



# Investment Themes

## Q4 2022 update: China renewables a bright spot

The US' Inflation Reduction Act is expected to accelerate the transition to a more sustainable economy. In our assessment, the Winds of Climate Change themes stand to benefit from the investment measures proposed in this act.

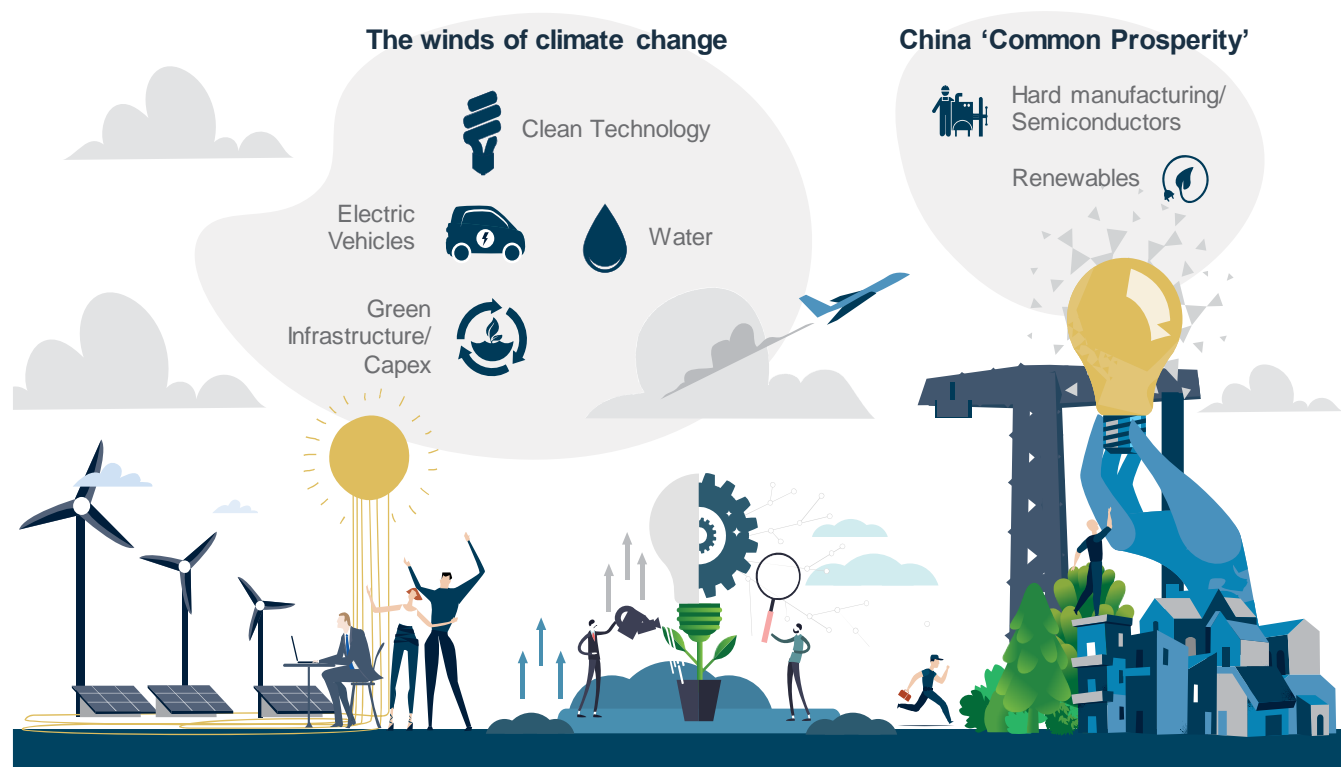
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Our preferred view on Cybersecurity has been closed, as the Fed's commitment to tighten monetary policy is expected to further weigh on valuations. Nevertheless, we remain on watch for long-term opportunities within this space.

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## Overview of our long-term themes



Source: Standard Chartered

It has been a particularly challenging time since we published our Q3 Thematic Update. Amid persistently high inflation, global central banks have continued their largely synchronized monetary and fiscal tightening, with around 90 central banks raising interest rates thus far this year. Consequently, global equities have declined for the third consecutive quarter, the longest streak of losses since the Global Financial Crisis, while global bonds have entered a bear market, the first of its kind seen in available data. Notably, the traditional 60/40 equity/bond portfolio also appears on track to clock its worst annual return on record, with data going back to 1872. In the face of this seemingly relentless bearish pressure, our themes have struggled to perform. However, some of our sub-themes have exhibited remarkable resilience, with Clean Tech and Green Capex in particular comfortably outperforming global equities since the start of the year.

### Winds of Climate Change receives a boost from the US' Inflation Reduction Act (IRA)

While our Winds of Climate Change theme has not been spared the recent downturn in global equities in terms of absolute returns, all sub-themes besides Green Capex have outperformed global equities (the MSCI ACWI index) since the announcement of the IRA in July. More notably, Clean Tech, arguably the largest beneficiary of the IRA, outperformed the MSCI ACWI by 6.4% over this same period.

We continue to see green capex as a multi-year secular theme, which we expect will drive the next wave of infrastructure investments as the world decarbonises. Penetration rate for electric vehicles also continues to grow, with strong adoption in Mainland China and Europe, while US manufacturers stand to benefit from the IRA.

### Preferred view on Cybersecurity closed

We have, however, decided to close our preferred view on Cybersecurity as we expect the Fed's commitment to tighten monetary policy to further weigh on valuations. This closure notwithstanding, we remain on the watch for renewed opportunities in this space given what we see as still-constructive long-term structural drivers in this space.

### China renewables remain a rare bright spot in the Chinese economy

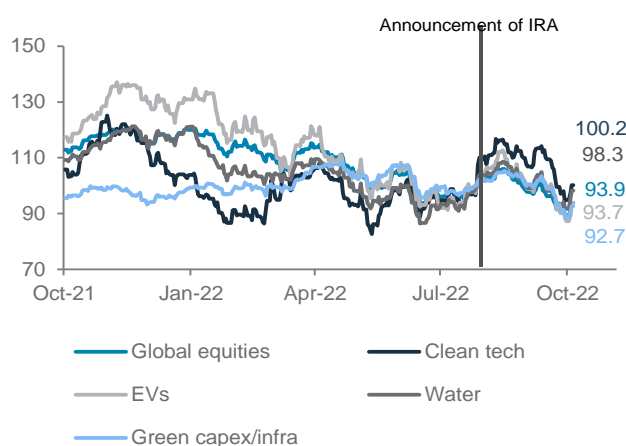
Our China's Common Prosperity sub-themes have struggled amid significantly downbeat sentiment as Mainland Chinese zero-Covid policy persists and the property market remains under pressure. However, China's renewables sector remains a rare bright spot in the economy via a combination of supportive policies, improving fundamentals and increasingly attractive valuations. China's New Energy Vehicle (NEV) sector, in particular, continues to see rising penetration rates, with sales expected to stay robust for the remainder of 2022.

## The winds of climate change

Against the backdrop of rising inflation and tightening financial conditions, the US Congress passed The Inflation Reduction Act (IRA) to strengthen efforts to tame inflation. The law, which aims to curb inflation by reducing the deficit and lowering prescription drugs prices, also serves to direct significant resources toward combatting climate change. In President Biden's words – "this is the largest investment ever in combatting the existential crisis of climate change".

**Fig. 1 Several climate related themes have outperformed global equities since the announcement of the IRA on 27 July 2022**

Performance of relevant indices rebalanced to 100 on 27 July 2022



Source: Bloomberg, Standard Chartered

\* Please refer to our themes monitor on page 8 for the specific indices used

## US Climate Bill to support Net Zero Ambitions

The Act, signed into law by President Biden on 16 August, includes USD 386bn in energy and climate spending. The legislation puts the US on course to reduce approximately 40% of the country's emissions by 2030 and cut climate costs by up to USD 1.9tn by 2050.

USD 265bn of the budget goes towards providing clean energy tax incentives. Businesses are incentivised to invest in and produce clean, renewable energy and low emission fuels, while the rebates make clean technologies affordable for consumers and encourages homeowners to modernise their homes to be more energy efficient. USD 13bn worth of tax credits are intended to be used to support the production of clean nuclear and hydrogen power.

The IRA provides investment opportunities in technologies that reduce industrial emissions, where approximately USD 11.5bn has been allocated to support such programmes. Clean energy stocks, potentially the largest beneficiaries from the act, have generated the largest outperformance, beating

the MSCI ACWI by 6.4% since the agreement on IRA was announced.

**Fig. 2 We believe the IRA can accelerate transition to a more sustainable economy**

Breakdown of IRA climate spending and tax credits

Energy and climate	USD bn
Clean electricity tax credits	161
Air pollution, hazardous materials, transportation and infrastructure	40
Individual clean energy incentives	37
Clean manufacturing tax credits	37
Clean fuel and vehicle tax credits	36
Conservation, rural development, forestry	35
Building efficiency, electrification, transmission, industrial, development of energy grants and loans	27
Other energy and climate spending	14

Source: Committee for a Responsible Federal Budget, Standard Chartered

The bill also aims to decarbonise all sectors of the economy through supporting innovative climate solutions and cleaner production. That, in addition to stimulus in American clean energy manufacturing, allows the US transition to a clean economy which simultaneously supports manufacturing jobs within the country. Stimulus of several key technologies across the Green Capex supply chain can provide long-term investors with opportunities to invest in innovative companies that produce services and tools which are likely to help in the acceleration of the transition.

Aside from the IRA, another milestone was the approval of the Kigali Amendment by the US Senate, an international climate treaty that would curb the production and use of hydrofluorocarbons (HFCs), a highly potent greenhouse gas commonly used in refrigerators and air conditioners. The ratification of the treaty, as well as the Infrastructure Investment and Jobs Act involving USD 1.2tn in infrastructure spending, are expected to support growth in the respective sectors as American jobs are created to drive development of HFC alternatives and modernise regional infrastructure.

## Accelerating EV transition

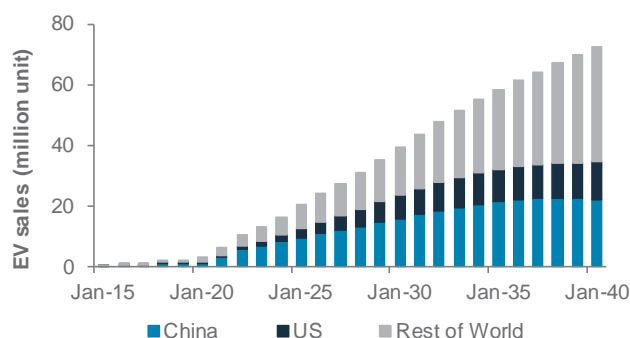
The IRA includes various initiatives aimed at raising the adoption of EVs. This includes tax credits to raise the number of charging stations, incentivise car buyers to purchase EVs as well as lifting of the cap on tax credits per EV manufacturer (provided the EVs meet the domestic content requirements). Additionally, the IRA aims to provide funding to decarbonise heavy transportation, supporting clean trucks and buses, sustainable aviation and zero-emissions equipment and technology.



Currently, the US accounts for just over 20% of global new car sales, with EVs making up only 5% of new car sales in the country. The stimulus package is not only positive for EV sales and market penetration but is also likely to spur the development of related technologies such as autonomous vehicles and vehicle connectivity. We continue to see investment opportunities in this space as companies producing EVs and EV-related technologies are likely to benefit from the legislation.

**Fig. 3 US expected to step up in EV production**

Sale of EV vehicles globally in millions



Source: Bloomberg, Standard Chartered

\* Please refer to our themes monitor on page 8 for the specific indices used

### Recognising the urgency for climate solutions

As the catastrophic impacts of climate change become increasingly prevalent, there is a growing urgency to combat this global environmental crisis. In addition to existing efforts by governments to respond to climate change, companies are also attempting to decarbonise operations and supply chains, being motivated by tightening regulations and costs of non-compliance.

Rising commodity prices have driven energy prices higher, fuelling global inflation. Supply chain shocks, on top of the ongoing conflict between Russia-Ukraine has propelled energy costs and security up the priority list for markets that are dependent on external energy sources. In our opinion, the increasing focus to gain energy independence could accelerate investments in renewables. Cost of renewable energy generation has fallen over the past decade and has become cheaper compared to fossil fuel alternatives. Low-cost, green electricity enhances long term energy security and lowers energy bills, which itself is deflationary in nature. We view such positive cost changes and the continued shift in investor preferences for climate solutions as beneficial for our climate-related themes.

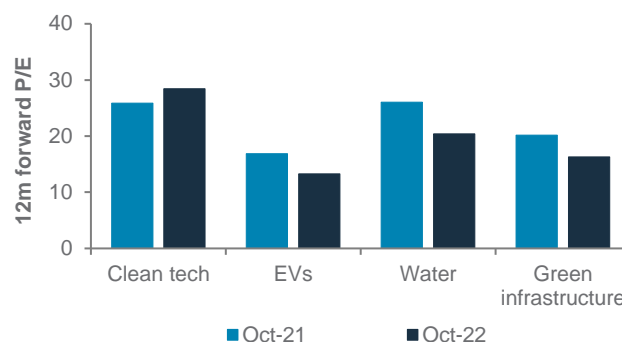
### Valuations still look attractive although earnings remain a near-term challenge

Valuations for the climate-related themes look attractive, after falling meaningfully relative to the previous year, driven by improving earnings expectations. Earnings revisions troughed

earlier in the year and have started to pick up in recent months, likely due to a positive turn in investors' sentiment around the recent announcements of several climate-friendly policies out of the US.

**Fig. 4 Valuations have largely fallen since a year ago and remain attractive**

12-month forward P/E of specific thematic indices\*



Source: Bloomberg, Standard Chartered

\* Please refer to our themes monitor on page 8 for the specific indices used

### Investors remain enthusiastic on climate change investments

Restoring the environment remains a top motivation. This was highlighted in the recently released 2022 Sustainable Banking Report conducted by Standard Chartered Bank. Resultingly climate change was also once again the top ESG priority for investors in growth markets. In fact, 40% of investors ranked climate change as their top ESG priority. This is closely followed by 30% in Food & Water Scarcity and 28% in Pollution & Waste Management.

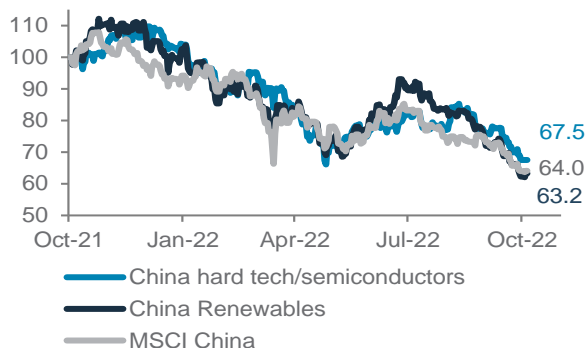
We believe that the momentum for green investing will continue to be driven by investor sentiment and we still see potential for it to become normalized in the financial markets in time to come.

### China "Common Prosperity"

Mainland China markets continue to face several challenges. These include ongoing zero-Covid policies, a sluggish property market and still-weak private sector demand. The external environment has also been less than conducive given headwinds from hawkish central banks elsewhere and a strong US Dollar. This combination has meant the MSCI China index has slipped to levels last seen since late December 2016, while China renewables have all but erased the 36% gains witnessed between early May and late June. The Party Congress in October is the next key event with expectations that it could open the door to further support from both fiscal and monetary policy.

**Fig. 5 China's Common Prosperity themes have underperformed MSCI China this year**

Cumulative returns of China related themes and the MSCI China index rebalanced to 100 as of 1 October 2021



Source: Bloomberg, Standard Chartered

### Macro headwinds hold back fundamental progress amid more reasonable valuations

Despite the gloom in risk sentiment, we continue to find reasons to be optimistic on China renewables. The sector is a rare bright spot in the Mainland China economy with solid fundamental progress, supportive policies and improving margins. In our previous quarterly update in June, we cautioned that while structural drivers remained intact, strong gains in May and June had led to stretched valuations. However, with China renewables now back to where it was in early May, we believe valuations have once again begun to look more reasonable.

### China NEV, one of the few bright spots

Given its outsized contribution to GDP and sensitivity to fiscal and monetary stimulus, China's auto sector has historically been a key policy stimulus target for the Chinese government. However, in the wake of tightening regulations in key sectors such as Internet and Property, the sector has taken on added importance as a source of growth and employment. Consequently, we expect policies to remain supportive for the auto sector as regulators look for options to boost growth, especially amid a backdrop of zero-Covid policies. China's NEV sector, in particular, is expected to benefit from ongoing policy support. The sector remains a strategic focus for the government and the purchase tax exemption has now been extended to the end of 2023. This will likely soften the blow of an end to subsidies in 2023.

### Robust NEV sales, driving penetration to 28%

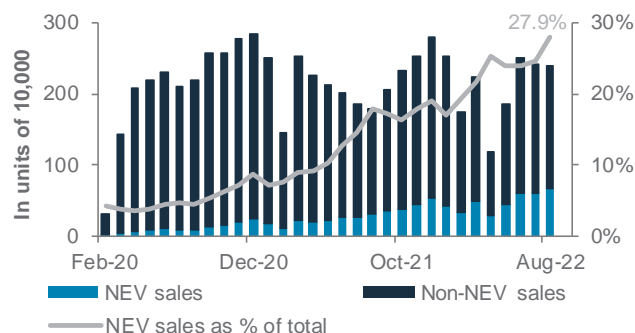
Meanwhile, the NEV sector continues to make fundamental progress. NEV sales continue to be robust, with August sales growing by 107.5% y/y and the penetration rate rising to almost 28%. This comes despite a continued recovery in internal combustion engine vehicle sales on a y/y basis amid purchase tax cuts, which would otherwise be expected to

erode the economic incentive for purchasing NEVs. The growth in charging infrastructure has also kept pace. August installations remain elevated, growing by almost 65%, while power battery installations rose by 121% to 27.8 GWh. With high order backlogs and thin inventories, the momentum in NEV sales is expected to continue for the remainder of 2022.

Beyond 2022, as more tech companies join the NEV space and bring with them tech improvements and greater model variety, sales are likely to remain well supported and offset possible headwinds from the cannibalization of demand stemming from the front-loading of purchases this year.

**Fig. 6 Sales of NEVs have been robust**

Sales of NEVs and non-NEVs in Mainland China



Source: China Association of Automobile Manufacturers, Standard Chartered

### Greater efficiency and margin improvements to drive offshore wind farm installation

We also remain positive on the wind energy sector, with structural drivers remaining intact amid local government offshore wind targets and subsidies. Specifically, new offshore installations are expected to drive growth in the coming years, with new installations forecast to reach 16 GW in 2025 and comprise almost 30% of total new installations. Offshore wind farms tend to be more efficient than onshore counterparts, due to higher and more consistent wind speeds from the lack of obstructions. Along with a lower overall investment cost and declining component and commodity prices, profit margins of the sector are expected to improve going forward.

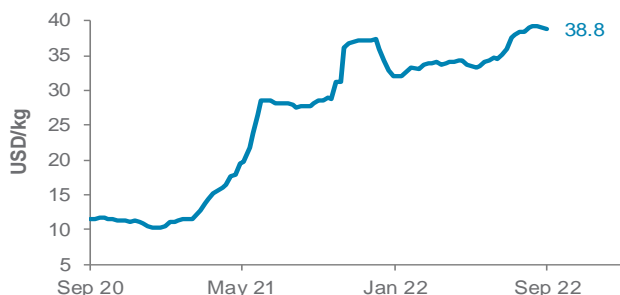
### Covid lock-down and rising input costs still a near-term overhang on the solar energy sector

The solar energy sector likewise benefits from ongoing policy support, non-fossil fuel energy mix targets and ongoing innovation in the supply chain. However, near term headwinds in the form of tight polysilicon supplies remain for now. Supply tightness is the result of a reduction in hydropower generation amid lower than usual rainfall and slowdown in production from major producers due to production capacity overhauls. While supply is expected to remain tight in 4Q22 before easing in 2023 as new production capacities come online, it

appears that polysilicon prices may have already peaked in August. Lower solar module prices would boost project returns and support the sector through in 4Q22 and 1Q23.

**Fig. 7 Polysilicon prices appear to have peaked in August**

Solar-grade polysilicon average prices



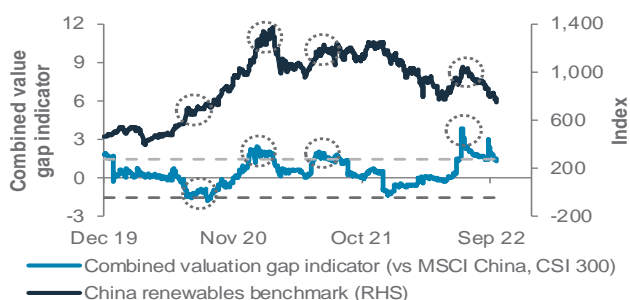
Source: Bloomberg, Standard Chartered

### Valuations are now at more reasonable levels

Valuation for China renewables has fallen sharply from a high of 23.5x 12-mth forward P/E in late June to 17.2x. This has, in turn, led our Combined Valuation Gap Indicator, which looks at the average detrended and standardized valuation gap of ratios such as P/E and P/S against broad market indices like the MSCI China and CSI 300, to fall back below the upper threshold of 1.5. This means that the sector's valuation is now within a historically neutral range, as opposed to being significantly overvalued amid rapid price gains in July.

**Fig. 8 Relative valuation of China renewables has fallen below the upper threshold**

Combined Valuation Gap Indicator with +/- 1.5 thresholds\*

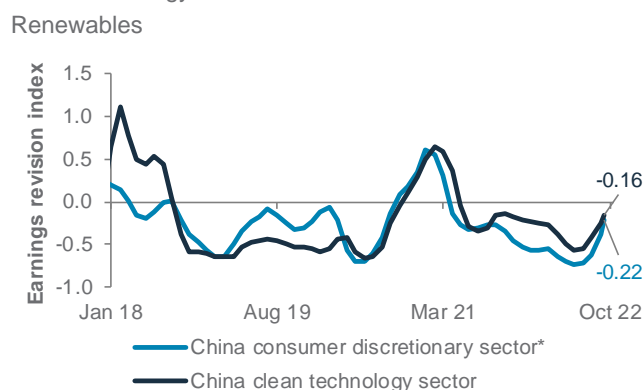


\*Calculation example: (Benchmark P/S – 1y MA) – (Broad market index P/S – 1y MA) / (1y Moving STD); Averaged across for P/S, P/B, P/CF, P/E, Fwd P/E; averaged across different broad market indices; threshold -1.5 and 1.5 STD. Source: Bloomberg, Standard Chartered

Meanwhile, earnings revision has improved while ETF flows have also started to return in recent months, suggesting renewed investor interests after steep outflows in July.

**Fig. 9 Earnings revisions is still negative but have started to improve after hitting a trough in May 2022**

Earnings revision index of China consumer discretionary and clean technology sectors

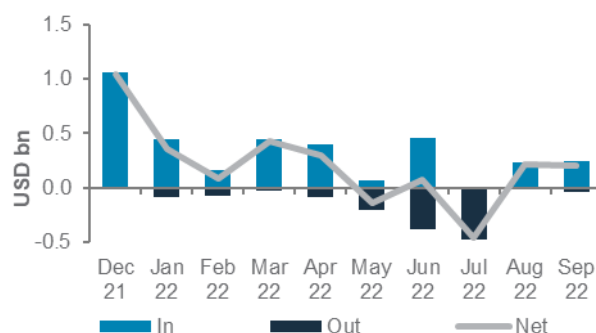


Source: Bloomberg, Standard Chartered

Together, these factors suggest that while macro headwinds continue to be a dominant influence on China equities, strong fundamentals, supportive policies and improving investor sentiment mean that market focus will return to theme's long-term fundamentals once macro headwinds abate, in our assessment.

**Fig. 10 Flows suggest investor interest is returning**

Net flows of China renewables related ETFs



Source: Bloomberg, Standard Chartered

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## Appendix

### Overview of themes for Q4 2022

	Themes	Date opened	Date closed
<b>The winds of climate change</b>	Water scarcity	9 December 2021	<b>Open</b>
	Electric Vehicles (EVs)	9 December 2021	<b>Open</b>
	Infrastructure/Green Capex	9 December 2021	<b>Open</b>
	Clean Technology	25 March 2022	<b>Open</b>
<b>Embracing a digital future</b>	5G/Internet of Things (IoT)	9 December 2021	24 June 2022
	Cybersecurity	9 December 2021	29 September 2022
	Blockchain Solutions	9 December 2021	25 March 2022
	Financial Technology (FinTech)	9 December 2021	25 March 2022
<b>China 'Common Prosperity'</b>	Hard Tech/Semiconductors	9 December 2021	<b>Open</b>
	Renewables	9 December 2021	<b>Open</b>
	Chinese Internet	9 December 2021	25 March 2022

Source: Standard Chartered

### Our assessment of drivers and indicators

Thematic investing is multi-faceted across regions, sectors and time horizons. Various drivers can influence a theme, from structural trends, such as demographic shifts, to public policies and regulations. However, as for most investments they also deeply depend on cyclical drivers such as the outlook for economic and earnings growth, valuation and interest rates changes. Below we outline what we see as key drivers and our related views with respect to our open thematic investment ideas.

### Thematic drivers

Theme	Cyclical Factors				Structural Factors		
	Economic growth	Increase in bond yields	Valuations	Earnings Revisions	Policy support	Trends evolution	Socio-economics
<b>The winds of climate change</b>	=	✗	=	=	✓	✓	✓
<b>China 'Common Prosperity'</b>	=	=	=	=	✓	✓	✓

Source: Standard Chartered, ✓ indicates the driver supports the performance of a theme. ✗ indicates the driver is currently a headwind to the performance of a theme. = indicates a neutral view

## Themes monitor

Name	2022 YTD (%)	Q3 2022 (%)	12m forward P/E
<b>The winds of climate change</b>			
Clean Technology	-9.1	-0.83	27.9
Electric Vehicles (EVs)	-31.9	-6.7	13.1
Water Scarcity	-21.8	2.57	19.7
Infrastructure/Green Capex	-6.4	-7.8	15.9
<b>China 'Common Prosperity'</b>			
Hard Tech/Semiconductors	-37.0	-12.3	20.5
Renewables	-39.9	-30.0	17.1

Source: Bloomberg, Standard Chartered

YTD returns from 9-Dec-2021 to 29-Sep-2022; Q3 2022 returns from 23-Jun-2022 to 29-Sep-2022; 12m forward P/E as of 29-Sep-2022

Themes are represented by the following indices: Clean Tech - S&P Global Clean Energy Index; Electric Vehicles (EVs) - Solactive Autonomous & Electric Vehicles Index; Water - ISE Clean Edge Water Index; Infrastructure/Green CAPEX - S&P Global Infrastructure Index; Hard Tech/Semiconductors - FactSet China Semiconductor Index; Renewables - MSCI China IMI Environment 10/40 Index



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