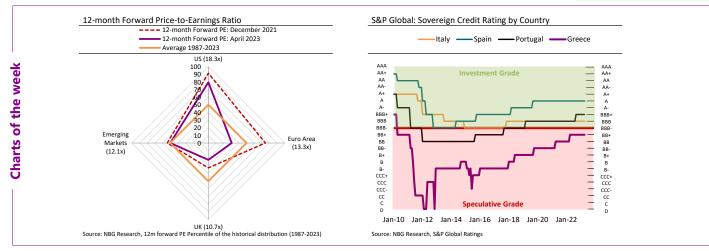
National Bank of Greece | Economic Research Division | April 25, 2023



Euro area equities hover near 14-month highs

- Global equity indices rose near 2023 highs in the past week and implied volatility subsided further, as equity multiples are pricing-in a high probability of soft landing for the US economy. The 12-month forward S&P500 Price-to-Earnings ratio has increased by 1.5 points to 18.3x year-to-date.
- Quarterly earnings reports have got off to a rather satisfactory start. Indeed, with 89 S&P500 companies having reported results so far for Q1.2023, 76% have surpassed analyst estimates, versus an average "beat rate" of 73% in the past 10 years. So far, reported earnings are +5.8% above estimates, versus a 10-year average "beat rate" of +6.4%. Meta (Facebook), Microsoft, Alphabet (Google), and Amazon are set to release results in the current week.
- Government bond yields moved higher in the euro area, due to increased odds of the ECB hiking interest rates by 50 basis points again next month (current DFR: 3%) amid strong core CPI (3month average annualized monthly rate of +5%) and better-than-expected economic data. So far this month, the 2-Year German Government bond yield has increased by 20 bps to 2.95%, remaining though lower by 40 bps compared with the 15-year high that recorded in early March.
- Euro area periphery bond spreads narrowed, with the GGB/Bund 10-Year yield spread down by 15 bps month-to-date to 177 bps. The S&P Global Ratings revised its outlook on Greek public debt to positive from stable, affirming the BB+ rating -- a step away from investment grade status (see graph below). At the same time, the BTP/Bund 10-Year yield spread has narrowed by 5 bps to 187 bps, as the S&P affirmed the BBB rating for Italian sovereign debt with a stable outlook.
- The euro area composite PMI rose by +0.7 pts to 54.4, an eleven-month high and above consensus estimates for a roughly stable outcome. However, PMIs diverged further sector-wise in April, with the difference between the output index in the manufacturing sector (-1.9 pts to 48.5) and its services peer (+1.6 pts to 56.6), reaching the widest level since early-2009. The fulfillment of previously backlogged orders averted a larger fall in manufacturing output.
- In the current week, GDP data will further help to gauge the health of the global economy, as well as sectoral trends. The first estimate of US real GDP for Q1.2023 is due on April 27th, with growth expectations of +2.1% quarter-over-quarter annualized rate from +2.6% in Q4.2022. Note that residential investment (3% of US GDP) is expected to contract for the eighth consecutive quarter, as housing market headwinds from, *inter alia*, higher mortgage interest rates, elevated construction costs and tight bank lending standards continue.
- On the other side of the Atlantic, the first estimate of the euro area GDP for Q1:2023 is released on April 28th, with growth expectations of +0.3% quarter-over-quarter annualized rate from -0.2% in Q4.2022. Euro area CPI inflation for April (May 2nd) will also be closely monitored, with headline CPI expected at +6.6% year-over-year from +6.9% in March (core: +5.6% from +5.7%). The CPI announcement is scheduled two days before the ECB Governing Council meeting.
- Market pricing now points to roughly additional hikes of +75 bps for euro policy interest rates, from additional hikes of +25 bps four weeks ago -- during the peak of the banking turmoil.



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US FOMC minutes suggest caution ahead for officials

• The minutes of the Federal Open Market Committee (FOMC) meeting on March 21st – 22nd, confirmed that the pockets of banking stress in early-to-mid-March, took center stage in the deliberations. "Several" participants considered whether a pause in hikes of the Federal Funds Rate would be appropriate, and "some" noted that absent the turmoil, they would consider a +50 bps hike. Recall that the Federal Reserve staff, estimated that the banking turmoil would result in a mild recession later in 2023, via a tightening of financial conditions. However, following the discussions, the decision for a +25 bps hike to range of 4.75% - 5.0% was unanimous (12-0), with officials taking note of the forceful action from federal authorities (including liquidity injections and deposit guarantees), which calmed banking conditions.

US job creation was resilient in March

- Headline job creation came out largely in line with expectations in March, with non-farm payrolls up by +236k. Although the latest outcome represents a deceleration compared with +334k on average in the prior 6 months (+326k in February), it is still a relatively robust outcome (20-year average of NFPs: +106k). Net revisions for the previous two months were modest (-17k, cumulatively). Sector-wise, leisure & hospitality continued to overperform (+72k), as well government (+47k), with the post-pandemic recovery in employment in both sectors remaining in catching-up mode with the rest ones. In the event, both are still significant laggards, with employment being -368k & -314k, respectively, below pre-pandemic (February 2020) levels (versus +3198k above pre-pandemic levels for total non-farm payrolls).
- The (relatively more volatile) total household employment, including the self-employed and agricultural workers, increased by +577k in March from +177k in February. As a result, the unemployment rate decreased by -0.1 pp to 3.5%, close to the lowest since May 1969 (3.4%) which was recorded in past January. Notably, that development came alongside an increase in the labor force participation rate (+0.1 pp to 62.6%). At the same time, the U-6 unemployment rate (which includes the unemployed, parttime workers for economic reasons, and those workers marginally attached to the labor force), which is considered a broader measure of slack, also fell by -0.1 pp to 6.7% in March.
- The Job Openings and Labor Turnover Survey for February remained consistent with the view for a tight labor market, even with some tentative signs of the tightening losing some impetus. In the event, job openings were 9.93mn, down from 10.56mn in January and below consensus estimates of 10.40mn (record - i.e. since 2000 – high of 12.03mn in March 2022), albeit still a relatively very robust outcome (average of 5.16mn since 2000). The difference with the number of hires was 3.77mn, a figure which despite being down from 4.24mn in January, is still large and suggests broad mismatches in the supply and demand of labor. Importantly, the job vacancy rate (i.e. the ratio of job openings to the number of unemployed persons excluding those on temporary layoff, a metric closely watched as an indicator of labor market slack), was 1.9x in February from 2.1x in the previous month and a record (since 2000) high of 2.3x in December, albeit still far above an average of 0.8x since 2000 suggesting higher bargaining power for workers.

• Average hourly earnings retained a healthy momentum in March. Indeed, the monthly growth was +0.3% mom, from +0.2% mom in February, largely as expected (average of +0.25% mom since 2006). At the same time, the annual growth decelerated to +4.2% from +4.6% in February, roughly in line with expectations, albeit still well above an average of +3.0% yoy since 2007. It should also be noted that the average weekly hours worked by total employees decreased by 0.1 to 34.4 in March, (aligning with the average since 2006), suggesting somewhat lower gains for workers' overall compensation, compared with those implied by the headline increase in average hourly earnings.

US headline CPI inflation came out below expectations in March

- Headline CPI inflation decelerated for a 9th consecutive month in March. Specifically, the annual pace of growth came out at +5.0% from +6.0% in February (peak of +9.1% in June 2022), versus consensus estimates for +5.2%. The sharp deceleration was both due to base effects (on a monthly basis, the index had increased by +1.0% in March 2022 seasonally adjusted | "sa") and a soft monthly growth in March 2023 (+0.05% mom). The energy index decreased by -3.5% mom (sa) following a -0.6% mom in February and the annual growth decelerated to -6.4% (in negative territory for the first time since January 2021) from +5.2% previously (also due to base effects | Energy prices had jumped by +8.2% mom sa in March 2022 due to the war in Ukraine).
- At the same time, food prices stabilized, in view also of declining international prices of food. Indeed, the Food Price Index from the Food and Agriculture Organization of the United Nations decreased by -2.1% mom in March and has fallen by -5.8% since past November. In all, US CPI food prices were stable on a monthly basis (sa) from +0.4% mom in February (average monthly pace since June 2021: +0.8% mom versus a 20-year average of +0.2% mom). That development, combined with base effects (+0.9% mom sa in March 2022), led to a deceleration in the annual pace of growth, to +8.5% in March from +9.5% in the previous month (peak of +11.4% in August, the highest since May 1979).
- Core CPI gains remained strong, up by +0.4% mom from +0.5% mom (sa) in February, in line with consensus estimates (20-year average of +0.2% mom). As a result, core CPI's annual pace of growth accelerated by +0.1 pp to +5.6% in March, largely in line with expectations (peak of +6.6% yoy in September 2022).
- Looking forward, the Federal Reserve Bank of Cleveland's Inflation Nowcasting model points to roughly unchanged figures in April for the annual growth of both the headline CPI (+5.1%) and the core (+5.6%, in view of a continued sharp momentum, with monthly expected gains of +0.5%).

Chinese growth surprised on the upside

In China, real GDP growth exceeded expectations in Q1:2023, with the annual growth picking up pace to +4.5% from +2.9% in Q4:2022, versus consensus estimates for +4.0%. Strong retail sales on the back of the economy's reopening, as well as solid infrastructure investment on the back of policy support measures, were important boosting factors. Note that retails sales increased by +7.1% yoy on average in Q1:2023 and infrastructure investment rose by +8.9% yoy on average for the same period.

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Equities

 Global equity markets (MSCI ACWI: -0.3%) exhibited relatively modest volatility in the past week. Emerging markets underperformed (MSCI EM: -2.0% wow) their Developed peers (-0.1% wow). Chinese bourses led the decline (MSCI China: -2.4% wow), with the post-reopening hype (+30% since early-November 2022), showing signs of fatigue. In the US, the S&P500 was roughly unchanged on a weekly basis, with the CBOE Volatility Index (VIX) averaging 17% in the past week versus a 1-year average of 24%. Financials modestly overperformed (+1.0%), in view of better-than-expected results in Q1:23, led by JPMorgan Chase (EPS of \$4.10 versus consensus estimates for \$3.41), Citigroup (\$2.19 versus expectations for \$1.65) and Bank of America (\$0.94 instead of \$0.81), mainly on the back of strong net interest income. As a result, the Q1:23 EPS annual growth for the sector is now anticipated at +5.4% instead of +2.9% on March 31st. Overall, the S&P500 Q1:23 earning period has got off to a rather satisfactory start. Indeed, with 89 companies having reported results so far, 76% have surpassed analyst estimates, versus an average "beat rate" of 73% in the past 10 years. So far, reported earnings are +5.8% above estimates, versus a 10year average "beat rate" of +6.4%. In all, according to analysts' estimates, the annual earnings growth is expected to be -6% in Q1:23 (-7% on March 31st), from -5% in the previous quarter. Notably, the net profit margin for the S&P500 is estimated to stabilize after six consecutive quarters of decline (albeit from very elevated levels), to 11.2% in Q1:23 from a peak of 13.0% in Q2:21 and to modestly increase later (to 11.8% on average in the next three quarters), hovering close to its 5-year average of 11.4%.

On the other side of the Atlantic, the EuroStoxx rose by +0.3% wow and in Greece, the ASE Index went up by 0.8% wow, led by Banks (+3.9%).

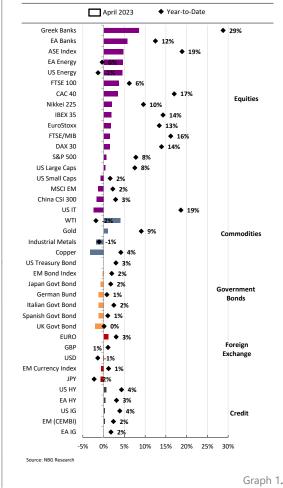
Fixed Income

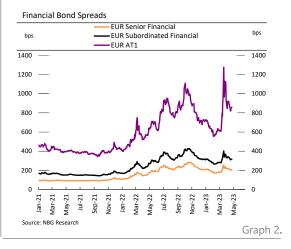
 Yields rose in the past week, with expectations for further monetary policy tightening being cemented. Indicatively, the futures markets now price-in a c. 90% chance of another +25 bps hike in the US federal funds rate on May 3rd to a range of 5.0% - 5.25%, instead of a c. 70% probability in the end of the previous week and 48% In the end of March. In all, the 10-year US Treasury yield increased by +5 bps wow to 3.57% and its (relatively more sensitive to monetary policy prospects) 2-year peer by +9 bps to 4.24%. A more profound rise in nominal yields was evident in UK gilts, with a +14 bps in the 10-year tenor to 3.76% and +18 bps in the 2-year tenor to 3.75%, following also stronger than expected CPI inflation readings in March (+10.1% yoy for the headline from +10.4% yoy in February, versus consensus estimates for +9.8% and stable at +6.2% yoy for the core index versus expectations for +6.0% yoy). In Germany, both the 2-year and the 10-year yields rose by +7 bps to 2.92% & 2.48%, respectively. At the same time, the spread in the 10-year tenor in Greece narrowed by -4 bps to 181 bps, mostly following a revision from S&P Global Ratings of its outlook on Greece to positive from stable, albeit affirming the long and short-term local and foreign currency sovereign credit ratings at 'BB+/B' (a step away from investment grade status). Recall also that a successful reopening of a 10-year bond (bearing a 4.25% annual coupon) took place in the past week (offers of €1.7 tn for an auctioned amount of €0.3 tn).

FX and Commodities

In foreign exchange markets, the US Dollar modestly rose (DXY Index: +0.3% wow), on the back of stronger expectations for another hike being imminent in the federal funds rate. Against the euro, the USD increased by +0.3% wow to \$1.10. In commodities, oil prices fell in the past week, on account of demand concerns (Brent: -5.4% wow to \$81.7/barrel | WTI: -5.6% wow to \$77.9/barrel). In addition, media reports suggested resilient crude oil exports from Russia in April, despite official pledges for supply cuts. These factors more than offset the upward effect on prices from stronger than expected economic data in China (15% of global oil demand) and a substantial fall in US crude oil inventories (-4.6 million barrels for the week ending April 14th to 466 million barrels).







Quote of the week: "Given the persistence of underlying inflation, plus the very strong momentum in food inflation, it's far too early to declare victory on inflation", Member of the Executive Board of the European Central Bank, Isabel Schnabel, April 20th 2023.

Interest Rates & Foreign Exchange Forecasts



10-Yr Gov. Bond Yield (%)	April 21st	3-month	6-month	12-month	Official Rate (%)	April 21st	3-month	6-month	12-month
Germany	2,48	2,60	2,70	2,80	Euro area	3,00	3,50	3,50	3,50
US	3,57	4,00	4,10	4,10	US	5,00	5,25	5,25	5,25
UK	3,76	3,68	3,58	3,34	UK	4,25	4,45	4,45	4,25
Japan	0,46	0,56	0,63	0,66	Japan	-0,10	-0,10	-0,10	-0,10
Currency	April 21st	3-month	6-month	12-month		April 21st	3-month	6-month	12-month
EUR/USD	1,10	1,05	1,08	1,10	USD/JPY	134	132	129	127
EUR/GBP	0,89	0,89	0,90	0,91	GBP/USD	1,23	1,18	1,21	1,21
EUR/JPY	148	138	139	139					
Forecasts at end of period									

Economic Forecasts

United States	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22a	2022a	Q1:23f	Q2:23f	Q3:23f	Q4:23f	20231
Real GDP Growth (YoY) (1)	5,9	3,7	1,8	1,9	0,9	2,1	1,8	2,2	1,5	0,9	1,6
Real GDP Growth (QoQ saar) (2)	-	-1,6	-0,6	3,2	2,6	-	2,1	0,8	0,7	0,0	-
Private Consumption	8,3	1,3	2,0	2,3	1,0	2,7	3,9	1,2	1,1	0,6	2,0
Government Consumption	0,6	-2,3	-1,6	3,7	3,8	-0,6	2,4	0,5	0,1	0,6	1,8
Investment	7,4	4,8	-5,0	-3,5	-3,8	-0,2	6,5	1,6	1,9	1,3	0,7
Residential	10,7	-3,1	-17,8	-27,1	-25,1	-10,6	-5,4	-3,6	-3,1	-3,1	-12,7
Non-residential	6,4	7,9	0,1	6,2	4,0	3,9	1,9	2,6	2,8	2,1	2,9
Inventories Contribution	0,2	0,3	-2,1	-1,4	2,0	0,7	-1,4	-0,3	-0,5	-0,8	-0,5
Net Exports Contribution	-1,7	-3,8	1,2	3,3	0,6	-0,6	0,2	-0,1	0,1	0,1	0,6
Exports	6,1	-4,6	13,8	14,6	-3,7	7,1	5,6	2,8	2,0	0,1	4,0
Imports	14,1	18,4	2,2	-7,3	-5,5	8,1	2,6	2,2	0,9	-0,5	-0,7
Inflation (3)	4,7	8,0	8,7	8,3	7,1	8,0	5,8	4,2	3,8	4,0	4,5
Euro Area	2021a	Q1:22a	Q2:22a	Q3:22a	Q4:22a	2022a	Q1:23f	Q2:23f	Q3:23f	Q4:23f	20231
Real GDP Growth (YoY)	5,3	5,5	4,4	2,4	1,8	3,5	1,3	0,6	0,6	0,9	0,9
Real GDP Growth (QoQ saar)	-	2,5	3,6	1,5	-0,1	-	0,3	0,9	1,3	1,3	-
Private Consumption	3,7	0,4	4,3	3,7	-3,4	4,3	0,3	1,5	1,3	1,4	0,6
Government Consumption	4,3	0,3	-0,3	-0,8	3,0	1,1	-0,6	-1,9	0,8	1,8	0,1
Investment	3,9	-2,7	3,8	16,7	-13,6	3,8	0,9	1,8	1,9	1,9	0,3
Inventories Contribution	0,2	-1,3	0,6	0,8	0,3	0,3	0,0	-0,3	-0,4	-0,1	0,1
Net Exports Contribution	1,3	4,2	0,0	-4,4	4,0	-0,1	0,1	0,4	0,5	-0,1	0,3
Exports	10,5	5,8	7,1	7,0	0,3	7,2	2,2	3,9	4,1	2,5	3,3
Imports	8,3	-2,5	7,9	17,8	-7,4	8,0	2,1	3,5	3,5	3,0	2,9
Inflation	2.6	6.1	8.0	9.3	10.0	8.4	8.0	6,4	4.9	3,6	5,7

6-12-Month View & Key Factors for Global Markets

	US	Euro Area	Japan	UK
	 Households' balance sheets are healthy (low debt, still elevated excess savings) Sentiment (e.g. AAII) and positioning indicators are low, despite the recent rally Peaking profit margins Recession risks remain considerable P/Es (Valuations) above long-term means, with EPS consensus expectations (\$228 for EPS) only slightly lower compared with end Q3 (-3%) 	 Higher equity risk premium (lower P/E ratio) relative to benchmark market (US) despite the recent rally of + 20% 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 	 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 ¥130, 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) 	 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 remain very high and labor market extremely tight
	Neutral/Negative	Neutral/Positive	Neutral	Neutral
	 Valuations appear somewhat rich despite the 237bps increase in 2022, 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 	 Valuations still appear excessive compared with long-term fundamentals ECB to start unwinding its government and corporate bond holdings (APP) in March 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) 	 Monetary stance remains extremely dovish, 	 Inflation expectations could drift higher due supply disruptions (persistent post Brexit, temporary due to China) The BOE is expected to continue increasing interest rates aggressively as inflation remain very high and labor market extremely tight BOE: active (sales) Quantitative Tightening Slowing economic growth post-Brexit
	Slightly higher yields	Slightly higher yields	Slightly Higher yields	Slightly Higher yields
-	 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 	 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 	 Safe haven demand More balanced economic growth recovery (long- term) Higher core Inflation rates could accelerate the shift of monetary policy (less accommodative) 	 Yaluations appear undemanding with REER below its 15-year average Sizeable Current account deficit
	Broadly Flat USD against G10 FX	Range-bound (around 1.05) with upside risks against the USD	Stronger JPY	Broadly stable GBP

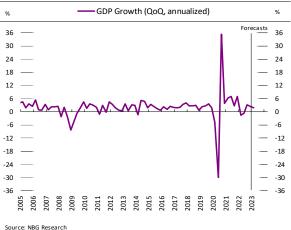
Economic Calendar

In the US, the main macro event next week is the advance estimate for GDP in Q1:23, which is released on Thursday. Consensus expects growth at +2.0% qoq saar versus +2.6% qoq saar in Q4:22. On Friday, March's personal income and consumption and PCE data (the Fed's preferred measure for gauging inflation developments) for March will gather investors' attention. On Monday, ISM Manufacturing survey (latest: 46.3 | consensus of 47.0) will provide an update on business confidence.

In the Euro area, Q1:23 GDP is due on April 28th. Consensus expect GDP growth of 0.2% qoq (+1.4% yoy), compared with 0% qoq in Q4:22 (+1.8% yoy).

In China, PMI data for April will provide valuable insight regarding the current economic momentum.





Economic News Calendar for the period: April 18 - May 1, 2022

Economic News Calendar for th	ne periou. A	prii 10 - 1	viay 1, 20	22										
Tuesday 18					Wednesday 19				-	Thursday 20				
US	March	S	A	P		March	S 9.8% ₫	A	P	US Initial Jobless Claims (k)	April 15	S	A 245	P 239
Building permits (k) Housing starts (k)	March March		- 1413 + 1420	1550 1432	CPI (YoY) CPI Core (YoY)	March March		10.1% 6.2%	10.4% 6.2%	Initial Jobless Claims (k) Continuing Claims (k)	April 15 April 8	240 1820	1865	239 1804
	Warch	1400	+ 1420	1452	CPI COIE (FOF)	Ivial CIT	0.0%	0.270	0.270	Philadelphia Fed Business				
ILO Unemployment Rate	February	3.7%	- 3.8%	3.7%						Outlook	April	-19.2	-31.3	-23.2
GERMANY	,									Existing home sales (mn)	March	4.5	4.4	4.6
ZEW survey expectations	April		- 4.1	13.0						EURO AREA				
ZEW survey current situation	April	-40.0	+ -32.5	-46.5						Consumer Confidence Indicator	April	-18.5	-17.5	-19.1
CHINA		2 201	2 20/	0.000						Trade Balance SA (€ bn)	February		-0.1	-11.6
GDP (sa, QoQ) GDP (YoY)	Q1:23 Q1:23	2.2% 4.0%	2.2% + 4.5%	0.6% 2.9%						JAPAN Imports (YoY)	March	11.4%	7.3%	8.3%
Industrial production (YoY)	March		- 3.9%	2.9%						Exports (YoY)	March		4.3%	6.5%
Retail sales (YoY)	March		+ 10.6%	3.5%										
Friday 21 US		s	А	Р	JAPAN		S	А	Р	Monday 24 GERMANY		s	A	Р
S&P Global US Manufacturing					CPI (YoY)	March	2.6%	3.2%	3.3%	IFO- Business Climate Indicator	April	94.0 ·		93.2
PMI	April	49.0	+ 50.4	49.2	Core CPI (YoY) - ex. Fresh Food	March	3.1%	3.1%	3.1%	IFO- Current Assesment	April	96.0		95.4
EURO AREA					Core CPI (YoY) - ex. Fresh Food	March	3.4%	3.8%	3.5%	IFO-Expectations	April	91.5		91.0
S&P Global Eurozone	April	48.0	- 45.5	47.3	and Energy					-				
Manufacturing PMI	Арпі	40.0	- 45.5	47.5	PMI manufacturing	April	48.9	49.5	49.2					
S&P Global Eurozone Composite	April	53.7	+ 54.4	53.7										
PMI S&P Global Eurozone Services														
PMI UK	April	54.5	+ 56.6	55.0										
S&P Global/CIPS UK PMI		10 5	10.0	17.0										
Manufacturing SA	April		- 46.6	47.9										
S&P Global/CIPS UK Services PMI	April	52.9	+ 54.9	52.9										
Retail sales Ex Auto MoM	March	-0.7%	1.0%	1.4%										
Tuesday 25					Wednesday 26					Thursday 27				
US		S	А	Р	US		S	Α	Р	US		S	А	Р
S&P Case/Shiller house price	Ferbruary	0.1%		2.5%	Durable goods orders (MoM)	March	0.8%		-1.0%	GDP (QoQ, annualized)	Q1:23	2.0%		2.6%
index 20 (YoY)					Durable goods orders ex	March	-0.2%		-0.1%	Initial Jobless Claims (k)	April 22 April 15	250		245
Consumer Confidence Index New home sales (k)	April March	104.0 634		104.2 640	transportation (MoM)					Continuing Claims (k) Pending home sales (MoM)	March	1865 0.3%		1865 0.8%
New Home sales (k)	Waren	034		040						EURO AREA	waren	0.578		0.076
										Business Climate Indicator	April			0.7
										Economic Confidence Indicator	April	100.0		99.3
Friday 20										Mandau 01				
Friday 28 US		s	A	Р	JAPAN		S	A	Р	Monday 01 US		S	A	Р
Personal income (MoM)	March	0.2%		0.3%	Bank of Japan announces its			^		ISM Manufacturing	April	47.0		46.3
Personal spending (MoM)	March	-0.1%		0.2%	intervention rate	April 28	-0.1%		-0.1%	Construction spending (MoM)	March	0.2%		-0.1%
PCE Deflator (YoY)	March			5.0%	Unemployment rate	March	2.5%		2.6%	CHINA				
PCE Core Deflator (YoY)	March	4.5%		4.6%	Retail sales (MoM)	March			2.1%	PMI manufacturing	April	51.5		51.9
EURO AREA		0.000		0.000	Retail sales (YoY)	March	5.8%		7.3%					
GDP (QoQ)	Q1:23	0.2%		0.0%	Industrial Production (MoM)	March	-0.3%		4.6%					
GDP (YoY) GERMANY	Q1:23	1.4%		1.8%	Industrial Production (YoY) Construction Orders (YoY)	March March	-2.4%		-0.5% 22.3%					
GDP (QoQ)	Q1:23	0.2%		-0.4%	construction orders (ror)	march			22.370					
GDP (wda, YoY)	Q1:23	0.2%		0.9%										
Source: NBG Research														

S: Consensus Analysts Survey, A: Actual Outcome, P: Previous Outcome

Equity Markets (in local currency)

Developed Ma	arkets	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	4134	-0.1	7.7	-5.9	-1.0	MSCI Emerging Markets	59060	-1.4	2.8	-6.2	-21.3
Japan	NIKKEI 225	28564	0.2	9.5	3.7	0.2	MSCI Asia	904	-1.7	3.2	-4.6	-23.0
UK	FTSE 100	7914	0.5	6.2	3.8	14.8	China	65	-2.4	1.1	-0.7	-39.7
Euro area	EuroStoxx	465	0.3	13.5	6.1	6.1	Korea	777	-0.9	15.9	-5.2	-22.1
Germany	DAX 40	15882	0.5	14.1	9.5	4.5	MSCI Latin America	87519	-1.6	-0.9	-11.0	-14.1
France	CAC 40	7577	0.8	17.0	12.8	22.0	Brazil	277628	-1.7	-6.0	-16.0	-24.9
Italy	FTSE/MIB	27746	-0.5	17.0	11.9	14.8	Mexico	50438	-0.4	12.0	1.4	12.4
Spain	IBEX-35	9416	0.6	14.4	6.8	10.5	MSCI Europe	2963	0.3	5.2	12.1	-52.3
Hong Kong	Hang Seng	20076	-1.8	1.5	-2.9	-29.9	Russia	2640	3.3	22.6	16.2	-25.9
Greece	ASE	1111	0.8	19.5	17.0	26.9	Turkey	5081537	-1.8	-5.6	77.2	254.1

World Market Sectors and Styles (MSCI Indices*)

in US Dollar terms	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)	Investment Styles	Current Level	1-week change (%)	Year-to-Date change (%)	1-Year change (%)	2-year change (%)
Energy	243.0	-2.5	-1.3	4.8	58.7	Growth	3919.3	0.0	15.6	-3.7	-8.0
Materials	327.7	-0.9	5.4	-9.9	-7.2	Value	3162.2	-0.2	1.9	-6.0	-0.7
Industrials	320.7	0.7	7.2	1.4	-4.0	Large Cap	1772.2	-0.1	9.2	-3.9	-2.1
Consumer Discretionary	337.8	0.3	16.0	-10.7	-17.4	Small Cap	483.0	0.0	4.0	-8.5	-15.2
Consumer Staples	286.9	1.8	6.3	-1.4	5.9	US Growth	2591.9	-0.5	9.8	-9.9	-7.7
Healthcare	352.1	0.0	2.0	-1.7	6.7	US Value	1511.4	0.3	5.4	-2.4	5.1
Financials	132.1	0.5	0.9	-7.3	-3.9	US Large Cap	2262.8	-0.1	7.5	-6.5	-3.8
IT	467.3	-0.6	18.8	-1.2	-2.6	US Small Cap	1791.5	0.6	1.7	-10.0	-20.0
Telecoms	78.5	-2.5	17.7	-10.6	-24.8	US Banks	298.5	0.9	-9.0	-19.1	-23.6
Utilities	157.4	1.2	3.0	-5.7	-0.8	EA Banks	107.7	-0.4	12.4	17.1	26.6
Real Estate	196.5	1.0	0.0	-23.8	-17.2	Greek Banks	838.5	3.9	30.9	21.3	45.5

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	3.57	3.52	3.88	2.92	2.20	US Treasuries 10Y/2Y	-67	-63	-58	22	89
Germany	2.48	2.42	2.53	0.91	0.48	US Treasuries 10Y/5Y	-10	-9	-13	-7	45
Japan	0.46	0.46	0.42	0.25	0.18	Bunds 10Y/2Y	-44	-44	-16	74	73
UK	3.76	3.62	3.66	1.97	1.53	Bunds 10Y/5Y	-4	-3	0	25	50
Greece	4.29	4.27	4.59	2.94	5.16						
Ireland	2.88	2.83	3.06	1.50	1.16	Corporate Bond Spreads	Current	Last week	Year Start	One Year	10-year
Italy	4.36	4.28	4.64	2.56	2.19	(in bps)	Current	Last week	rear Start	Back	average
Spain	3.52	3.46	3.61	1.86	1.65	US IG	138	139	138	130	132
Portugal	3.30	3.27	3.57	1.80	2.32	US High yield	446	443	481	350	447
EM	4.91	4.89	5.04	4.72	0.00	Euro area IG	155	159	167	135	120
						Euro area High Yield	454	455	498	412	403
UC Mantena Market	Current	Lastinali	Veen Chert	One Year	10-year	EM	298	294	295	298	321
US Mortgage Market	Current	Last week	Year Start	Back	average	EUR Senior Financial	204	211	204	155	N/A
30-Year FRM ¹ (%)	6.43	6.30	6.42	5.20	4.24	EUR Subordinated Financial	314	324	311	239	N/A
vs 30Yr Treasury (bps)	263.8	253.1	240.1	225.2	146.1	EUR AT1	851	865	718	562	N/A

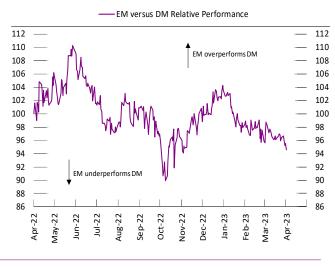
Foreign Exchange & Commodities

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											
EUR/USD	1.10	-0.3	1.7	1.2	2.8	Agricultural	448	-1.8	1.4	-21.9	-4.9
EUR/CHF	0.98	-0.3	-1.6	-5.0	-0.7	Energy	261	-5.2	5.1	-29.0	-9.6
EUR/GBP	0.89	0.1	0.3	6.4	-0.2	West Texas Oil (\$/bbl)	78	-5.6	9.8	-25.0	-3.0
EUR/JPY	147.52	0.4	3.0	5.9	4.8	Crude brent Oil (\$/bbl)	82	-5.4	6.5	-24.6	-4.9
EUR/NOK	11.64	2.0	2.9	21.4	10.7	HH Natural Gas (\$/mmbtu)	2.2	19.4	10.0	-67.5	-36.6
EUR/SEK	11.32	-0.3	1.3	10.1	1.8	TTF Natural Gas (EUR/mwh)	40	-2.4	0.5	-59.9	-47.4
EUR/AUD	1.64	0.2	1.7	12.0	4.3	Industrial Metals	447	-1.2	1.8	-22.8	-1.0
EUR/CAD	1.49	1.0	0.3	9.6	2.7	Precious Metals	2602	-1.3	2.1	2.2	8.6
USD-based cross rates						Gold (\$)	1982	-1.1	0.7	1.6	8.7
USD/CAD	1.35	1.3	-1.3	8.3	-0.1	Silver (\$)	25	-1.1	9.1	1.7	4.7
USD/AUD	1.50	0.5	0.0	10.6	1.4	Baltic Dry Index	1504	4.8	3.3	-32.8	-0.7
USD/JPY	134.44	0.7	1.3	4.6	1.9	Baltic Dirty Tanker Index	1146	-7.7	-30.5	-24.5	-38.8

Source: NBG Research, Data as of April 21st, S&P/Goldman Sachs Indices for Agricultural, Energy, Industrial & Precious Metals, BofA/ML Indices for Corporate Bond Spreads, *: Unless otherwise noted, ¹ Fixed-rate Mortgage

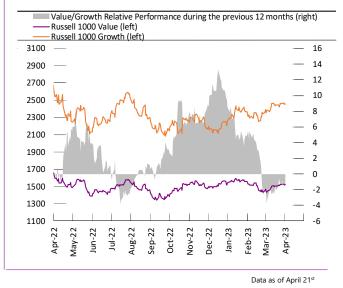


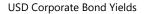
EM vs DM Performance in \$

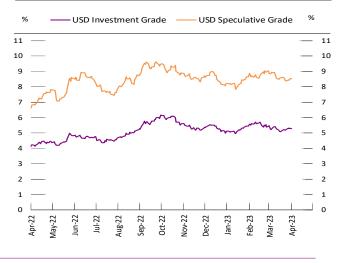


Data as of April 21st – Rebased @ 100

Russell 1000 Value & Growth Index

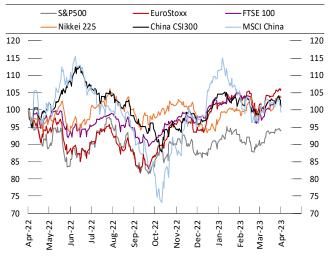




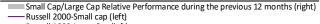


Data as of April 21st





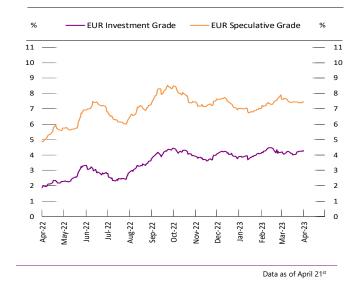
Russell 2000 & Russell 1000 Index





Data as of April 21st

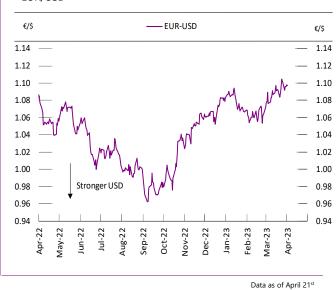
EUR Corporate Bond Yields

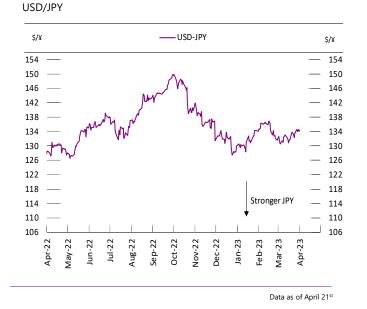


Data as of April 21st - Rebased @ 100

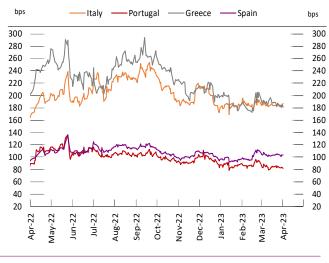




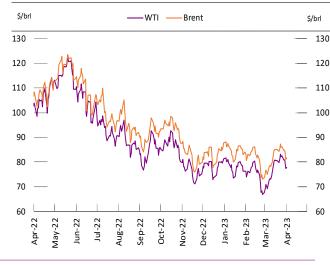




10- Year Government Bond Spreads







West Texas Intermediate and Brent (\$/brl)

10- Year Government Bond Yields

- UK

Japan

Dec-22

Feb-23

Mar-23

Jan-23

- Germanv

%

4.8

4.4

4.0

3.6

3.2

2.8

2.4

2.0

1.6

0.8

0.4

0.0

-0.4

-0.8

____ 1.2

Apr-23

Data as of April 21st

–US

%

4.8

4.4

3.6

3.2

2.4

2.0

1.6

1.2

0.4

0.0

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Apr-22

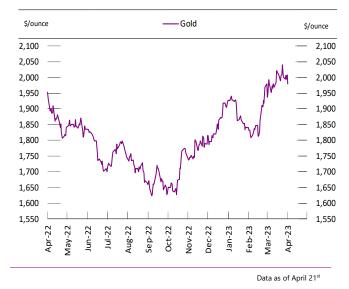
May-22

Jun-22

Jul-22 Aug-22 Sep-22 Oct-22 Nov-22

Data as of April 21st





US Sectors Valuation

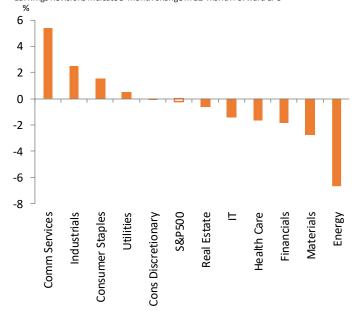
		Price (\$)		EPS Gro	wth (%)	Dividend	Yield (%)		Ρ/	'E Ratio		P/BV Ratio			
	21/4/23	% Weekly Change	%YTD	2022	2023	2022	2023	2022	2023	12m fwd	20Yr Avg	2022	2023	Current	20Yr Avg
S&P500	4134	-0.1	7.7	4.8	1.2	1.7	1.7	18.4	18.9	18.3	15.7	3.9	3.8	3.8	2.9
Energy	653	-2.5	-2.8	154.4	-22.9	3.4	3.2	8.1	10.8	10.8	15.2	2.3	2.2	2.2	2.0
Materials	508	-0.3	3.8	5.4	-15.8	2.2	2.1	14.6	17.1	16.8	15.2	2.9	2.7	2.7	2.8
Financials															
Diversified Financials	970	0.7	1.3	-9.4	4.3	1.3	1.4	19.0	17.8	17.2	16.0	2.7	2.5	2.5	2.3
Banks	299	0.9	-9.0	-20.7	9.2	3.0	3.7	11.2	8.7	8.7	11.9	1.2	0.9	0.9	1.3
Insurance	578	1.9	-2.8	-13.1	25.7	1.7	2.0	17.2	13.2	12.6	11.1	2.2	1.9	1.9	1.4
Real Estate	234	1.6	0.5	12.4	-0.5	3.8	3.9	18.1	17.7	17.4	18.8	2.6	2.9	2.9	2.7
Industrials															
Capital Goods	886	0.5	1.5	13.1	14.2	1.7	1.8	22.7	19.7	18.9	16.1	5.0	4.4	4.4	3.6
Transportation	953	1.6	5.2	123.7	10.1	1.9	2.1	16.0	14.7	N/A	15.1	5.5	4.6	4.6	3.7
Commercial Services	501	0.7	3.0	13.6	6.4	1.5	1.6	27.7	27.2	26.2	21.7	7.5	7.3	7.3	4.7
Consumer Discretionary															
Retailing	3079	3.4	11.8	-43.4	44.0	0.8	0.8	43.0	31.9	30.0	22.7	10.7	9.7	9.7	7.8
Consumer Services	1474	1.7	16.0	N/A	176.6	1.1	1.2	69.6	26.8	N/A	27.1	456.7	268.8	N/A	15.3
Consumer Durables	407	1.6	9.9	3.7	-16.4	1.7	1.6	13.0	16.5	16.0	16.1	3.2	3.1	3.1	3.2
Automobiles and parts	98	-9.1	25.8	28.6	-12.8	0.3	0.5	24.2	23.0	N/A	11.1	4.7	3.5	3.5	2.3
IT															
Technology	3057	-1.1	21.5	5.0	-0.3	0.9	0.9	21.8	23.8	23.0	16.0	15.8	15.1	15.1	5.5
Software & Services	3227	-0.1	13.5	10.9	7.2	1.0	1.0	25.9	26.3		18.4	8.7	8.1	8.1	6.1
Semiconductors	2156	-0.2	29.9	-5.7	-16.2	1.4	1.4	20.2	26.0	24.3	18.3	5.1	5.4	5.4	3.8
Communication Services	191	-3.1	19.9	-20.4	16.5	1.0	0.9	18.1	17.2	16.4	17.6	2.9	2.9	2.9	2.8
Media	754	-2.6	24.3	-22.8	20.0	0.3	0.3	20.9	19.6	18.6	21.6	3.3	3.3	3.3	3.2
Consumer Staples															
Food & Staples Retailing	663	2.3	6.9	-3.5	3.5	1.5	1.5	21.9	22.2	21.6	17.3	5.3	4.9	4.9	3.7
Food Beverage & Tobacco	867	0.8	0.5	6.0	2.7	3.1	3.1	18.6	19.0	18.6	16.9	5.2	5.0	5.0	4.7
Household Goods	892	2.9	3.3	-3.4	4.4	2.5	2.3	25.2	26.9	26.0	19.6	9.6	10.4	10.4	6.1
Health Care															
Pharmaceuticals	1272	-0.6	-1.8	5.5	-16.3	2.0	2.0	14.1	17.9	17.4	14.6	5.3	5.1	5.1	4.1
Healthcare Equipment	1836	0.3	-0.6	4.3	2.9	1.2	1.2	18.7	19.0	18.4	15.8	3.8	3.8	3.8	3.1
Utilities	354	1.1	-1.3	1.2	6.4	3.2	3.2	18.5	18.7	18.3	15.3	1.9	2.0	2.0	1.7

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



3-month revisions to 12-month Forward EPS

 ${\sf Earnings}\ {\sf Revisions}\ {\sf indicate}\ {\sf 3}{\sf -}{\sf month}\ {\sf change}\ {\sf in12}{\sf -}{\sf month}\ {\sf Forward}\ {\sf EPS}$



Data as of April 21st

12-month forward EPS are 69% of 2023 EPS and 31% of 2024 EPS

Euro Area Sectors Valuation

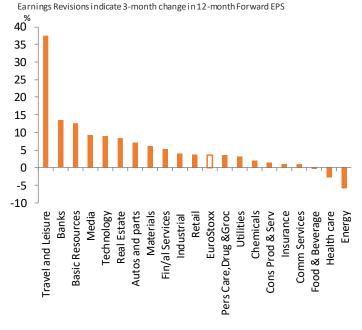
		Price (€)		EPS Gro	wth (%)	Dividend	Yield (%)		P/	'E Ratio		P/BV Ratio				
	21/4/23	% Weekly Chan	ige %YTD	2022	2023	2022	2023	2022	2023	12m fwd	20Yr Avg	2022	2023	Current	20Yr Avg	
EuroStoxx	465	0.3	13.5	15.5	4.0	3.1	3.2	14.0	13.7	13.3	13.2	1.8	1.7	1.7	1.6	
Energy	343	-1.7	-1.1	121.8	-23.9	5.6	5.2	5.2	6.7	6.9	11.2	1.3	1.2	1.2	1.5	
Materials	998	0.9	8.2	13.5	-34.0	3.8	3.4	8.9	13.4	13.1	13.4	1.4	1.3	1.3	1.6	
Basic Resources	211	-1.5	-5.8	-11.2	-46.7	2.9	3.4	5.0	8.2	8.0	10.6	0.8	0.6	0.6	0.9	
Chemicals	1488	1.4	11.1	28.7	-27.2	4.0	3.4	11.1	15.7	15.2	14.2	1.7	1.7	1.7	2.1	
Financials																
Banks	108	-0.4	12.4	18.4	10.3	5.3	6.8	8.6	7.1	6.8	10.0	0.8	0.7	0.7	1.0	
Insurance	328	1.1	6.6	-17.3	41.1	5.2	5.6	13.3	9.3	9.1	9.5	1.5	1.4	1.4	1.0	
Financial Services	535	0.5	9.9	31.5	-0.8	3.1	3.3	11.3	11.7	11.5	15.6	1.3	1.3	1.3	1.3	
Real Estate	121	-2.0	-7.5	3.4	6.6	6.4	6.8	12.4	9.8		16.7	0.6	0.5	0.5	1.0	
Industrials																
Industrial Goods & Services	1091	1.0	13.4	18.8	12.6	2.2	2.4	19.4	17.5	16.9	15.3	2.8	2.6	2.6	2.3	
Construction & Materials	539	1.1	16.7	3.1	-1.9	3.4	3.5	12.6	12.9	12.5	13.5	1.7	1.6	1.6	1.6	
Consumer Discretionary																
Retail	627	0.7	22.4	2.5	10.1	3.7	3.9	23.1	22.2	21.7	22.5	4.7	4.8	4.8	5.5	
Automobiles and parts	581	-4.0	14.9	9.3	-13.7	4.9	4.8	5.9	6.6	6.5	8.5	0.9	0.9	0.9	1.1	
Travel and Leisure	234	3.8	27.6	N/A	28.6	1.0	1.3	19.1	16.2	N/A	N/A	2.7	2.5	2.5	2.0	
Consumer Products & Services	554	1.7	29.9	1.8	14.7	1.4	1.4	33.6	33.3	31.8	21.1	6.8	6.9	6.9	3.6	
Media	298	2.0	14.4	21.4	16.6	2.2	2.5	22.5	19.8	19.3	15.5	3.0	3.0	3.0	2.0	
Technology	841	-1.5	17.8	-3.5	26.6	1.0	1.1	28.1	22.7	21.6	21.3	3.9	3.9	3.9	3.5	
Consumer Staples																
Food, Beverage & Tobacco	187	2.3	13.4	11.7	3.8	1.8	2.0	19.6	20.3	19.6	17.7	2.2	2.2	2.2	2.6	
Personal Care, Drug & Grocery	192	2.4	15.2	6.6	1.8	2.4	2.3	16.1	16.7	16.2	16.2	2.3	2.3	2.3	2.6	
Health care	854	0.9	9.9	6.5	-0.3	2.4	2.3	16.0	17.2	16.5	15.0	2.0	2.0	2.0	2.1	
Communication Services	303	-1.4	15.8	27.1	-2.0	3.8	3.9	15.3	16.1	15.5	13.8	1.6	1.6	1.6	1.9	
Utilities	388	2.5	10.8	-58.2	162.3	4.6	4.4	32.3	13.3	13.1	13.4	1.7	1.7	1.7	1.5	

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



1-month revisions to 12-month Forward EPS

³⁻month revisions to 12-month Forward EPS



Data as of April 21st

12-month forward EPS are 69% of 2023 EPS and 31% of 2024 EPS

Data as of April 21st

12-month forward EPS are 69% of 2023 EPS and 31% of 2024 EPS



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