

EYE ON THE WORLD

Costs of returning to work

Thursday May 14

Equity markets being tested by second-wave infection concern and renewed economic gloom. We see markets consolidating, better supported than feared, and economic activity improving. **HOT TOPICS** looks at corporate reopening costs, of social distancing and disrupted supply chains, with Q1 US margins -150bps yoy. Amazon and Volkswagen show how expensive this can be. Discretionary and Industrials sectors among the most exposed.

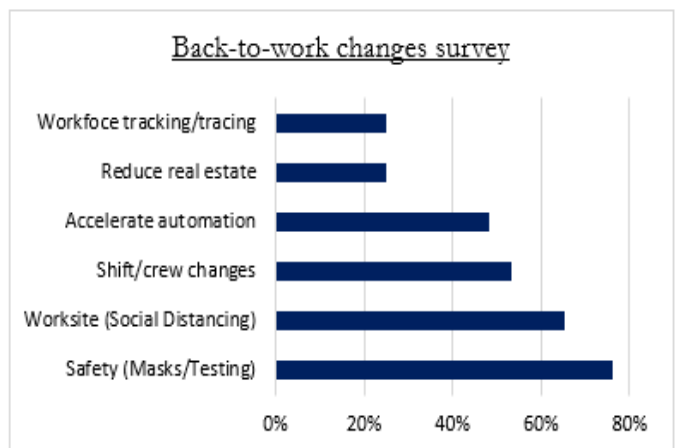
Equity markets fell on second-wave infection concern and extended gloomy economic outlook. S&P500 fell 1.7%, Asia fell overnight, European markets opened down, and US futures weaker.

Powell concerns. Markets not reassured by Fed Chair Powell's caution on the economic outlook and call for more fiscal action, which Congress is delaying on. Powell warned of 'extended period' of weak economic growth, vowed to use the Fed's power as needed, said negative interest rates are 'not something that we are considering', and called for more fiscal spending to offset COVID

Key Markets Performance Table

Index	Level	1D	1W	YTD
S&P500	2870.1	-1.7%	-1.0%	-12.7%
ACWI xUS	39.7	-0.8%	1.0%	-19.7%
DXY USD	99.9	0.3%	0.1%	4.0%
US 10Y YLD	0.69	-3.7%	-8.3%	-65.8%
Brent Spot	25.1	12.2%	40.1%	-59.2%
Gold Spot	1702.1	0.8%	1.8%	13.1%

economic weakness, saying 'the Fed has lending powers, but not spending powers', as Senate Republicans rejected House US\$3bn plan.



Source: PwC COVID-19 CFO pulse survey. 867 CFO's globally, Wk. May 4

Which are you planning to implement once transition back to on-site work?

HIGHLIGHTS FROM REST OF DOC

- **Hot Topics** on [Cost of Return](#) with social distancing and disrupted supply chains, and Q1 US margins -150bps yoy. Amazon/Volkswagen show expense. Discretionary/Industrials at risk.
- **What to watch:** Weekly US jobless claims expected to show further consecutive easing to 2.6m.
- **Country and Sector 'Eye':** We favor US and select EM's, and US Consumer and IT sectors
- **Data pages:** Performance, valuation, earnings, macro forecasts. See [Library](#) for prior dailies

*Sources if not stated are Refinitiv, THR

US & Sector Performance

Index	Level	1D	1W	YTD
S&P500	2870.1	-1.7%	-1.0%	-12.7%
NASDAQ	9112.4	-1.5%	0.1%	-1.2%
Russell 2000	1275.5	-3.3%	-2.4%	-26.1%
US IT	346.5	-1.7%	0.1%	1.3%
US Healthcare	351.1	-1.2%	-0.2%	-2.2%
US Financials	137.7	-3.1%	-4.2%	-33.4%

Virus concerns. WHO reported 81.6k new cases globally yesterday down from week ago 71.5k, and US saw 21.8k new cases, down from 16.2k. WHO however also warned COVID may become and may never go away. Elsewhere, **just another endemic virus** European Union pushing for gradual reopening of internal borders, with tourism c10% GDP, but recommended external borders remain closed. Japan expected to lift state of emergency for 39 of its 47 prefectures, excluding hard-hit Tokyo.

Oil supports. Brent crude prices supported by surprise fall in US crude inventories yesterday, in further evidence of **gradual market rebalancing**. US inventories fell by 745k bbl to 531.5m bbl in week to May 8, the Energy Information Administration (EIA) said. Separately, the Organization of the Petroleum Exporting Countries (OPEC) now expects 2020 global demand to fall 9.1m bpd, or 9.1%. See our recent energy upgrade *Less bearish Energy*.

ESG divestment. Norway's US\$1trn wealth fund announced its divestment from some of world's largest commodity and energy

FX, Fixed Income, Commodities

Index	Level	1D	1W	YTD
DXY USD Index	99.9	0.3%	0.1%	4.0%
EUR/USD	1.08	-0.3%	0.2%	-3.5%
US 10Y YLD	0.69	-3.7%	-8.3%	-65.8%
US 10-2 BOND	0.52	1.0%	1.1%	23.7%
CBOE VIX Index	33.0	6.8%	3%	156%
CRB Index	2275.9	-2.3%	-1.2%	-27.9%

Events to Watch

Indicator	Period	Forecast	Last
CPI YY, Germany	Apr	0.80	0.80
Import Prices MM, US	Apr	3.05	-2.30
Initial Jobless Claims, US	9/5 w/e	2.6 M	3.2 M

companies, as climate and ESG factors continue to go mainstream. Companies named include Glencore, Anglo-American, RWE, Sasol, and AGL Energy, whilst several others were put on a watch list, including BHP, Uniper, and Vistra Energy. **Flows into US sustainable funds more than tripled last year**, marking the fourth year of record flows, according to Morningstar.

Sector View

Energy (-4.0%) and financials (-3.0%) lagged the US market yesterday, while utilities (-0.9%) and staples (-0.9%) outperformed. Large caps (-1.7%) bested Russell 2000 small caps (-3.3%).

Mastercard is seeing **beginnings of consumer activity rebound** in US. The US card usage was only down 6% yoy in week ended May 7 vs a 26% fall in week ended April 14. Cross-border volume is still depressed though, with a 43% yoy drop in May 7 week vs. -55% in April 14 week.

What to Watch

Easing jobless claims. Latest US weekly jobless claims today, the timeliest economic data available, is forecast at 2.6m, down from 3.2m prior week, and vs the 6.9m record the week of March 28.

Deflation pressure. The Labor Department will also report April import prices likely fell 3.0% , after the 2.3% drop in March. Export prices are also expected to have dropped 2.1%, vs the 1.6% fall in March.

HOT TOPICS

COSTS OF RETURNING TO WORK

With lockdowns easing, we focus on two of costs of returning to work: labor social distancing, and disrupted inventory chains. These will hit already under pressure margins. Q1 S&P500 net margins were -150bps yoy, led by Discretionary and Industrials, two of most exposed. Companies with low revenue/FTE are vulnerable, also those with low inventories or long supply chains. Amazon and Volkswagen show how expensive this could be.

COVID costs to recovery

Revenue impact of COVID lockdown to start easing, but extra cost implications are complex, and potentially underestimated in EPS expectations. S&P500 **Q1 net margins fell 150bps** yoy to 9.5%, led by Industrials and Discretionary, two of sectors most exposed.

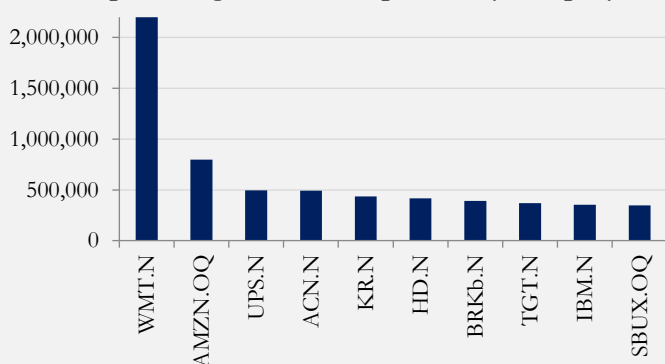
1) The labor costs of social distancing

[PwC CFO Pulse](#) global survey shows 76% changing workplace safety and 65% reconfiguring sites. Amazon is the bell-weather for returning to work costs. It's the 2nd largest employer in S&P500, behind Walmart, with

cameras in warehouses, 5) more staff, 6) in-house COVID testing facility (cost US\$1bn), 7) and prioritizing household essentials and medical goods shipping. Q1 extra costs for estimated at US\$600m, with **Amazon guiding to US\$4bn Q2 cost impact**, potentially driving post first loss since 2014.

Highest risks are for companies with large workforces generating low sales/FTE (below the average line in chart below). For example, Apple generates 3.5x the revenue of Citigroup with just 2/3rds the workforce.

Top 10 largest US companies by Employees

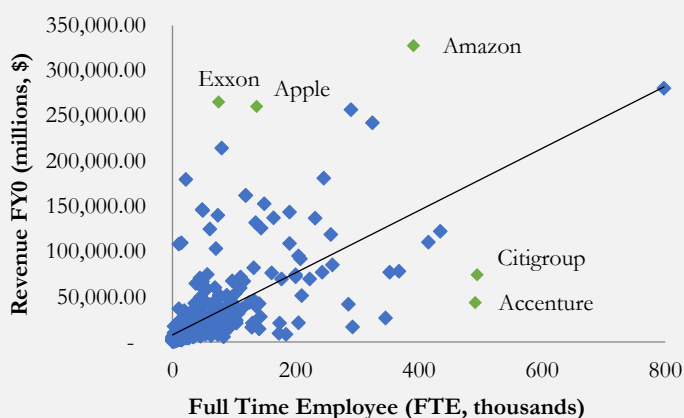


WMT - Walmart, AMAN - Amazon, UPS - United Parcel Service, ACN - Accenture, K BRK - Berkshire Hathaway, TGT - Target, IBM - International Business Machines, SBU

Source: Refinitiv, THR

800k Full Time Employees (FTE's), and has provided most cost detail in 1Q These extra costs include 1) investments in PPE, 2) enhanced facilities cleaning, 3) less efficient paths to allow for social distancing, 4) thermal

S&P 500 Revenues vs Headcount



Source: Refinitiv, THR. *Excl. Walmart

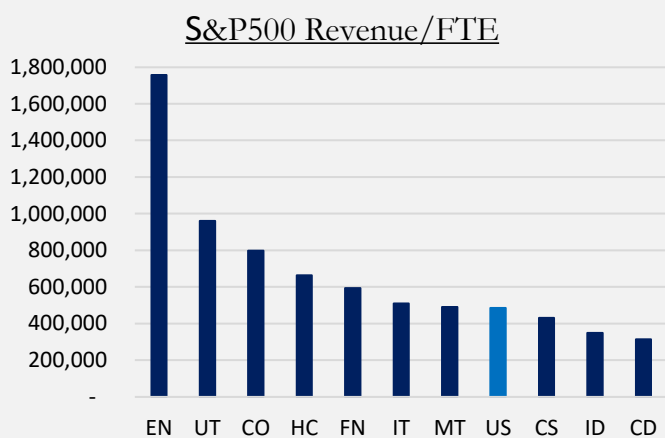
We list 15 stocks with lowest Revenue/FTE efficiency ratio's in the S&P 500. For example, Chipotle is 4th worst in the S&P 500 on this metric, its Revenues/FTE are 31% below the bottom 15 average and yet shares are up 4% YTD versus -23% for the peer group.

Bottom 15 S&P500 companies by Revenue/FTE

Ticker	Name	Segment	Revenue/FTE (\$)	YTD share price (%)
NLSN.N	Nielsen Holdings PLC	Consumer Cyclical	141,261	-33%
ROL.N	Rollins Inc	Industrials	134,796	25%
RCL.N	Royal Caribbean Cruises	Consumer Cyclical	128,378	-72%
GPS.N	Gap Inc	Consumer Cyclical	127,000	-58%
MAR.OQ	Marriott International	Consumer Cyclical	120,529	-45%
APH.N	Amphenol Corp	Technology	111,154	-20%
HBI.N	HanesBrands Inc	Consumer Cyclical	110,586	-32%
MCD.N	McDonald's Corp	Consumer Cyclical	102,812	-9%
APTV.N	Aptiv PLC	Consumer Cyclical	101,823	-31%
ACN.N	Accenture PLC	Technology	87,835	-14%
SBUX.OQ	Starbucks Corp	Consumer Cyclical	76,614	-17%
CMG.N	Chipotle Mexican Grill	Consumer Cyclical	67,306	4%
CTSH.OQ	Cognizant Technology	Technology	57,378	-8%
HLT.N	Hilton Worldwide	Consumer Cyclical	54,636	-35%
DRI.N	Darden Restaurants Inc	Consumer Cyclical	46,123	-37%

Source: Refinitiv, THR

Revenue/FTE ratios are best used for intra-sector comparisons but can also help understand sectors most dependent on people. Sectors with low ratios may be most impacted by COVID recovery costs, and include Discretionary, Industrials and Staples.



Source: Refinitiv, THR

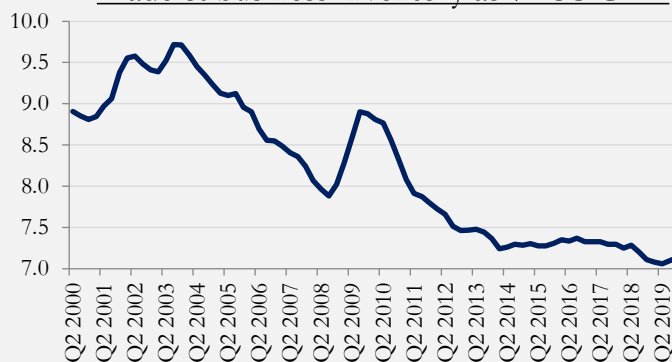
2) Inventory & supply chains costs rising

US production has moved to a 'just-in-time' model, with longer, often offshore, supply chains, and lower inventories. Enabled by technology, falling transport costs and cheaper overseas labor. All are now COVID impacted.

Higher inventory now: US Inventory/GDP is

at a 20-yr low. Communications and Materials have lowest inventory days (<30), whilst Industrials and IT have seen sharpest declines (-7-8%) last 5 years. All are under pressure with COVID supply chain disruptions and rethink.

Trade & business inventory as % US GDP



Source: Refinitiv, THR

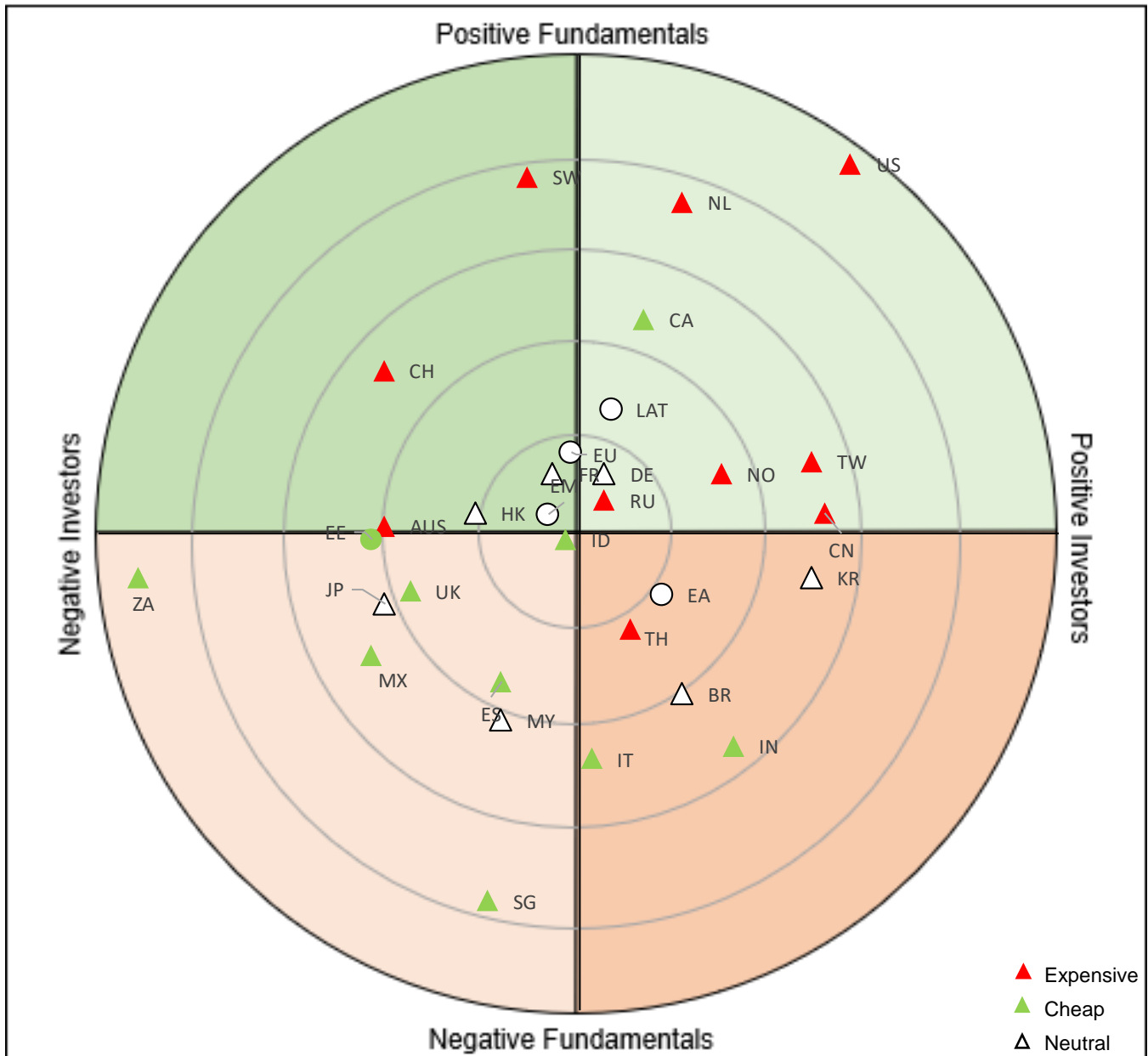
Supply chains operating at sub-capacity:

Best outlined by car manufacturer Volkswagen in 1Q release: global supply chains make thousands of bespoke parts, delivered straight to production lines, within a tight schedule. Suppliers who invested in manufacturing large volumes now operate at fraction of capacity and faced with overheads that can't be flexed overnight. These higher expenses are passed on through supply chain, diluting margins, and negating benefits of cheaper raw materials.

COUNTRY 'EYE' & ALLOCATIONS

Country Allocation Views

Market	Main Index	THR View	Market	Main Index	THR View
US	S&P 500	Overweight	UK	FTSE 100	Underweight
EM	MSCI EM	Neutral	Canada	S&P/TSX	Overweight
Eurozone	EUROSTOXX	Neutral	Switzerland	SMI	Overweight
Japan	TOPIX	Underweight	Australia	S&P/ASX	Neutral



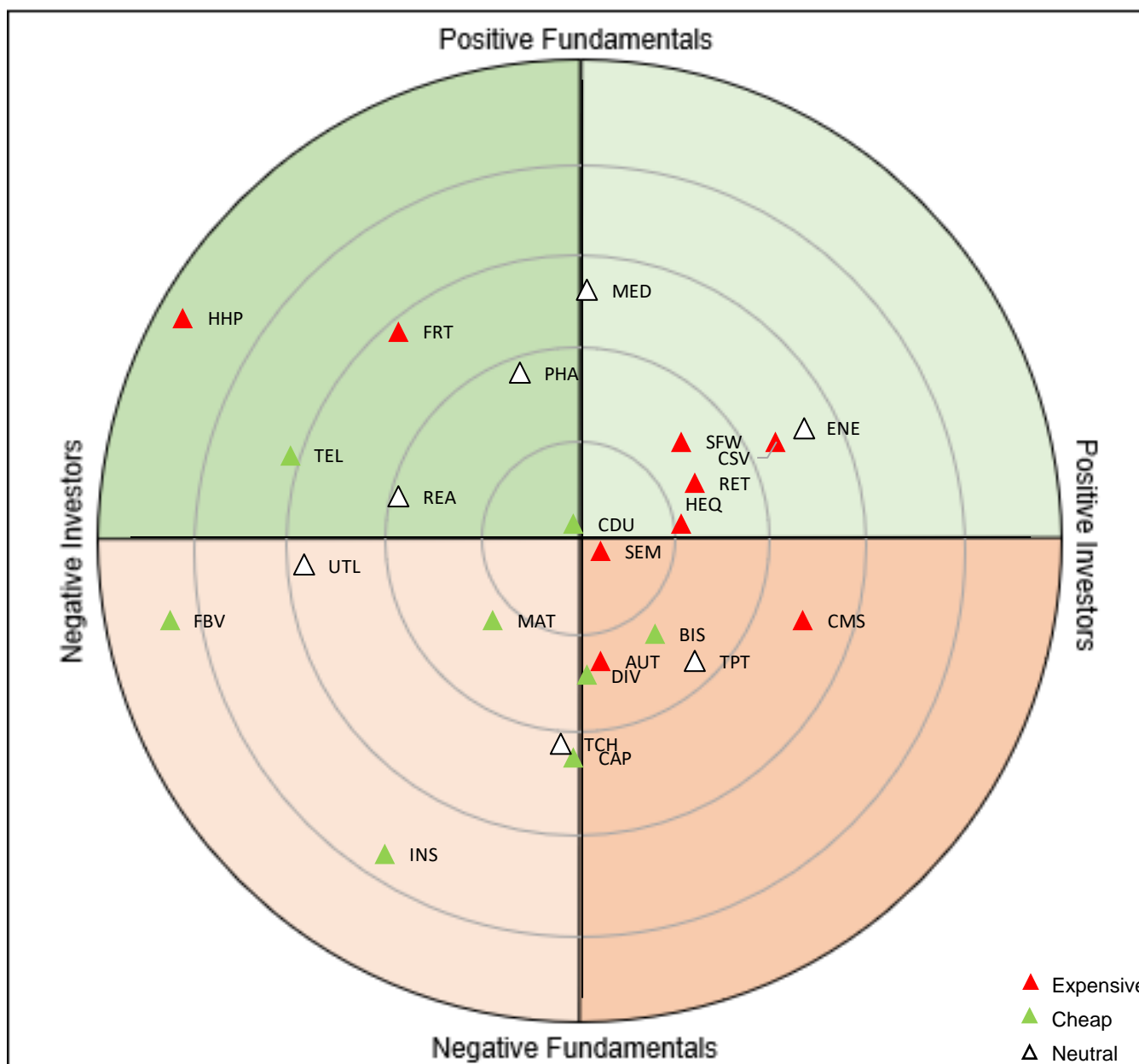
Source: Refinitiv, THR. SEE PAGE 12 FOR FULL METHODOLOGY

AUS=Australia, BR=Brazil, CA=Canada, CN=China, FR=France, DE=Germany, HK=Hong Kong, IN=India, ID=Indonesia, IT=Italy, JP=Japan, KR=Korea, MY=Malaysia, MX=Mexico, NL=Netherlands, NO=Norway, RU=Russia, SG=Singapore, ZA=South Africa, ES=Spain, SE=Sweden, CH=Switzerland, TW=Taiwan, TH=Thailand, UK=United Kingdom, US=United States, EU=Europe, LAT=Latin America, EM=Emerging Markets, EE=Emerging Europe, EA=Emerging Asia.

US SECTOR 'EYE' & ALLOCATION

US Sector Allocation Views






Market	Main ETFs	THR View	Market	Main ETFs	THR View
IT	XLK/VGT	Overweight	Staples	XLP/VDC	Overweight
Healthcare	XLV/VHT	Overweight	Energy	XLE/VDE	Neutral
Financials	XLF/VFH	Underweight	Utilities	XLU/VPU	Overweight
Communications	XLC/VOX	Overweight	Real Estate	XLRE/VNQ	Overweight
Discretionary	XLY/VCR	Neutral	Materials	XLB/VAW	Underweight
Industrials	XLI/VIS	Neutral			








Source: Refinitiv, THR. SEE PAGE 13 FOR FULL METHODOLOGY

AUT=Auto & Auto parts, BIS=Banking & Investment, CAP=Capital Goods, CMS=Commercial & Prof Svcs, CDU=Consumer Durables & Apparel, CSV=Consumer Svcs, DIV=Diversified Financials, ENE=Energy, FRT=Food Staples & Retail, FBV=Food, Bev. & Tobacco, HEQ=Healthcare Equip. & Svcs, HHP=Household & Personal Products, INS=Insurance, MAT=Materials, MED=Media & Entertainment, PHA=Pharma, Bio & Life Svcs, REA=Real Estate, RET=Retailing, SEM=Semiconductors & Equip, SFW=Software and Svcs, TCH=Technology Hardware & Equip, TEL=Telecoms TPT=Transport, UTL=Utilities

'EYE' ALLOCATION BREAKDOWN

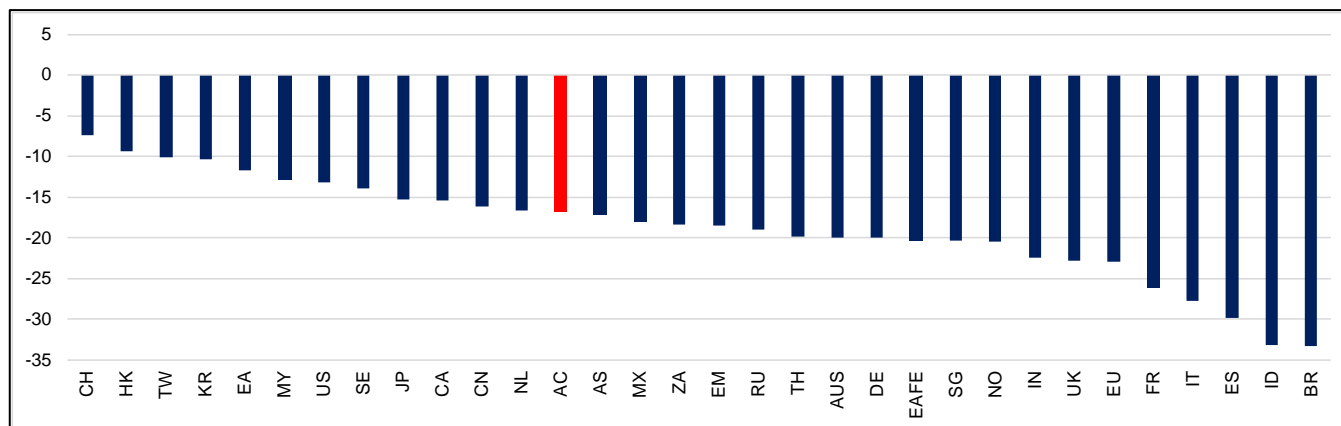
Country/ Region	Rationale	P/E (x)		EPS Gr. (%)	
		2020e	2021e	2020e	2021e
	United States (Overweight): Remains a global equity 'safer haven' despite currently centre of COVID outbreak. Has relatively closed economy and stock market, trend GDP growth into crisis, and seen unprecedented policy response, with unlimited QE and initial 14%/GDP fiscal stimulus. Valuations fundamentally supported by tech, tax, and UST. Earnings 'recession' was easing pre COVID-19. Is in the 'momentum' Eye quadrant, with some of world's strongest relative fundamentals, but also some of the most optimistic investors.	22.8	17.9	-20.1	27.2
	Emerging Markets (Neutral): Economic growth recovery vulnerable even before COVID outbreak. USD strength and plunging oil prices are additional broad headwinds for many. Much of the valuation discount structural. However, lower oil welcomed by many, and have some growth support, with +2% EM EPS growth. Favor China, EM's largest market, on combination of policy flexibility, FIFO on COVID cases, <10x P/E. Underweight rest of EM.	13.3	10.8	-0.2	22.8
	Eurozone (Neutral): To lead global GDP decline, whilst most of valuation discount vs US is just sector composition. Recession has triggered a broader fiscal policy response, whilst ECB help extended, and weak EUR is important support for Europe's globalised corporates. As COVID cases peak and countries look to restart economies is set to be the key beneficiary of cyclical economic and market upturn. Focus domestic cyclicals (Financials)	17.3	13.4	-24.2	28.8
	Japan (Underweight): Has been moving out of the value-trap 'Eye' quadrant, but has significant fundamental headwinds on growth, trade, policy flexibility, and longer-term structural issues (demographics, debt). Valuation is attractive vs history, but EPS outlook poorest globally. Domestic stocks significantly underperformed global-exposed peers.	14.0	11.9	7.9	17.5
	UK (Underweight): One of the poorest positioned of all major countries/regions on the 'Eye'. Relatively in-favour with investors, but with relatively weak fundamentals. Market more expensive than generally perceived (on P/E), and has above average cyclical equity exposure, making it vulnerable to a broader economic downturn (or lower oil prices). Weak GBP has been a key support to large caps, with c60% index revenues ex UK.	15.5	12.0	-30.9	29.4

US Sector	Rationale	P/E (x)		EPS Gr. (%)	
		2020e	2021e	2020e	2021e
	Information Technology (Overweight): Software and Semiconductors in attractive top-right 'momentum' quadrant of the Eye. Are quality growth and attractive at this stage of cycle, reflected in defensiveness vs previous corrections. Valuations average but supported by net-cash and high RoE, giving buyback and M&A flexibility. Tech Hardware (Neutral) less well positioned, with weaker fundamentals, but beneficiary of easing growth concerns.	24.4	20.9	-0.4	16.8
	Healthcare (Overweight): Both Healthcare Equipment and Pharma are in the top-right 'momentum' quadrant, well liked by the market (with multiple rerating and sell-side conviction), but with good fundamental momentum as quality growth attractive at this stage, with defensive cash flows, less EPS cyclicality and a domestic revenue focus. US election risks easing as Biden rises in primary polls and seeing Federal support to combat COVID.	17.9	15.3	-0.4	16.6
	Financials (Underweight): All three sector components (Banks, Diversified, Insurance) in the negative bottom quadrants of the 'Eye'. Modestly out of favour with market, with strong fund outflows and valuation derating, whilst fundamentals remain under pressure from ever lower US bond yields, flat yield curve, and GDP growth collapse, despite stronger capital buffers. Insurance offers the best value, though none of the sector is optically expensive.	15.0	10.8	-36.5	38.7
	Communications (Overweight): Telecoms (AT&T largest sector weight) in most-attractive top-left quadrant, and Media (Facebook, Alphabet largest) in attractive top-right. Both seeing above average fundamentals, with Media led by EPS revisions, and Telecoms by price momentum. Telecoms has average valuation vs history, has derated, and sell-side sentiment especially poor. Media better liked by the market..	23.0	18.7	-13.2	22.6
	Consumer Discretionary (Neutral): Consumer Services and Retail (Amazon largest stock) best placed of Discretionary sectors, both in top-right quadrant. Services defensive to cycle and seeing positive EPS revisions. Autos poorest placed, in bottom-left quadrant. Whilst the least-in-favour, has some of worst fundamentals and more expensive than perceived. Leisure discretionary industries very COVID exposed.	46.1	25.3	-45.4	82.0

Source: Refinitiv, THR

REGION/COUNTRY PERFORMANCE & VALUATION

Total Return YTD

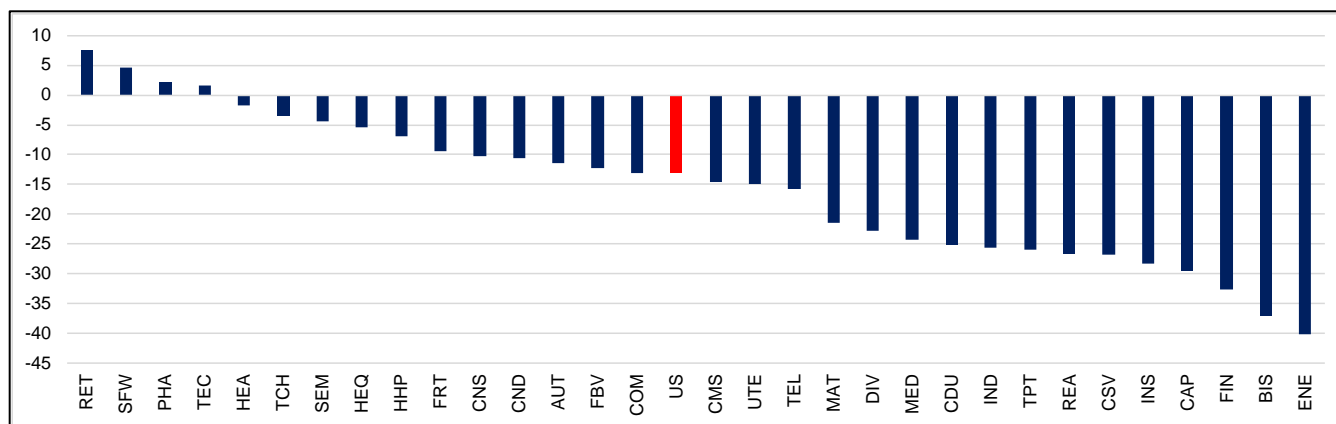


Index	Abbreviation	Price Performance				PE			EPS Growth	
		1D (%)	1W (%)	3M(%)	YTD (%)	2019A	2020E	2021E	2020E	2021E
World	AC	-1.5	-3.3	-18.6	-16.7	15.9	19.0	15.1	-16.2%	25.5%
EAFE	EAFE	-1.5	-1.5	-20.0	-20.3	13.7	16.2	13.1	-15.9%	23.8%
Europe	EU	-2.3	-2.4	-22.7	-22.9	13.1	17.3	13.4	-24.2%	28.8%
Asia	AS	0.3	-1.2	-16.2	-17.1	14.6	14.0	11.7	4.4%	20.1%
Emerging Global Markets	EM	0.0	-0.3	-17.8	-18.4	13.3	13.3	10.8	-0.2%	22.8%
Emerging Asia	EA	0.5	0.3	-12.2	-11.7	14.5	13.8	11.4	5.0%	21.9%
Australia	AUS	0.3	-0.6	-24.6	-19.9	13.7	16.4	16.9	-16.0%	-3.1%
Brazil	BR	-0.3	-2.3	-33.9	-33.3	10.7	14.3	10.2	-25.1%	41.1%
Canada	CA	-2.6	-2.4	-18.9	-15.4	13.1	18.0	13.8	-27.0%	30.7%
China	CN	-0.1	-1.4	-12.2	-16.1	13.2	12.9	10.9	2.7%	18.1%
France	FR	-2.7	-3.9	-28.1	-26.2	12.8	17.7	13.1	-27.7%	34.6%
Germany	DE	-2.2	-2.7	-22.5	-20.0	13.5	17.3	12.1	-22.1%	42.9%
Hong Kong	HK	0.1	1.0	-9.1	-9.4	13.9	15.9	12.9	-12.8%	23.4%
India	IN	1.9	0.6	-24.0	-22.4	19.2	17.8	14.1	7.8%	26.1%
Indonesia	ID	-1.0	-4.0	-28.8	-33.2	12.2	12.8	11.2	-4.0%	13.4%
Italy	IT	-1.8	-0.7	-31.3	-27.8	9.1	13.6	10.6	-33.3%	28.1%
Japan	JP	-0.2	1.5	-14.9	-15.3	15.1	14.0	11.9	7.9%	17.5%
Korea	KR	0.9	0.1	-13.0	-10.4	15.4	12.6	8.9	22.6%	40.5%
Malaysia	MY	1.2	1.4	-10.4	-12.8	15.6	17.0	14.9	-8.4%	14.3%
Mexico	MX	-2.8	-1.1	-21.1	-17.9	13.9	14.4	11.7	-3.7%	23.8%
Netherlands	NL	-1.9	-2.4	-20.7	-16.6	17.4	19.4	16.2	-10.1%	19.6%
Norway	NO	-1.5	-1.3	-19.7	-20.5	12.2	19.5	13.0	-37.6%	50.6%
Russia	RU	-1.6	-1.3	-18.8	-19.0	5.3	7.5	6.0	-29.8%	25.2%
Singapore	SG	-0.5	-1.7	-20.6	-20.4	11.0	12.9	11.4	-15.0%	13.3%
South Africa	ZA	-0.2	-1.5	-17.8	-18.3	13.0	11.4	9.4	14.3%	21.2%
Spain	ES	-1.9	-2.1	-32.5	-29.8	9.8	13.2	10.9	-25.9%	21.0%
Sweden	SE	-2.7	-1.7	-19.3	-14.0	13.6	19.3	14.7	-29.5%	31.7%
Switzerland	CH	-1.0	-0.4	-11.0	-7.3	17.7	19.1	16.6	-7.3%	15.2%
Taiwan	TW	0.6	-0.4	-8.7	-10.0	16.8	16.1	14.0	4.1%	14.6%
Thailand	TH	-0.5	1.5	-17.0	-19.8	14.8	17.7	14.6	-16.4%	21.1%
United Kingdom	UK	-1.6	-2.0	-22.0	-22.8	10.7	15.5	12.0	-30.9%	29.4%
United States	US	-1.9	-1.0	-17.1	-13.1	18.2	22.8	17.9	-20.1%	27.2%

Source: MSCI, Refinitiv, THR

US SECTOR PERFORMANCE & VALUATION

Total Return YTD

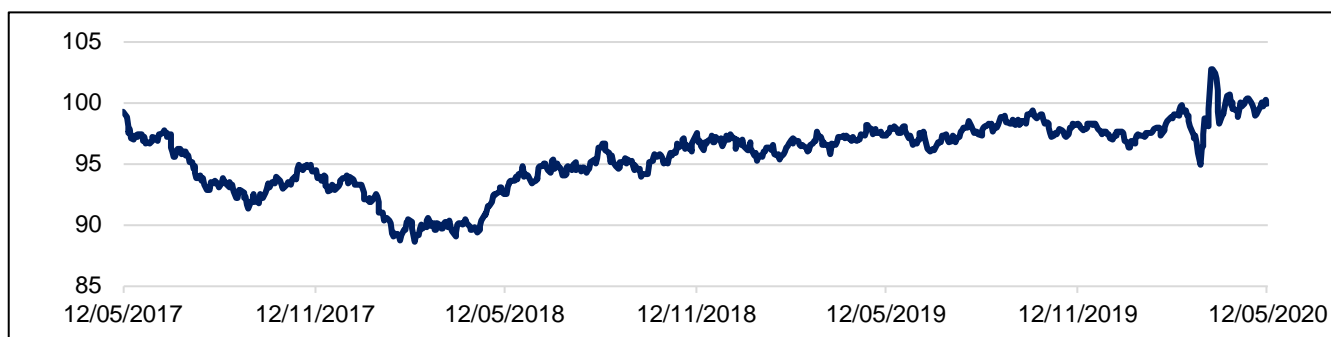


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United States	US	-1.9	-1.0	-17.1	-13.1	18.2	22.8	17.9	-20.1%	27.2%
Communications	COM	-3.3	0.5	-17.4	-13.1	19.9	23.0	18.7	-13.2%	22.6%
Media & Entertainment	MED	-1.9	-0.4	-25.3	-24.3	25.6	30.7	22.7	-16.5%	34.9%
Telecommunication Svcs	TEL	-1.9	-1.4	-15.4	-15.7	9.9	10.7	10.4	-7.3%	3.2%
Consumer Discretionary	CND	-1.6	-0.6	-15.6	-10.6	25.2	46.1	25.3	-45.4%	82.0%
Autos & Components	AUT	-3.9	-1.5	-20.7	-11.4	12.9	NA	16.4	-111.8%	767.2%
Consumer Durables & App	CDU	-3.5	-3.4	-26.9	-25.1	16.2	21.1	16.3	-23.2%	29.1%
Consumer Svcs	CSV	-2.3	-1.0	-28.0	-26.8	18.0	79.8	23.9	-77.5%	233.9%
Retailing	RET	-0.5	0.3	-1.8	7.5	34.1	43.3	29.7	-21.4%	45.9%
Consumer Staples	CNS	-1.1	0.0	-12.1	-10.3	19.5	19.8	18.3	-1.9%	8.2%
Food & Staples Retailing	FRT	-1.4	-0.9	-8.0	-9.4	21.2	21.4	20.2	-1.3%	6.2%
Food, Bev & Tobacco	FBV	-1.0	0.0	-14.8	-12.3	17.0	17.9	16.3	-4.9%	9.8%
Household Products	HHP	-0.9	0.4	-8.8	-6.9	24.6	22.7	21.6	8.3%	4.9%
Energy	ENE	-4.4	-1.4	-34.3	-40.1	13.5	NA	36.5	-108.9%	514.6%
Financials	FIN	-3.1	-4.1	-34.0	-32.6	9.5	15.0	10.8	-36.5%	38.7%
Banks	BIS	-3.6	-5.3	-37.0	-37.2	7.4	16.6	9.6	-55.6%	73.2%
Diversified Financials	DIV	-0.7	-1.5	-26.4	-22.9	12.6	17.2	13.4	-26.9%	28.3%
Insurance	INS	-2.8	-1.2	-30.8	-28.2	9.6	10.2	9.1	-6.5%	12.8%
Health Care	HEA	-1.2	-0.1	-4.1	-1.7	17.8	17.9	15.3	-0.4%	16.6%
Health Care Equipment	HEQ	-1.9	-0.9	-8.1	-5.5	28.0	31.7	24.3	-11.8%	30.6%
Pharmaceuticals	PHA	-0.6	0.7	0.0	2.2	15.4	15.2	13.3	0.7%	14.7%
Industrials	IND	-2.6	-3.0	-28.7	-25.7	15.6	22.7	16.5	-31.2%	37.7%
Capital Goods	CAP	-2.5	-3.0	-32.3	-29.5	14.3	20.7	15.7	-31.1%	31.9%
Commercial & Prof Svcs	CMS	-2.5	-2.6	-19.9	-14.7	25.7	29.3	25.1	-12.3%	16.7%
Transportation	TPT	-2.2	-1.7	-27.5	-26.0	16.6	27.7	15.7	-39.9%	76.3%
Information Technology	TEC	-1.7	0.2	-8.3	1.6	24.3	24.4	20.9	-0.4%	16.8%
Semiconductors	SEM	-1.8	-1.0	-11.4	-4.5	17.3	18.5	15.5	-6.5%	19.0%
Software & Svcs	SFW	-1.7	-0.2	-6.8	4.6	31.4	30.1	26.2	4.4%	14.7%
Technology Hardware	TCH	-1.8	0.8	-11.2	-3.5	20.0	20.5	17.4	-2.3%	18.1%
Materials	MAT	-2.6	-1.2	-19.8	-21.5	16.8	20.8	16.3	-19.2%	27.5%
Real Estate	REA	-2.5	-4.7	-30.5	-26.6	30.2	40.9	35.6	-26.2%	14.9%
Utilities	UTE	-1.0	0.1	-20.3	-14.9	17.3	16.9	16.0	2.4%	5.9%

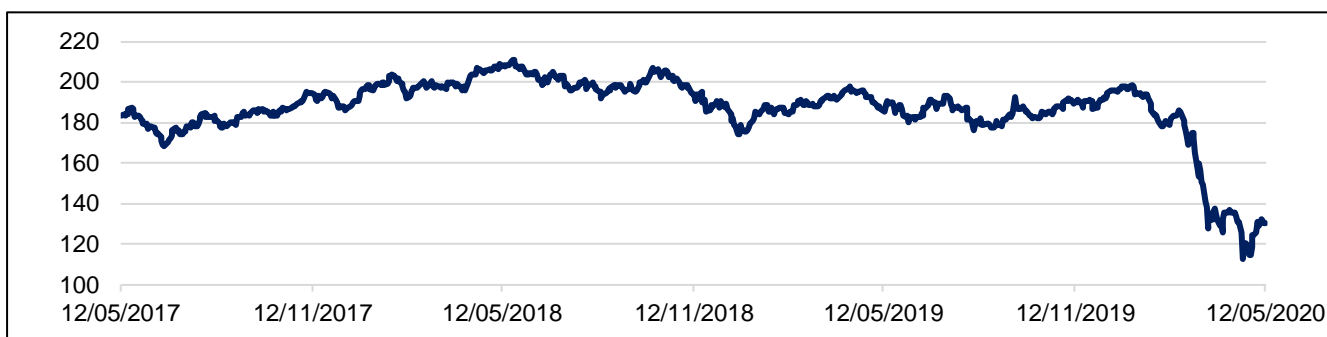
Source: MSCI, Refinitiv, THR

GLOBAL FX, BONDS AND COMMODITIES

DXY USD Index - 3 years



CRB Major Commodity Index* - 3 Years

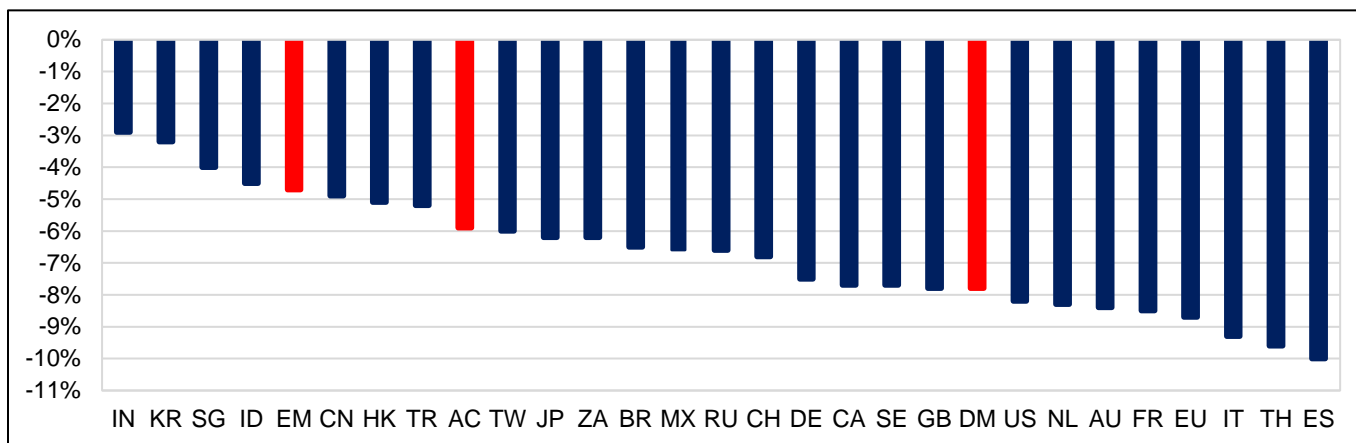


Name	Currency	Close Price	1 Day	1 Week	1 Month	3 Months	1 Year	MTD	QTD	YTD
Commodities										
CRB Commodity Index	USD	2224.58	-0.6%	-3.4%	-2.0%	-23.5%	-22.6%	-5.4%	6.4%	-28.3%
Gold Spot	USD	1715.29	0.0%	-0.1%	-0.7%	8.3%	32.3%	2.1%	9.2%	13.1%
Copper Spot	USD	2.35	0.2%	-1.3%	0.3%	-9.6%	-13.9%	0.0%	5.1%	-15.7%
Brent Crude Spot	USD	28.17	0.0%	28.2%	49.6%	-51.4%	-61.7%	90.0%	81.6%	-59.2%
CRB Agricultural Index	USD	4223.05	-0.7%	-2.9%	-4.1%	-22.5%	-21.0%	-5.9%	0.8%	-26.9%
Currencies										
DXY USD Index	USD	100.24	0.1%	0.4%	1.4%	1.2%	2.8%	1.3%	1.3%	4.1%
EUR/USD	USD	1.08	-0.1%	-0.2%	-1.6%	-0.2%	-3.5%	-1.4%	-2.0%	-3.6%
USD/JPY	JPY	107.02	-0.2%	0.5%	-0.3%	-2.6%	-2.5%	-0.3%	-0.6%	-1.6%
GBP/USD	USD	1.22	-0.2%	-1.3%	-3.4%	-6.5%	-5.5%	-3.1%	-1.8%	-8.0%
USD/CNY	CNY	7.09	0.1%	0.2%	0.7%	1.6%	3.2%	0.5%	0.2%	1.9%
Bond Yields										
DE 10Y BUND	EUR	-0.53	3.0%	-1.6%	43.0%	35.5%	663.4%	-7.5%	18.6%	189.8%
GB 10Y GILT	GBP	0.21	-2.4%	-14.0%	-40.1%	-67.7%	-81.6%	-12.1%	-42.8%	-75.4%
JP 10Y JGB	JPY	0.00	100.0%		-118.2%	-93.1%	-95.9%	-94.7%	-111.8%	-90.9%
US 10Y BILL	USD	0.65	-3.7%	-0.7%	-16.5%	-60.5%	-74.1%	0.3%	-10.4%	-67.2%
US 30Y BOND	USD	1.35	-1.8%	-0.3%	-6.7%	-35.6%	-53.9%	3.6%	-2.8%	-44.6%
US 10-2 BOND	-	0.49	-3.7%	-25.5%	12.0%	28.2%	18.6%	14.6%	19.0%	22.5%
Volatility										
CBOE VIX Index	USD	35.28	0.00	0.12	-0.07	1.58	0.95	0.03	-0.34	1.56

Source: Refinitiv, THR

MACRO INDICATORS: HISTORIC AND FORECASTS

Forecast Real GDP Growth 'Delta' (2020E % Growth – 2019)



Codes	Nominal GDP 2019 US\$trn	Real GDP (%)			Inflation (%)			Current Account (% GDP)			Gov Debt (% GDP)		
		2018	2019	2020E	2018	2019	2020E	2018	2019	2020E	2019	2020E	
Americas													
US	21.4	2.9	2.3	-5.9	2.4	1.8	0.6	-2.4	-2.5	-2.6	106	110	
Canada	1.7	1.9	1.5	-6.2	2.2	2.0	0.6	-2.6	-1.9	-3.7	88	83	
Brazil	1.9	1.1	1.2	-5.3	3.7	3.8	3.6	-0.8	-1.2	-1.8	92	95	
Mexico	1.3	2.0	0.0	-6.6	4.9	3.8	2.7	-1.8	-1.2	-0.3	54	55	
Europe													
Eurozone	18.3	2.2	1.2	-7.5	1.9	1.5	2.0	2.0	2.0	1.6	80	78	
Germany	3.9	1.5	0.5	-7.0	1.9	1.5	0.3	7.3	7.0	6.6	59	53	
UK	2.7	1.4	1.3	-6.5	2.5	1.8	1.2	-3.9	-3.5	-4.4	86	85	
France	2.7	1.7	1.3	-7.2	2.1	1.2	0.3	-0.6	-0.5	10.4	99	99	
Italy	2.0	0.9	0.2	-9.1	1.2	0.7	0.2	2.5	2.9	3.2	133	134	
Spain	1.4	2.6	2.0	-8.0	1.7	0.7	-0.3	0.9	0.9	2.2	96	94	
Netherlands	0.9	2.6	1.8	-6.5	1.6	2.5	0.5	10.9	9.8	9.0	49	46	
Switzerland	0.7	2.8	0.8	-6.0	0.9	0.6	-0.4	10.2	9.6	7.2	39	36	
Sweden	0.5	2.3	0.9	-6.8	2.0	1.7	0.5	1.7	2.9	2.2	37	34	
Russia	1.6	2.3	1.1	-5.5	2.9	4.7	3.1	6.8	5.7	0.7	17	18	
Turkey	0.7	2.8	0.2	-5.0	16.3	15.7	12.0	-3.5	-0.6	0.4	30	32	
Asia													
China	14.1	6.6	6.1	1.2	2.1	2.3	3.0	0.4	1.0	0.5	56	65	
Hong Kong	0.4	3.0	0.3	-4.8	2.4	3.0	2.0	4.3	5.5	6.0	0	0	
Japan	5.2	0.8	1.0	-5.2	1.0	1.0	0.2	3.5	3.3	1.7	238	238	
India	2.9	6.8	4.8	1.9	3.4	3.4	3.3	-2.1	-2.0	-0.6	69	68	
Korea	1.6	2.7	2.0	-1.2	1.5	0.5	0.3	4.4	3.2	4.9	40	46	
Australia	1.4	2.7	1.7	-6.7	2.0	1.6	1.4	-2.1	-0.3	-0.6	42	41	
Indonesia	1.1	5.2	5.0	0.5	3.2	3.2	2.9	-3.0	-2.9	-3.2	30	30	
Taiwan	0.6	2.6	2.0	-4.0	1.5	0.8	0.5	12.2	11.4	8.2	34	31	
Thailand	0.5	4.1	2.9	-6.7	1.1	0.9	-1.1	6.4	6.0	5.2	42	44	
Singapore	0.4	3.1	0.5	-3.5	0.4	0.7	-0.2	17.9	16.5	14.8	114	115	
Other													
South Africa	0.4	0.8	0.4	-5.8	4.6	4.4	2.4	-3.5	-3.1	0.2	60	68	
World													
Developed Markets	DM	51.7	2.3	1.7	-6.1	2.0	1.5	0.5	0.7	0.6	0.1	103	104
Emerging Markets	EM	34.9	4.5	3.7	-1.0	4.8	4.7	4.6	0.0	0.0	-0.9	53	58
World	AC	86.6	3.6	2.9	-3.0	3.6	3.4	3.0					

Source: IMF, THR

GLOBAL MACRO & FORECAST TABLES

Provides historic data, and consensus forecasts, for key macro-economic indicators in the major economies of US, Germany, and China. Forecasts highlighted in green and red indicate whether the latest change in the consensus forecast was an increase or decrease.

United States	Historic										Forecasts	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E
Production												
Real GDP, Growth	2.6	1.6	2.2	1.8	2.5	2.9	1.6	2.4	2.9	2.3	-4.1	3.8
Industrial Production, Growth	5.5	3.1	3.0	2.0	3.1	-1.0	-1.9	2.3	3.9	0.8	-9.1	2.6
Labour Markets and Income												
Unemployment Rate	9.6	8.9	8.1	7.4	6.2	5.3	4.9	4.3	3.9	3.7	9.5	7.0
Average Earnings, Growth	1.9	2.0	1.9	2.1	2.1	2.2	2.6	2.6	3.0	3.3	2.6	2.5
Prices												
CPI	1.6	3.2	2.1	1.5	1.6	0.1	1.3	2.1	2.4	1.8	1.0	1.8
PCE, excluding energy	1.4	1.6	1.9	1.5	1.6	1.2	1.6	1.6	1.9	1.6	1.4	1.5
Government												
Budget Balance, Growth	-0.2	-0.2	0.0	-0.9	-0.2	0.0	0.2	0.1	0.2	0.1	0.6	-0.4
Current Account, % of GDP	-2.9	-2.9	-2.6	-2.1	-2.1	-2.2	-2.3	-2.3	-2.4	-2.5	-2.2	-2.4

Germany	Historic										Forecasts	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E
Production												
Real GDP, Growth	4.2	3.9	0.4	0.4	2.2	1.7	2.2	2.5	1.5	0.6	-5.3	4.4
Industrial Production, Growth	11.6	8.8	-0.6	0.3	1.9	0.4	1.4	3.6	1.2	-4.5	-7.0	5.9
Labour Markets and Income												
Unemployment Rate	7.6	7.1	6.8	6.9	6.7	6.4	6.1	5.7	5.2	5.0	5.4	5.2
Prices												
CPI	1.1	2.1	2.0	1.5	1.0	0.2	0.4	1.7	2.0	1.4	0.8	1.4
Government												
Current Account, % of GDP	5.7	6.2	7.1	6.6	7.2	8.6	8.5	8.1	7.3	7.0	6.5	6.4

China	Historic										Forecasts	
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E
Production												
Real GDP, Growth	9.9	8.8	8.1	7.7	7.3	6.9	6.9	6.8	6.5	6.0	1.8	8.2
Prices												
CPI	3.5	5.5	2.6	2.7	2.0	1.4	2.0	1.5	2.1	2.8	3.3	2.3
Government												
Current Account, % of GDP	3.9	1.8	2.5	1.5	2.2	2.7	1.8	1.6	0.4	1.0	0.5	0.8

Source: Refinitiv, THR

TOWER HUDSON ‘EYE’: HOW IT WORKS

The ‘eye’ methodology helps identify relative buy and sell signals for countries, regions and US sectors, by comparing market sentiment vs fundamentals, with a valuation overlay. The more out-of-favor, with better relative fundamentals the better.

We compare: 1) **sentiment**: to understand whether markets are optimistic or pessimistic, and 2) **fundamentals**: focusing on earnings and business cycle fundamentals and price momentum. The output is also color-coded with a valuation overlay. This combines to give a relative allocation view

How to read the quadrants

Top left – Pessimistic sentiment/Positive fundamentals: The best place to be. Market expectations are low, but fundamentals are relatively good. As sentiment catches up to the better fundamentals, assets may outperform.

Top right – Optimistic sentiment/Positive fundamentals: The 2nd best place to be. The fundamentals are good, but so is market sentiment. This is a momentum quadrant that may deliver outperformance, but investors must be sensitive to relative fundamentals easing.

Bottom right – Optimistic sentiment/Negative fundamentals: Worst place to be. Fundamentals are poor but sentiment still positive. As sentiment catches up, assets may underperform.

Bottom left – Negative sentiment/Negative fundamentals: The second worst place to be. Can be a ‘value trap’. Fundamentals are weak but sentiment is equally subdued. Investors need to be sensitive to any improvement in relative fundamentals, that can lead to a move up and rerating.

Sentiment	Indicator
Buy-side	Net ETF and Mutual Fund Flows vs average
Sell-side	Sell-side recommendation consensus score (RCS)
Re-rating/De-rating	Trailing P/E ratio vs average

Fundamentals	
Earnings revisions	Rolling earnings revisions ratio
Price momentum	Change in trailing P/E ratio
Business cycle	Correlation to this business cycle stage (rising, neutral, falling)

Overlay	
Valuation	Average of P/E, P/BV, and P/CF vs history

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