The debt constraint

Tuesday, March 02

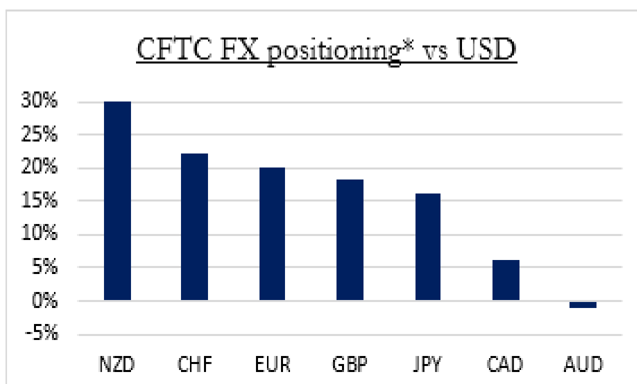
S&P surged yesterday, led by tech, on stabilizing bond yields. Concerns may remain but measured yield increase historically equity positive. We see a strong cyclical catch-up, and IT resilience. HOT TOPICS Global debt continues to soar, to record 350%/GDP, putting focus on sensitivity to rise in funding cost. +50bps equal to 2%/GDP. Focus on well controlled contagion channels incl. financial conditions, credit spreads, and denominator with rising GDP and EPS outlook.

S&P 500 largest gain in nine-mths yesterday, erasing bond tantrum losses. Rebound led by tech, whilst yields stabilized and VIX dropped 16%. Inflation and yield uncertainty to linger as growth outlook strengthens, with more fiscal stimulus and vaccine rollout. Modest yield rises (<10bps month) equity positive, and strong earnings to more than offset inevitable lower valuations. **See cyclicals catch-up and IT resilience.** Asia fell as China bank regulator warned on foreign bubble risks, whilst Europe and US futures eased this morning. **See latest views on yesterday' Bloomberg The Close (from '49:25).**

Key Markets Performance Table

Index	Level	1D	1W	YTD
S&P500	3811.2	2.4%	0.7%	3.9%
ACWI xUS	55.5	2.3%	-1.0%	4.6%
DXY USD	91.0	0.2%	1.1%	1.2%
US 10Y YLD	1.45	-0.7%	5.6%	58.6%
Brent Spot	66.7	-0.2%	3.5%	31.1%
Gold Spot	1723.1	-0.6%	-4.7%	-9.1%

Central Banks intervene. Authorities begun to respond to higher yields, flexing some of policy flexibility to moderate increase. Yesterday Australia' RBA stepped up bond purchases to defend yield curve control target of 0.1% for 3-yr bonds. ECB vice president



Source: CFTC, THR. * to February 23rd

HIGHLIGHTS FROM REST OF DOC

- Hot Topics on **Debt Constraint**. Global debt record 350%/GDP, putting focus on sensitivity to funding cost rise. +50bps = 2%/GDP. Focus contagion channels and rising denominator.
- **What to watch**: Little data today after reassuring EU inflation. OPEC+ and payrolls later in wk.
- **Country and Sector 'Eye':** Favor US and EM, and cyclicals/value 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	3811.2	2.4%	0.7%	3.9%
NASDAQ	13283.0	3.0%	0.4%	5.4%
Russell 2000	2275.3	3.4%	1.1%	15.2%
US IT	491.9	3.0%	0.9%	4.7%
US Healthcare	415.7	1.4%	-0.3%	1.8%
US Financials	221.5	3.0%	1.8%	14.4%

Events to Watch

Indicator	Period	Forecast	Last
Retail Sales MM, DE	Jan	-0.21	-9.60
Unemployment Rate, DE	Feb	5.96	6.00
House Prices YY, UK	Feb	5.57	6.40
HICP YY, EU	Feb	0.91	0.90

said rise in yields unwarranted and ECB needs to push back using flexibility embedded in its bond purchase program. Fed officials continued to downplay inflation concerns. **We see inflation expectations overdone, and more modest bond yield increases as equity positive.**

Stable USD caution. USD DXY Index supported by higher bond yields and near-term wider GDP differences (see Pg. 10). USD bearishness stable at c16% of open G10 positions vs 24% high (front chart net CFTC longs vs USD) with JPY longs reduced, and GBP positioning increasing further on vaccine rollout. **We see modest USD weakness ahead** on still lower-for-longer US rates and rebounding global GDP, helping EM, commodities, and intl. US sectors (tech), but a headwind to EU/Japan' globalised and lower-margin co's.

CERAWeek. World' largest energy conference returns, after miss last yr. on covid. Faces resurgent US$60/bbl+ brent, and mounting energy transition questions as more countries and co's announce 'net zero' targets, and the move to carbon pricing accelerates. Jan. 27, *The real cost of carbon*. Energy is best performing, and 3rd smallest global sector, and **still very out-of-favor on our allocation framework.** We are neutral-weighted, focused on dividend-paying majors. Large cap ETF XLE +30% YTD, and small cap PSCE +52%.

FX, Fixed Income, Commodities

Index	Level	1D	1W	YTD
DXY USD Index	91.0	0.2%	1.1%	1.2%
EUR/USD	1.20	-0.2%	-0.9%	-1.4%
US 10Y YLD	1.45	-0.7%	5.6%	58.6%
US 10-2 BOND	1.32	14.5%	-1.3%	56.9%
CBOE VIX Index	23.4	-16.5%	0%	3%
CRB Index	3564.7	2.1%	0.3%	15.1%

Sector Views

S&P 500 soared, led by IT (+3.2%) and financials (+3.2%), whilst real estate (+0.2%) and staples (+1.0%) lagged. **Coupang who?** South Korea e-commerce retail giant Coupang seeking upto US$50bn valuation in upcoming US IPO, in biggest of year. Korean e-commerce mkt. est. at US$90bn last year, up 22% yoy. **Small Caps led rebound** yesterday, +3.4%. We are positive, as big beneficiary of growth surprise, with dramatic EPS catch up, as more domestic, cyclical, and leveraged. ETF IWM +15% YTD, and +54 1-yr. Largest stocks Plug Power, GameStop, Penn National, Novavax. See Feb. 12, *Small Cap focus*.

What to Watch

Yesterday saw Feb. **US Mfg. ISM rise further** to a 3-yr.high 60.8 vs prior 58.7, driven by new orders outlook, and with employment gauge also rising. Svcs. due later in week seen easing to 58.4. **EU core inflation dropped** from 1.4% to 1.1% in Feb., driven by slowing goods inflation and to lesser degree by slowing services, relieving some pressure on market inflation and yield expectations. Light data today with OPEC+ US payrolls later in wk.

HOT TOPICS

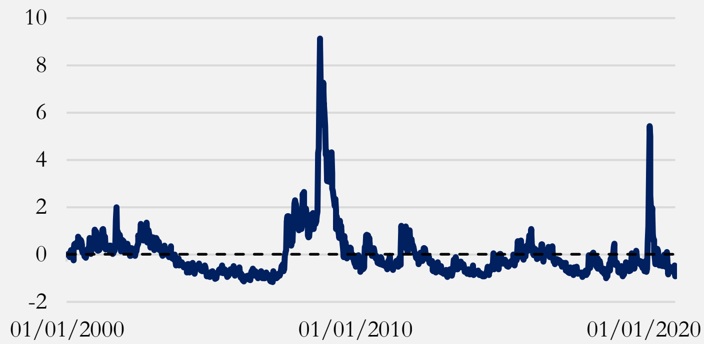
THE DEBT CONSTRAINT

Global debt continues to soar, to record 350%/GDP, putting focus on sensitivity to any rise in funding cost, with +50bps equal to 2%/GDP. Focus on key contagion channels incl. financial conditions indices and credit spreads, and sharply improving denominator, with rising GDP and earnings expectations. Will keep policy-makers v. focused on managing exit.

Debt at all time high

Global debt increased 10% or US$24trn last year, led by gov's, according to IIF. Took gov., corp., financial, and h'hold debt to US$281trn or c350%/GDP, with gov's and corps. over 100%. See Dec. 2nd, *Turning the debt tables*. This increase is well over GFC levels, set to continue increasing, and raises rate and yield sensitivity, even as increasing inflation is easiest way to cut.

St Louis Financial Stress Index



Source: FRED, THR

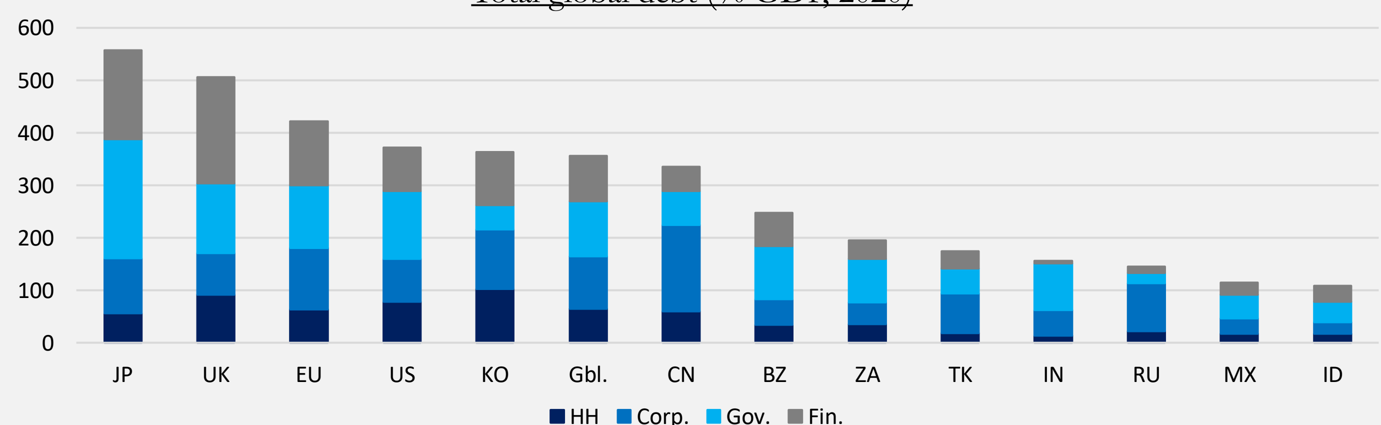
Exposure to bond market tantrum

Despite these debt levels, policy rates, financing costs, and financial stress measures are low, and the GDP and profits rebound underway, helped by vaccine visibility. Much corp. debt increase been precautionary. Housing strength, increased savings, and some deleveraging supports h'hold balance sheets. Should allow some broad deleveraging in future. Risk an early rise in policy rates or current bond yield overshoot, with – very simplistically - a 50bps increase in interest rate on global debt load equal to c2% of GDP, a potentially big growth drag.

Where the debt sits

Japan has highest overall debt per IIF, at 556%/GDP, led by world's highest gov. debt (227%/GDP), whilst China leads corp. debt (165%/GDP), and Switz. highest household debt (144%/GDP), with Korea (102%) also noteworthy elsewhere. Higher US yields and a stronger USD are possible EM debt headwinds.

Total global debt (% GDP, 2020)



Source: IIF, THR

Fed been in the driving seat

Fed provided huge support to debt markets, helping lower financial stress indicators, such as St Louis Fed composite financial stress index (0='normal' conditions). Has helped US HY bond yield spread vs IG fall from 5.8% April peak to current 2.5%, dramatically quicker than GFC. This has been a key support for our 'Reopeners' and small caps equity overweight.

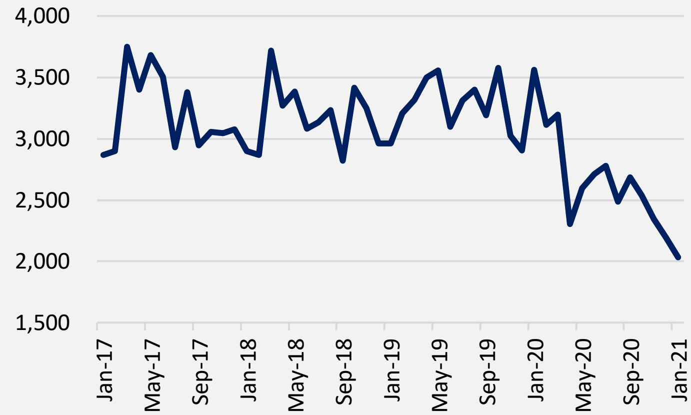
Recovering GDP and earnings upside

Credit support is coming from sharply better earnings outlook on policy support, GDP rebound, and overly-cut expectations. US Q4 EPS beat forecasts by near-record 17pp, led by most depressed sectors, discretionary and energy. 12m fwd. global earnings are forecast +25% this year, with upside risk. Global GDP to rebound +5.5% (IMF). We are also seeing co's beginning to restore dividends, another sign of improved outlook and visibility. See Feb. 18th, *End of the earnings recession*.

EM risks remain, but idiosyncratic

EM debt/GDP at 78% is well below DM 204% and has been rising less, constrained by lower fiscal flexibility whilst ability to raise further USD debt limited by FX weakness. However, whilst overall current account and FX mismatches less than during 2013 taper-tantrum individual sensitivities remain.

US Bankruptcy Fillings*



Source: EPIQ, THR. * Chapters 11, 7, 13, 15

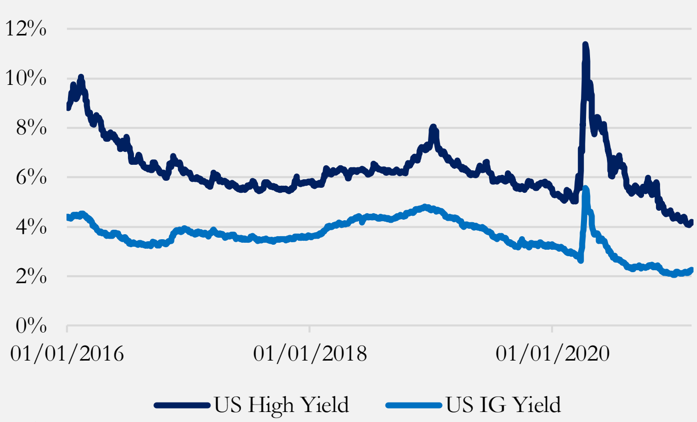
Risk of premature end to support

Fiscal support has been crucial to many corporates, and default and bankruptcy rates have been surprisingly low (see above chart), putting focus on timing and degree of policy stimulus withdrawal.

Three high-debt policy implications

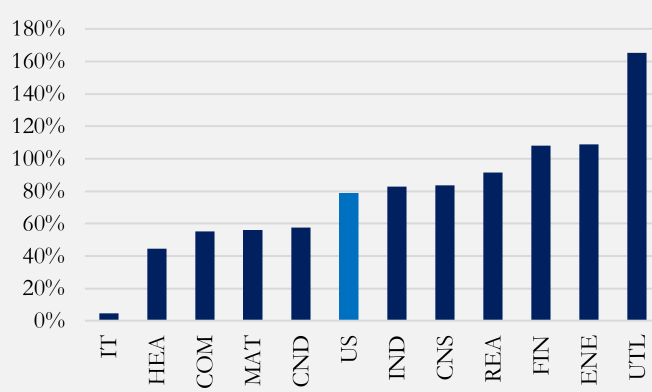
1) High debt will continue pressure for lower-for-longer policy rates and drive central bank response to large yield rise or curve steepening.
2) Will keep focus on cash flows and earnings returning to pre-pandemic levels before withdrawal of extraordinary policy stimulus.
3) Substantial portion of debt funded by banks (esp. in EU and China). Are well capitalised and able to absorb losses but regulators focus to remain on buyback and dividends.

US HY and IG Bond Yields



Source: FRED, THR.

2021E Net Debt / Equity %

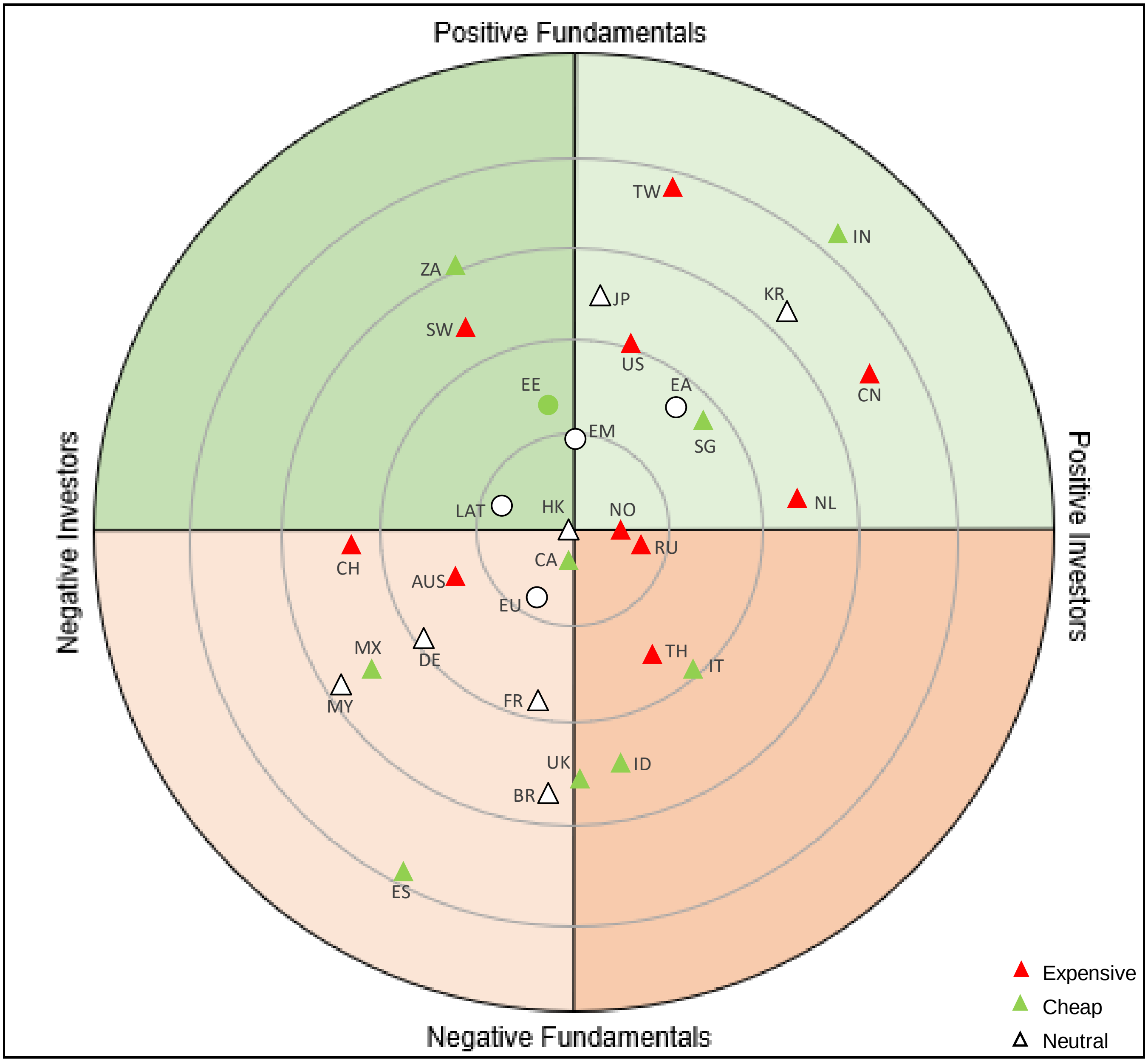


Source: Refinitiv, THR.

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	Overweight	**Canada**	S&P/TSX	Overweight
Eurozone	EUROSTOXX	Neutral	**Switzerland**	SMI	Neutral
Japan	TOPIX	Underweight	**Australia**	S&P/ASX	Neutral



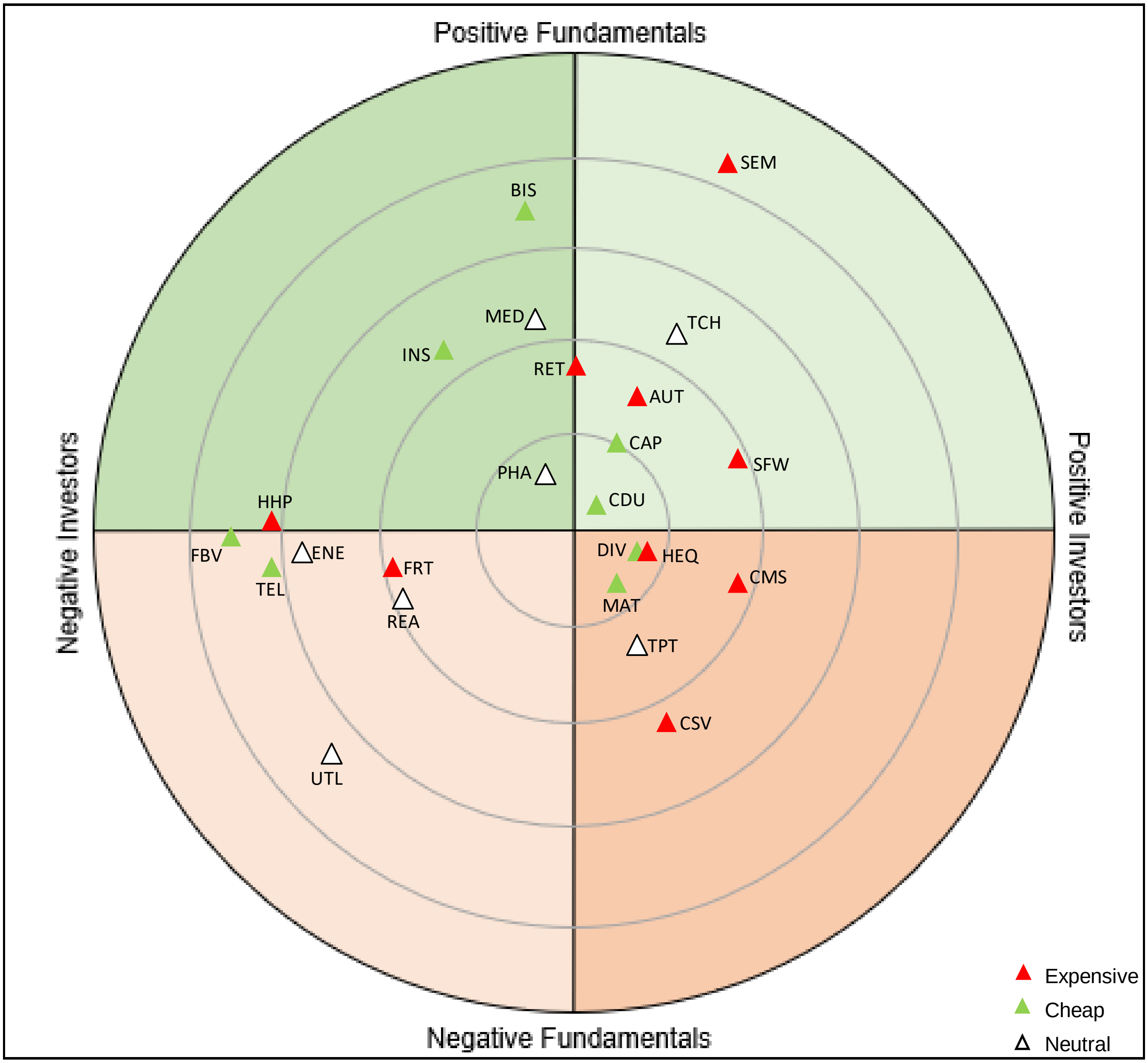
Source: Refinitiv, THR. SEE PAGE 13 FOR FULL METHODOLOGY

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, SW=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	Underweight	**Energy**	XLE/VDE	Neutral
Financials	XLF/VFH	Overweight	**Utilties**	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

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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

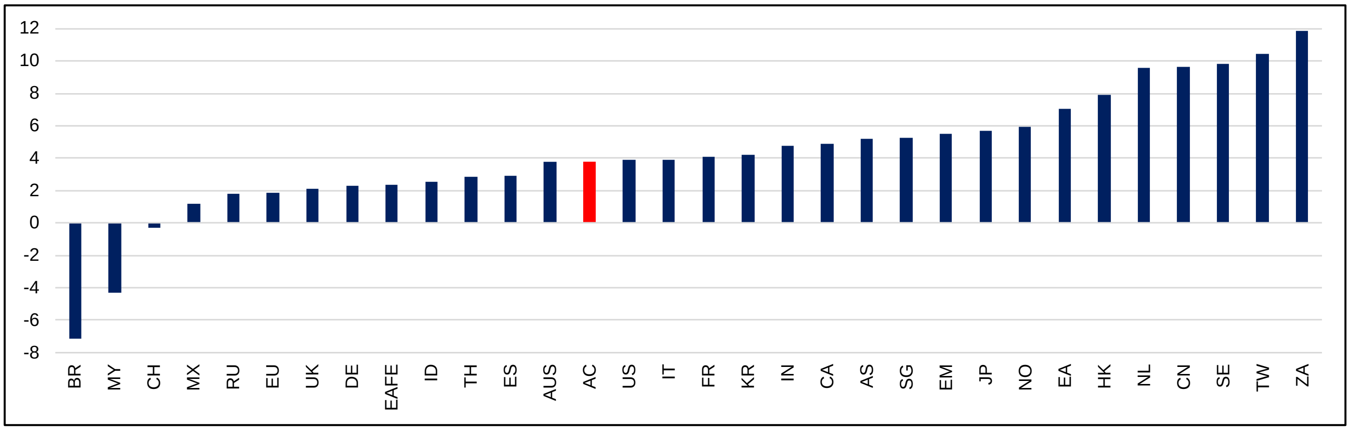
'EYE' ALLOCATION BREAKDOWN

Country/ Region	Rationale	P/E (x)		EPS Gr. (%)	
		2020e	2021e	2020e	2021e
	United States (Overweight): Remains global equity 'safer haven' despite centre COVID outbreak. Has relatively closed economy and stock market, growth and 'tech'-focused equity market, unprecedented policy response with unlimited QE and initial 15%/GDP fiscal stimulus. Valuations fundamentally supported by tech, tax, and UST. Earnings expectations well-supported. Is in 'momentum' Eye quadrant, with some of world's strongest relative fundamentals, but also some of most optimistic investors.	27.9	22.8	-9.7	22.5
	Emerging Markets (Overweight): We are focused on cyclical components, such as LatAm/CEEMEA, alongside more 'structural' north Asia overweight. Recent outperformance has a lot further to go after decade of under-performance, with GDP, earnings, valuations, currencies, and ownership all depressed, with room for a sharp 2021 recovery as gain vaccine-led growth visibility. Frontier and EM proxies (such as Canada/Spain) also attractive. Key is accelerating earnings turn-around, which is currently weak.	21.9	16.2	-6.0	35.2
	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.	23.7	17.2	-30.1	37.7
	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.	23.9	17.5	-3.7	36.8
	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 Brexit impacts (after 'lite' goods-focused Brexit deal), 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.	20.9	14.1	-38.2	48.0
US Sector	**Rationale**	**P/E (x)**		**EPS Gr. (%)**	
		2020e	2021e	2020e	2021e
	Information Technology (Overweight): See resilient to cyclicals catch up (not rotation) given still strong long-term growth and financial flexibility and still relatively well positioned on allocation framework. Software in attractive 'momentum' quadrant. Valuations average but supported by net-cash and high RoE, giving buyback and M&A flexibility. Tech Hardware (Neutral) less well positioned, but beneficiary of easing growth concerns.	34.7	29.1	6.2	19.5
	Healthcare (Neutral): Both Healthcare Equipment and Pharma have been slipping on our framework, and sector remain liked by the market (with multiple rerating and sell-side conviction). We see quality growth vulnerable at this stage, with market less rewarding of defensive cash flows, less EPS cyclicality and domestic revenue focus. Seeing Federal support to combat COVID. Similar to Tech, seeing accelerated adoption drivers.	19.5	17.0	9.2	14.5
	Financials (Neutral: All segments been improving on allocation framework, and remain out of favour with market, with strong fund outflows and valuation derating. Fundamental outlook improving with higher bond yields, GDP recovery, and less regulatory capital restrictions. However, likely 'caps' on how high bond yields can go and less EPS operating leverage than cyclicals are constraints.. Insurance offers the best value in our view, though none of the sector is optically expensive.	16.2	13.2	-18.5	23.3
	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..	27.6	24.4	-2.4	12.9
	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.	56.7	37.3	-24.0	51.9

Source: Refinitiv, THR

REGION/COUNTRY PERFORMANCE & VALUATION

Total Return YTD

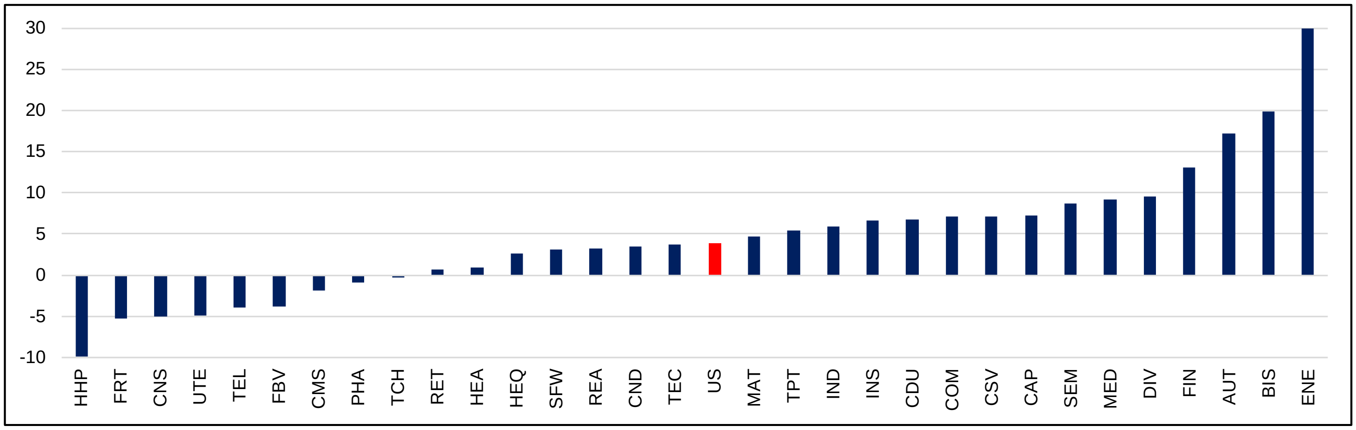


		Price Performance				PE			EPS Growth	
Index	**Abbreviation**	**1D (%)**	**1W (%)**	**3M(%)**	**YTD (%)**	**2019A**	**2020E**	**2021E**	**2020E**	**2021E**
World	**AC**	**2.0**	**-0.5**	**7.5**	**3.8**	**21.9**	**25.6**	**19.8**	**-14.6%**	**28.9%**
EAFE	**EAFE**	**1.4**	**-1.6**	**5.7**	**2.4**	**18.0**	**24.0**	**17.5**	**-24.7%**	**37.0%**
Europe	**EU**	**1.1**	**-0.9**	**5.6**	**1.9**	**16.6**	**23.7**	**17.2**	**-30.1%**	**37.7%**
Asia	**AS**	**1.8**	**-2.8**	**8.9**	**5.2**	**22.5**	**22.8**	**17.6**	**-1.2%**	**30.0%**
Emerging Global Markets	**EM**	**1.7**	**-2.5**	**10.7**	**5.5**	**20.6**	**21.9**	**16.2**	**-6.0%**	**35.2%**
Emerging Asia	**EA**	**1.8**	**-2.8**	**11.9**	**7.0**	**23.3**	**22.1**	**17.7**	**5.3%**	**25.3%**
Australia	AUS	1.8	0.4	3.5	3.7	23.9	21.3	18.8	12.4%	13.0%
Brazil	BR	0.4	-1.9	-0.2	-7.2	16.2	36.8	11.4	-56.0%	222.9%
Canada	CA	1.4	-0.5	5.2	4.9	15.8	20.8	16.1	-24.1%	28.7%
China	CN	3.2	-3.4	9.4	9.6	21.0	20.6	17.4	1.8%	18.4%
France	FR	1.6	0.4	3.1	4.1	16.3	29.4	17.9	-44.7%	64.0%
Germany	DE	1.6	0.0	5.9	2.3	17.7	22.9	16.3	-22.8%	40.5%
Hong Kong	HK	1.0	-1.5	10.7	7.9	17.3	23.5	17.9	-26.4%	31.6%
India	IN	1.5	0.7	13.9	4.8	30.4	30.2	22.3	0.6%	35.9%
Indonesia	ID	2.6	2.2	3.2	2.6	17.3	23.0	17.4	-24.9%	32.1%
Italy	IT	1.9	1.7	4.0	3.9	11.5	21.0	13.6	-45.4%	55.1%
Japan	JP	2.0	-2.1	7.1	5.7	23.0	23.9	17.5	-3.7%	36.8%
Korea	KR	0.0	-1.8	16.0	4.2	27.8	22.2	15.1	25.6%	46.3%
Malaysia	MY	-0.9	-0.7	-4.1	-4.3	18.0	22.5	13.5	-19.9%	66.4%
Mexico	MX	0.4	-0.6	6.8	1.2	18.0	25.8	15.0	-30.3%	72.5%
Netherlands	NL	2.3	-1.6	13.1	9.6	27.1	29.8	24.9	-9.2%	19.9%
Norway	NO	1.9	2.6	6.1	5.9	15.9	21.6	15.8	-26.1%	36.8%
Russia	RU	1.4	-1.2	6.8	1.8	6.9	12.9	8.1	-46.4%	59.0%
Singapore	SG	1.1	3.2	4.6	5.3	13.2	21.3	14.6	-38.2%	46.6%
South Africa	ZA	2.7	-0.5	14.0	11.9	17.5	17.2	11.2	1.8%	52.8%
Spain	ES	1.7	2.8	1.8	2.9	12.0	21.4	15.6	-44.1%	37.0%
Sweden	SE	2.3	1.3	7.7	9.8	19.0	24.2	19.3	-21.2%	25.3%
Switzerland	CH	1.8	-0.2	1.8	-0.3	20.9	22.5	19.5	-7.1%	15.1%
Taiwan	TW	0.0	-4.1	18.5	10.4	27.2	22.2	19.4	22.7%	14.6%
Thailand	TH	0.6	2.3	2.0	2.9	16.5	26.7	20.1	-38.2%	32.7%
United Kingdom	UK	1.5	-0.3	3.3	2.1	12.9	20.9	14.1	-38.2%	48.0%
United States	US	2.4	0.5	7.6	3.9	25.2	27.9	22.8	-9.7%	22.5%

Source: MSCI, Refinitiv, THR

US SECTOR PERFORMANCE & VALUATION

Total Return YTD

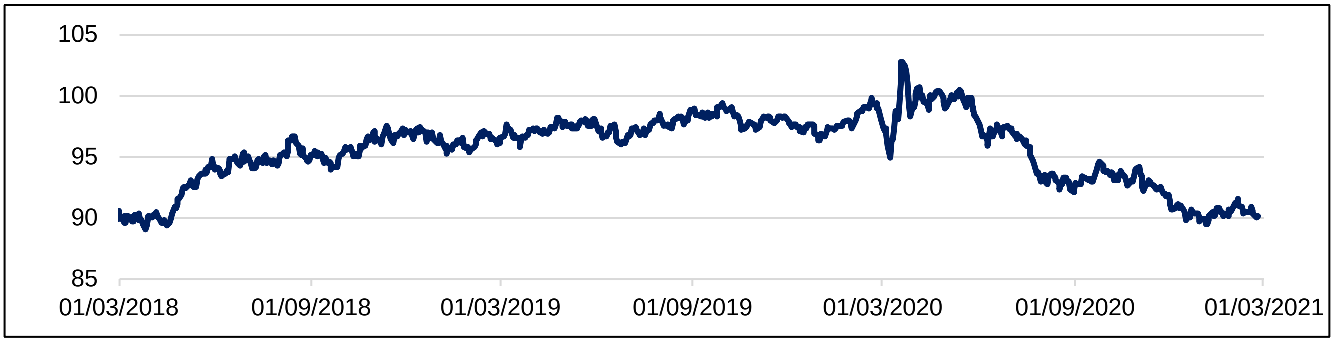


		Price Performance				PE			EPS Growth	
Index	**Abbreviation**	**1D (%)**	**1W (%)**	**3M(%)**	**YTD (%)**	**2019A**	**2020E**	**2021E**	**2020E**	**2021E**
United States	**US**	**2.4**	**0.5**	**7.6**	**3.9**	**25.2**	**27.9**	**22.8**	**-9.7%**	**22.5%**
Communications	**COM**	**2.4**	**1.3**	**9.7**	**7.1**	**26.9**	**27.6**	**24.4**	**-2.4%**	**12.9%**
Media & Entertainment	MED	2.6	1.8	12.7	9.2	35.6	36.1	30.4	-1.5%	18.9%
Telecommunication Svcs	TEL	0.9	-1.7	-5.3	-4.0	11.2	11.7	11.4	-4.1%	2.0%
Consumer Discretionary	**CND**	**2.3**	**-0.3**	**5.4**	**3.4**	**43.1**	**56.7**	**37.3**	**-24.0%**	**51.9%**
Autos & Components	AUT	2.8	0.0	22.9	17.2	56.1	88.6	44.6	-36.7%	98.4%
Consumer Durables & App	CDU	2.2	0.7	9.2	6.7	31.4	26.9	21.0	16.5%	28.4%
Consumer Svcs	CSV	0.9	2.2	10.7	7.1	24.3	NA	60.3	-114.6%	NA
Retailing	RET	1.9	-1.5	2.3	0.7	49.7	46.7	37.0	6.5%	26.1%
Consumer Staples	**CNS**	**1.0**	**-1.7**	**-3.7**	**-5.1**	**22.4**	**21.5**	**20.3**	**4.0%**	**6.1%**
Food & Staples Retailing	FRT	0.8	-3.8	-7.2	-5.3	25.2	24.6	24.3	2.3%	1.3%
Food, Bev & Tobacco	FBV	1.2	-1.0	-0.5	-3.8	19.2	18.8	17.7	2.3%	6.4%
Household Products	HHP	0.5	-2.0	-9.9	-9.9	27.7	24.6	22.6	12.6%	9.0%
Energy	**ENE**	**2.7**	**3.6**	**28.6**	**30.0**	**14.8**	**NA**	**25.8**	**-108.6%**	**NA**
Financials	**FIN**	**3.1**	**1.8**	**17.6**	**13.0**	**13.2**	**16.2**	**13.2**	**-18.5%**	**23.3%**
Banks	BIS	3.1	1.6	26.2	19.9	10.3	15.2	11.8	-32.3%	28.9%
Diversified Financials	DIV	3.4	2.3	13.7	9.6	17.5	18.6	15.6	-5.7%	19.2%
Insurance	INS	2.5	1.1	9.1	6.6	12.8	14.0	11.5	-8.5%	21.2%
Health Care	**HEA**	**1.3**	**0.0**	**5.2**	0.9	**21.3**	**19.5**	**17.0**	**9.2%**	**14.5%**
Health Care Equipment	HEQ	1.7	0.6	8.0	2.6	35.7	36.2	27.5	-1.4%	31.4%
Pharmaceuticals	PHA	0.5	-1.0	4.0	-0.9	16.8	15.8	14.1	6.4%	12.1%
Industrials	**IND**	**2.6**	**1.8**	**6.5**	**5.9**	**23.2**	**30.2**	**23.1**	**-23.3%**	**31.0%**
Capital Goods	CAP	2.9	2.2	7.9	7.2	20.1	28.8	22.2	-30.2%	29.6%
Commercial & Prof Svcs	CMS	2.6	-0.6	0.6	-1.9	35.1	34.3	31.0	2.5%	10.6%
Transportation	TPT	1.8	1.4	4.6	5.5	32.4	33.1	22.7	-1.9%	45.7%
Information Technology	**TEC**	**3.2**	**1.4**	**10.5**	**3.7**	**36.9**	**34.7**	**29.1**	**6.2%**	**19.5%**
Semiconductors	SEM	2.8	1.3	14.3	8.7	27.1	25.5	21.8	6.3%	17.0%
Software & Svcs	SFW	2.4	1.0	7.3	3.1	43.8	40.7	34.5	7.5%	17.9%
Technology Hardware	TCH	4.7	1.6	11.5	-0.3	35.3	33.8	27.3	4.4%	23.6%
Materials	**MAT**	**2.7**	**-0.1**	**6.8**	**4.7**	**23.7**	**25.8**	**19.9**	**-8.2%**	**29.3%**
Real Estate	**REA**	**0.3**	**-1.9**	**3.8**	**3.2**	**35.7**	**50.7**	**49.3**	**-29.7%**	**2.9%**
Utilities	**UTE**	**2.1**	**-1.0**	**-5.9**	**-4.9**	**17.7**	**18.5**	**18.0**	**-4.4%**	**2.8%**

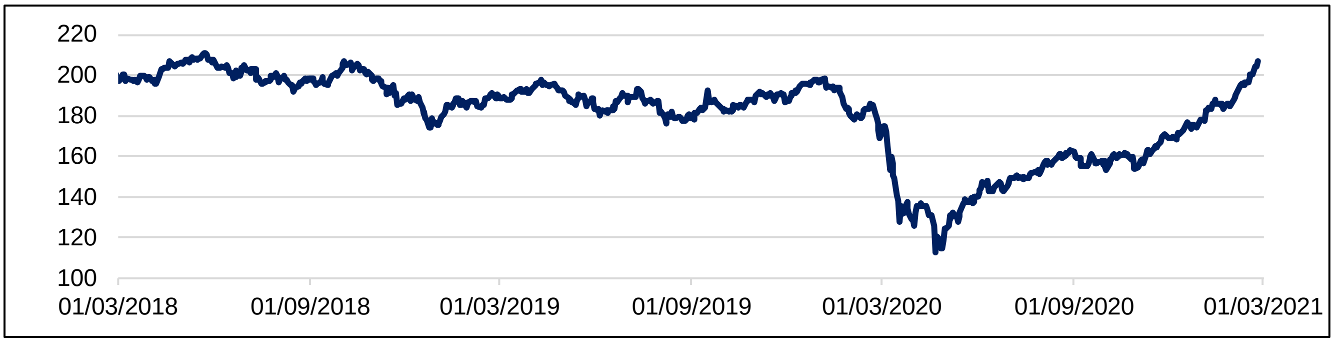
Source: MSCI, Refinitiv, THR

GLOBAL FX, BONDS AND COMMODITIES

DXY USD Index - 3 years



CRB Major Commodity Index* - 3 Years

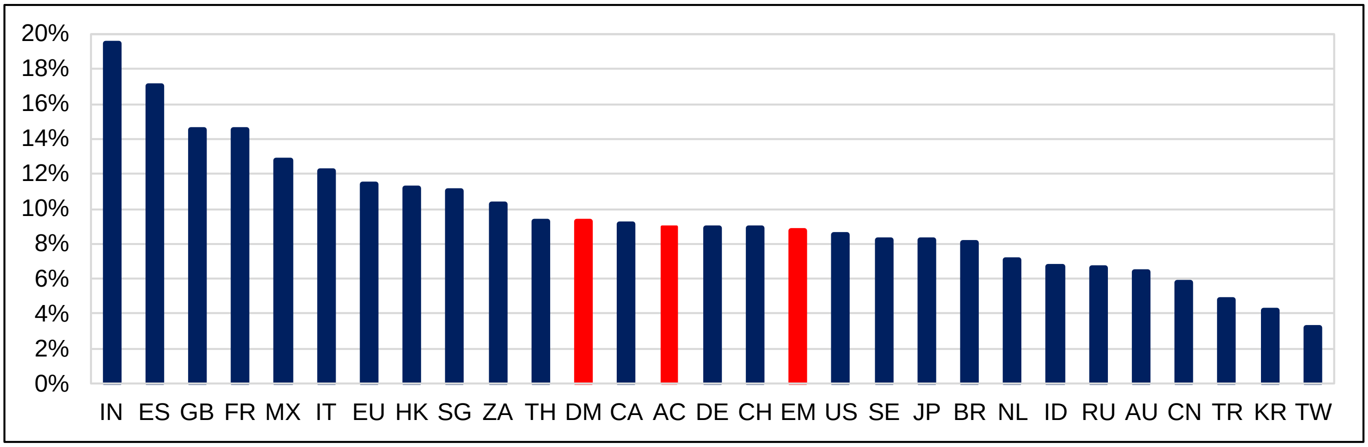


Name	Currency	Close Price	1 Day	1 Week	1 Month	3 Months	1 Year	MTD	QTD	YTD
Commodoties	-									
CRB Commodity Index	USD	3564.73	2.1%	0.3%	11.6%	19.7%	39.7%	2.1%	15.1%	15.1%
Gold Spot	USD	1723.10	-0.6%	-4.7%	-7.3%	-5.0%	8.8%	-0.6%	-9.1%	-9.1%
Copper Spot	USD	4.12	0.6%	-0.8%	15.7%	18.8%	61.8%	0.6%	17.2%	17.2%
Brent Crude Spot	USD	66.70	-0.2%	3.5%	18.7%	41.9%	27.5%	-0.2%	31.1%	31.1%
CRB Agricultural Index	USD	7148.04	2.2%	0.4%	9.9%	18.7%	46.1%	2.2%	14.9%	14.9%
Currencies	-									
DXY USD Index	USD	91.04	0.2%	1.1%	0.1%	-0.3%	-7.2%	0.2%	1.2%	1.2%
EUR/USD	USD	1.20	-0.2%	-0.9%	-0.1%	-0.2%	9.3%	-0.2%	-1.4%	-1.4%
USD/JPY	JPY	106.75	0.2%	1.6%	1.8%	2.3%	-1.2%	0.2%	3.4%	3.4%
GBP/USD	USD	1.39	-0.1%	-1.0%	1.9%	3.8%	8.6%	-0.1%	1.8%	1.8%
USD/CNY	CNY	6.46	-0.1%	0.0%	0.0%	-1.6%	-7.5%	-0.1%	-0.9%	-0.9%
Bond Yields	-									
DE 10Y BUND	EUR	-0.34	29.6%	-3.8%	-35.1%	-36.5%	-45.2%	29.6%	-42.1%	-42.1%
GB 10Y GILT	GBP	0.76	-7.9%	11.6%	135.7%	117.5%	71.7%	-7.9%	287.2%	287.2%
JP 10Y JGB	JPY	0.13	-9.7%	28.4%	148.3%	645.0%	-197.4%	-9.7%	609.5%	609.5%
US 10Y BILL	USD	1.45	-0.7%	5.6%	34.3%	54.8%	28.4%	-0.7%	58.6%	58.6%
US 30Y BOND	USD	2.22	1.8%	1.9%	20.3%	32.5%	33.2%	1.8%	35.3%	35.3%
US 10-2 BOND	-	1.32	14.5%	-1.3%	23.5%	84.1%	114.4%	14.5%	56.9%	56.9%
Volatility	-									
CBOE VIX Index	USD	23.35	-0.16	0.00	-0.23	0.12	-0.42	-0.16	0.03	0.03

Source: Refinitiv, THR

MACRO INDICATORS: HISTORIC AND FORECASTS

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



	Codes	Nominal GDP 2019 US$trn	Real GDP (%) 2019	Real GDP (%) 2020E	Real GDP (%) 2021E	Inflation (%) 2019	Inflation (%) 2020E	Inflation (%) 2021E	Fiscal Balance (% GDP) 2019	Fiscal Balance (% GDP) 2020E	Fiscal Balance (% GDP) 2021E	Gov Debt (% GDP) 2019	Gov Debt (% GDP) 2020E
Americas													
US	US	21.4	2.2	-3.4	5.1	1.8	1.5	2.8	-6.3	-18.7	-8.7	109	131
Canada	CA	1.7	1.7	-5.5	3.6	1.9	0.6	1.3	-0.3	-19.9	-8.7	89	115
Brazil	BR	1.9	1.1	-4.5	3.6	3.7	2.7	2.9	-6.0	-16.8	-6.5	90	101
Mexico	MX	1.3	-0.3	-8.5	4.3	3.6	3.4	3.3	-2.3	-5.8	-3.4	54	66
Europe													
Eurozone	EU	18.3	1.7	-7.2	4.2	1.4	0.8	1.2	-0.6	-9.7	-4.8	79	95
Germany	DE	3.9	0.6	-5.4	3.5	1.3	0.5	1.1	1.5	-8.2	-3.2	60	73
UK	GB	2.7	1.5	-10.0	4.5	1.8	0.8	1.2	-2.2	-16.5	-9.2	85	108
France	FR	2.7	1.5	-9.0	5.5	1.3	0.5	0.6	-3.0	-10.8	-6.5	98	119
Italy	IT	2.0	0.3	-9.2	3.0	0.6	0.1	0.6	-1.6	-13.0	-6.2	135	162
Spain	ES	1.4	2.0	-11.1	5.9	0.7	-0.2	0.8	-2.8	-14.1	-7.5	96	123
Netherlands	NL	0.9	1.7	-4.1	3.0	2.7	1.2	1.5	1.7	-8.8	-4.9	48	59
Switzerland	CH	0.7	1.2	-5.3	3.6	0.4	-0.8	0.0	1.5	-4.2	-1.4	42	49
Sweden	SE	0.5	1.3	-4.7	3.5	1.6	0.8	1.4	0.4	-5.9	-2.0	35	42
Russia	RU	1.6	1.3	-3.6	3.0	4.5	3.2	3.2	1.9	-5.3	-2.6	14	19
Turkey	TR	0.7	0.9	1.2	6.0	15.2	11.9	11.9	-5.6	-7.9	-7.9	33	42
Asia													
China	CN	14.1	6.1	2.3	8.1	2.9	2.9	2.7	-6.3	-11.9	-11.8	53	62
Hong Kong	HK	0.4	-1.2	-7.5	3.7	2.9	0.3	2.4	-1.5	-11.8	-6.6	0	0
Japan	JP	5.2	0.7	-5.1	3.1	0.5	-0.1	0.3	-3.3	-14.2	-6.4	238	266
India	IN	2.9	4.2	-8.0	11.5	4.8	4.9	3.7	-8.2	-13.1	-10.9	72	89
Korea	KR	1.6	2.0	-1.1	3.1	0.4	0.5	0.9	0.4	-3.2	-2.3	42	48
Australia	AU	1.4	1.8	-2.9	3.5	1.6	0.7	1.3	-3.9	-10.1	-10.5	46	60
Indonesia	ID	1.1	5.0	-1.9	4.8	2.8	2.1	1.6	-2.2	-6.3	-5.5	31	39
Taiwan	TW	0.6	2.7	0.0	3.2	0.5	-0.1	1.0	-1.8	-4.7	-3.2	33	36
Thailand	TH	0.5	2.4	-6.6	2.7	0.7	-0.4	1.8	-0.8	-5.2	-4.9	41	50
Singapore	SG	0.4	0.7	-6.0	5.0	0.6	-0.4	0.3	3.8	-10.8	1.2	130	131
Other													
South Africa	ZA	0.4	0.2	-7.5	2.8	4.1	3.3	3.9	-6.3	-14.0	-11.1	62	79
World													
Developed Markets	DM	51.7	1.7	-4.9	4.3	1.4	0.8	1.6	-3.3	-14.2	-6.8	104	124
Emerging Markets	EM	34.9	3.7	-2.4	6.3	5.1	5.0	4.7	-4.8	-10.4	-8.8	52	61
World	AC	86.6	2.8	-3.5	5.5	3.5	3.2	3.4					

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.

	Historic										Forecasts	
United States	**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

	Historic										Forecasts	
Germany	**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

	Historic										Forecasts	
China	**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	Trailling 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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