

EYE ON THE WORLD

Poor sentiment is bullish

Wednesday, September 30

Markets eased after 3-day rally ahead of acrimonious first US presidential debate that stoked election disruption fears. We see these concerns overdone, better priced than feared and would use pre-election weakness to position for year-end recovery. **HOT TOPICS** see' current poor investor sentiment as a key market support, with our composite Investor Sentiment Index near contrarian buy levels that have historically seen a double-digit forward return. Retail investors are bearish, we have seen consistent fund outflows, and VIX still above average.

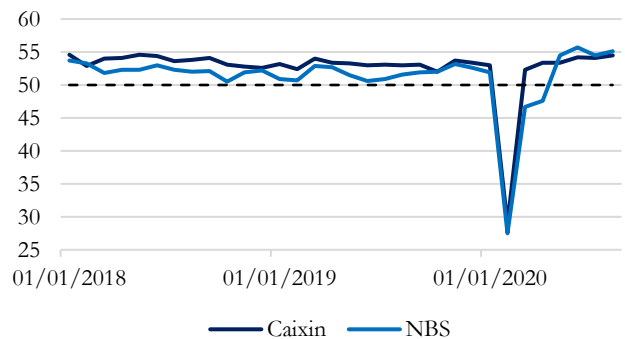
Markets eased yesterday ahead of the acrimonious first US presidential debate, with cyclicals giving back some recent gains. Debate is unlikely to change Biden polling lead significantly, but it did further stoke investors transition fears. We think concerns here are overdone, and partly priced, and would use pre-election weakness to **position for year-end rebound, on 2021 outlook**. Asia eased overnight, even with better than expected China PMI, and Europe and US futures are lower on last day of Q3.

Key Markets Performance Table

| Index | Level | 1D | 1W | YTD |
|------------|--------|-------|-------|--------|
| S&P500 | 3351.6 | -0.5% | 0.6% | 3.2% |
| ACWI xUS | 46.0 | -0.2% | 0.1% | -6.5% |
| DXY USD | 93.9 | -0.4% | -0.1% | -2.6% |
| US 10Y YLD | 0.65 | -2.7% | -2.9% | -66.2% |
| Brent Spot | 40.4 | -2.5% | -1.0% | -41.5% |
| Gold Spot | 1897.7 | 0.9% | -0.1% | 25.1% |

US election concerns. Acrimonious first US presidential debate likely does not significantly change Biden c7pp national tracking poll lead, but President Trump again declined to commit to accepting the results or commit to a

China Composite PMI



Source: Refinitiv, THR

HIGHLIGHTS FROM REST OF DOC

- **Hot Topics on [Investor Sentiment](#).** Poor investor sentiment a key market support. Our composite Index is near contrarian buy levels that historically seen double-digit forward return.
- **[What to watch](#):** US ADP private payrolls +648k in precursor to Friday employment report
- **[Country and Sector 'Eye'](#):** We favor US and select EM's, and US cyclical and IT sector barbell.
- **[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 | 3351.6 | -0.5% | 0.6% | 3.2% |
| NASDAQ | 11323.0 | -0.3% | 1.1% | 23.5% |
| Russell 2000 | 1504.7 | -0.4% | 0.5% | -9.8% |
| US IT | 426.0 | -0.1% | 1.3% | 26.6% |
| US Healthcare | 371.4 | 0.0% | 0.9% | 4.7% |
| US Financials | 156.1 | -1.1% | 0.3% | -22.9% |

peaceful election transition if lost, stoking market concerns. We believe a lot of **investor election concerns have already been priced in, and we take some comfort from the 2000 contested election parallel** (see September 29 *EOTW*). The next debate is not scheduled until October 15.

China recovery on track. The September official NBS manufacturing and services PMI both inched higher, to 51.5 and 55.9 respectively, above expectations. The private sector Caixin PMI was stable at an expansionary 53, in further sign of continued economic recovery, and with new export orders returning to growth. The lagging employment outlook also improved, though remained contractionary. **We are overweight China equities, the only major market to see both GDP and earnings growth this year,** and its continued recovery also supports our broader north Asia overweight.

Direct listings spotlight. Data analytics co. Palantir and workplace software co. Asana are set to IPO in US today using rare direct listings, where shares are listed with no capital being raised. Would be only third major one ever, after Spotify

FX, Fixed Income, Commodities

| Index | Level | 1D | 1W | YTD |
|----------------|--------|-------|-------|--------|
| DXY USD Index | 93.9 | -0.4% | -0.1% | -2.6% |
| EUR/USD | 1.17 | 0.7% | 0.3% | 4.7% |
| US 10Y YLD | 0.65 | -2.7% | -2.9% | -66.2% |
| US 10-2 BOND | 0.52 | 1.9% | 4.5% | 25.8% |
| CBOE VIX Index | 26.3 | 0.3% | -2% | 91% |
| CRB Index | 2553.2 | -0.9% | -1.9% | -17.2% |

Events to Watch

| Indicator | Period | Forecast | Last |
|-------------------------|--------|----------|--------|
| Retail Sales YY, Japan | Aug | -3.67 | -2.80 |
| NBS Mfg PMI, China | Sept | 51.15 | 51.00 |
| GDP YY, UK | Q2 | -21.68 | -21.70 |
| Unemploy. Rate, Germany | Sept | 6.38 | 6.40 |

and Slack, and a **continued sign of the strong and broadening IPO market**, which has also seen booming SPAC issuance. NYSE and NASDAQ have requested regulators allow direct listings to raise capital, that could further boost demand. See September 1, *Re-equitizing the US*.

Sector View

S&P500 eased yesterday led by energy (-2.7%) and financials (-1.1%), while communications (+0.2%) and utilities (-0.1%) outperformed. **Unemployment in focus again**, ahead of Friday US employment report with Disney to lay off 28k from its parks unit as faces continued reopening restrictions, and US airlines furlough plan ending tonight, with industry seeking new US\$25bn federal aid to extend for six months.

What to Watch

US consumer confidence saw biggest gain in 17 years, with Conference Board index at 101.8, well ahead of expectations, but still below February 132. Was at odds with the more modest increase in Univ. of Michigan consumer survey. **Euro zone sentiment improves** with European Commission's monthly survey rising to 91.1 from August 87.5, ahead of expectations and led by services. The US ADP **National Employment Report** forecast show private payrolls increased 648k in September from August 428k, as head into Friday's employment report, where unemployment forecast to inch down to 8.2% amidst signs of stalling labor recovery.

HOT TOPIC

POOR SENTIMENT IS BULLISH

Investor sentiment has fallen from already low levels, providing contrarian market support. Our composite Index is near contrarian 'Buy' levels rarely seen last decade, with a historic double-digit forward return. Retail investors have been above average bearish for 29 weeks; US equity funds seen US\$72bn outflows since March bottom; and VIX futures rising on election uncertainty. Alternative indicators, from Robinhood to hedge funds, support this.

Poor investor sentiment contrarian support

We update our Investor Sentiment Index, which tracks a cross-section of sentiment indicators, seeking 'euphoria' or 'capitulation' contrarian exit or entry points to the market. An Index at -0.9 or -1.5 standard deviations (STD) below average, has been a contrarian buy signal, with a double-digit equity return historically, and rarely seen the last decade.

The current -0.7 level is not quite this depressed, but is low, has fallen from -0.5 over the last month, and is a market support in our view, showing still considerable market pessimism after the +43% S&P 500 return from March trough. Poor investor sentiment has been a key equity market support, along with strong policy stimulus, low bond yields, and recovering activity.

The Sentiment Index has moderated from the strong buy signal sent in March, but remains contrarian supportive with the VIX, equity fund flows, and retail investor sentiment all clearly still at cautious levels. For background see August 20, *Investor caution still bullish*.

Index of four equal-weighted indicators

The index is equal weighted on four variables, to capture broad equity 'sentiment':

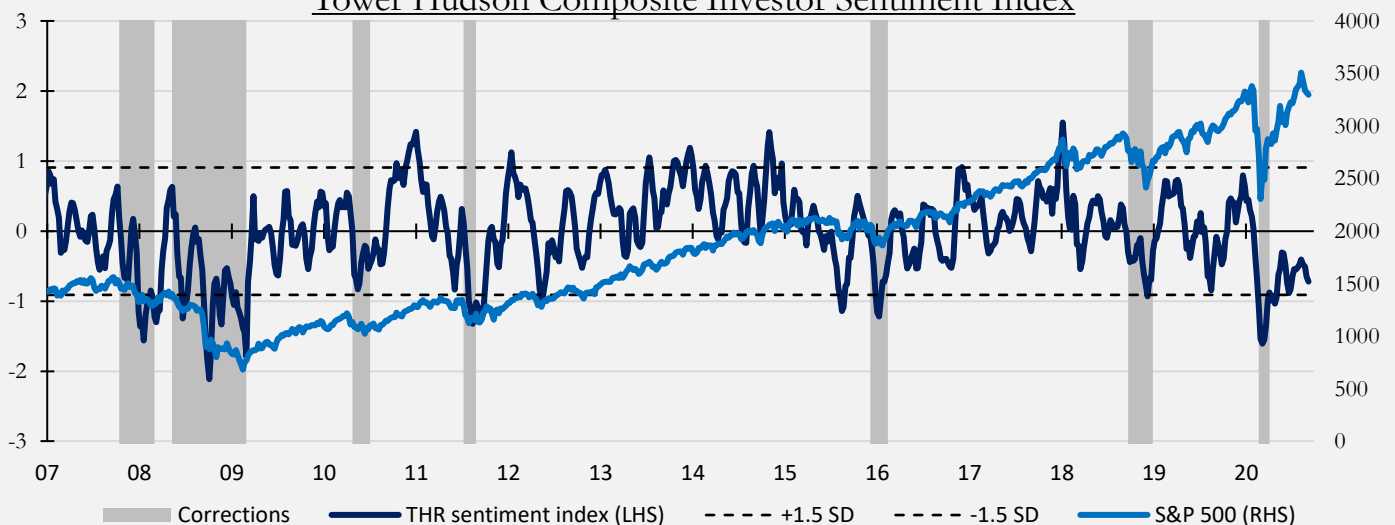
- American Assoc. of Individual Investors (AAII) weekly sentiment survey
- Net weekly Lipper US equity fund flows
- CBOE VIX volatility index
- CBOE put/call ratio

These are smoothed to 1-mth moving average

Over 40% retail investors bearish

US individual investors, proxied by the long-

Tower Hudson Composite Investor Sentiment Index



running (since 1987) AAII survey, are very cautious, with 46% of respondents bearish the outlook vs a 34% long term average. This is only modestly down from a 5-year peak over 50% in April. Sentiment has now been below-average for twenty-nine consecutive weeks.

Consistent equity outflows, favoring bonds

US based equity funds (ETF + mutual funds) saw US\$15bn of outflows last week, the worst in fifteen weeks, according to Lipper, and brings cumulative outflows to US\$72bn since the March trough. This is despite continued dramatic outflows from safe-haven, but low-yielding, money market funds that have favored bond funds rather than equities.

VIX above average, and higher over election

VIX volatility index has fallen from a March peak of over 80. Both spot (26) and 1-mth moving average (27) remain above long-term (19). This is not surprising. In global financial crisis, the VIX did not return to pre-crisis levels

until a year after stock market bottom in March 2009. Also, VIX futures are currently 20% higher than spot over Q4 election period.

Put/call ratio rise

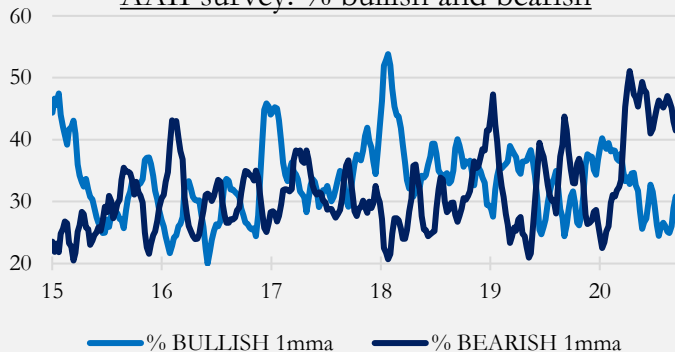
The CBOE put/call ratio was the one indicator to have fully normalised. However, the 1mma has risen to 0.96 from 0.76 last month, suggesting bearish sentiment is building.

Supported by other sentiment measures

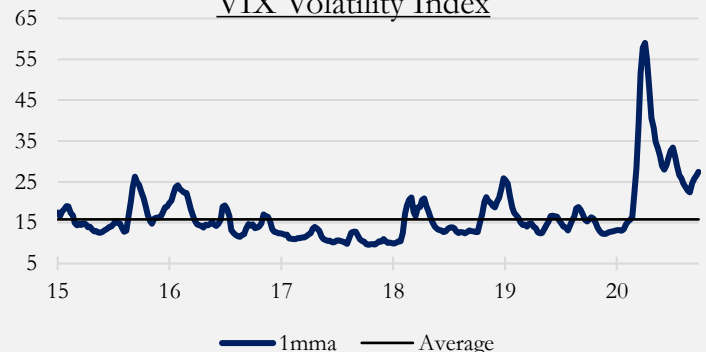
We also sense-check vs four other indicators.

- *US news-based Economic Policy Uncertainty (EPU)* daily index currently at 257 vs crisis peak 500, but still well-above pre-crisis 160.
- *TD Ameritrade Investor Movement Index (IMX)* of retail investor activity. Latest 4.93, midway btw March low 3.90 and pre-crisis high 5.68.
- *NAAIM Exposure Index*, of hedge fund net US equity exposure at latest 55%, vs a March trough low 11% and a pre-crisis high of 99%.
- *Robintrack retail trading barometer*, of activity on the Robinhood site is near a post-crisis low.

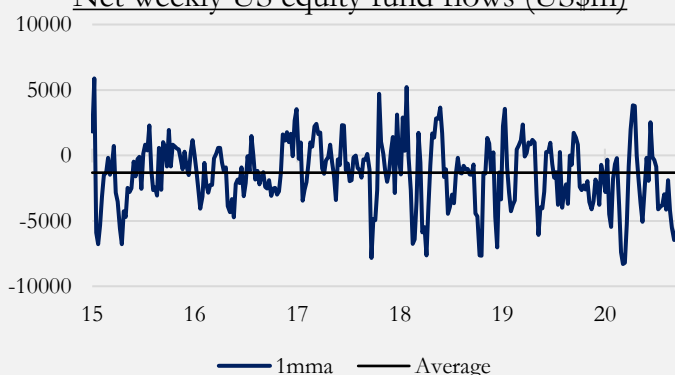
AAII survey: % bullish and bearish



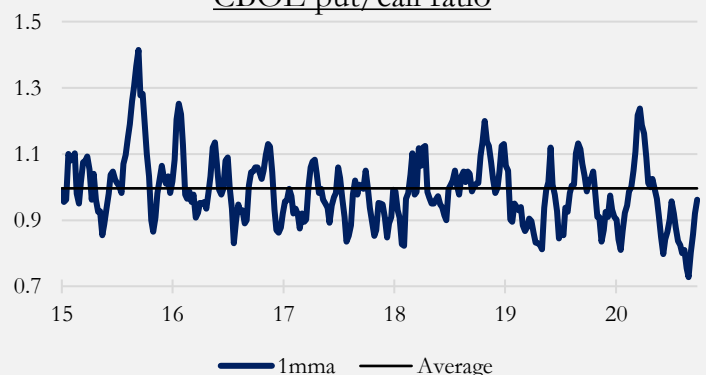
VIX Volatility Index



Net weekly US equity fund flows (US\$m)



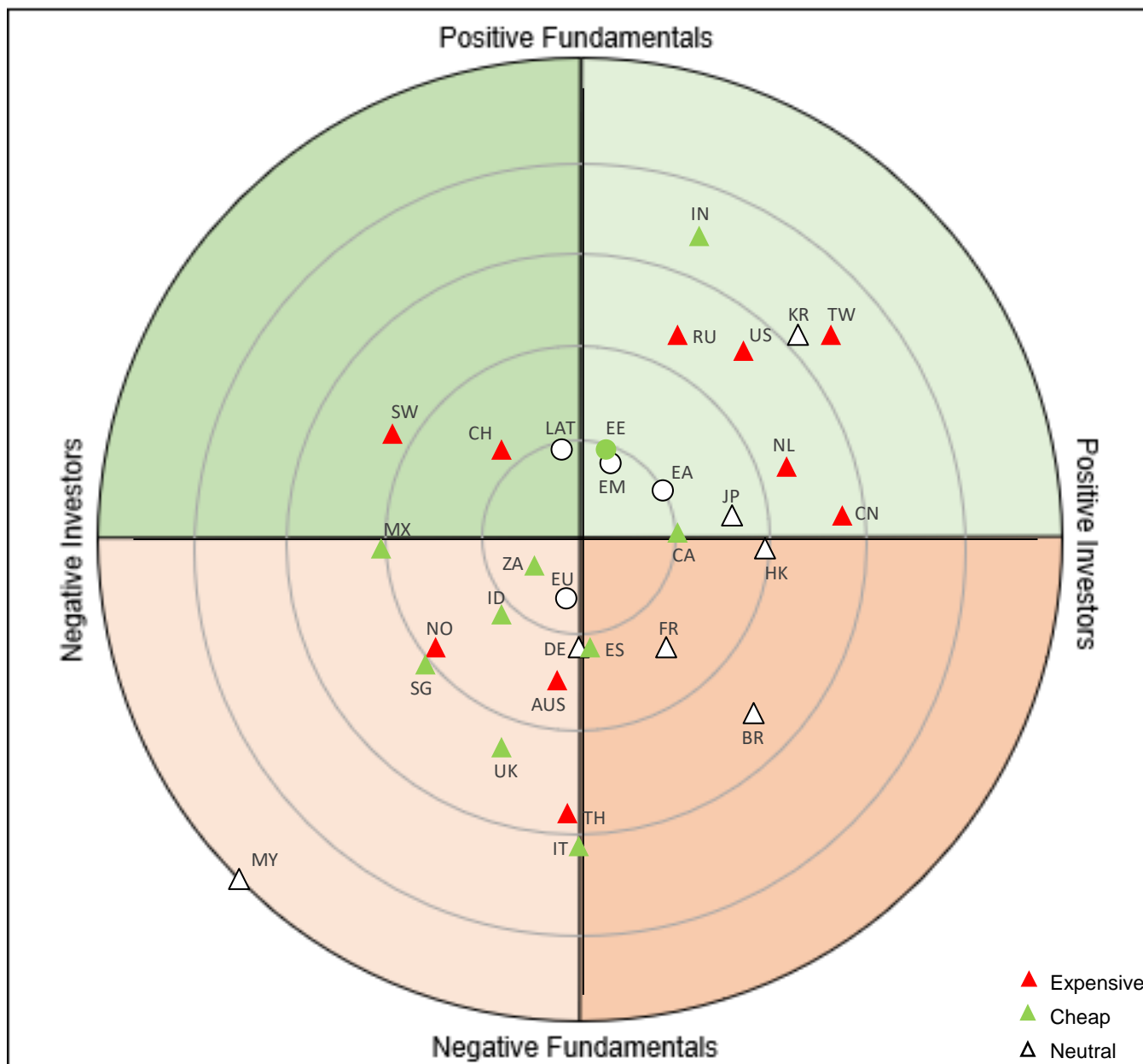
CBOE put/call ratio



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 |



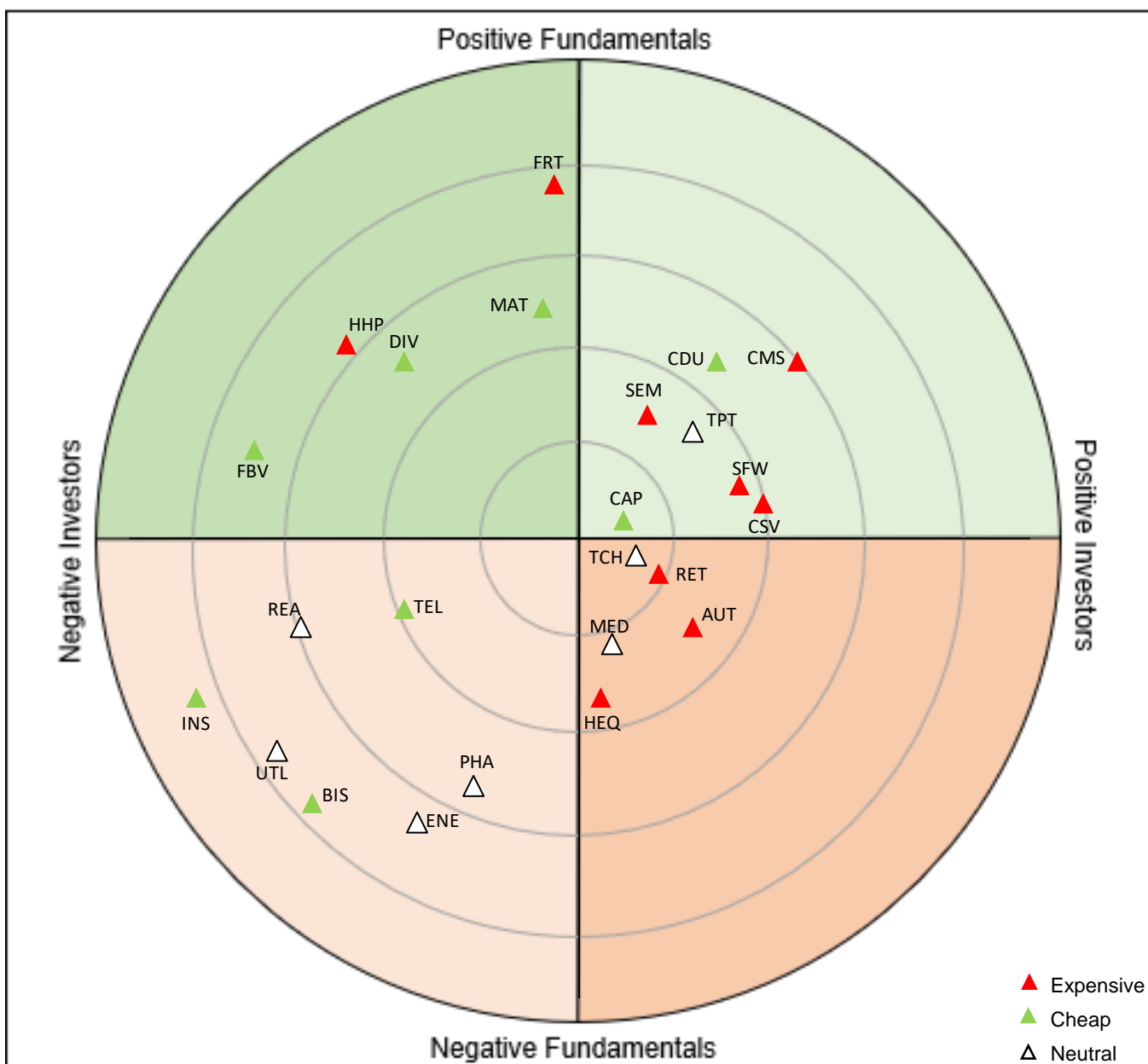
Source: Refinitiv, THR. SEE PAGE 13 FOR FULL METHODOLOGY

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 | XLFI/VFI | Underweight | Utilities | XLU/VPU | Underweight |
| Communications | XLC/VOX | Overweight | Real Estate | XLRE/VNQ | Overweight |
| Discretionary | XLY/VCR | Neutral | Materials | XLB/VAW | Underweight |
| Industrials | XLI/VIS | Overweight | | | |



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

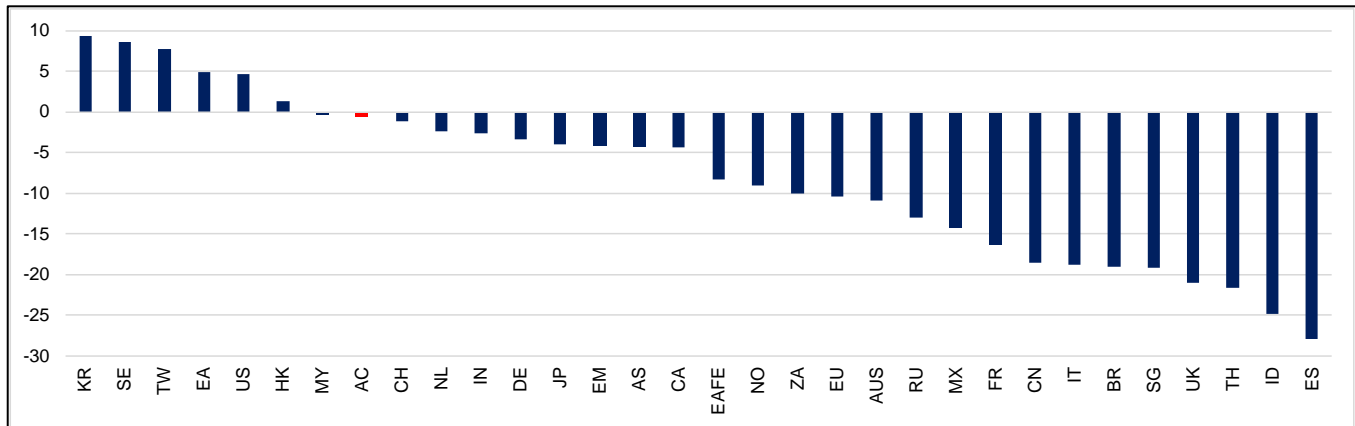
'EYE' ALLOCATION BREAKDOWN

| Country/ Region | Rationale | P/E (x) | | EPS Gr. (%) | |
|---|---|---------|-------|-------------|-------|
| | | 2020e | 2021e | 2020e | 2021e |
|  | United States (Overweight): Remains global equity 'safer haven' despite centre COVID outbreak and upcoming election. Has relatively closed economy and stock market, trend GDP growth into crisis, 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 'momentum' Eye quadrant, with some of world's strongest relative fundamentals, but also some of most optimistic investors. | 26.7 | 21.6 | -16.2 | 24.1 |
|  | Emerging Markets (Neutral): Economic growth vulnerable even before COVID outbreak. USD strength and low oil prices headwinds part reversed. Some of valuation discount structural (governance and cost-of-capital) but rising China and tech weights have boosted structural growth and fair-value. LatAm/CEEMEA now focus of virus, after north Asia (65% EM) control, and have cyclical upside to commodities, PMI, weaker USD. Favor China, EM's largest market, on policy flexibility, resilient GDP/EPS, FIFO on virus, 14x 2021e P/E. | 17.9 | 13.6 | -9.3 | 31.7 |
|  | Eurozone (Neutral): Led global GDP and EPS decline, whilst much of valuation discount vs US is just sector composition. Recession triggered a broader fiscal policy response, whilst ECB help extended. COVID easing and countries reopening, will see large cyclical economic and market upturn. Focus on cheap domestic cyclicals, such as Financials. Risk is impact of stronger EUR on region's globalised and low margin companies. | 22.0 | 15.8 | -33.1 | 39.5 |
|  | Japan (Underweight): 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 to stronger JPY. Domestic stocks underperformed global-exposed peers. | 21.7 | 15.2 | -8.3 | 42.9 |
|  | 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. | 18.2 | 13.3 | -39.4 | 37.2 |
| 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. | 30.8 | 26.9 | 3.7 | 14.8 |
|  | Healthcare (Overweight): Both Healthcare Equipment and Pharma have been slipping on our framework. Remain liked by the market (with multiple rerating and sell-side conviction), and we see 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 | 16.1 | 5.1 | 15.5 |
|  | Financials (Underweight): Diversified and Insurance segments have been improving on allocation framework, whilst Banks remains in value trap quadrant. All are 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, regulatory buyback and dividend restrictions which likely combine to see lagging other Cyclicals in a recovery. Insurance offers the best value in our view, though none of the sector is optically expensive. | 16.8 | 12.8 | -33.2 | 31.4 |
|  | 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. | 27.4 | 22.6 | -12.2 | 20.9 |
|  | 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. | 57.3 | 34.3 | -35.9 | 67.3 |

Source: Refinitiv, THR

REGION/COUNTRY PERFORMANCE & VALUATION

Total Return YTD

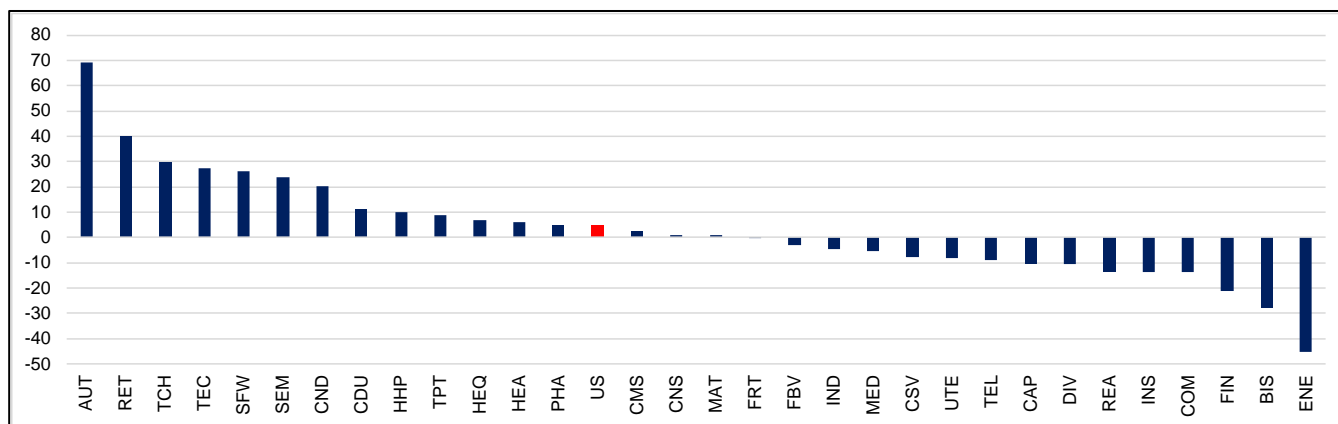


| Index | Abbreviation | Price Performance | | | | PE | | | EPS Growth | |
|-------------------------|--------------|-------------------|--------|-------|---------|-------|-------|-------|------------|--------|
| | | 1D (%) | 1W (%) | 3M(%) | YTD (%) | 2019A | 2020E | 2021E | 2020E | 2021E |
| World | AC | -0.2 | 2.2 | 5.9 | -0.5 | 19.1 | 23.7 | 18.3 | -19.3% | 29.7% |
| EAFE | EAFE | 0.1 | 2.0 | 3.3 | -8.3 | 15.9 | 21.8 | 15.8 | -27.3% | 38.3% |
| Europe | EU | 0.2 | 2.3 | 2.1 | -10.3 | 14.7 | 22.0 | 15.8 | -33.1% | 39.5% |
| Asia | AS | -0.2 | 1.0 | 4.8 | -4.2 | 18.4 | 19.4 | 14.7 | -5.3% | 31.6% |
| Emerging Global Markets | EM | -0.1 | 1.0 | 4.4 | -4.1 | 16.3 | 17.9 | 13.6 | -9.3% | 31.7% |
| Emerging Asia | EA | 0.0 | 1.5 | 6.7 | 5.0 | 18.1 | 18.0 | 14.4 | 0.7% | 24.8% |
| Australia | AUS | 0.0 | -1.7 | -0.5 | -10.8 | 19.6 | 19.9 | 17.3 | -1.2% | 14.9% |
| Brazil | BR | -1.2 | -3.5 | -1.1 | -19.0 | 13.3 | 27.8 | 12.0 | -52.2% | 131.3% |
| Canada | CA | -0.2 | 0.3 | 4.9 | -4.4 | 14.7 | 20.9 | 15.8 | -29.6% | 32.3% |
| China | CN | -1.3 | -2.1 | -3.6 | -18.5 | 16.8 | 16.7 | 14.0 | 0.3% | 19.4% |
| France | FR | -0.3 | 0.6 | -0.9 | -16.3 | 14.4 | 26.2 | 15.9 | -45.1% | 64.4% |
| Germany | DE | -0.2 | 1.3 | 4.2 | -3.4 | 16.4 | 23.0 | 15.2 | -29.0% | 51.3% |
| Hong Kong | HK | -0.6 | -1.2 | 4.2 | 1.3 | 15.3 | 20.8 | 15.5 | -26.4% | 34.1% |
| India | IN | -0.1 | 1.8 | 10.9 | -2.6 | 24.3 | 27.1 | 19.0 | -10.2% | 42.7% |
| Indonesia | ID | -0.9 | -1.5 | -2.4 | -24.8 | 15.0 | 20.4 | 15.5 | -26.5% | 31.7% |
| Italy | IT | -0.6 | -0.1 | -1.8 | -18.8 | 10.5 | 20.6 | 13.1 | -49.0% | 58.0% |
| Japan | JP | 0.4 | -0.5 | 6.3 | -4.0 | 19.9 | 21.7 | 15.2 | -8.3% | 42.9% |
| Korea | KR | 0.8 | -0.1 | 10.9 | 9.3 | 19.5 | 16.7 | 11.7 | 17.0% | 42.4% |
| Malaysia | MY | -0.4 | 1.8 | 3.6 | -0.2 | 17.6 | 22.3 | 16.3 | -21.2% | 37.1% |
| Mexico | MX | -0.1 | 3.5 | 0.0 | -14.2 | 14.1 | 21.2 | 12.7 | -33.3% | 67.3% |
| Netherlands | NL | -0.1 | 1.3 | 1.9 | -2.4 | 20.4 | 22.8 | 19.0 | -10.4% | 19.8% |
| Norway | NO | -0.1 | 0.0 | 6.0 | -9.1 | 13.9 | 19.7 | 14.6 | -29.5% | 34.7% |
| Russia | RU | -0.8 | -0.2 | 2.1 | -13.0 | 5.9 | 11.5 | 7.4 | -49.0% | 56.5% |
| Singapore | SG | -0.4 | -0.4 | -3.4 | -19.2 | 11.2 | 16.9 | 12.8 | -33.8% | 32.1% |
| South Africa | ZA | 0.5 | 1.5 | 1.3 | -10.1 | 14.7 | 15.2 | 10.1 | -3.3% | 50.9% |
| Spain | ES | -1.2 | 0.7 | -7.1 | -27.9 | 10.3 | 28.0 | 13.0 | -63.1% | 115.9% |
| Sweden | SE | 0.2 | 2.2 | 12.2 | 8.6 | 16.7 | 21.0 | 17.5 | -20.3% | 19.9% |
| Switzerland | CH | -0.6 | -0.9 | 1.8 | -1.1 | 19.6 | 21.6 | 18.5 | -9.6% | 17.0% |
| Taiwan | TW | 0.1 | -0.4 | 9.3 | 7.7 | 20.7 | 18.7 | 16.4 | 10.5% | 14.0% |
| Thailand | TH | -0.5 | -1.1 | -8.3 | -21.6 | 14.1 | 22.2 | 16.9 | -36.8% | 31.9% |
| United Kingdom | UK | -0.6 | 0.0 | -3.4 | -21.1 | 11.1 | 18.2 | 13.3 | -39.4% | 37.2% |
| United States | US | -0.5 | 0.6 | 8.3 | 4.7 | 22.4 | 26.7 | 21.6 | -16.2% | 24.1% |

Source: MSCI, Refinitiv, THR

US SECTOR PERFORMANCE & VALUATION

Total Return YTD

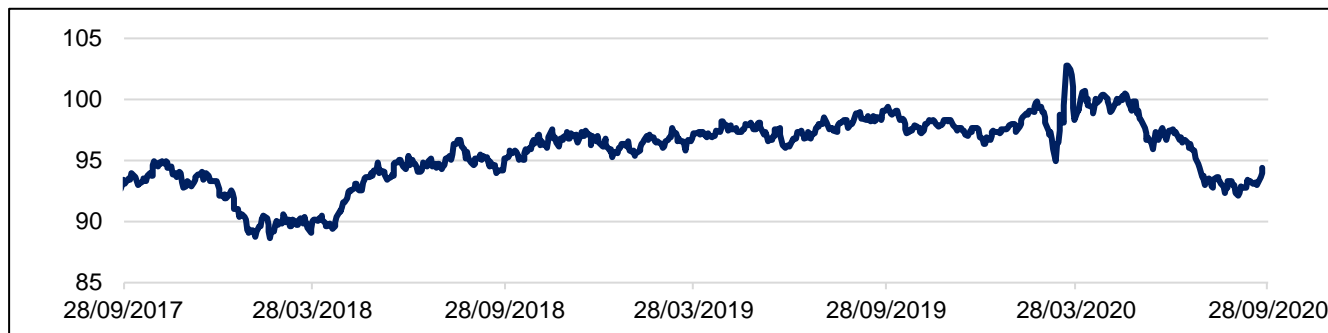


| Index | Abbreviation | Price Performance | | | | PE | | | EPS Growth | |
|-------------------------------|--------------|-------------------|-------------|--------------|--------------|-------------|-------------|-------------|----------------|----------------|
| | | 1D (%) | 1W (%) | 3M(%) | YTD (%) | 2019A | 2020E | 2021E | 2020E | 2021E |
| United States | US | -0.5 | 0.6 | 8.3 | 4.7 | 22.4 | 26.7 | 21.6 | -16.2% | 24.1% |
| Communications | COM | 0.1 | -0.3 | -10.3 | -13.9 | 24.1 | 27.4 | 22.6 | -12.2% | 20.9% |
| Media & Entertainment | MED | -0.7 | -0.7 | 13.9 | -5.6 | 31.0 | 36.7 | 27.8 | -15.5% | 32.2% |
| Telecommunication Svcs | TEL | -0.3 | -0.7 | 2.9 | -9.1 | 11.4 | 12.1 | 11.8 | -6.1% | 2.5% |
| Consumer Discretionary | CND | -0.7 | 0.3 | 17.2 | 20.2 | 36.8 | 57.3 | 34.3 | -35.9% | 67.3% |
| Autos & Components | AUT | -0.6 | -0.4 | 48.6 | 69.1 | 26.9 | 137.3 | 28.4 | -80.4% | 384.3% |
| Consumer Durables & App | CDU | -0.2 | 2.2 | 19.3 | 11.1 | 27.2 | 28.5 | 22.2 | -4.6% | 28.0% |
| Consumer Svcs | CSV | -1.1 | -0.1 | 14.3 | -7.9 | 23.1 | NA | 43.2 | -108.7% | 712.0% |
| Retailing | RET | -0.7 | 0.3 | 14.2 | 39.9 | 47.2 | 48.3 | 36.8 | -2.4% | 31.3% |
| Consumer Staples | CNS | -0.7 | 0.0 | 8.0 | 0.9 | 22.2 | 22.2 | 20.7 | -0.1% | 7.2% |
| Food & Staples Retailing | FRT | -0.6 | -1.3 | 7.1 | 0.0 | 23.5 | 24.1 | 23.1 | -2.3% | 4.0% |
| Food, Bev & Tobacco | FBV | -0.8 | 0.5 | 6.5 | -3.1 | 19.0 | 19.6 | 18.0 | -2.7% | 8.9% |
| Household Products | HHP | -0.6 | -0.1 | 11.2 | 9.9 | 29.4 | 26.3 | 25.0 | 12.1% | 5.0% |
| Energy | ENE | -2.4 | -3.9 | -15.1 | -45.2 | 12.3 | NA | 25.9 | -100.5% | 8872.4% |
| Financials | FIN | -1.0 | 0.4 | 2.2 | -21.2 | 11.3 | 16.8 | 12.8 | -33.2% | 31.4% |
| Banks | BIS | -1.2 | 0.8 | -0.5 | -27.7 | 8.2 | 16.8 | 11.3 | -51.0% | 48.3% |
| Diversified Financials | DIV | -0.8 | 1.5 | -1.4 | -10.7 | 15.2 | 19.6 | 15.6 | -22.2% | 25.6% |
| Insurance | INS | -1.0 | -0.6 | 8.1 | -13.8 | 11.7 | 13.0 | 11.0 | -9.5% | 18.0% |
| Health Care | HEA | 0.0 | 0.9 | 4.8 | 6.0 | 19.5 | 18.6 | 16.1 | 5.1% | 15.5% |
| Health Care Equipment | HEQ | 0.2 | 1.5 | 7.8 | 7.0 | 32.8 | 36.4 | 27.4 | -10.0% | 32.8% |
| Pharmaceuticals | PHA | -0.2 | 0.3 | 1.8 | 4.8 | 16.1 | 15.4 | 13.5 | 4.5% | 14.2% |
| Industrials | IND | -0.7 | 0.8 | 10.5 | -4.5 | 20.8 | 29.2 | 21.2 | -28.6% | 37.4% |
| Capital Goods | CAP | -0.7 | 0.6 | 8.4 | -10.4 | 17.6 | 26.5 | 19.6 | -33.5% | 35.4% |
| Commercial & Prof Svcs | CMS | -0.4 | 1.1 | 6.1 | 2.7 | 32.4 | 33.7 | 29.9 | -3.9% | 12.7% |
| Transportation | TPT | -1.2 | 1.3 | 25.1 | 8.8 | 30.5 | 37.2 | 23.2 | -18.1% | 60.3% |
| Information Technology | TEC | -0.1 | 1.3 | 10.4 | 27.4 | 32.0 | 30.8 | 26.9 | 3.7% | 14.8% |
| Semiconductors | SEM | 0.3 | 3.1 | 13.1 | 23.8 | 21.6 | 21.8 | 18.7 | -0.7% | 16.5% |
| Software & Svcs | SFW | 0.0 | 0.6 | 7.5 | 26.0 | 40.2 | 37.4 | 32.9 | 7.4% | 13.9% |
| Technology Hardware | TCH | -0.2 | 2.3 | 15.7 | 29.9 | 29.0 | 28.4 | 24.8 | 2.2% | 14.6% |
| Materials | MAT | -0.7 | -0.5 | 11.3 | 0.8 | 21.6 | 26.1 | 20.3 | -17.3% | 28.6% |
| Real Estate | REA | -0.8 | 0.8 | 1.6 | -13.6 | 34.7 | 49.1 | 46.2 | -29.3% | 6.2% |
| Utilities | UTE | -0.1 | 1.3 | 4.1 | -8.3 | 17.4 | 18.1 | 17.4 | -4.1% | 4.0% |

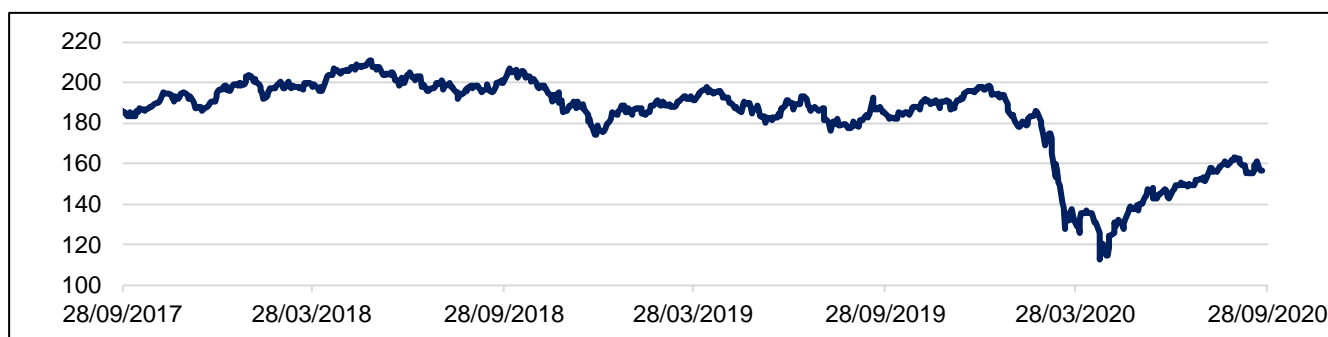
Source: MSCI, Refinitiv, THR

GLOBAL FX, BONDS AND COMMODITIES

DXY USD Index - 3 years



CRB Major Commodity Index* - 3 Years

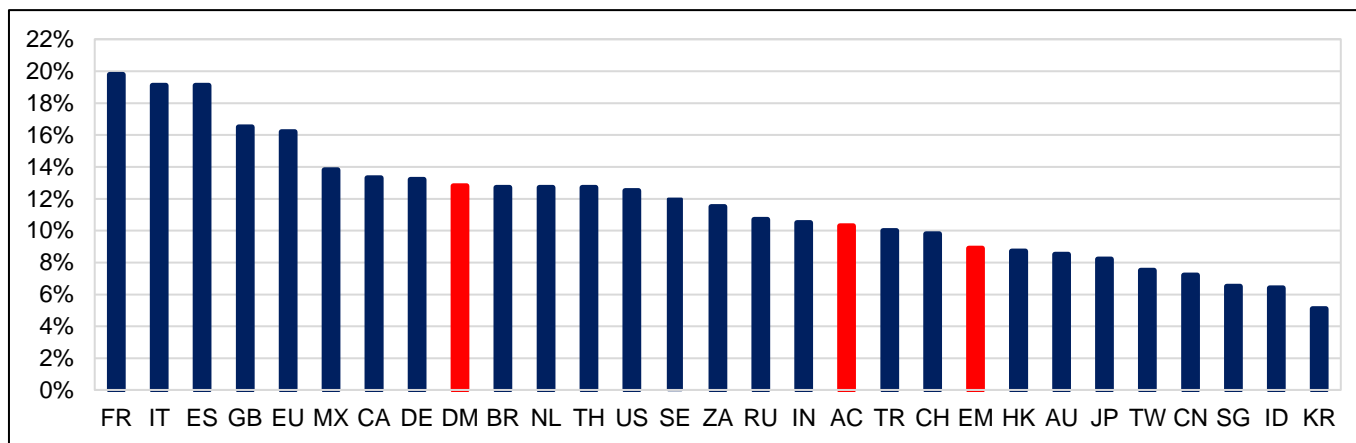


| Name | Currency | Close Price | 1 Day | 1 Week | 1 Month | 3 Months | 1 Year | MTD | QTD | YTD |
|------------------------|----------|-------------|--------|--------|---------|----------|---------|--------|--------|---------|
| Commodities | | - | | | | | | | | |
| CRB Commodity Index | USD | 2553.18 | -0.9% | -1.9% | -5.8% | 5.0% | -11.8% | -5.2% | 3.8% | -17.2% |
| Gold Spot | USD | 1897.69 | 0.9% | -0.1% | -3.4% | 7.1% | 26.8% | -3.7% | 6.6% | 25.1% |
| Copper Spot | USD | 2.98 | -0.2% | -2.5% | -0.4% | 11.3% | 15.5% | -1.9% | 10.0% | 6.8% |
| Brent Crude Spot | USD | 40.36 | -2.5% | -1.0% | -12.0% | -4.2% | -36.3% | -12.2% | -5.1% | -41.5% |
| CRB Agricultural Index | USD | 5208.15 | -0.7% | -0.7% | -2.6% | 12.6% | -3.9% | -1.8% | 11.8% | -9.2% |
| Currencies | | - | | | | | | | | |
| DXY USD Index | USD | 93.89 | -0.4% | -0.1% | 1.6% | -3.7% | -5.3% | 1.9% | -3.6% | -2.6% |
| EUR/USD | USD | 1.17 | 0.7% | 0.3% | -1.4% | 4.5% | 7.4% | -1.6% | 4.5% | 4.7% |
| USD/JPY | JPY | 105.64 | 0.1% | 0.7% | 0.3% | -1.8% | -2.1% | -0.2% | -2.1% | -2.7% |
| GBP/USD | USD | 1.29 | 0.3% | 1.0% | -3.7% | 4.6% | 4.7% | -3.8% | 3.7% | -3.0% |
| USD/CNY | CNY | 6.82 | 0.1% | 0.5% | -0.7% | -3.7% | -4.3% | -0.5% | -3.5% | -2.1% |
| Bond Yields | | - | | | | | | | | |
| DE 10Y BUND | EUR | -0.54 | 3.0% | 8.4% | 32.2% | 15.1% | -6.1% | 36.9% | 17.8% | 189.8% |
| GB 10Y GILT | GBP | 0.19 | -9.3% | -9.8% | -40.9% | 13.5% | -63.0% | -40.9% | 7.6% | -77.6% |
| JP 10Y JGB | JPY | 0.02 | -19.0% | 30.8% | -69.6% | 54.5% | -107.1% | -63.8% | -37.0% | -177.3% |
| US 10Y BILL | USD | 0.65 | -2.7% | -2.9% | -11.5% | 1.4% | -61.4% | -6.9% | -1.2% | -66.2% |
| US 30Y BOND | USD | 1.41 | -1.2% | -0.6% | -6.8% | 1.2% | -33.8% | -3.2% | -0.4% | -40.8% |
| US 10-2 BOND | - | 0.52 | 1.9% | 4.5% | -4.1% | 23.3% | 30.9% | -2.3% | 17.6% | 25.8% |
| Volatility | | - | | | | | | | | |
| CBOE VIX Index | USD | 26.27 | 0.00 | -0.02 | 0.14 | -0.17 | 0.53 | -0.01 | -0.14 | 0.91 |

Source: Refinitiv, THR

MACRO INDICATORS: HISTORIC AND FORECASTS

Forecast Real GDP Growth 'Delta' (2021E % Growth – 2020E)



| | Codes | Nominal GDP 2019 US\$trn | Real GDP (%) | | | Inflation (%) | | | Fiscal Balance (% GDP) | | | Gov Debt (% GDP) | |
|-------------------|-------|-----------------------------|--------------|-------|-------|---------------|-------|-------|------------------------|-------|-------|------------------|-------|
| | | | 2019 | 2020E | 2021E | 2019 | 2020E | 2021E | 2019 | 2020E | 2021E | 2019 | 2020E |
| Americas | | | | | | | | | | | | | |
| US | US | 21.4 | 2.3 | -8.0 | 4.5 | 1.8 | 0.6 | 2.2 | -6.3 | -23.8 | -12.4 | 106 | 110 |
| Canada | CA | 1.7 | 1.7 | -8.4 | 4.9 | 1.9 | 0.6 | 1.3 | -0.3 | -12.6 | -5.8 | 88 | 83 |
| Brazil | BR | 1.9 | 1.1 | -9.1 | 3.6 | 3.7 | 3.6 | 3.3 | -6.0 | -16.0 | -5.9 | 92 | 95 |
| Mexico | MX | 1.3 | -0.3 | -10.5 | 3.3 | 3.6 | 2.7 | 2.8 | -2.3 | -6.0 | -4.0 | 54 | 55 |
| Europe | | | | | | | | | | | | | |
| Eurozone | EU | 18.3 | 1.3 | -10.2 | 6.0 | 1.4 | 0.6 | 1.2 | -0.6 | -11.7 | -5.3 | 80 | 78 |
| Germany | DE | 3.9 | 0.6 | -7.8 | 5.4 | 1.3 | 0.3 | 1.2 | 1.5 | -10.7 | -3.1 | 59 | 53 |
| UK | GB | 2.7 | 1.4 | -10.2 | 6.3 | 1.8 | 1.2 | 1.5 | -2.1 | -12.7 | -6.7 | 86 | 85 |
| France | FR | 2.7 | 1.5 | -12.5 | 7.3 | 1.3 | 0.3 | 0.7 | -3.0 | -13.6 | -7.1 | 99 | 99 |
| Italy | IT | 2.0 | 0.3 | -12.8 | 6.3 | 0.6 | 0.2 | 0.7 | -1.6 | -12.7 | -7.0 | 133 | 134 |
| Spain | ES | 1.4 | 2.0 | -12.8 | 6.3 | 0.7 | -0.3 | 0.7 | -2.8 | -13.9 | -8.3 | 96 | 94 |
| Netherlands | NL | 0.9 | 1.8 | -7.7 | 5.0 | 2.7 | 0.5 | 1.2 | 1.6 | -6.2 | -2.1 | 49 | 46 |
| Switzerland | CH | 0.7 | 0.9 | -6.0 | 3.8 | 0.4 | -0.4 | 0.6 | 0.9 | -5.1 | -1.9 | 39 | 36 |
| Sweden | SE | 0.5 | 1.2 | -6.8 | 5.2 | 1.7 | 0.5 | 1.5 | 0.4 | -5.3 | -1.6 | 37 | 34 |
| Russia | RU | 1.6 | 1.3 | -6.6 | 4.1 | 4.5 | 3.1 | 3.0 | 1.9 | -5.5 | -3.9 | 17 | 18 |
| Turkey | TR | 0.7 | 0.9 | -5.0 | 5.0 | 15.2 | 12.0 | 12.0 | -5.3 | -8.4 | -7.5 | 30 | 32 |
| Asia | | | | | | | | | | | | | |
| China | CN | 14.1 | 6.1 | 1.0 | 8.2 | 2.9 | 3.0 | 2.6 | -6.3 | -12.1 | -10.7 | 56 | 65 |
| Hong Kong | HK | 0.4 | -1.2 | -4.8 | 3.9 | 2.9 | 2.0 | 2.5 | -1.4 | -7.0 | 0.0 | 0 | 0 |
| Japan | JP | 5.2 | 0.7 | -5.8 | 2.4 | 0.5 | 0.2 | 0.4 | -2.8 | -7.1 | -2.1 | 238 | 238 |
| India | IN | 2.9 | 4.2 | -4.5 | 6.0 | 4.5 | 3.3 | 3.6 | -7.9 | -12.1 | -9.4 | 69 | 68 |
| Korea | KR | 1.6 | 2.0 | -2.1 | 3.0 | 0.4 | 0.3 | 0.4 | 0.4 | -3.6 | -2.4 | 40 | 46 |
| Australia | AU | 1.4 | 1.8 | -4.5 | 4.0 | 1.6 | 1.4 | 1.8 | -3.9 | -8.6 | -8.4 | 42 | 41 |
| Indonesia | ID | 1.1 | 5.0 | -0.3 | 6.1 | 2.8 | 2.9 | 2.9 | -2.2 | -6.3 | -5.0 | 30 | 30 |
| Taiwan | TW | 0.6 | 2.7 | -4.0 | 3.5 | 0.5 | 0.5 | 1.5 | NA | NA | NA | 34 | 31 |
| Thailand | TH | 0.5 | 2.4 | -7.7 | 5.0 | 0.7 | -1.1 | 0.6 | -0.8 | -3.5 | -1.7 | 42 | 44 |
| Singapore | SG | 0.4 | 0.7 | -3.5 | 3.0 | 0.6 | -0.2 | 0.5 | 3.8 | -3.5 | 1.8 | 114 | 115 |
| Other | | | | | | | | | | | | | |
| South Africa | ZA | 0.4 | 0.2 | -8.0 | 3.5 | 4.1 | 2.4 | 3.2 | -6.3 | -14.8 | -11.0 | 60 | 68 |
| World | | | | | | | | | | | | | |
| Developed Markets | DM | 51.7 | 1.7 | -8.0 | 4.8 | 1.4 | 0.5 | 1.5 | -3.3 | -16.6 | -8.3 | 103 | 104 |
| Emerging Markets | EM | 34.9 | 3.7 | -3.0 | 5.9 | 3.2 | 3.0 | 2.9 | -4.9 | -10.6 | -8.5 | 53 | 58 |
| World | AC | 86.6 | 2.9 | -4.9 | 5.4 | 3.6 | 3.0 | 3.3 | | | | | |

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

[SEPTEMBER 29: WATCH THE GDP REVISIONS](#)

[SEPTEMBER 28: NEARING THE HOME STRETCH](#)

[SEPTEMBER 25: BREXIT LOOMS](#)

[SEPTEMBER 24: FAANGM LEADING THE SELL-OFF](#)

[SEPTEMBER 23: IMPORTANCE OF SHORT-SELLERS](#)

[SEPTEMBER 22: THE WORLD'S BIGGEST LAGGARD](#)

[SEPTEMBER 21ST: THE NEW VIRUS STAND-OFF](#)

[SEPTEMBER 18: LA NINA AGRICULTURAL CATALYST](#)

[SEPTEMBER 17: WHAT ETF'S ARE TELLING US](#)

[SEPTEMBER 16: THE BROADENING EARNINGS RECOVERY](#)

[SEPTEMBER 15: THE DIVIDEND RECOVERY](#)

[SEPTEMBER 14: CENTRAL BANKS IN FOCUS](#)

[SEPTEMBER 11: WHERE LOCKDOWNS COULD BE CHANGED](#)

[SEPTEMBER 10: NASDAQ CORRECTION OPPORTUNITIES](#)

[SEPTEMBER 09: DON'T BLAME THE LITTLE GUY](#)

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.