

Focal Point

Chinese regulatory crack-down: consequences for investors

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Our Focal Point series explores topical issues on macro, markets and investment

- China's authorities have recently introduced a wide range of regulatory tightening measures. More are likely to come. The unifying theme is a new focus on "common prosperity", implying a less beneficial environment for capital markets.
- While regulatory uncertainty and falling earnings justify a major share of the Chinese market rout, we see signs of the market's reaction being overdone. Chinese A-shares are starting to look attractive within global equity universe.
- Short term, we remain cautious on the MSCI China (slight UW) amid persistent regulatory uncertainty and weaker post-pandemic growth prospects but see an upside potential in the mid-term. We favour A shares, though, because of more appealing valuations and lower regulatory pressure due to sector composition. Preferred sectors are Comm/Prof. services, Materials, Utilities, Cons. Services and Energy.

China has recently introduced a flurry of regulatory tightening measures. Upon their very diverse topics, markets have first grappled with finding a common theme which also could provide a rationale for an outlook. High-tech and especially internet platforms have been a major focus in at least three dimensions, regarding: 1) monopolistic behaviour (curbed competition on their platforms and strategic M&A), 2) data security of personal information and national security issues of cross border data flows, 3) flexible employees protection. However, China's government also cracked down on fintech, profit school tutoring, crypto-currency, and carbon emissions. Of late, also 'post-work drinking', 'harmful karaoke' as well as video-gaming came under pressure which provoked some media to dub China a 'nanny state'. The regulations follow previous efforts regarding the deleveraging of the economy, the housing sector and local government debt.

What is behind the regulatory tightening?

In our view, the dominant unifying theme is that the Chinese Communist Party (CCP) does not want to "lose touch with ordinary people". While viewed from the outside, per capita income has been a success story, the [FT rightly describes the widespread mood](#) that urban "lives have become riddled with anxieties that belie the broader sense of progress – from seemingly unattainable home prices to the [...] best education for their children" [...] and parental worries that "kids will grow tired of the race and seek refuge in the world of video games and the internet." Thus, for the CCP to remain unchallenged in its dominant societal role, it needs to fulfil 'the people's demand for a happier life'.

On a more abstract level, China is recalibrating its developing- targets from "growth first" to a broader "growth

and sustainability” spectrum. After four decades of a strong focus on quantitative expansion, China has eliminated absolute poverty. According to the 14th Five-year Plan, the new stage of development pursues the goal of “common prosperity” or “getting rich together”. Social inequality is especially visible against the new “internet tycoons” and President Xi called to “regulate excessively high incomes and encourage high-income groups and enterprises to return more to society” Antitrust, competition policies and preventing excessive private data collection are means to avoid monopoly rents. Accordingly, the internet platforms have become a prime target. They developed much faster than regulations and generated very high incomes. Improving social mobility is another dimension and access to education is one of its important drivers. Therefore, in the CCP view, it must not depend on the parents’ ability to pay for additional tutoring.

We expect more regulations to come

We interpret the recent release of 2021-25 blueprint for building “a law-based government” as a strong hint, that regulations will go deeper: The blueprint was jointly issued in mid-August by the CCP Central Committee and the State Council, showing its high importance. It covers:

- a better coordination among different agencies and sufficient consultation with the private sector,
- strengthening the regulatory framework in people’s vital interests (food, drugs, public health, natural resources, safe production, labour protection, city management, transportation, financial services and education),
- ensuring healthy development in emerging sectors like digital economy, fintech, AI, big data, cloud computing.

Thus, instead of the recent shock therapy, consultations may mean that markets will get better informed and prepared.

Increased policy support but no full reflation cycle

We consider the regulatory tightening measures a fundamental shift. In the short run, they will add uncertainty to investment projects and may thus work as an additional economic headwind, on top of the recent Covid-19 outbreak and the recent weak activity and monetary data. In the long run, tackling inequality issues may help strengthening private demand. However, given the triple headwinds, we expect growth to come in on the weak side in Q3. This should prompt some policy easing. We expect the PBoC to cut the RRR by 50 bps and to improve liquidity via its medium-term lending facility. While the odds of a rate cut are rising, we see the People’s Bank of China (PBoC) to still resort to targeted instead of global measures. Moreover, fiscal policy is able to play a larger role, even within the deficit bounds set by the National People’s Congress (NPC). Total government bond

issuance reached only 36% of the allowed quota so far and thus can be stepped up. However, we do not expect a full-fledged reflation cycle. Limiting the non-financial sector debt, maintaining control over local government shadow debt as well as deleveraging the real estate sector remain important targets.

MSCI China cleaning out past exuberant valuation

In response to recent regulatory clampdown in July, the MSCI China came under further pressure, falling since then by 17%, while less tech-heavy A-shares increased (+2%). Versus the recent peak in mid-February, Chinese equities have lost 28% and 2%, respectively.

Indeed, as of mid-February we had a neutral stance as a result of:

- an absolute as well as relative expensive valuation of the MSCI China, including a significant premium of China IT (around +35%) vs the corresponding US IT,
- concerns about China’s economic slowdown and a poor M2 trend,
- weaker EM revisions, with prices overshooting earnings trend in the short term.



In mid-February, our fair value indicator (12-month forward earnings / 10-year yields) for the MSCI China showed an overvaluation of 35%, which has dropped to a current 7% after the recent market rout.

MSCI China not as cheap as in previous market troughs

To estimate the severity of the current market sell-off we resorted to the framework using a number of factors:

- Drawdown showing a peak-to-trough decline after major market events specified (s. complete table in the appendix),
- theoretical market’s fair value measured by the index 12-month forward earnings / 10-year yields,

- valuations based on 12-month forward PE and PBV (both in absolute and relative terms vs the US),
- change in the risk premium,
- price and earnings trends of China IT vs US IT.

| MSCI China & A-Shares Market Corrections (20 episodes since 1997) | | | | | | | | | |
|---|------------|----------------|------------------------|------------------------|-----------------------------|-----------------------------|------------------|-------------------------|--------------------------|
| Period | Index | Peak to Trough | 12M fwd P/E change (%) | 12M fwd P/B change (%) | rel. 12M fwd P/E change (%) | rel. 12M fwd P/B change (%) | ERP Change (bps) | Starting Fair Value Gap | Fair Value Gap at Trough |
| Regulation Crackdown (from Feb. 21) | MSCI China | -26% | -26% | -28% | -22% | -33% | 231 | -35 | -7 |
| | A-Shares | -2% | -14% | -7% | -10% | -14% | 159 | -19 | -1 |
| Overall Historical Average | MSCI China | -30% | -30% | -25% | -22% | -18% | 306 | -6 | 31 |
| | A-Shares | -12% | -17% | -16% | -8% | -8% | 172 | -17 | 2 |
| 9 Corrections from -20% to -40% | MSCI China | -26% | -27% | -27% | -19% | -20% | 284 | -4 | 31 |
| | A-Shares | -11% | -18% | -17% | -10% | -9% | 156 | -21 | -4 |

Performances are in Prices; PE = Price/Earnings 12M forward; PB = Price/Book 12M forward; ERP = Earnings 12M forward/Price - 10Y Yield; Fair Value Indicator = 12M FW EPS / (10Y Rate + α); Value Gap = % diff. between Fair Value and Price; Negative Value Gap = Downside Risk;
Source: Datastream, GIAM calculations

MSCI China's pullback this year has still not fully reached the levels commensurate with the average drawdown of other relevant events we have selected since 1998. Thus, for the MSCI China, the average drawdown was -30% as compared to the current one of -26%.

Special attention deserves the market development in 2018, in which tightened regulations on healthcare, online gaming and private education became effective. The drawdown at that time was even slightly harder at -33% and -28% for the MSCI China and A-shares, respectively.

Similar observations are valid for other factors. For example, PE for the MSCI Index has derated on average by 30%, while it has decreased by 26% so far. A-shares' PE has suffered less: -14% vs -17% of historical norm.

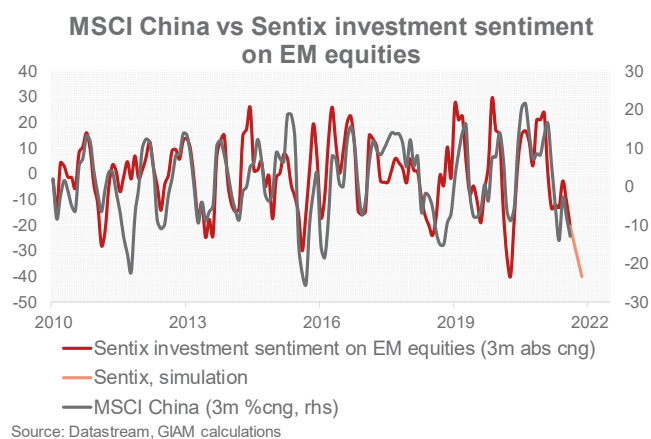
downside of nearly 10%-12%, should the Sentix reach the cited cyclical bottom.

Furthermore, notwithstanding the huge negative regulation newsflow, the political uncertainty index has lingered at the bottom of the cycle: a possible upturn would hit markets as past history shows. Valuation is starting to look cheap, even after discounting lower potential growth in the next years due to ageing population, decreasing labour force and government interventionism in private firms (potentially leading to a decline in capital inflows). Indeed, in our stress test of considerably lower earnings growth and targeted CAPE (cyclically-adjusted PE) level versus history, we could still expect an annual total return (TR) of around 5%-6% for the next decade.

A-shares relatively more appealing

As to the Shanghai A-share index, its current valuation as well as the experienced drawdown vs the historical average represent two factors, which induce us to favour it versus the MSCI China.

In fact, A-shares look quite attractive judging by our country score, which takes into consideration different valuation measures – a mix of value and growth approaches to valuation. Within the equity universe comprising 45 countries, Chinese A-shares and the MSCI China rank 10th and 12th, respectively.

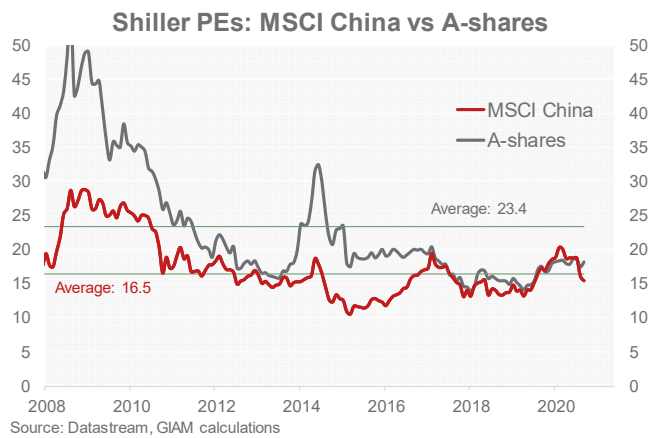


While performance and market multiples are not too far from historical drawdowns, the fair value premium at 8% is very distant from the "discount" of nearly 30% that the market showed around previous historical lows. Overall, the MSCI China could go down by another 10%. Furthermore, should the uncertainty prolong, the investment sentiment index could fall to past historical troughs (see chart), weighing on the market performance. In this case, using a simple univariate regression (market on Sentix) we get indeed a

In particular, in terms of conventional PE, the MSCI China trades at a premium vs. A-shares (by one st. deviation above the historical average). Likewise, Chinese A-shares look more appealing comparing gaps between price and earnings trends as well as price-to-book ratios (one st. deviation above the historical average).

We obtain the same results looking to longer term measures of valuation: the cyclically-adjusted PE (CAPE) or Shiller PE. For its calculation, both prices and earnings are adjusted for inflation and the denominator is represented by the 10-year average of past real earnings. According to this measure, both Chinese markets look attractive, with A-Shares even

more appealing. Thus, A-shares and MSCI China have a discount of -12% and -24%, while the US equities trade at a premium of 22%. The US IT sector looks strongly overvalued, too, versus the Chinese IT (+76% vs 12.5%, respectively).



Additional positives for A-shares vs. the MSCI China are their higher sensitivity to Chinese economic policy (to be relatively more supportive in H2 vs H1) and a lower Tech (8.4% vs 14.6%) and POE (private owned enterprises) weight, which are pressured by the new regulation. Last but not least, the Hong Kong Exchanges and Clearing Limited (HKEX) will launch its first A-share derivatives product on Oct. 18, 2021 to provide international investors with a hedging tool. This should remove a major obstacle for the MSCI to lift the A-share weighting in its indices.

Sectors more exposed to new regulation

The regulation crackdown is affecting different sectors of the economy.

Sectors more at risk are likely to be the ones in monopoly positions with high pricing power, operating in personal data management business (including education), capital market (VIE listing) and in general those dominating “social” businesses. These are fintech, media, consumer services – education (AST, after school tutoring) and pharmaceuticals.

Less exposed to regulation shocks are instead: software, semis, energy, utilities and auto. Some tech subsectors are particularly well positioned as they are directly connected to the 5-year plan in the field of AI, virtual reality, semiconductor and neurosciences.

Sector assessment amid regulatory risk

We developed a scorecard to help European investors rank sectors’ exposure. To this end, we are assessing Chinese sectors along 3 different valuation dimensions and 2 measures of risk. Firstly, we rank sectors by the historical average level of their Sharpe ratios (return/volatility). Second, we consider the correlation vs. the MSCI Europe,

where a lower one is better due to higher diversification effects. Having a mid-term perspective in mind, we calculate average Sharpe ratios and correlations using rolling 3-year periods. Thirdly, we measure each sector’s PEG ratio (PE divided by the expected long-term earnings growth). The ratio is further adjusted to take into account the quotient ROE/COE, which signals the ability to produce a return on capital higher than the cost of it. We then consider the correlation between sector PE and Chinese economic policy uncertainty plus an assessment of regulatory risk (from 1 = lowest risk to 3 = highest risk).

| Chinese Sectors | avg Sharpe ratio since 2000 * | avg correlation vs MSCI Europe* | PEG adj. | corr. b/w sector PE and econ. policy uncertainty | regulatory risk (1 = lowest) | Final Rank (lower= better) |
|-------------------|-------------------------------|---------------------------------|----------|--|------------------------------|----------------------------|
| Comm./Prof. Serv. | 0.08 | 0.12 | 0.88 | -0.19 | 2 | 1 |
| Materials | 0.45 | 0.52 | 0.99 | -0.30 | 1 | 2 |
| Utilities | 0.52 | 0.47 | 1.55 | -0.33 | 1 | 3 |
| Consumer Services | 0.53 | 0.34 | 1.06 | -0.31 | 3 | 4 |
| Energy | 0.52 | 0.61 | 1.38 | 0.04 | 1 | 5 |
| Retailing | 0.21 | 0.52 | 1.63 | 0.11 | 3 | 20 |
| Autos | 0.37 | 0.49 | 3.09 | -0.52 | 2 | 21 |
| Media | -0.33 | 0.40 | 1.36 | -0.42 | 3 | 22 |
| Pharmaceuticals | 0.17 | 0.25 | 2.72 | -0.56 | 3 | 23 |
| Transportation | 0.31 | 0.60 | 1.98 | -0.32 | 3 | 24 |

* using 3yr rolling periods
Source: Datastream, GIAM calculations

In sum, considering current valuation and regulatory risks, more appealing sectors are Comm/Prof. services, Materials, Utilities, Cons. Services and Energy. The less appealing ones are Transportation, Pharmaceuticals, Media, Autos, and Retailing (refer to table 2 in the appendix for complete list of sectors). Short term, Tech sector valuations are looking stretched, too. The discount to US tech is not yet at an attractive level and the US tech itself after the summer rally looks even more expensive than before relative to the broader index.

Conclusion

China shares look attractive on a long-term horizon, with investors benefitting from higher (while receding) GDP growth and more attractive bond yields. Furthermore, a more balanced and more equal economy with possible higher approval rating for the Party will over time lower systemic risks. For the time being, the flows in Chinese equities and bonds are holding relatively well. That said, short term we remain cautious on the MSCI China (slight UW) amid unresolved regulatory uncertainty (while mostly priced-in), which would cause higher volatility, and weaker post-pandemic growth prospects. Given recent softness in most macro data, Beijing will likely engage in more support by fiscal and monetary policy, though. For this reason, we do not adopt a full underweight position, while favouring A-shares (slight OW), due to more attractive valuations and a lower regulatory pressure as well as a lower Tech weight. Having stressed our assumptions of future earnings growth and target CAPE, we see an annual total return of at least 5%-6% over the next decade.

Appendix

Table 1

| MSCI China & A-Shares Market Corrections (20 episodes since 1997) | | | | | | | | | | | | | | | | | | | | | |
|---|--------|--------|---------------------|----------------------|-----------------------|------------------------|----------------------|-----------------------|------------------------|-----------------------------|--------------------------------------|-------------------------|-------------------------------------|--------------------------------------|-------------------------|--------------|---------------|------------------|-------------------------|--------------------------|-----|
| Period | | Index | Peak to Trough | Starting 12M fwd P/E | 12M fwd P/E at Trough | 12M fwd P/E change (%) | Starting 12M fwd P/B | 12M fwd P/B at Trough | 12M fwd P/B change (%) | Starting rel. P/E vs S&P500 | rel. 12M fwd P/E at Trough vs S&P500 | rel. 12M P/E change (%) | Starting rel. 12M fwd P/B vs S&P500 | rel. 12M fwd P/B at Trough vs S&P500 | rel. 12M P/B change (%) | Starting ERP | ERP at Trough | ERP Change (bps) | Starting Fair Value Gap | Fair Value Gap at Trough | |
| Asian Financial Crisis | Aug-97 | Sep-98 | MSCI China A-Shares | -81% | 34.6 | 7.5 | -78% | - | - | - | 1.9 | 0.4 | -79% | - | - | - | - | - | - | - | |
| TMT Market Bubble | Jul-99 | Sep-01 | MSCI China A-Shares | -72% | 21.7 | 9.9 | -54% | - | - | 0.9 | 0.5 | -42% | - | - | - | - | - | - | - | - | |
| Global Slowing & SARS | May-02 | Apr-03 | MSCI China A-Shares | -27% | 13.8 | 8.4 | -39% | - | - | 0.7 | 0.5 | -28% | - | - | - | - | 8.6 | - | - | 42 | |
| Hard-landing fears | Feb-04 | May-04 | MSCI China A-Shares | -30% | 15.5 | 9.8 | -37% | 2.0 | 1.1 | -43% | 0.8 | 0.6 | -29% | 0.7 | 0.4 | -32% | 2.6 | 5.9 | 337 | -27 | 10 |
| Mid-cycle slowing | May-06 | Jun-06 | MSCI China A-Shares | -20% | 13.5 | 10.6 | -21% | 2.2 | 1.8 | -20% | 0.9 | 0.8 | -14% | 0.9 | 0.7 | -13% | 4.3 | 6.4 | 204 | -8 | 17 |
| Pre-Crisis Unwinding | Jul-07 | Aug-07 | MSCI China A-Shares | -19% | 19.0 | 15.1 | -20% | 3.2 | 2.6 | -20% | 1.3 | 1.1 | -16% | 1.2 | 1.0 | -17% | 1.0 | 2.3 | 130 | -43 | -29 |
| Global Financial Crisis | Nov-07 | Oct-08 | MSCI China A-Shares | -74% | 24.2 | 5.7 | -76% | 4.4 | 1.0 | -78% | 1.7 | 0.6 | -63% | 1.6 | 0.7 | -59% | -0.3 | 14.2 | 1449 | -56 | 111 |
| Tightening & Sov. Risk | Apr-10 | May-10 | MSCI China A-Shares | -17% | 13.8 | 11.2 | -19% | 2.2 | 1.8 | -18% | 1.0 | 0.9 | -5% | 1.1 | 1.0 | -6% | 3.8 | 5.7 | 194 | -14 | 9 |
| Double-dip & Debt Concerns | Apr-11 | Aug-11 | MSCI China A-Shares | -21% | 11.6 | 8.6 | -25% | 1.9 | 1.5 | -25% | 0.9 | 0.8 | -10% | 1.0 | 0.9 | -12% | 4.8 | 7.5 | 276 | -3 | 28 |
| US growth & EU debt Concerns | Sep-11 | Oct-11 | MSCI China A-Shares | -25% | 9.1 | 6.9 | -25% | 1.5 | 1.1 | -26% | 0.8 | 0.6 | -22% | 0.9 | 0.7 | -22% | 6.8 | 10.7 | 386 | 20 | 64 |
| China growth & EU Sov. Concerns | May-12 | Jun-12 | MSCI China A-Shares | -15% | 9.4 | 8.0 | -15% | 1.5 | 1.2 | -16% | 0.7 | 0.7 | -6% | 0.8 | 0.7 | -8% | 7.1 | 9.0 | 191 | 24 | 47 |
| QE Tapering Concerns | May-13 | Jun-13 | MSCI China A-Shares | -18% | 9.3 | 7.6 | -19% | 1.4 | 1.1 | -18% | 0.7 | 0.6 | -16% | 0.6 | 0.5 | -16% | 7.2 | 9.6 | 234 | 26 | 53 |
| China Credit Concerns | Dec-13 | Feb-14 | MSCI China A-Shares | -14% | 9.4 | 8.0 | -15% | 1.4 | 1.2 | -15% | 0.6 | 0.5 | -13% | 0.6 | 0.5 | -12% | 6.2 | 8.0 | 173 | 13 | 31 |
| China correction / growth concerns | Apr-15 | Sep-15 | MSCI China A-Shares | -35% | 12.3 | 8.1 | -34% | 1.6 | 1.0 | -35% | 0.7 | 0.5 | -25% | 0.6 | 0.4 | -29% | 4.7 | 9.0 | 434 | -4 | 48 |
| Fed Hike, China FX / Growth Concerns | Oct-15 | Feb-16 | MSCI China A-Shares | -25% | 9.5 | 8.6 | -9% | 1.2 | 1.1 | -10% | 0.6 | 0.6 | 0% | 0.5 | 0.5 | 0% | 7.5 | 8.7 | 116 | 32 | 47 |
| US Election Uncertainty | Sep-16 | Dec-16 | MSCI China A-Shares | -12% | 12.6 | 11.1 | -12% | 1.5 | 1.3 | -10% | 0.7 | 0.6 | -13% | 0.6 | 0.5 | -13% | 5.2 | 5.8 | 64 | 2 | 10 |
| US Rates Risk & Trade War Concerns | Jan-18 | Oct-18 | MSCI China A-Shares | -33% | 14.7 | 9.5 | -36% | 2.0 | 1.3 | -37% | 0.8 | 0.6 | -22% | 0.6 | 0.4 | -30% | 2.8 | 7.0 | 418 | -24 | 24 |
| Sino-US Trade Tensions | Apr-19 | Aug-19 | MSCI China A-Shares | -17% | 12.1 | 10.3 | -15% | 1.6 | 1.3 | -15% | 0.7 | 0.6 | -13% | 0.5 | 0.4 | -13% | 4.8 | 6.7 | 182 | -2 | 21 |
| COVID-19 & Oil Shock | Mar-20 | Mar-20 | MSCI China A-Shares | -19% | 12.2 | 10.0 | -18% | 1.6 | 1.3 | -19% | 0.7 | 0.7 | 0% | 0.5 | 0.5 | 1% | 5.4 | 7.2 | 175 | 6 | 28 |
| Regulation Crackdown (from Feb. 21) | Feb-21 | Sep-21 | MSCI China A-Shares | -26% | 18.5 | 13.7 | -26% | 2.3 | 1.7 | -28% | 0.8 | 0.6 | -22% | 0.6 | 0.4 | -33% | 2.1 | 4.5 | 231 | -35 | -7 |
| Overall Historical Average | | | MSCI China A-Shares | -30% | 14.8 | 9.4 | -30% | 2.0 | 1.4 | -25% | 0.9 | 0.6 | -22% | 0.8 | 0.6 | -18% | 4.5 | 7.6 | 306 | -6 | 31 |
| 9 Corrections from -20% to -40% | | | MSCI China A-Shares | -26% | 13.0 | 9.3 | -27% | 1.8 | 1.3 | -27% | 0.8 | 0.6 | -19% | 0.7 | 0.6 | -20% | 4.7 | 7.6 | 284 | -4 | 31 |

Performances are in Prices; PE = Price/Earnings 12M forward; PB = Price/Book 12M forward;
 ERP = Earnings 12M forward/Price - 10Y Yield; Fair Value Indicator = 12M FW EPS / (10Y Rate + α);
 Value Gap = % diff. between Fair Value and Price; Negative Value Gap = Downside Risk;
 Source: Datastream, GIAM calculations

Table 2

| Chinese Sectors | avg Sharpe ratio since 2000 (3yr rolling) | avg correlation vs MSCI Europe | PEG adj. | correlation b/w sector PE and econ. policy uncertainty | regulatory risk (1 = lowest) | Final Rank (lower = better) |
|--------------------------|---|--------------------------------|----------|--|------------------------------|-----------------------------|
| Autos | 0.37 | 0.49 | 3.09 | -0.52 | 1.5 | 21 |
| Banks | 0.38 | 0.56 | 1.12 | -0.21 | 2 | 11 |
| Capital Goods | 0.23 | 0.57 | 1.05 | -0.40 | 1 | 18 |
| Comm./Prof. Serv. | 0.08 | 0.12 | 0.88 | -0.19 | 2 | 1 |
| Consumer Durables | 0.41 | 0.44 | 1.26 | -0.59 | 2 | 16 |
| Consumer Services | 0.53 | 0.34 | 1.06 | -0.31 | 3 | 4 |
| Diversified Financials | 0.14 | 0.47 | 1.22 | -0.15 | 2 | 8 |
| Energy | 0.52 | 0.61 | 1.38 | 0.04 | 1 | 5 |
| Food and Staples Ret. | -0.16 | 0.16 | 5.33 | 0.05 | 2 | 10 |
| Food, Bev., Tobacco | 0.49 | 0.40 | 1.60 | -0.36 | 1 | 6 |
| Health Care Equip. | 0.35 | 0.43 | 2.76 | -0.12 | 2 | 12 |
| Household&Pers. Prod. | 0.47 | 0.32 | 5.33 | -0.36 | 2 | 14 |
| Insurance | 0.58 | 0.52 | 1.14 | -0.32 | 2.5 | 13 |
| Materials | 0.45 | 0.52 | 0.99 | -0.30 | 1 | 2 |
| Media | -0.33 | 0.40 | 1.36 | -0.42 | 3 | 22 |
| Pharmaceuticals | 0.17 | 0.25 | 2.72 | -0.56 | 3 | 23 |
| Real Estate* | 0.61 | 0.48 | 0.83 | -0.45 | 3 | 9 |
| Retailing | 0.21 | 0.52 | 1.63 | 0.11 | 3 | 20 |
| Semis | -0.18 | 0.27 | 1.50 | -0.07 | 1.5 | 7 |
| Software and Services | 1.02 | 0.48 | 5.33 | -0.35 | 2 | 15 |
| Technology Hardw. | 0.36 | 0.49 | 0.99 | -0.55 | 2 | 17 |
| Telecomms | 0.45 | 0.49 | 1.91 | -0.09 | 3 | 19 |
| Transportation | 0.31 | 0.60 | 1.98 | -0.32 | 3 | 24 |
| Utilities | 0.52 | 0.47 | 1.55 | -0.33 | 1 | 3 |

PEG is PE divided by expected EPS long-term growth. PEG adj. (higher = expensive); PEG is modified by the ratio COE/ROE which signals the ability to produce a return on capital higher than the cost of it. COE (cost of equity) = 10yr gov't bond rate + ... + 6% mkt risk premium x country Beta versus MSCI WORLD (monthly returns over the last 10 yrs).
 * Valuation for Real Estate looks very low but regulatory risk remains one of the highest.

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