

# Driehaus Emerging Markets Small Cap Equity Strategy Summary

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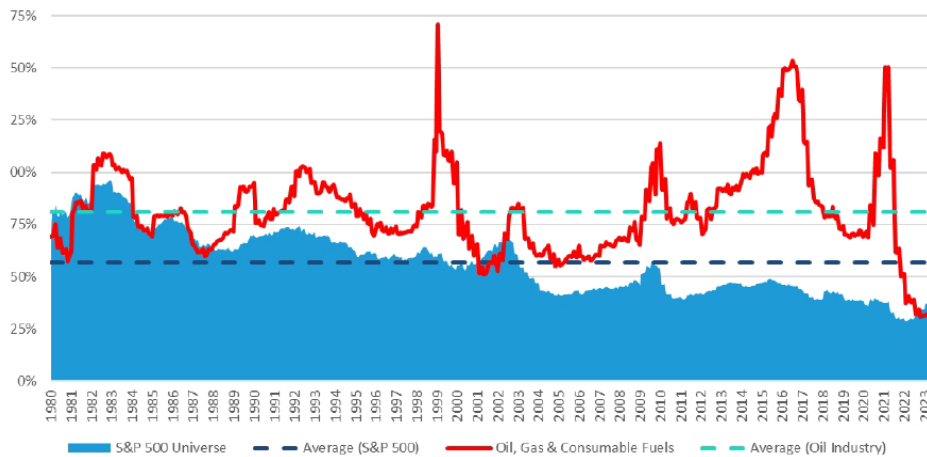
Global energy markets continue to experience significant fundamental change, linked to corporate capital allocation decisions, geopolitics, and the macroeconomic backdrop, carrying meaningful implications for both emerging (EM) and developed economies. Countries and companies that are able to navigate this shifting landscape are likely to be rewarded in an outsized manner by market participants, while those that embark on value-destructive strategies are bound to suffer material consequences.

One of the challenges facing the world is the simultaneous need to provide both low-cost and environmentally friendly sources of energy to meet growing demand. Increasingly, EM economies are driving this demand growth. In the coming decade, OPEC expects China and India alone to account for 40% of global oil demand growth. Astonishingly, the International Energy Agency (IEA) expects that by 2050, India’s electricity demand for running household air conditioners alone will grow 9x and exceed the entire power consumption in Africa.

The response by global energy companies and policymakers to these dual challenges has taken diverging paths, and in some cases, led to economic disruption and misallocation of capital. A glimpse at recent capital market developments provides a snapshot of this dichotomy.

During the US shale boom of the 2010s, energy companies devoted 75-150% of their cash flow from operations to capital expenditures (capex) linked to the development of shale resources (Exhibit 1). The resultant production growth led oil and gas to be oversupplied for several years, causing prices to converge toward marginal cost levels, and ultimately leading these same companies to shift their capital allocation policies to prioritize shareholder returns over capex. Consequently, capex has been running at closer to 40% of cash flow from operations in recent years. Energy companies that prioritized shareholder returns have been significant outperformers, and thus management teams are unlikely to deviate from this strategy that has been embraced by investors.

**Exhibit 1. US Oil & Gas Reinvestment Rate**



Source: Bernstein Quant (Larson); Bernstein analysis

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Simultaneously, a number of European integrated energy companies undertook strategies to diversify away from oil and gas into renewables, undertaking the view that oil demand would inevitably peak and move into long-term decline.

Following several years of these respective capital allocation strategies, the world is now grappling with the implications. US oil production, which previously acted as a short-cycle buffer, able to respond quickly to changing demand conditions, appears to have moved into a structural slowdown. At the same time, rising interest rates, a lack of pricing power, and execution challenges in the renewable energy industry have led to writedowns of this exposure by certain European integrated energy companies.

In the aftermath of the pandemic, the concept of energy transition generated a significant amount of investment, punctuated by the COP26 climate forum in Glasgow in 2021, which saw many companies and countries pledging dates by which they would achieve net zero emissions.

While these investments are necessary to achieve a more environmentally friendly and sustainable energy mix, the initial wave of investments was undertaken amid a period of structurally low interest rates. Since January 2021, the US 10-year Treasury yield has risen from 1% to nearly 5%. It is important to bear in mind that many of these projects carry a high degree of leverage and are vulnerable to cost of debt increases, as shown in the following table from UBS (Exhibit 2).

### Exhibit 2. Weighted Average Cost of Capital Sensitivity to Cost of Debt Increase

WACC March 2022		WACC October 2023	
Equity	50%	Equity	50%
COE	8.6%	COE	8.6%
Debt	50%	Debt	50%
COD	5.0%	COD	7.6%
<b>WACC</b>	<b>6.80%</b>	<b>WACC</b>	<b>8.11%</b>

Source: UBS

Increases in weighted average cost of capital (WACC) of course have a negative impact on project-level returns, but from a high-level perspective, they also impact the relative cost of renewable energy compared to fossil fuels. Morgan Stanley estimates that every 100bps increase in the WACC increases the levelized cost of energy (LCOE) from wind and solar by 7%-10%. Adoption of renewable energy is spurred by reductions in cost per watt of electricity generated. Throughout the 2010s, advances in technology and reductions in interest rates led to significant declines in LCOE. The substantial rise in interest rates since 2021 threatens to deter renewable adoption as a result of the corresponding LCOE increases.

One country where renewable adoption has not been slowed by a rising cost of debt is China, where a weak macroeconomic backdrop and low inflation have kept interest rates subdued relative to the rest of the world. Moreover, China's domestic solar supply chain has undergone significant cost deflation, leading local authorities to speed up installations of wind and solar capacity. Against a target of 120GW of solar installations, China had already completed 138GW through the first nine months of 2023, and is on pace for roughly 180GW in the full year. By comparison, the installed capacity of solar in the US is only approximately 150GW, so in the course of one year, China is likely to add the equivalent of the entire US installed base. However, China continues to prioritize energy security, forging ahead with capacity expansions in coal, oil, and gas, while also facing potential curtailment issues from such a rapid pace of renewable expansion, which has greatly outstripped capacity additions for power grid infrastructure.

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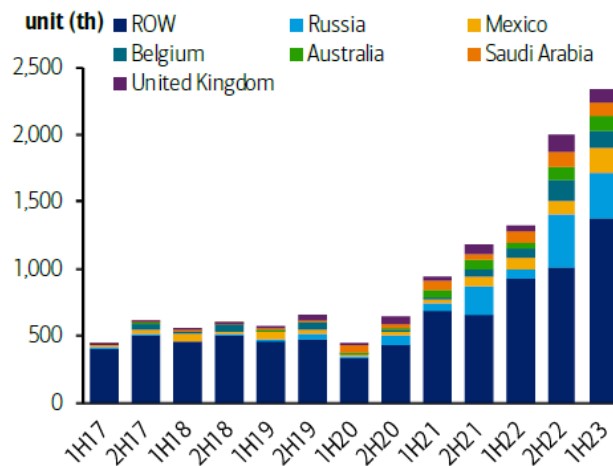
When investors think about geopolitical uncertainty in the energy sector, the ongoing war between Russia and Ukraine, as well as the recent developments in the Middle East are understandably top of mind. However, geopolitical uncertainty also carries implications for energy transition, with risks centered around the continued dominance of China in the EV and renewable industry.

Following Russia's invasion of Ukraine, the US passed the Inflation Reduction Act (IRA), which was designed to promote domestic investment, with a focus on the EV and renewable supply chain. This policy specifically sought to reduce the degree of dependence on Chinese suppliers in these areas, while also using aggressive subsidies to promote adoption and local manufacturing of EVs and renewables. While this strategy has shown some success in bringing investment to the US, and supply relationships have been forged with perceived "friendlier" suppliers, it is difficult to supplant the dominance of China in these areas. Recently, in response to ongoing trade disputes, China curtailed the export of graphite, a key material in the EV battery supply chain, where China holds 67% market share.

Despite some signs of initial success, the sustainability of the IRA is an open question, particularly if a Republican administration and/or Congress were to come into power in the 2024 elections. Even if domestic political change does not unfold, the heightened degree of subsidies embedded in the IRA are unlikely to sustain over long periods of time.

Meanwhile, Chinese auto OEMs have made substantial progress in developing new EV models, deepening their export presence. Auto exports grew by 104% year-over-year through the first seven months of 2023, with an even faster growth for EVs, which accounted for 41% of auto exports, up from 2.5% five years ago (Exhibit 3).

### Exhibit 3. China Auto Export Volume



Source: CEIC

European auto companies have faced pressure from new Chinese brands that have targeted Europe as a key export market. While the Chinese brands have not yet sought to undercut the domestic companies on pricing, they maintain a significant cost advantage, given China's control of the EV supply chain. Europe may be forced to make a difficult decision between promoting its climate goals and protecting its domestic industry.

Uncertainty abounds on the fossil fuel side of the energy matrix as well. In the past month, two leading industry bodies, the IEA and OPEC, published vastly different outlooks for oil.

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According to the IEA, global oil demand will peak this decade, although the agency sees an “undulating plateau lasting for many years” with oil demand still running at 97 million barrels per day (mbd) by 2050, down only slightly from 102mbd in the late 2020s.

Meanwhile, OPEC forecasts global energy demand to grow at a compound annual growth rate (CAGR) of 0.9% through 2045. While OPEC expects renewables to be the fastest growing energy source at a 7.6% CAGR, the producer group expects the share of oil to remain stable at around 30%. Counter to the IEA, OPEC does not see peak oil demand in its forecast horizon, and its long-term forecast of oil demand is 116mbd by 2045, starkly higher than the IEA.

While one can argue that each of these agencies is “talking its own book,” the proverbial line in the sand has been drawn. OPEC foresees its own control of the global oil market to grow substantially, accounting for 40% of demand growth by 2030 and 73% by 2045, as capital allocation priorities in the rest of the world continue to shift toward renewables or shareholder returns.

In a nod to the growing realization that it will take sound policy related to both fossil fuels and renewables to meet growing energy demand, this year’s COP28 climate forum in November will be held in Dubai and will for the first time feature a major presence by OPEC.

With respect to the strategy’s positioning, we have adopted a balanced approach over the years, participating in several areas of the energy supply chain, including upstream oil and gas producers, oilfield service companies, EV and renewable supply chain beneficiaries, and various industrial companies with a focus on electrification.

Despite ambitious agendas for decarbonization, policymakers have thus far struggled to bridge the requirements for low-cost, reliable power with the need to bring about a cleaner energy mix. Consequently, we expect an increasing emphasis on existing technologies such as geothermal and nuclear energy, alongside growing innovation in areas such as battery storage and pumped hydro, as well as nuclear technologies such as small modular reactors and fusion.

As EM energy demand growth continues to increase and comprise a growing share of global demand, we expect that policymakers will adopt an “all of the above” approach to energy policy, creating numerous opportunities throughout the value chain.

Until next month,



**Chad Cleaver**, Lead Portfolio Manager  
Driehaus Emerging Markets Small Cap Equity Strategy

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