

EYE ON THE WORLD

Side effects of passive growth

Thursday, July 16

Markets boosted by initial better-than-feared Q2 results and vaccine optimism. US-China tension overshadows China's Q2 return to GDP growth today. **HOT TOPICS** looks at dramatic growth of US\$6.5trn passive investing market and power of big-3 index providers. Boosted liquidity, diversification, and cut costs, but increased correlations, index inclusion speculation (Tesla +50% S&P inclusion price speculation), concentrated fund markets, and impacted governance.

Markets re-opening optimism boosted by Moderna vaccine progress and **outlook for Astra Zeneca trial results**. Goldman Sachs Q2 much better than expected, and key FAANGM Netflix due today with EPSe +200%. Trump re-election campaign replaced manager as election [outlook](#) worsened. Asia fell, led by China, on further US-China tensions, whilst Europe and US futures fell after strong gains. We believe markets well-supported.

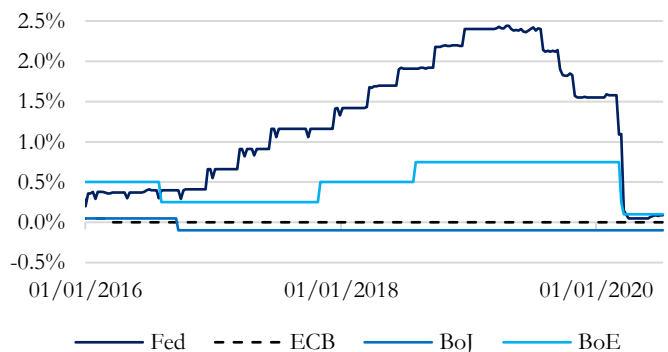
China two-speed growth return. Is first major

Key Markets Performance Table

Index	Level	1D	1W	YTD
S&P500	3197.5	0.9%	1.8%	-0.1%
ACWI xUS	45.1	1.0%	1.2%	-7.2%
DXY USD	96.1	-0.2%	-0.4%	-0.3%
US 10Y YLD	0.63	2.6%	-3.5%	-67.0%
Brent Spot	44.5	1.3%	0.7%	-35.5%
Gold Spot	1811.3	0.2%	0.1%	19.4%

economy to return to growth after recession. Q2 GDP +3.2% yoy, above expectations, and vs Q1 -6.8% yoy, with qoq +11.5%. **Recovery is unbalanced**, and opposite of US, led by industrial output, +4.8% in June y/y and third

Major Central Bank Policy Rates



HIGHLIGHTS FROM REST OF DOC

- **Hot Topics** on [Passive Growth](#). ETF AUM up by US\$6.5trn last 10-yr, helping liquidity, diversification and costs, but increasing correlations, inclusion volatility, and fund concentration.
- **What to watch**: ECB meeting (no change), US jobless claims (1.25m), Netflix Q2 (+200% yoy)
- **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	3197.5	0.9%	1.8%	-0.1%
NASDAQ	10701.7	0.6%	0.6%	17.6%
Russell 2000	1478.3	3.5%	3.6%	-11.4%
US IT	399.3	0.4%	-0.2%	19.2%
US Healthcare	366.9	1.6%	2.7%	5.1%
US Financials	153.0	2.1%	3.6%	-22.0%

month of growth, whilst retail sales fell for fifth month, -1.8% yoy in June, with consumer savings high but confidence remaining low.

US-China tension. GDP enthusiasm hurt by further ratcheting of US tensions. Sec. State Pompeo to impose visa restrictions on Chinese firms like Huawei accused of facilitating human-rights violations. Administration also expecting action in 'coming weeks' vs TikTok and WeChat, on national security grounds.

Vaccine momentum. Moderna vaccine trial results boosted markets yesterday, and Oxford/AstraZeneca early-stage results due on Monday, with [press reporting](#) positive 'double defence'. US infectious diseases head Fauci predicted will meet goal of vaccine by year end. 16 vaccines in human trials globally, and c192 in development. Progress clear market support.

Oil balancing act. OPEC+ agreed to scale back output cuts as expected, to 7.7mbpd for Aug-Dec vs 9.7mbpd, or 10% of global supply, cuts in place since May. OPEC+ is calibrating production response to rebalancing market and

FX, Fixed Income, Commodities

Index	Level	1D	1W	YTD
DXY USD Index	96.1	-0.2%	-0.4%	-0.3%
EUR/USD	1.14	0.1%	0.7%	1.8%
US 10Y YLD	0.63	2.6%	-3.5%	-67.0%
US 10-2 BOND	0.48	2.6%	-3.5%	23.1%
CBOE VIX Index	27.8	-6.0%	-1%	101%
CRB Index	2566.7	1.6%	4.1%	-16.8%

Events to Watch

Indicator	Period	Forecast	Last
Industrial Output YY, China	June	4.72	4.40
Unemployment Rate, UK	May	4.25	3.90
Jobless Claims, US	w/e 11/06	1.25M	1.31M
Philly Fed Business Index, US	July	18.58	27.50

looking to keep Brent above US\$40/bbl. Energy Information Administration (EIA) reported US inventories fell greater than expected 7.5mbbls last week. See June 24th *Value down but not out.*

Sector View

US led up yesterday by cyclicals, with industrials (+2.5%) and energy (+2.0%), whilst defensives utilities (-0.4%) and staples (+0.0%) lagged. Russell 2000 soared 3.5%. See July 14 *The key small cap difference.* Apple won US\$15bn EU tax-battle; TSMC, world's largest contract chip maker, saw Q2 profit +81% on demand for faster chips. In worse news, American Airlines sent 25k furlough notices as demand sags, and California Resources, state' no1 driller, filed bankruptcy.

What to Watch

Yesterday US June Manufacturing output rose better-than-expected 7.2% mom, as businesses reopened, and auto sector surged. Today, **ECB** to keep policy on hold, with -0.5% deposit rate, pausing to assess depth of contraction. US June **retail sales** forecast +5% mom after May +18% surge. US weekly **new jobless claims** forecast at 1.25m vs 1.31m last week. More representative continuing claims f'cast 18.6m vs 19.1m last week.

Q2 today: Netflix (Q2e EPS US\$1.81, +200% yoy), focus on subscriber outlook. Bank of America (\$0.27, -64%) on loan losses. Johnson & Johnson (\$1.49, -42%) on the vaccine outlook.

HOT TOPIC

SIDE-EFFECTS OF PASSIVE GROWTH

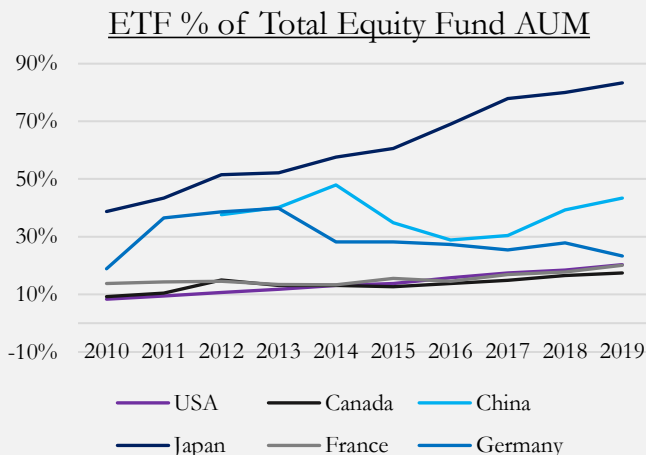
Tesla's recent 50% price surge again focuses attention on passive fund growth and power of index providers. Global passive industry quadrupled in a decade, to US\$6.4trn and 8,000 funds, 20% of market and most of growth in US, and higher in markets like Japan. This has boosted stock trading liquidity and cut trading costs, but increased correlations, the index inclusion price effect, concentrated the overall fund market, and impacted governance.

Passive popularity growing

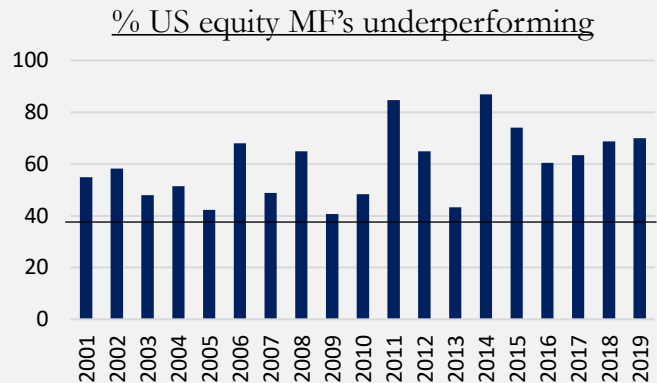
Passive investment management, tracking price index returns e.g. an established benchmark, is a large and growing proportion of total fund assets (AUM). They are diversified, liquid, and low-fee (avg. ETF 20bps fee vs active avg. 75bps). Growth accelerated by acceptance of 'efficient market hypothesis' and US large cap active manager underperformance in 13 of last 19 years (see chart), with those consistently outperforming being under 5% of total funds. Small/mid cap active track-record is better. See July 14th *The key small cap differences*. The passive boom has also boosted the index providers.

ETF size quadrupled in last decade

ETF assets globally, across all asset classes, have risen to est. US\$6.4trn (end 2019), over 4x the US\$1.5trn of a decade earlier, and with the number of products rising from 2,500 to near 8,000 today, across 440 providers.



Source: Refinitiv, THR



Source: S&P Global, THR. *S&P Composite 1500 Index

Japan has led geographic growth with government fund GPIF boosting equity allocations and Bank of Japan making ETF purchases, and now holding c60% of all Japanese equity ETFs. This expansion of 'official' ETF usage is noteworthy given US Fed's recent foray into purchasing bond ETFs.

What it means

The implications of passive expansion and index provider concentration is wide-ranging and hotly debated. We highlight five here:

1. Greater correlation. Less diversification

Passive managers buy and sell the entire basket of stocks in benchmark indices in response to inflows and outflows. If the passive funds represent a high enough proportion of trading volume, this may induce higher co-movement of prices within indices. The risk is the benefits of holding a diversified portfolio are therefore reduced.

[This](#) BIS paper used a sample of 462 stocks joining and leaving the S&P500 between 2000-2017. It found the correlation with the S&P500 rose from 0.45 to 0.52 upon joining the index.

2. Increased liquidity and lower costs

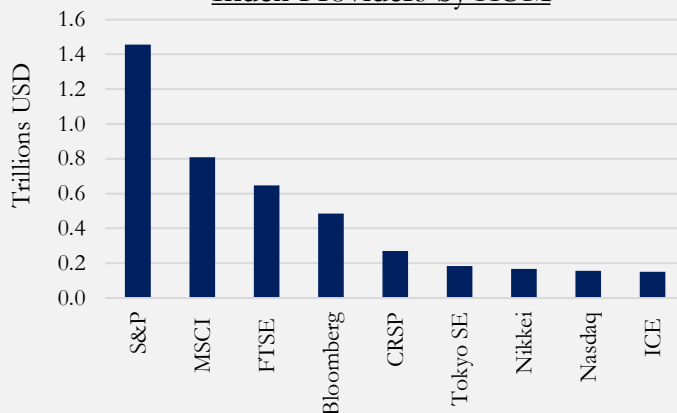
The other effect is increased trading liquidity. We looked at the Dec 2019 S&P 500 constituent changes as a recent example (LYV, ZBRA, STE in; AMG, TRIP, MAC out). We found average daily trading volumes of index joiners jumped an average 162% (see bottom chart). This is in line with the larger sample findings above.

We can also expect a tightening of average stock bid-ask spreads. The chief reason for these effects is the correlated behaviour of passive investors tracking the index, aided by others benchmarking against (though a side-effect of the rise of passive may be a reduction in ‘closet’ active management indexing). Interestingly we found there was no equivalent trading volume change for firms that left the index, with volume remaining high even after stock exclusion.

3. Clear index inclusion price effect

Perhaps more interesting is the price effect on firms entering indices. The increased passive products track relatively few benchmark indices, and these constructed by three major providers, responsible for c70% of benchmarked AUM (see top chart), a recipe for a strong price effect.

Index Providers by AUM



Source: Refinitiv, THR

[This](#) 2011 paper reports that for ‘additions to the S&P 500 and Russell 2000, the price impact from announcement to effective day averaged +8.8% and +4.7%, respectively, and -15.1% and -4.6% for deletions.’ This also does not account for the speculative positioning prior to inclusion announcement. As seen in the 50% recent increase in Tesla share price as speculation grew on potential S&P 500 [inclusion](#), this can be significant.

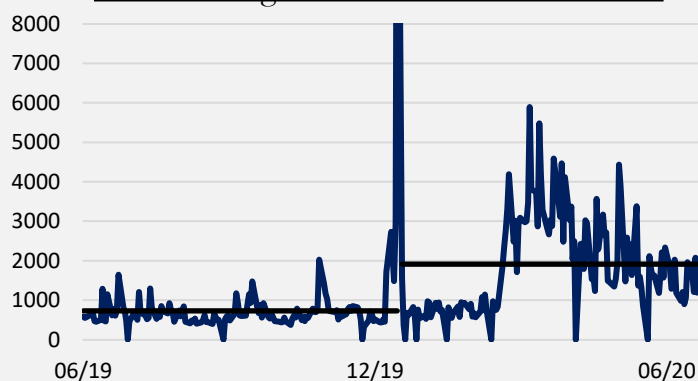
4. Market concentration increasing

Less positively, [Fed researchers](#) have highlighted how the strong growth in passive has accelerated US asset market concentration, with passive industry more concentrated than active, and how this has heightened some financial stability issues. The big three index managers (Vanguard, Blackrock, State Street) could control over a quarter of S&P 500 within next decade on current growth trends, as are receiving 70%+ of all passive inflows.

5. Impact on corporate governance

Increasing passive AUM may crowd out active research, trading and the monitoring functions that supports market quality. This has received [regulator research](#) that specifically argues that the quality of corporate governance may decline as the proportion of shares owned by passive funds increases in the market.

ADTV change of Dec 19 SP500 additions

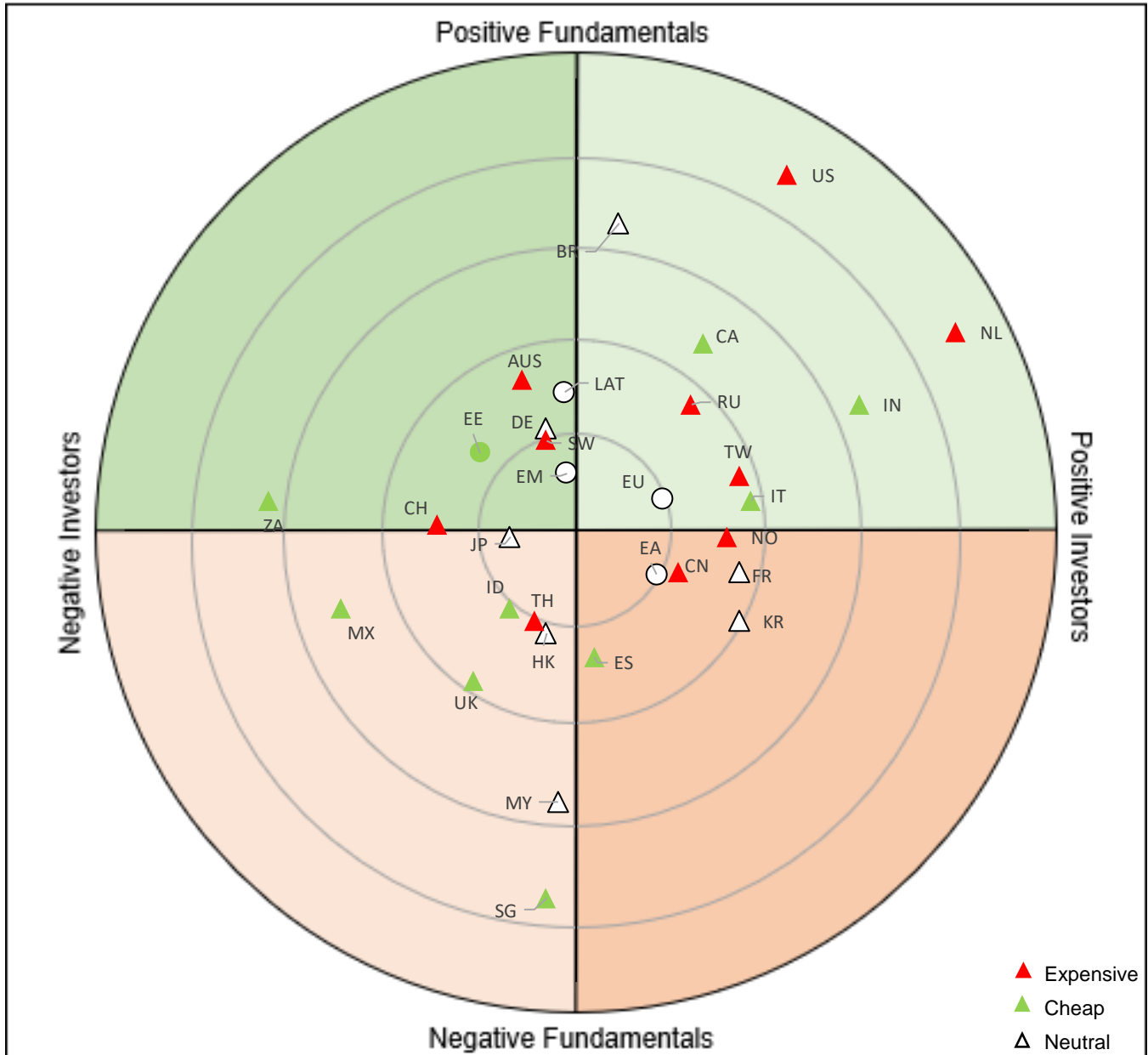


Source: Refinitiv, THR

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



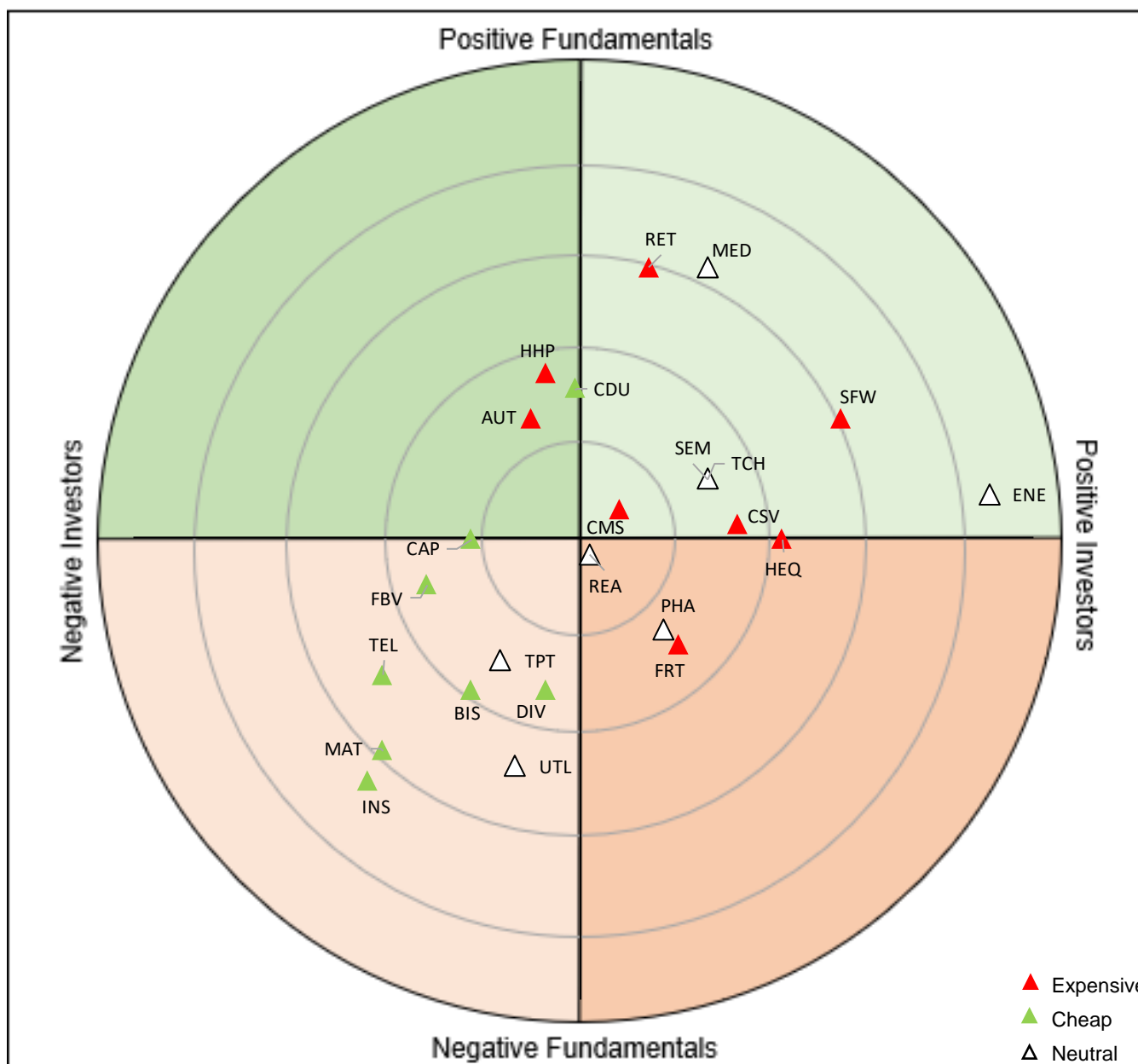
Source: Refinitiv, THR. SEE PAGE 13 FOR FULL METHODOLOGY

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 Equipt. & Svcs, HHP=Household & Personal Products, INS=Insurance, MAT=Materials, MED=Media & Entertainment, PHA=Pharma, Bio & Life Svcs, REA=Real Estate, RET=Retailing, SEM=Semiconductors & Equipt, SFW=Software and Svcs, TCH=Technology Hardware & Equipt, TEL=Telecoms TPT=Transport, UTL=Utilities

'EYE' ALLOCATION BREAKDOWN

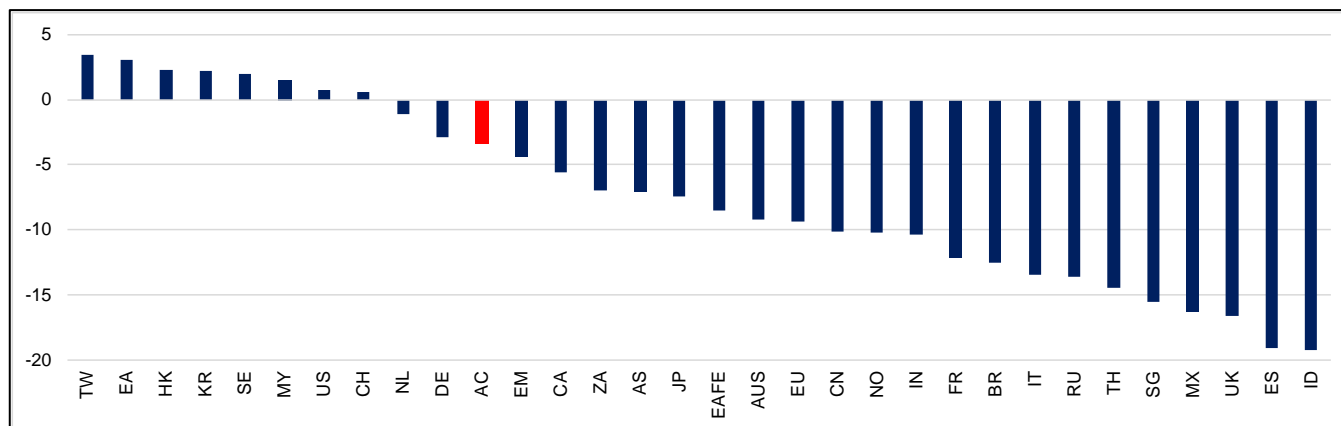
Country/ Region	Rationale	P/E (x)		EPS Gr. (%)	
		2020e	2021e	2020e	2021e
	United States (Overweight): Remains a global equity 'safer haven' despite currently centre of COVID outbreak. Has relatively closed economy and stock market, trend GDP growth into crisis, and seen unprecedented policy response, with unlimited QE and initial 14%/GDP fiscal stimulus. Valuations fundamentally supported by tech, tax, and UST. Earnings expectations very quickly adjusted. Is in the 'momentum' Eye quadrant, with some of world's strongest relative fundamentals, but also some of the most optimistic investors.	25.6	20.0	-20.1	27.7
	Emerging Markets (Neutral): Economic growth vulnerable even before COVID outbreak. USD strength and low oil prices have been additional broad headwinds for many. Much of the valuation discount structural and overstated. LatAm and CEEMEA now centre of virus outbreak, after north Asia (60% EM) control. Favor China, EM's largest market, on policy flexibility, resilient GDP/EPS, FIFO on COVID cases, 12x P/E. Underweight rest of EM.	15.9	12.4	-6.7	28.0
	Eurozone (Neutral): To lead global GDP and EPS 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 been support for Europe's globalised corporates. As COVID cases ease and countries reopen, set to be the key beneficiary of cyclical economic and market upturn. Focus on cheap domestic cyclicals, such as Financials.	20.4	15.4	-28.6	32.6
	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 overstated and vulnerable. Domestic stocks underperformed global-exposed peers.	18.0	14.3	8.5	26.3
	UK (Underweight): In value-trap framework quadrant. Exposed to twin-headwinds of above-average COVID impact (with high infections and relatively low fiscal response) and rising Brexit hard-exit risks (into Dec. 31 cliff edge), and market valuations at long-term average. Risk that lags our preferred recovery cyclicals (Canada, EU Financials, US small caps) despite 50%+ cyclical equity index composition and 60% overseas revenue exposure.	18.0	13.6	-36.0	32.8

US Sector	Rationale	P/E (x)		EPS Gr. (%)	
		2020e	2021e	2020e	2021e
	Information Technology (Overweight): Software 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.	27.9	23.9	-0.1	16.4
	Healthcare (Overweight): Both Healthcare Equipment and Pharma are close to the top-right 'momentum' quadrant, 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 cyclical and a domestic revenue focus. Seeing Federal support to combat COVID. Similar to Tech, set to come out of crisis more dominant.	18.6	15.7	-0.5	18.0
	Financials (Underweight): All three components (Banks, Diversified, Insurance) in the negative bottom left 'value trap' quadrant of the 'Eye'. Out of favour with market, with strong fund outflows and valuation derating, but fundamentals remain under pressure from low US bond yields, flat yield curve, and GDP growth collapse. Capital buffers are strong but Fed buyback and dividend restrictions an additional unique sector constraint vs other cyclicals.	17.5	12.5	-37.2	40.5
	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.	25.8	20.9	-14.9	23.9
	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.	59.0	30.4	-48.5	94.1

Source: Refinitiv, THR

REGION/COUNTRY PERFORMANCE & VALUATION

Total Return YTD

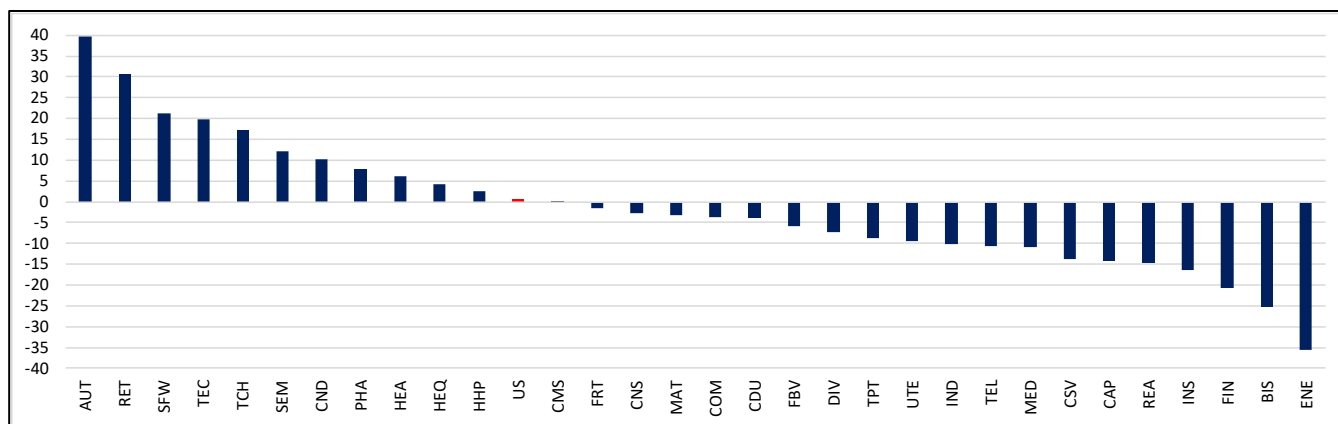


Index	Abbreviation	Price Performance				PE			EPS Growth	
		1D (%)	1W (%)	3M(%)	YTD (%)	2019A	2020E	2021E	2020E	2021E
World	AC	1.3	1.5	15.2	-3.3	17.8	22.0	17.0	-19.1%	29.0%
EAFE	EAFE	1.9	2.8	14.9	-8.5	15.8	20.0	15.4	-21.2%	30.1%
Europe	EU	1.9	2.8	16.8	-9.4	14.8	20.8	15.6	-28.9%	33.0%
Asia	AS	1.3	0.6	12.8	-7.1	17.4	17.4	13.7	0.0%	26.5%
Emerging Global Markets	EM	0.6	-0.3	18.3	-4.3	15.1	16.3	12.6	-7.5%	29.2%
Emerging Asia	EA	0.4	-0.5	18.3	3.1	16.7	16.5	13.3	1.0%	24.6%
Australia	AUS	1.9	0.9	12.0	-9.2	15.9	18.8	19.2	-15.5%	-1.8%
Brazil	BR	1.3	1.8	28.2	-12.5	12.6	26.7	12.3	-52.7%	117.2%
Canada	CA	1.0	2.8	15.6	-5.6	13.6	20.7	15.0	-34.5%	38.4%
China	CN	-1.2	-5.9	6.5	-10.2	15.7	15.4	12.9	1.6%	19.6%
France	FR	2.0	2.5	19.3	-12.2	14.4	21.9	15.4	-34.3%	42.2%
Germany	DE	1.5	2.8	25.2	-2.9	15.8	21.5	14.7	-26.6%	46.8%
Hong Kong	HK	0.4	-5.3	15.2	2.3	14.7	17.7	14.1	-17.0%	25.7%
India	IN	0.0	-1.5	17.8	-10.4	22.1	24.3	17.6	-8.9%	37.6%
Indonesia	ID	-0.1	1.0	20.2	-19.2	13.7	17.6	13.9	-22.5%	26.8%
Italy	IT	1.9	1.6	22.0	-13.5	10.9	20.8	13.7	-47.9%	52.0%
Japan	JP	1.5	1.3	11.3	-7.4	19.4	18.7	14.4	3.8%	29.7%
Korea	KR	0.9	0.9	18.5	2.2	17.3	14.7	10.3	17.3%	43.6%
Malaysia	MY	-0.8	0.1	19.0	1.5	16.8	20.6	16.9	-18.5%	21.6%
Mexico	MX	1.0	-2.3	8.6	-16.3	15.0	18.9	12.8	-20.8%	47.2%
Netherlands	NL	0.4	0.9	22.6	-1.1	20.9	23.0	19.4	-9.0%	18.4%
Norway	NO	2.1	3.7	14.2	-10.2	12.8	21.4	14.4	-40.3%	48.9%
Russia	RU	0.8	-1.4	10.7	-13.6	5.6	10.0	7.1	-44.0%	41.1%
Singapore	SG	0.9	-0.8	3.7	-15.5	11.7	15.3	12.8	-23.5%	19.1%
South Africa	ZA	0.4	0.1	15.5	-7.0	14.9	13.8	10.7	7.7%	29.2%
Spain	ES	1.7	2.2	11.7	-19.1	11.0	17.6	13.1	-37.7%	34.7%
Sweden	SE	1.6	2.8	22.5	2.0	15.8	22.6	17.0	-30.1%	32.9%
Switzerland	CH	1.9	2.6	13.0	0.6	19.4	21.1	18.1	-8.1%	16.1%
Taiwan	TW	0.1	0.1	19.4	3.4	18.2	17.8	15.3	2.8%	15.9%
Thailand	TH	1.1	-1.2	13.0	-14.5	15.2	20.4	16.5	-25.6%	23.9%
United Kingdom	UK	1.8	2.2	12.6	-16.6	11.6	18.2	13.7	-36.1%	32.8%
United States	US	1.1	1.9	18.3	0.7	20.1	25.1	19.7	-20.0%	27.6%

Source: MSCI, Refinitiv, THR

US SECTOR PERFORMANCE & VALUATION

Total Return YTD

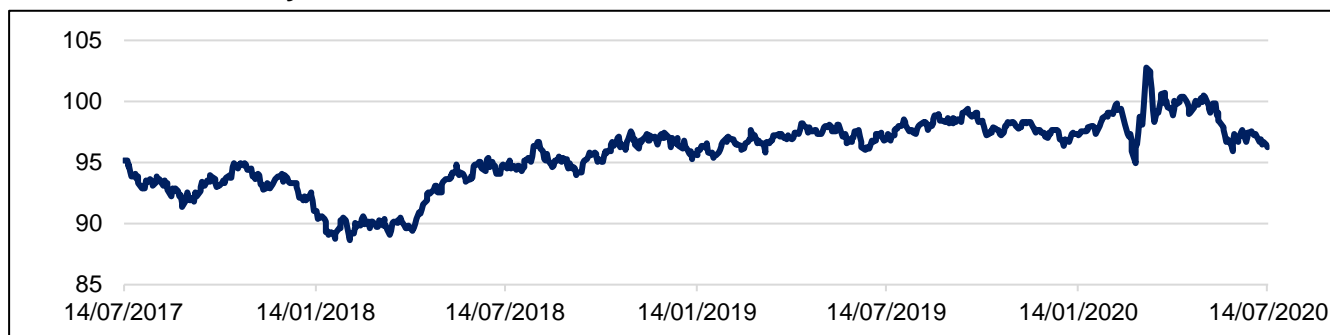


Index	Abbreviation	Price Performance				PE			EPS Growth	
		1D (%)	1W (%)	3M(%)	YTD (%)	2019A	2020E	2021E	2020E	2021E
United States	US	1.1	1.9	18.3	0.7	20.1	25.1	19.7	-20.0%	27.6%
Communications	COM	0.9	1.6	11.4	-3.6	21.6	25.5	20.5	-15.0%	24.0%
Media & Entertainment	MED	2.4	4.8	16.6	-10.9	27.6	34.4	25.1	-19.8%	36.8%
Telecommunication Svcs	TEL	-0.2	0.2	1.3	-10.7	10.6	11.3	10.9	-6.0%	3.7%
Consumer Discretionary	CND	1.2	2.5	27.5	10.2	30.4	59.9	30.3	-49.3%	97.4%
Autos & Components	AUT	3.0	10.2	64.4	39.7	16.5	NA	21.1	-114.2%	650.1%
Consumer Durables & App	CDU	2.8	2.6	34.8	-3.8	23.3	24.8	20.1	-6.1%	23.3%
Consumer Svcs	CSV	3.6	5.0	17.7	-13.7	19.6	356.9	29.8	-94.5%	1095.6%
Retailing	RET	-0.8	-0.1	27.7	30.5	40.1	52.5	34.5	-23.7%	52.1%
Consumer Staples	CNS	0.4	2.6	4.9	-2.8	19.8	20.2	18.7	-2.3%	8.5%
Food & Staples Retailing	FRT	1.0	4.6	5.3	-1.6	20.8	21.3	19.9	-2.6%	7.1%
Food, Bev & Tobacco	FBV	0.3	2.4	3.7	-5.8	17.3	18.3	16.6	-5.2%	10.1%
Household Products	HHP	0.1	1.7	6.9	2.6	25.5	23.5	22.4	8.3%	4.9%
Energy	ENE	2.1	3.4	19.0	-35.5	13.6	NA	33.2	-102.5%	1702.9%
Financials	FIN	2.0	3.6	11.1	-20.7	10.5	16.7	11.9	-37.1%	40.2%
Banks	BIS	2.8	4.4	14.8	-25.2	8.0	17.9	10.4	-55.5%	71.6%
Diversified Financials	DIV	0.5	1.4	23.3	-7.2	13.9	18.8	14.6	-25.9%	28.2%
Insurance	INS	1.4	5.1	7.6	-16.3	10.8	12.3	10.3	-12.5%	19.6%
Health Care	HEA	1.6	2.8	11.8	6.0	18.1	18.2	15.4	-0.5%	18.0%
Health Care Equipment	HEQ	1.9	3.5	12.9	4.3	28.2	33.7	24.6	-16.5%	37.0%
Pharmaceuticals	PHA	1.2	2.0	10.7	7.8	14.9	14.8	12.9	1.0%	14.7%
Industrials	IND	2.6	3.9	19.1	-10.3	18.0	25.4	18.7	-28.9%	35.7%
Capital Goods	CAP	2.8	4.8	18.0	-14.3	15.7	23.1	17.6	-32.1%	31.5%
Commercial & Prof Svcs	CMS	2.6	2.5	23.0	0.0	28.6	32.0	27.5	-10.6%	16.1%
Transportation	TPT	2.8	3.7	21.2	-8.7	24.2	31.5	19.0	-23.4%	65.8%
Information Technology	TEC	0.4	-0.2	26.0	19.8	27.9	27.9	24.0	-0.1%	16.3%
Semiconductors	SEM	0.0	0.7	20.3	12.2	19.4	20.8	17.4	-6.5%	19.1%
Software & Svcs	SFW	0.3	-1.3	25.2	21.2	36.0	34.3	30.0	5.0%	14.2%
Technology Hardware	TCH	0.5	1.8	27.4	17.3	23.5	24.0	20.4	-2.1%	17.4%
Materials	MAT	1.8	5.2	26.9	-3.2	18.3	23.0	18.0	-20.5%	27.9%
Real Estate	REA	1.2	0.5	7.4	-14.8	32.5	45.0	40.4	-27.7%	11.2%
Utilities	UTE	-0.4	1.2	-0.1	-9.4	17.9	17.6	16.6	1.7%	6.0%

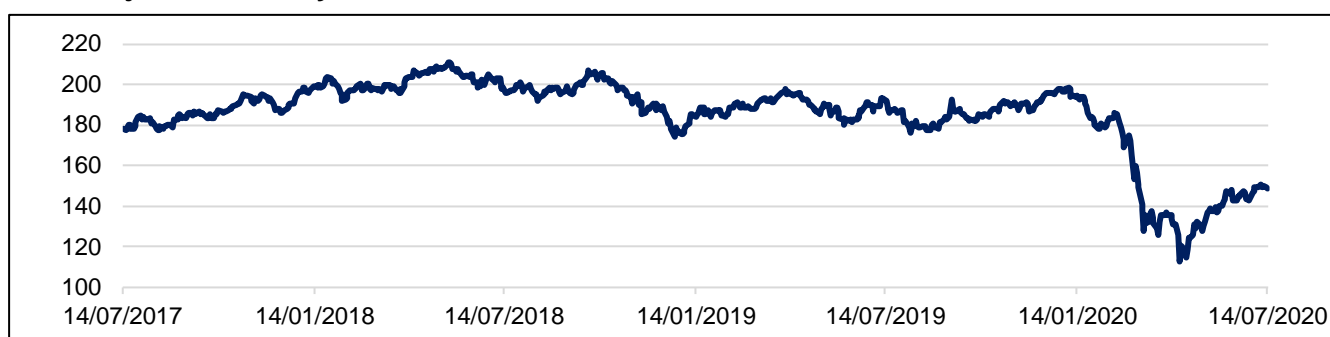
Source: MSCI, Refinitiv, THR

GLOBAL FX, BONDS AND COMMODITIES

DXY USD Index - 3 years



CRB Major Commodity Index* - 3 Years

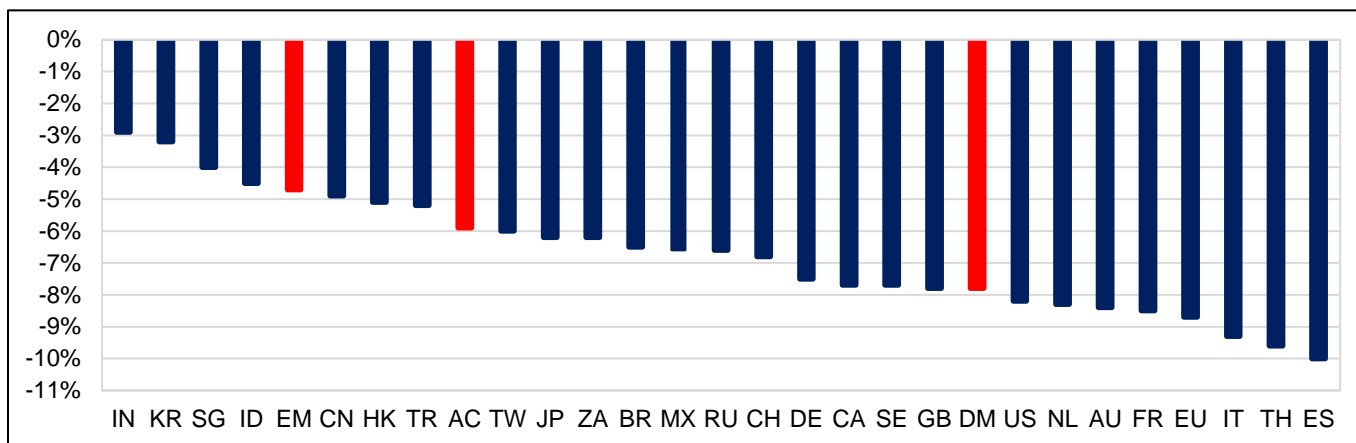


Name	Currency	Close Price	1 Day	1 Week	1 Month	3 Months	1 Year	MTD	QTD	YTD
Commodities										
CRB Commodity Index	USD	2566.66	1.6%	4.1%	3.8%	18.2%	-14.8%	4.4%	4.4%	-16.8%
Gold Spot	USD	1811.31	0.2%	0.1%	5.0%	5.6%	28.1%	1.7%	1.7%	19.4%
Copper Spot	USD	2.87	-1.6%	2.0%	11.8%	24.1%	6.0%	5.8%	5.8%	2.7%
Brent Crude Spot	USD	44.51	1.3%	0.7%	13.7%	182.1%	-33.7%	4.7%	4.7%	-35.5%
CRB Agricultural Index	USD	4912.35	1.9%	5.3%	4.8%	15.9%	-11.8%	5.4%	5.4%	-14.3%
Currencies										
DXY USD Index	USD	96.08	-0.2%	-0.4%	-0.6%	-3.4%	-0.9%	-1.3%	-1.3%	-0.3%
EUR/USD	USD	1.14	0.1%	0.7%	0.8%	4.6%	1.4%	1.6%	1.6%	1.8%
USD/JPY	JPY	106.92	-0.3%	-0.3%	-0.4%	-0.5%	-0.9%	-0.9%	-0.9%	-1.6%
GBP/USD	USD	1.26	0.3%	-0.2%	-0.2%	0.5%	0.5%	1.5%	1.5%	-5.1%
USD/CNY	CNY	6.99	-0.2%	-0.2%	-1.4%	-1.1%	1.6%	-1.1%	-1.1%	0.4%
Bond Yields										
DE 10Y BUND	EUR	-0.44	0.7%	0.7%	1.1%	-4.3%	50.0%	-3.5%	-3.5%	137.4%
GB 10Y GILT	GBP	0.17	10.7%	-8.8%	-18.6%	-45.0%	-79.3%	-3.5%	-3.5%	-79.9%
JP 10Y JGB	JPY	0.02	9.5%	4.5%	360.0%	35.3%	-120.0%	-14.8%	-14.8%	-204.5%
US 10Y BILL	USD	0.63	2.6%	-3.5%	-10.3%	-1.7%	-69.9%	-3.5%	-3.5%	-67.0%
US 30Y BOND	USD	1.33	2.3%	-4.4%	-8.1%	4.4%	-49.0%	-5.7%	-5.7%	-44.0%
US 10-2 BOND	-	0.48	2.6%	-3.5%	7.7%	22.7%	21.7%	-4.2%	-4.2%	23.1%
Volatility										
CBOE VIX Index	USD	27.76	-0.06	-0.01	-0.19	-0.32	1.19	-0.09	-0.09	1.01

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	US	21.4	2.9	2.3	-5.9	2.4	1.8	0.6	-2.4	-2.5	-2.6	106	110
Canada	CA	1.7	1.9	1.5	-6.2	2.2	2.0	0.6	-2.6	-1.9	-3.7	88	83
Brazil	BR	1.9	1.1	1.2	-5.3	3.7	3.8	3.6	-0.8	-1.2	-1.8	92	95
Mexico	MX	1.3	2.0	0.0	-6.6	4.9	3.8	2.7	-1.8	-1.2	-0.3	54	55
Europe													
Eurozone	EU	18.3	2.2	1.2	-7.5	1.9	1.5	2.0	2.0	2.0	1.6	80	78
Germany	DE	3.9	1.5	0.5	-7.0	1.9	1.5	0.3	7.3	7.0	6.6	59	53
UK	GB	2.7	1.4	1.3	-6.5	2.5	1.8	1.2	-3.9	-3.5	-4.4	86	85
France	FR	2.7	1.7	1.3	-7.2	2.1	1.2	0.3	-0.6	-0.5	10.4	99	99
Italy	IT	2.0	0.9	0.2	-9.1	1.2	0.7	0.2	2.5	2.9	3.2	133	134
Spain	ES	1.4	2.6	2.0	-8.0	1.7	0.7	-0.3	0.9	0.9	2.2	96	94
Netherlands	NL	0.9	2.6	1.8	-6.5	1.6	2.5	0.5	10.9	9.8	9.0	49	46
Switzerland	CH	0.7	2.8	0.8	-6.0	0.9	0.6	-0.4	10.2	9.6	7.2	39	36
Sweden	SE	0.5	2.3	0.9	-6.8	2.0	1.7	0.5	1.7	2.9	2.2	37	34
Russia	RU	1.6	2.3	1.1	-5.5	2.9	4.7	3.1	6.8	5.7	0.7	17	18
Turkey	TR	0.7	2.8	0.2	-5.0	16.3	15.7	12.0	-3.5	-0.6	0.4	30	32
Asia													
China	CN	14.1	6.6	6.1	1.2	2.1	2.3	3.0	0.4	1.0	0.5	56	65
Hong Kong	HK	0.4	3.0	0.3	-4.8	2.4	3.0	2.0	4.3	5.5	6.0	0	0
Japan	JP	5.2	0.8	1.0	-5.2	1.0	1.0	0.2	3.5	3.3	1.7	238	238
India	IN	2.9	6.8	4.8	1.9	3.4	3.4	3.3	-2.1	-2.0	-0.6	69	68
Korea	KR	1.6	2.7	2.0	-1.2	1.5	0.5	0.3	4.4	3.2	4.9	40	46
Australia	AU	1.4	2.7	1.7	-6.7	2.0	1.6	1.4	-2.1	-0.3	-0.6	42	41
Indonesia	ID	1.1	5.2	5.0	0.5	3.2	3.2	2.9	-3.0	-2.9	-3.2	30	30
Taiwan	TW	0.6	2.6	2.0	-4.0	1.5	0.8	0.5	12.2	11.4	8.2	34	31
Thailand	TH	0.5	4.1	2.9	-6.7	1.1	0.9	-1.1	6.4	6.0	5.2	42	44
Singapore	SG	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	ZA	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	-5.7	4.0
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	10.5	8.0
Average Earnings, Growth	1.9	2.0	1.9	2.1	2.1	2.2	2.6	2.6	3.0	3.3	2.8	2.4
Prices												
CPI	1.6	3.2	2.1	1.5	1.6	0.1	1.3	2.1	2.4	1.8	1.6	1.6
PCE, excluding energy	1.4	1.6	1.9	1.5	1.6	1.2	1.6	1.6	1.9	1.6	1.3	1.4
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



LIBRARY

RECENT 'EYE ON THE WORLD' DAILIES

These reports available to **DAILY subscribers-only** through our website Library

Please let us know if you need help accessing

[JULY 15: EUROPE'S HAMILTON MOMENT](#)

[JULY 14: THE KEY SMALL CAP DIFFERENCES](#)

[JULY 13: IMPACT OF SURGING NEW CASES](#)

[JULY 10: SENTIMENT A CONTRARIAN SUPPORT](#)

[JULY 09: UNDERSTANDING WHO OWNS WHAT](#)

[JULY 08: THE DIVIDEND COMEBACK](#)

[JUNE 07: MOST IMPORTANT EARNINGS OF THE YEAR](#)

[JULY 6: FOCUS ON THE DEATH RATE](#)

[JULY 2: US ELECTION RISKS IN FOCUS](#)

[JULY 1: UPSIDE RISKS FOR Q3](#)

[JUNE 30: NASDAQ TWENTY YEARS ON](#)

[JUNE 29: REBOUND AND RELAXATION RESILIENCE](#)

[JUNE 26: RISE OF CARBON PRICING](#)

[JUNE 25: ALL TIME HIGH UNCERTAINTY](#)

[JUNE 24: VALUE DOWN BUT NOT OUT](#)

Subscriptions can be made, and example Daily issues seen, at www.towerhudson.com



ABOUT US

‘EYE ON THE WORLD’ DAILY

One idea or insight a year, or a client relationship gained or maintained, or an hour of your time saved daily. These can individually be worth many times the subscription price

US and Global investment trends and actionable views in your inbox at 7 am ET daily

Each day we include:

- Multi-asset market recap
- What to watch for outlook
- Hot topic analysis and view
- 31 Countries & Regions allocation model
- 24 US sector industries allocation model
- Our key country and sector investment views
- Data on market performance, earnings, valuation, and macro-economics

Subscription also includes:

- **Weekly** conference call and Q&A, as well as audio replay
- **Quarterly** market recap and performance data, for client reporting
- **Open line** email and Q&A for us to answer your key questions
- **Access** to back catalogue of hot topic reports and weekly call audio

Subscriptions can be made, and example Daily issues seen, at www.towerhudson.com

TOWER HUDSON RESEARCH

Tower Hudson Research Ltd is an UK FCA registered firm providing investment strategy research globally. Our multi-disciplinary team of financial and investment strategy analysts provides an in-depth and global perspective and capability.

Visit us at www.towerhudson.com or contact us at directly ben@towerhudson.com or on (US) +1 917 539 0541 or (UK +44 (0) 7444 392506, with any questions.



Important Disclosure Statement from Tower Hudson Research Ltd

This document is issued by Tower Hudson Research Ltd solely for its clients. It **may not be reproduced, redistributed or passed to any other person** in whole or in part without written consent of Tower Hudson Research Ltd. This material is not directed at you if Tower Hudson is prohibited or restricted by any legislation in any jurisdiction from making it available to you.

This document is **provided for information purposes only** and should not be regarded as an offer, solicitation, invitation, inducement or recommendation relating to any security or other financial instrument. This document does not constitute, and should not be interpreted as, investment advice. You should seek independent advice from a suitably qualified professional advisor before taking any decisions in relation to the investments detailed herein. All expressions of opinions and estimates constitute a judgement and are those of the author and Tower Hudson Research Ltd only and are subject to change without notice. Tower Hudson is under no obligation to update information contained. Whilst we have taken all reasonable care to ensure information is not untrue or misleading at the time of publication, we cannot guarantee its accuracy or completeness.

This document is **not guaranteed to be a complete statement** or summary of any securities, markets, or developments referred to herein. No representation or warranty is made, nor responsibility of any kind is accepted, by Tower Hudson Research Ltd either as to the accuracy or completeness of any information contained in this document. No liability whatsoever is accepted by Tower Hudson Research Ltd for any loss, whether direct or consequential, arising whether directly or indirectly as a result of the recipient acting on the content of this document, including, without limitation, lost profits arising from the use of this document or any of its contents.

This document is provided with the understanding that Tower Hudson Research Ltd is **not acting in a fiduciary capacity** and it is not a personal recommendation to you. Investing in securities entails risks. The value of and the income produced by products may fluctuate, so that an investor may get back less than he invested. Investments referred to are not suitable for all investors and this document should not be relied upon in substitution for the exercise of independent judgment. The stated price of any securities mentioned herein will generally be the closing price at the end of any of the three business days immediately prior to the publication date on this document.

Tower Hudson Research Ltd and respective analysts are remunerated for providing investment research to professional investors, corporations, other research institutions and consultancy houses. **Our analysts are not censored in any way** and are free to express their personal opinions. We may have issued other documents inconsistent with conclusions from the information contained here. Those reflect different assumptions, views and analytical methods of authors at the time.

Tower Hudson Research Ltd is an **appointed representative of Messels Ltd., authorised and regulated by the Financial Conduct Authority** for the provision of investment advice. Residents of the UK should seek specific professional financial and investment advice from a professional adviser authorised pursuant to the Financial Services and Markets Act 2000. This report is intended only for investors who are 'professional clients' as defined by the FCA, and may not, therefore, be redistributed to other classes of investors.

Analysts' Certification

The analysts involved in the production of this document certify that the views expressed accurately reflect their personal views about the securities mentioned. The analysts may buy, sell or already have taken positions in the securities, and related financial instruments, mentioned.