor market extremely tight + BOE: active (sales) Quantitative Tightening - Slowing economic growth post-Brexit <p>▲ Slightly Higher yields</p>
Foreign Exchange	<ul style="list-style-type: none"> + USD interest rate differential vs peers remain significant + Weak global economic growth + Safe-haven demand status - Global political uncertainty to decline - The FED is close to be done, which reduces potential USD upside <p>● Broadly Flat USD against G10 FX</p>	<ul style="list-style-type: none"> + ECB to continue with interest rate hikes in 2023 as core inflation pressures remain strong + Lower geopolitical uncertainty (Ukraine-Russia, natural gas) is positive for EUR - Global growth risks remain to the downside <p>● Range-bound with upside risks against the USD</p>	<ul style="list-style-type: none"> + Safe haven demand + More balanced economic growth recovery (long-term) + Higher core Inflation rates could accelerate the shift of monetary policy (less accommodative) <p>▲ Stronger 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</p>

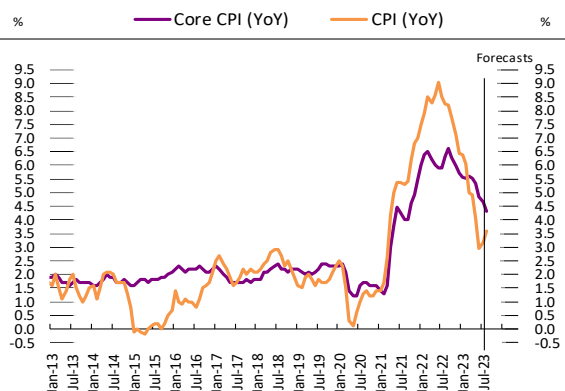
Economic Calendar

In the US, attention turns to inflation data for August, on Wednesday. CPI is expected to rise from 3.2% yoy to 3.6% yoy, while the core figure is expected to decelerate (from 4.7% yoy to 4.3% yoy). Also, economic activity indicators for August will gather investors' attention. Specifically, retail sales will offer insight regarding private consumption, whereas industrial production regarding business spending.

In the euro area, the ECB meets on September 14th and whether it will retain its interest rates at 3.75% (DFR) and 4.25% (MRO) or hike them by +0.25%, is a close call. Also, industrial production will offer insight regarding business spending for July.

In the UK, the industrial production for July is released on Wednesday (consensus for +0.5% yoy vs -0.7% yoy in the previous month).

US Inflation



Source: NBG Research

Economic News Calendar for the period: September 05 - September 18, 2023

Tuesday 05					Wednesday 06					Thursday 07				
US					US					US				
Factory Goods Orders (MoM)	July	S	A	P	ISM Services PMI	August	S	A	P	Initial Jobless Claims (k)	September 2	S	A	P
		-2.5%	+ -2.1%	2.3%	Trade balance (\$bn)	July	-68.0	+ -65.0	-63.7	Continuing Claims (k)	August 26	1715	+ 1679	1719
					EURO AREA					EURO AREA				
					Retail sales (MoM)	July	-0.1%	- -0.2%	-0.2%	GDP (QoQ)	Q2:23	0.3%	- 0.1%	0.3%
					Retail sales (YoY)	July	-1.2%	+ -1.0%	-1.0%	GDP (YoY)	Q2:23	0.6%	- 0.5%	0.6%
					UK					GERMANY				
					S&P Global/CIPS UK	August	50.5	+ 50.8	51.7	Gross Fixed Capital Formation (QoQ)	Q2:23	0.3%	0.3%	0.3%
					Construction PMI	August	50.5	+ 50.8	51.7	Household Consumption (QoQ)	Q2:23	0.2%	- 0.0%	0.0%
										Government Expenditure (QoQ)	Q2:23	0.3%	- 0.2%	-0.6%
										JAPAN				
										Industrial Production (sa, MoM)	July	-0.5%	- -0.8%	-1.4%
										Industrial Production (wda, YoY)	July	..	-2.1%	-1.5%
										CHINA				
										Coincident Index	July	..	114.5	115.1
										Leading Index	July	..	107.6	109.1
										Exports (YoY)	August	-9.2%	+ -8.8%	-14.5%
										Imports (YoY)	August	-9.0%	+ -7.3%	-12.4%
Friday 08					Monday 11									
US					CHINA									
Wholesale trade	July	S	A	P	CPI (YoY)	August	S	A	P					
		..	0.8%	-0.8%	Aggregate Financing (RMB bn)	August	0.2%	0.1%	-0.3%					
					New Yuan Loans (RMB bn)	August	2690.0	3120.0	528.2					
JAPAN					Money Supply M0 (YoY)	August	1250.0	1360.0	345.9					
GDP (QoQ)	Q2:23	1.3%	- 1.2%	1.5%	Money Supply M1 (YoY)	August	..	9.5%	9.9%					
GDP (YoY)	Q2:23	2.0%	- 1.6%	2.0%	Money Supply M2 (YoY)	August	2.4%	2.2%	2.3%					
Eco Watchers Current Survey	August	..	53.6	54.4										
Eco Watchers Outlook Survey	August	..	51.4	54.1										
Tuesday 12					Wednesday 13					Thursday 14				
UK					US					US				
ILO Unemployment Rate	July	S	A	P	CPI (YoY)	August	S	A	P	Initial Jobless Claims (k)	September 9	S	A	P
		4.3%	..	4.2%	Core CPI (YoY)	August	3.6%	..	3.2%	Continuing Claims (k)	September 2	226	..	216
					Industrial Production (sa, MoM)	July	-0.7%	..	0.5%	Retail sales (MoM)	August	0.2%	..	0.7%
					Industrial Production (wda, YoY)	July	-0.4%	..	-1.2%	Retail sales ex-autos (MoM)	August	0.5%	..	1.0%
					EURO AREA					EURO AREA				
					GDP (MoM)	July	-0.2%	..	0.5%	ECB announces its deposit facility rate	September 14	3.75%	..	3.75%
					Industrial Production (MoM)	July	-0.6%	..	1.8%	ECB announces its intervention rate	September 14	4.25%	..	4.25%
					Industrial Production (YoY)	July	0.5%	..	0.7%					
Friday 15					Monday 18									
US					US									
Empire Manufacturing	September	S	A	P	NAHB housing market confidence index	September	S	A	P					
		-10.0	..	-19.0	Net Long-term TIC Flows (\$ bn)	July	195.9					
Industrial Production (MoM)	August	0.1%	..	1.0%										
University of Michigan consumer confidence	September	69.2	..	69.5										
EURO AREA														
Trade Balance SA (€ bn)	July	12.5										
CHINA														
Industrial production (YoY)	August	3.9%	..	3.7%										
Retail sales (YoY)	August	3.0%	..	2.5%										

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

Equity Markets (in local currency)

Developed Markets						Emerging Markets						
	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)		
US	S&P 500	4457	-1.3	16.1	11.3	-1.3	MSCI Emerging Markets	59652	-0.6	3.8	2.5	-19.1
Japan	NIKKEI 225	32607	-0.3	25.0	16.2	8.0	MSCI Asia	912	-0.4	4.2	3.0	-19.9
UK	MSCI UK	2136	0.4	-0.4	2.3	7.4	China	61	-1.0	-5.9	-4.5	-37.0
Euro area	EuroStoxx	449	-1.2	9.4	15.2	-4.3	Korea	786	-0.9	17.2	10.3	-17.7
Germany	DAX 40	15740	-0.6	13.0	22.0	0.8	MSCI Latin America	89441	-1.8	1.3	0.4	-8.9
France	CAC 40	7241	-0.8	11.8	18.2	8.6	Brazil	294815	-1.9	-0.2	-2.4	-14.5
Italy	MSCI Italy	895	-1.2	18.4	30.4	9.9	Mexico	48124	-1.0	6.9	11.1	1.1
Spain	IBEX-35	9365	-0.9	13.8	18.3	5.9	MSCI Europe	3526	-1.4	25.2	53.4	-50.7
Hong Kong	Hang Seng	18202	-1.0	-8.0	-3.5	-30.8	Russia	3143	-2.7	45.9	31.5	-21.8
Greece	ASE	1260	-3.1	35.5	52.5	39.1	Turkey	8209261	3.8	52.4	122.2	405.4

World Market Sectors and Styles (MSCI Indices*)

in US Dollar terms						Investment Styles					
	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	
Energy	257.3	1.0	4.6	15.0	66.9	Growth	4254.7	-1.5	25.5	17.6	-10.4
Materials	314.9	-2.9	1.3	8.5	-10.4	Value	3167.1	-1.2	2.1	5.8	-3.5
Industrials	330.6	-2.2	10.5	16.4	-5.1	Large Cap	1862.4	-1.2	14.8	13.2	-4.4
Consumer Discretionary	366.5	-0.8	25.8	9.4	-13.2	Small Cap	486.9	-2.9	4.8	4.3	-17.2
Consumer Staples	267.2	-0.9	-1.0	2.1	-5.0	US Growth	2865.6	-1.5	21.4	9.2	-9.8
Healthcare	343.2	-1.1	-0.6	5.1	-5.7	US Value	1583.1	-1.1	10.4	12.2	7.1
Financials	133.2	-1.4	1.7	6.0	-8.8	US Large Cap	4457.5	-1.3	16.1	11.3	-1.3
IT	536.4	-2.3	36.3	26.9	-0.4	US Small Cap	1185.5	-4.3	2.4	1.2	-11.8
Telecoms	89.0	-0.2	33.6	19.0	-23.3	US Banks	292.1	-2.3	-11.0	-13.6	-27.5
Utilities	143.3	0.2	-6.2	-10.6	-11.0	EA Banks	107.2	-3.4	11.9	31.9	11.3
Real Estate	191.5	-1.0	-2.5	-12.0	-27.1	Greek Banks	992.9	-4.5	55.0	84.6	76.9

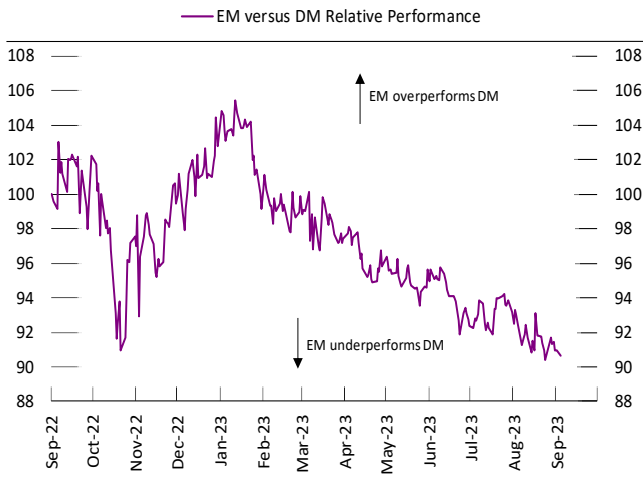
Bond Markets (%)

10-Year Government Bond Yields						Government Bond Yield Spreads (in bps)					
	Current	Last week	Year Start	One Year Back	10-year average	Current	Last week	Year Start	One Year Back	10-year average	
US	4.26	4.19	3.88	3.30	2.26	US Treasuries 10Y/2Y	-71	-70	-54	-19	79
Germany	2.60	2.52	2.53	1.67	0.52	US Treasuries 10Y/5Y	-14	-12	-13	-10	40
Japan	0.64	0.63	0.42	0.24	0.17	Bunds 10Y/2Y	-46	-46	-16	41	66
UK	4.43	4.39	3.66	3.13	1.61	Bunds 10Y/5Y	-0.3	1.2	-0.4	16	46
Greece	3.95	3.79	4.59	4.22	4.93	Corporate Bond Spreads (in bps)					
Ireland	3.00	2.90	3.06	2.28	1.12						
Italy	4.33	4.19	4.64	3.92	2.19	US IG	123	122	138	149	132
Spain	3.64	3.54	3.61	2.81	1.62	US High yield	385	381	481	480	445
Portugal	3.31	3.24	3.57	2.71	2.21	Euro area IG	152	154	167	197	121
EM	4.92	4.86	5.04	4.86	4.66	Euro area High Yield	436	447	498	551	401
US Mortgage Market						EM	257	259	295	332	318
30-Year FRM¹ (%)	7.21	7.31	6.42	5.94	4.34	EUR Senior Financial	185	186	204	236	N/A
vs 30Yr Treasury (bps)	285.2	298.6	240.1	239.1	153.8	EUR Subordinated Financial	303	305	311	353	N/A
						EUR AT1	782	771	718	885	N/A

Foreign Exchange & Commodities

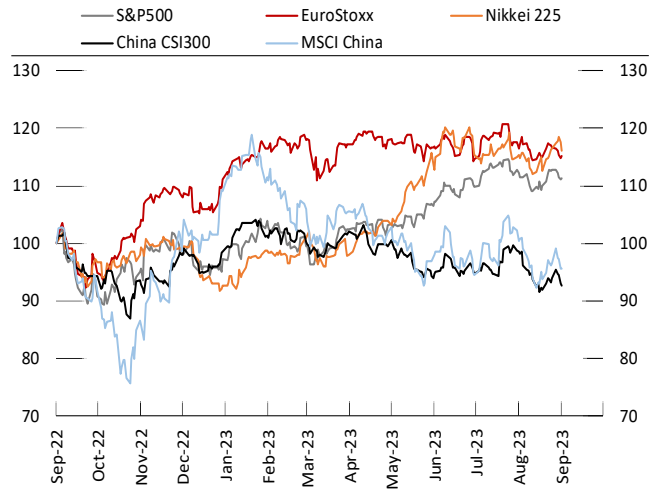
Foreign Exchange						Commodities					
	Current	1-week change (%)	1-month change (%)	1-Year change (%)	Year-to-Date change (%)	Current	1-week change (%)	1-month change (%)	1-Year change (%)	Year-to-Date change (%)	
Euro-based cross rates						Agricultural	402	0.1	0.1	-14.4	-14.5
EUR/USD	1.07	-0.9	-2.4	7.6	0.4	Energy	298	2.6	2.6	-5.0	3.4
EUR/CHF	0.96	0.0	-0.8	-1.4	-3.2	West Texas Oil (\$/bbl)	88	2.3	3.7	4.8	9.0
EUR/GBP	0.86	0.2	-0.5	-1.0	-3.3	Crude Brent Oil (\$/bbl)	91	2.4	3.5	1.7	5.5
EUR/JPY	158.22	0.3	0.2	10.4	12.4	HH Natural Gas (\$/mmbtu)	2.6	-3.5	-10.8	-68.5	-26.0
EUR/NOK	11.42	-0.7	1.9	13.8	8.7	TTF Natural Gas (EUR/mwh)	35	-3.1	-13.3	-84.4	-54.8
EUR/SEK	11.89	-0.2	1.3	11.1	6.9	Industrial Metals	409	-2.8	-1.2	-1.7	-9.4
EUR/AUD	1.68	0.1	-0.4	13.4	6.5	Precious Metals	2525	-1.7	-0.3	14.0	5.4
EUR/CAD	1.46	-0.5	-1.0	11.8	1.0	Gold (\$)	1919	-1.1	0.3	12.3	5.2
USD-based cross rates						Silver (\$)	23	-5.2	1.1	23.5	-4.3
USD/CAD	1.36	0.4	1.5	3.9	0.6	Baltic Dry Index	1186	11.4	3.7	0.7	-21.7
USD/AUD	1.56	1.0	2.1	5.4	6.1	Baltic Dirty Tanker Index	713	-3.6	-10.8	-49.6	-61.9
USD/JPY	147.67	1.1	2.8	2.6	11.9						

EM vs DM Performance in \$



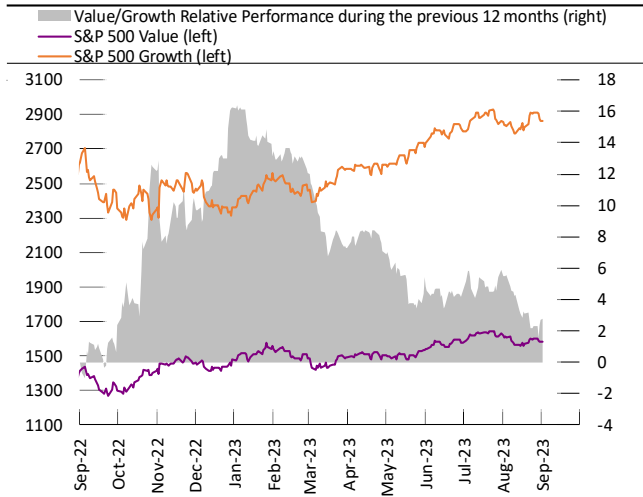
Data as of September 8th – Rebased @ 100

Equity Market Performance



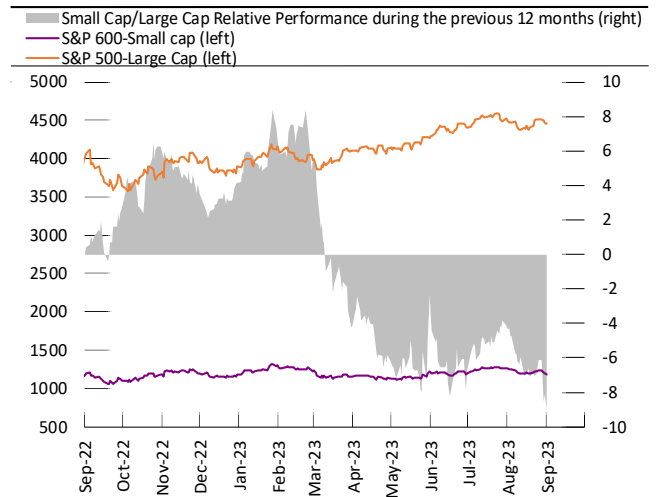
Data as of September 8th – Rebased @ 100

S&P 500 Value & Growth Index



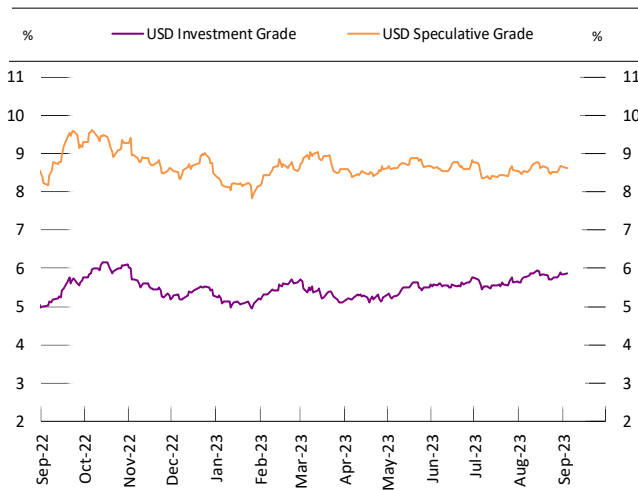
Data as of September 8th

S&P 500 & S&P 600 Index



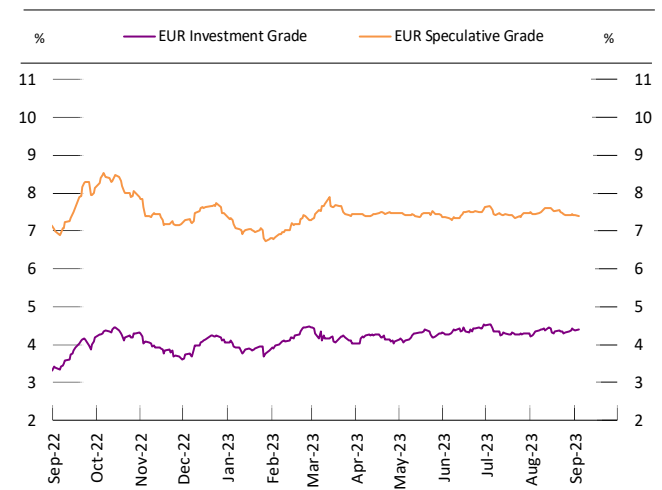
Data as of September 8th

USD Corporate Bond Yields



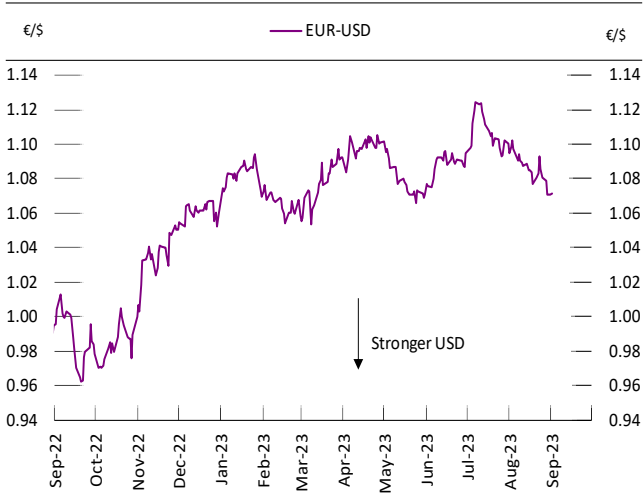
Data as of September 8th

EUR Corporate Bond Yields



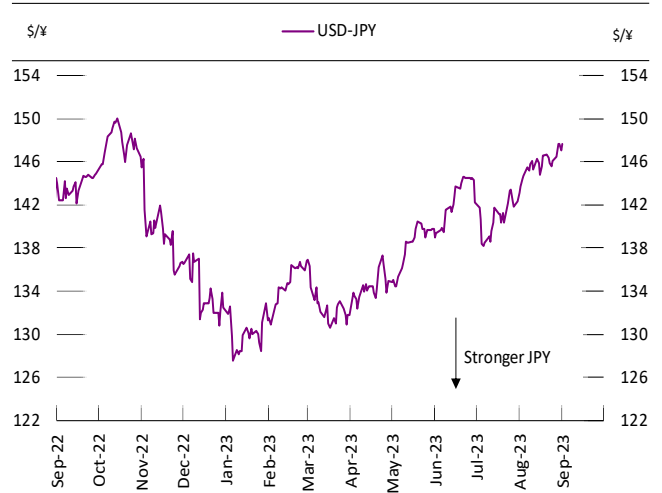
Data as of September 8th

EUR/USD



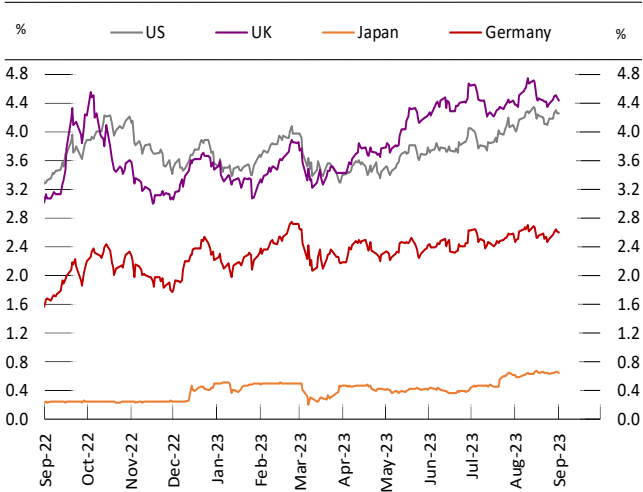
Data as of September 8th

JPY/USD



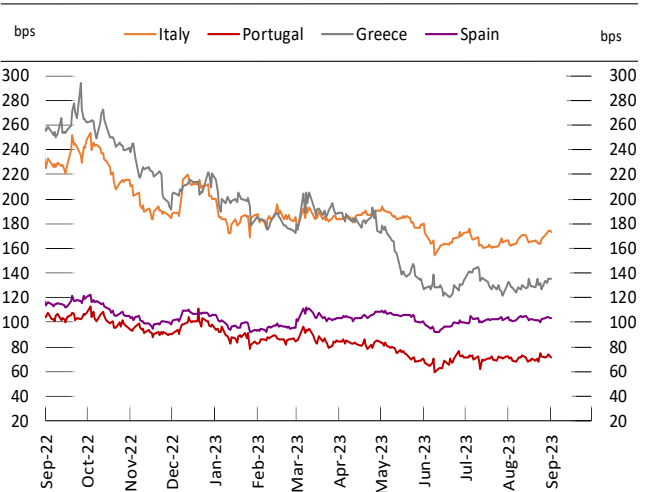
Data as of September 8th

10- Year Government Bond Yields



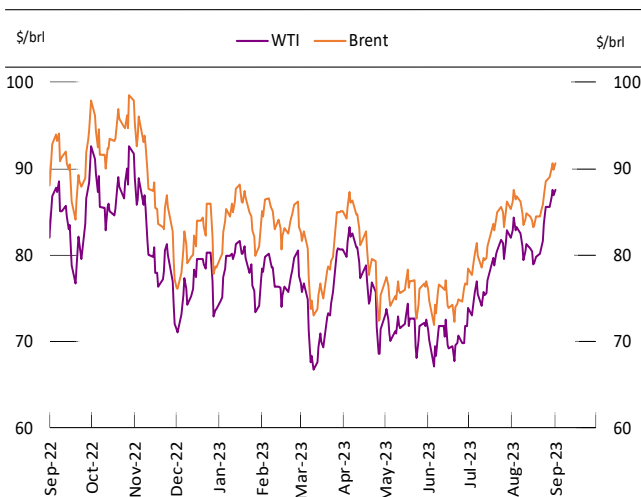
Data as of September 8th

10- Year Government Bond Spreads



Data as of September 8th

West Texas Intermediate and Brent (\$/bbl)



Data as of September 8th

Gold (\$/ounce)



Data as of September 8th

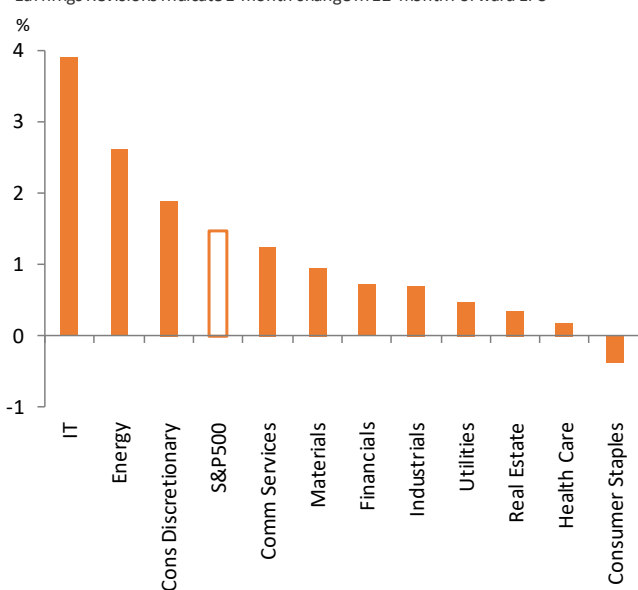
US Sectors Valuation

	Price (\$)			EPS Growth (%)		Dividend Yield (%)		P/E Ratio				P/BV Ratio			
	8/9/23	% Weekly Change	%YTD	2022	2023	2022	2023	2022	2023	12m fwd	20Yr Avg	2022	2023	Current	20Yr Avg
S&P500	4457	-1.3	16.1	4.7	2.0	1.7	1.5	18.4	20.2	18.7	15.8	3.9	4.1	4.1	2.9
Energy	701	1.4	4.3	154.4	-28.3	3.4	3.2	8.1	12.4	12.2	15.1	2.3	2.3	2.3	2.0
Materials	513	-2.4	4.8	5.4	-20.9	2.2	2.1	14.6	18.4	17.6	15.2	2.9	2.8	2.8	2.8
Financials															
Diversified Financials	1018	-0.7	6.4	-9.4	3.1	1.3	1.3	19.0	19.0	17.3	16.0	2.7	2.5	2.5	2.3
Banks	292	-2.3	-11.0	-21.3	10.2	3.0	3.7	11.2	8.4	8.6	11.8	1.2	0.9	0.9	1.2
Insurance	599	-0.6	0.6	-13.1	20.1	1.7	1.9	17.2	14.3	12.4	11.0	2.2	2.0	2.0	1.4
Real Estate	228	-1.1	-1.7	11.8	0.7	3.8	4.0	17.4	16.4	15.9	18.6	2.6	2.7	2.7	2.7
Industrials															
Capital Goods	933	-2.9	6.9	12.8	19.6	1.6	1.7	22.8	19.9	18.2	16.1	5.0	4.8	4.8	3.6
Transportation	938	-3.8	3.5	123.7	6.7	1.9	2.2	16.0	14.9	N/A	15.0	5.5	4.5	4.5	3.7
Commercial Services	551	-1.7	13.4	16.4	10.3	1.5	1.5	27.8	28.9	26.7	21.7	8.1	8.3	8.3	4.8
Consumer Discretionary															
Retailing	3630	-0.5	31.8	-43.9	60.5	0.8	0.7	43.6	34.2	30.4	23.0	10.9	10.9	10.9	8.1
Consumer Services	1508	-1.0	18.7	N/A	217.5	1.1	1.2	69.6	23.9	N/A	27.2	464.2	193.7	N/A	19.1
Consumer Durables	373	-3.8	0.7	3.7	-6.8	1.7	1.7	13.0	13.6	12.8	16.1	3.2	2.9	2.9	3.2
Automobiles and parts	137	1.0	74.5	28.6	-3.2	0.3	0.3	24.2	28.7	N/A	11.3	4.7	4.8	4.8	2.3
IT															
Technology	3321	-5.3	32.0	5.0	0.2	0.9	0.8	21.8	25.7	24.1	16.1	15.8	16.6	16.6	5.8
Software & Services	3827	1.2	34.6	10.8	10.2	1.0	0.8	26.0	30.5	28.1	18.5	8.8	9.6	9.6	6.2
Semiconductors	2818	-4.1	69.7	-5.8	-2.1	1.4	1.0	20.3	29.1	24.2	18.1	5.1	6.7	6.7	3.8
Communication Services	228	0.0	43.3	-20.6	26.1	1.0	0.8	18.2	19.0	17.0	17.5	2.9	3.4	3.4	2.8
Media	938	0.2	54.8	-23.0	31.9	0.3	0.2	21.1	22.4	19.6	21.4	3.3	4.1	4.1	3.2
Consumer Staples															
Food & Staples Retailing	642	0.5	3.6	-3.5	-1.3	1.5	1.6	21.9	22.6	21.4	17.2	5.3	4.9	4.9	3.7
Food Beverage & Tobacco	813	-0.7	-5.7	5.9	3.2	3.1	3.3	18.7	17.8	17.0	17.0	5.2	4.7	4.7	4.7
Household Goods	826	-1.5	-4.4	-3.4	6.8	2.5	2.4	25.2	24.3	23.0	19.7	9.6	8.6	8.6	6.1
Health Care															
Pharmaceuticals	1268	-1.3	-2.1	5.5	-24.4	2.0	2.0	14.1	19.7	17.9	14.5	5.3	5.3	5.3	4.1
Healthcare Equipment	1762	-0.9	-4.6	4.3	3.4	1.2	1.3	18.7	18.1	17.0	15.8	3.8	3.6	3.6	3.1
Utilities	319	0.9	-11.1	1.2	6.3	3.2	3.5	18.5	16.9	16.0	15.4	1.9	1.8	1.8	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 12-month Forward EPS

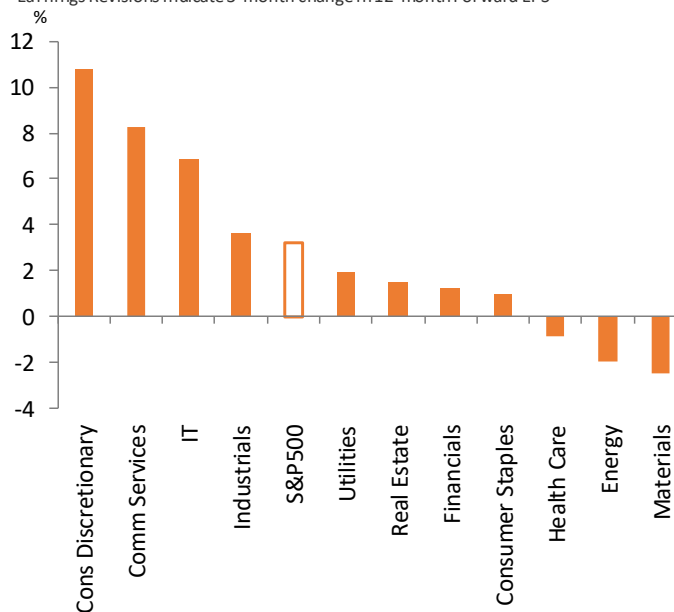
Earnings Revisions indicate 1-month change in 12-month Forward EPS



Data as of September 8th
12-month forward EPS are 31% of 2023 EPS and 69% of 2024 EPS

3-month revisions to 12-month Forward EPS

Earnings Revisions indicate 3-month change in 12-month Forward EPS



Data as of September 8th
12-month forward EPS are 31% of 2023 EPS and 69% of 2024 EPS

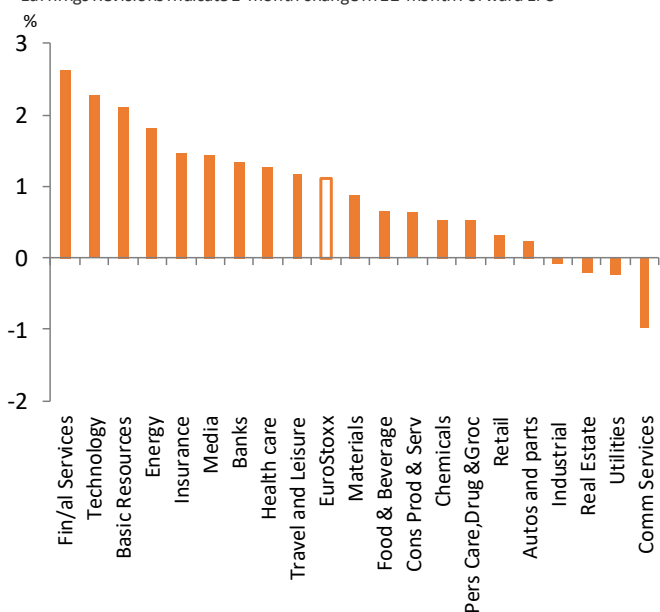
Euro Area Sectors Valuation

	Price (€)			EPS Growth (%)		Dividend Yield (%)		P/E Ratio				P/BV Ratio			
	8/9/23	% Weekly Change	%YTD	2022	2023	2022	2023	2022	2023	12m fwd	20Yr Avg	2022	2023	Current	20Yr Avg
EuroStoxx	449	-1.2	9.4	21.7	3.4	3.1	3.4	13.3	12.7	12.1	13.2	1.8	1.6	1.6	1.6
Energy	349	1.8	0.6	121.8	-32.1	5.6	5.1	5.2	7.6	7.6	11.1	1.3	1.2	1.2	1.5
Materials	968	-2.3	5.0	13.4	-41.5	3.8	3.4	8.9	14.7	13.5	13.4	1.4	1.3	1.3	1.6
Basic Resources	206	-3.3	-8.0	-11.2	-49.8	2.9	3.2	5.0	8.4	8.4	10.4	0.8	0.6	0.6	0.9
Chemicals	1442	-2.1	7.7	28.3	-36.9	4.0	3.4	11.2	17.6	15.7	14.3	1.7	1.7	1.7	2.1
Financials															
Banks	107	-3.4	11.9	18.4	29.3	5.3	7.9	8.6	6.0	5.8	9.8	0.8	0.6	0.6	0.9
Insurance	331	0.0	7.6	-17.4	41.5	5.2	5.5	13.3	9.4	8.8	9.4	1.5	1.4	1.4	1.0
Financial Services	502	-0.8	3.2	31.5	15.1	3.1	3.5	11.3	9.5	10.1	15.4	1.3	1.1	1.1	1.3
Real Estate	124	-0.1	-5.2	2.1	-5.0	5.5	5.0	11.6	10.5	10.6	16.2	0.6	0.6	0.6	1.0
Industrials															
Industrial Goods & Services	1037	-0.8	7.7	18.6	15.3	2.2	2.6	19.5	16.3	15.2	15.3	2.8	2.5	2.5	2.3
Construction & Materials	547	-1.9	18.5	3.1	3.0	3.4	3.6	12.6	12.5	11.7	13.6	1.7	1.6	1.6	1.6
Consumer Discretionary															
Retail	640	-1.1	24.9	2.5	15.8	3.7	4.0	23.1	21.6	20.1	22.5	4.7	5.1	5.1	5.5
Automobiles and parts	575	0.3	13.5	9.6	-0.8	4.9	5.4	5.9	5.7	5.8	8.4	0.9	0.8	0.8	1.1
Travel and Leisure	223	-0.9	21.7	N/A	56.7	1.0	1.5	19.1	12.7	N/A	N/A	2.7	2.4	2.4	2.0
Consumer Products & Services	486	-3.3	13.9	2.3	15.5	1.4	1.6	33.4	28.8	26.2	21.3	6.8	6.0	6.0	3.7
Media	291	1.7	11.6	21.4	14.7	2.2	2.5	22.5	19.7	18.4	15.5	3.0	3.1	3.1	2.0
Technology	856	-1.8	19.9	-3.7	26.4	1.0	1.1	28.3	23.3	20.9	21.2	4.0	3.9	3.9	3.5
Consumer Staples															
Food, Beverage & Tobacco	159	-1.5	-3.5	11.7	-4.8	1.8	2.3	19.6	18.8	17.1	17.8	2.2	1.8	1.8	2.6
Personal Care, Drug & Grocery	182	-2.9	9.0	6.8	0.3	2.4	2.5	16.0	16.0	14.7	16.2	2.3	2.2	2.2	2.6
Health care	828	-1.0	6.5	7.2	-3.9	2.4	2.4	15.9	17.2	15.8	15.0	2.0	1.9	1.9	2.1
Communication Services	280	1.2	6.8	28.0	-3.3	3.9	4.4	14.7	14.5	13.6	13.6	1.5	1.3	1.3	1.9
Utilities	366	0.3	4.8	23.0	5.7	5.2	5.3	12.0	11.6	12.0	13.2	1.8	1.6	1.6	1.5

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 12-month Forward EPS

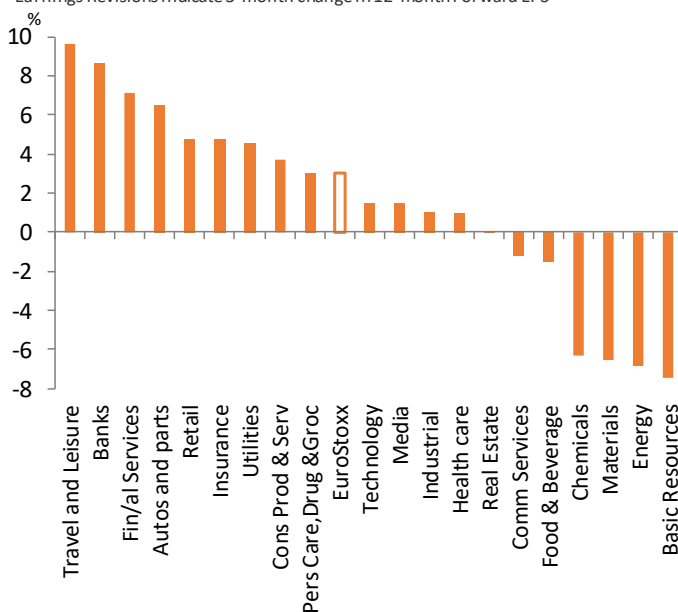
Earnings Revisions indicate 1-month change in 12-month Forward EPS



Data as of September 8th
12-month forward EPS are 31% of 2023 EPS and 69% of 2024 EPS

3-month revisions to 12-month Forward EPS

Earnings Revisions indicate 3-month change in 12-month Forward EPS



Data as of September 8th
12-month forward EPS are 31% of 2023 EPS and 69% of 2024 EPS

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

DISCLOSURES:

This report has been produced by the Economic Research Division of the National Bank of Greece, which is regulated by the Bank of Greece, and is provided solely as a sheer reference for the information of experienced and sophisticated investors who are expected and considered to be fully able to make their own investment decisions without reliance on its contents, i.e. only after effecting their own independent enquiry from sources of the investors' sole choice. The information contained in this report does not constitute the provision of investment advice and under no circumstances is it to be used or considered as an offer or an invitation to buy or sell or a solicitation of an offer or invitation to buy or sell or enter into any agreement with respect to any security, product, service or investment. No information or opinion contained in this report shall constitute any representation or warranty as to future performance of any financial instrument, credit, currency rate or other market or economic measure. Past performance is not necessarily a reliable guide to future performance. National Bank of Greece and/or its affiliates shall not be liable in any matter whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance on or usage of this report and accepts no legal responsibility to any investor who directly or indirectly receives this report. The final investment decision must be made by the investor and the responsibility for the investment must be taken by the investor.

Any data provided in this report has been obtained from sources believed to be reliable but has not been independently verified. Because of the possibility of error on the part of such sources, National Bank of Greece does not guarantee the accuracy, timeliness or usefulness of any information. Information and opinions contained in this report are subject to change without notice and there is no obligation to update the information and opinions contained in this report. The National Bank of Greece and its affiliate companies, its representatives, its managers and/or its personnel or other persons related to it, accept no responsibility, or liability as to the accuracy, or completeness of the information contained in this report, or for any loss in general arising from any use of this report including investment decisions based on this report. This report does not constitute investment research or a research recommendation and as such it has not been prepared in accordance with legal requirements designed to promote investment research independence. This report does not purport to contain all the information that a prospective investor may require. Recipients of this report should independently evaluate particular information and opinions and seek the advice of their own professional and financial advisers in relation to any investment, financial, legal, business, tax, accounting or regulatory issues before making any investment or entering into any transaction in relation to information and opinions discussed herein.

National Bank of Greece has prepared and published this report wholly independently of any of its affiliates and thus any commitments, views, outlook, ratings or target prices expressed in these reports may differ substantially from any similar reports issued by affiliates which may be based upon different sources and methodologies.

This report is not directed to, or intended for distribution to use or use by, any person or entity that is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to any law, regulation or rule.

This report is protected under intellectual property laws and may not be altered, reproduced or redistributed, or passed on directly or indirectly, to any other party, in whole or in part, without the prior written consent of National Bank of Greece.

ANALYST CERTIFICATION:

The research analyst denoted by an "AC" on page 1 holds the certificate (type Δ) of the Hellenic Capital Market Commission/Bank of Greece which allows her/him to conduct market analysis and reporting and hereby certifies that all of the views expressed in this report accurately reflect his or her personal views solely, about any and all of the subject issues. Further, each of these individuals also certifies that no part of any of the report analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this report. Also, all opinions and estimates are subject to change without notice and there is no obligation for update.