GLOBAL SUSTAINABLE OUTCOMES

News & Views Q3 2022

For professional investors only.

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"I wish there were a painless way [to reduce inflation]. There isn't." Jerome Powell, US Federal Reserve Chairman, September 2022.[1] And boy has it been painful as the Fed, along with central banks around the world, accelerated their fight against stubbornly high inflation. The 230bps move higher in the US 10-year interest rate since the beginning of the year[2] has been the steepest and most destructive shift higher since the index was created, leading to the dual collapse of both equity and fixed income markets.

In retrospect, the surge in inflation should not have come as a surprise. First you take huge real-world supply shocks triggered by a global pandemic and subsequent lockdown, then add a war between two of the world's most resource-rich nations. Finally, you combine this with a phenomenal demand boost from central banks combining forces with fiscal policy to flood their nations with cash to create a severe demand/supply imbalance which has squeezed prices higher across most segments of the economy.

After a brief hiatus for markets in July, when the US 10-year dropped from 3% to 2.7%, we ended the quarter with 10-year rates at 3.8%, the highest since 2010, and global markets falling to fresh lows.[3] Through this volatility the Columbia Threadneedle Sustainable Outcomes Global Equities strategy managed to rise 1.6%, slightly above the MSCI ACWI benchmark which was up 1.5%.

Through what has been another quarter dominated by macro and geopolitical factors, we did also see positive sustainable developments with a strong step forward in the US climate transition with the passing of the Inflation Reduction Act. We delve into this deeper below.

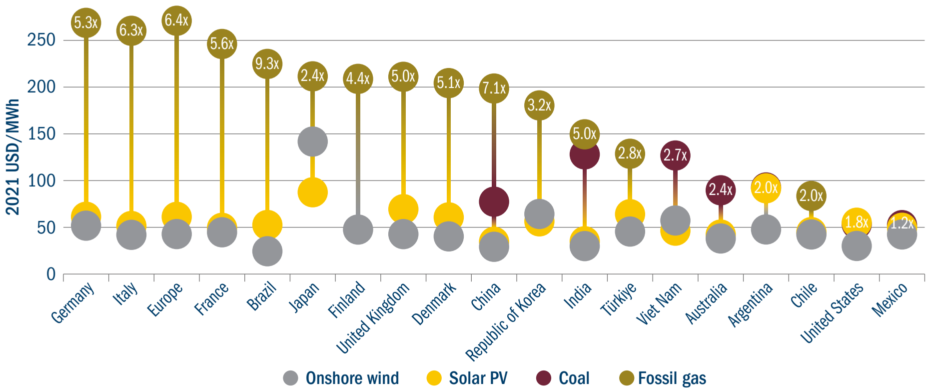
Governments have done little to curtail fossil fuels as access to cheap energy supports economic growth.
Source: iStock.

Sustainable theme focus: The climate transition – policy and economics combine as a powerful force for change

There is a reason the world transitioned to oil and gas from around 1940-1970: they offered a reliable and cheap energy source to diversify away from the reliance on coal. Since the discovery of oil in the US Permian basin, the world has enjoyed both plentiful and cheap energy to drive its economic growth. Sadly, the true economic cost of fossil fuels has not been reflected in their price, ie the negative impact of their emissions on both the environment and the health of populations.

Despite climate rhetoric, governments have generally done very little to curtail fossil fuel consumption as access to cheap energy has supported economic growth. Suddenly, however, fossil fuels are not as cheap or as plentiful as they once were. In fact, with the recent surge in natural gas and coal prices, clean energy is now by some margin the lowest cost source of new-build utility scale power across the world (Figure 1).

Figure 1: energy cost comparisons



Source: IRENA, Renewable Power Generation Costs, July 2021. Fuel-only generation costs for coal and gas for 2022 relative to the levelised cost of energy (lifetime costs including capital costs versus energy production) of new solar, onshore and offshore wind power projects commissioned in 2021.

This has started to accelerate investment into clean energy. In the EU, for example, an increase in wind and solar power capacity meant clean power covered 24% of the bloc's energy needs between March and September this year – the highest ever for the six-month period. It has also resulted in economic savings of €11 billion from avoided gas imports.[4]

In addition, we have seen vital progress this quarter in terms of policy support for the climate transition, which has reinforced the relative economic case for renewable energy.

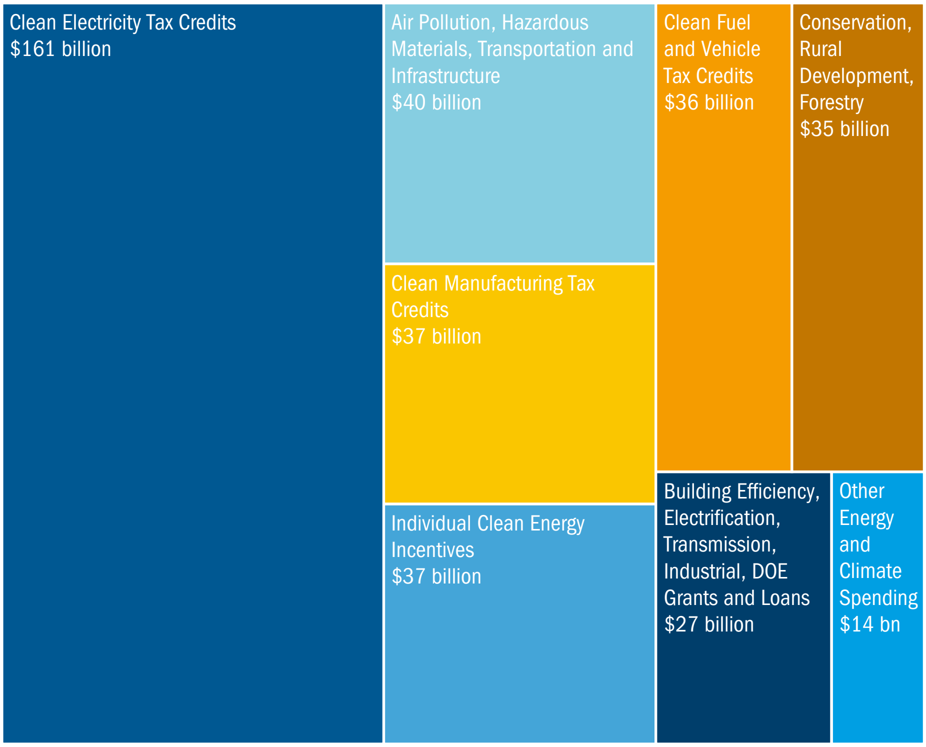
In August, the Indian government finally approved an updated national climate plan under the Paris Agreement. This sets out the framework for the country's transition to cleaner energy from 2021-2030 and its commitment to slash the emissions intensity of its GDP by 45% by 2030 from 2005 levels, versus its previous target of 33%-35%. A key part of this decarbonisation framework is to achieve the installation of about 50% cumulative electrical power capacity from non-fossil fuel-based energy resources – wind, solar, nuclear and hydro – by 2030.[5]

But it was in the US that we saw the most significant milestone in climate policy support. In August, President Biden secured a major win with the passing of the Inflation Reduction Act (IRA) into law. Through a policy of sizeable tax credits and financial support, the act incentivises the deployment of clean energy supply and transformation of energy demand across sectors that are key to decarbonising the US economy – namely the power, transportation, construction and agriculture sectors. Under the guise of combatting inflation through access to cheap energy, a key goal of this legislation is to put the US on a path towards its target of 40% emissions reductions by 2030.[6]

The Act provides at least $369 billion in support over the next decade for renewable energy, green hydrogen, electric vehicles (EVs), carbon capture and storage (CCS), energy efficient buildings and sustainable agriculture (Figure 2). Key to this is that for at least the next 10 years, companies will have visibility of government tax credits. This provides a sizeable boost to the economic attraction

> "Private investments and green financing could propel total spending to $1.7 trillion

Figure 2: major areas and spending of IRA climate provisions



Source: Committee for a Responsible Federal Budget, September 2022.

of renewable energy and other green technologies, which is vital to drive their adoption. Given the uncapped nature of tax credits and the multiplier effect of federal grants and loans, it is estimated that private investments and green financing programs could propel total spending to nearly $1.7 trillion over the next decade.[7]

By introducing a clean hydrogen production tax credit the IRA also supports domestic hydrogen production, helping to make the cost of green hydrogen in the US among the lowest in the world. Green mobility also gets a significant boost from the expansion of subsidies for consumers of domestically produced EVs. This scaling of green hydrogen and EVs will in turn drive higher demand for clean energy sources, providing further tailwinds for the sector.

Another important aim of the IRA is to make the US a global leader in clean technology and reduce its heavy reliance on China in its solar and battery supply chains. It does this by incentivising domestic manufacturing of solar panels, wind turbines, batteries and EVs. While the US already has the key ingredients to be a leader in clean technologies, including access to natural resources, infrastructure and technology talent, the IRA provides the catalyst for greater investment in both early- and late-state clean technologies, allowing it to challenge China's current dominance.

A core holding in our fund, US utility company Nextera Energy,[8] will be a key beneficiary of the expansion of renewable energy tax credits as they lead the US wind, solar and battery storage market with a 20% market share.[9] This tax credit will dramatically improve the competitive position of renewables relative to fossil fuel in the US and in turn support stronger growth in the sector.

In addition, Korean battery manufacturers such as our holding in Samsung SDI[10] should benefit from strong growth in US demand for their EV batteries and stationary storage batteries for renewable grids. This should also affirm Samsung SDI's plans for a $2.5 billion battery factory in Indiana.[11]

Ultimately, the holy grail for any energy system is to offer cheap, reliable power without greenhouse gas emissions. Renewable energy now solves for two out of those three – it is cheap and clean. Sadly, however, it is not yet as reliable as we would like, suffering from both daily and seasonal intermittency. Battery storage can help with daily intermittency but remains expensive to scale, and while hydrogen fuel cell storage may provide a long-term solution, the technology is still in its infancy.

So given current technology limitations, renewables cannot yet meet 100% of our energy needs. But coal, the most polluting of all fossil fuels, can have no future role in energy systems, while methane emissions from natural gas limit its role to that of a transition fuel. We are, however, seeing a growing trend of renewed support for nuclear power which can provide a reliable, emission-free base energy source with innovation limiting safety and waste risks:

- The IRA offers new tax credits to existing nuclear plants to keep up to 20GW of nuclear online by 2030 that would otherwise have been shut down.
- Countries across Europe are either extending the life of existing nuclear plants (Germany, for example, which historically has been heavily opposed to nuclear energy[12]) or investing in new "clean" nuclear power stations (for example, France building 14 new nuclear power stations[13]).
- In July, the EU parliament approved the taxonomy proposal to add nuclear as a taxonomy-aligned activity, subject to rigorous checks around safety and waste disposal.[14]

Ultimately though, even renewable energy has an environmental cost – the equipment and batteries used for renewable grids are both mineral and carbon intensive to produce, while solar and wind farms utilise extensive amounts of land. As such, unchecked energy consumption – particularly in western economies – fueled by access to cheap energy needs to end. This has already been put in motion by the current energy crisis, and it is a process that will involve some social sacrifices – and we all have a part to play in that.

[1] Bloomberg, Fed's Powell: There's No Painless Way to Beat Inflation, September 2022.
[2] Bloomberg, October 2022.
[3] Bloomberg, October 2022.
[4] E3G, Record growth in renewables avoids the EU €11bn in gas costs during war, 18 October 2022.
[5] Reuters, India approves new emissions targets to tackle climate change, 4 August 2022.
[6] All IRA figures: https://www.energy.gov/lpo/inflation-reduction-act-2022
[7] Credit Suisse, US Inflation Act: a tipping point in climate action, September 2022.
[8] Mention of specific companies is not a recommendation to deal.
[9] https://www.investor.nexteraenergy.com/
[10] Mention of specific companies is not a recommendation to deal.
[11] Reuters, Stellantis, Samsung SDI to build $2.5 bln Indiana JV battery plant, 25 May 2022.
[12] FT.com, Germany extends life of nuclear power plants until next April, 17 October 2022.
[13] Guardian, France to build up to 14 new nuclear reactors by 2050, says Macron, 10 February 2022.
[14] European Parliament, Taxonomy: Parliament to vote on Commission's plan to include gas and nuclear, 30 June 2022.

Company Q322 engagement highlights

We have had a busy quarter, meeting with our holdings' management teams. Here we highlight one particularly interesting company meeting:

Company[15]	Sustainable Category	
Schneider Electric	Leader Energy & Climate Transition	We met with Schneider Electric's CFO, Hilary Maxson, for what was a relatively upbeat update on the business. Schneider Electric provides energy and automation solutions for efficiency and sustainability addressing homes, buildings, data centres, infrastructure and industries. Although there are concerns around the impact of an economic downturn on demand for Schneider's products, management noted that the structural demand for energy efficient solutions remains robust given the energy crisis. In fact, the current need for such solutions in Europe has cut the payback period for Schneider's products from between three and five years to one year, making them more attractive for customers. In addition, European stimulus plans, namely RePower and Fit for 55, stipulate energy efficiency targets by sector, which in turn is supporting adoption of Schneider's solutions. The meeting really highlighted the crucial role that Schneider plays in helping customers achieve both their energy security and decarbonisation targets. As such, management have been able to increase their growth outlook for the year despite a weakening macro environment.

[15] Mention of specific companies is not a recommendation to deal.

Threadneedle Global Sustainable Equity Composite

GIPS Report: Columbia Threadneedle Investments EMEA APAC

Reporting Currency: USD

Statement of Performance Results

Calendar Year	Gross-of-fees Return (%)	Net-of-fees Return (%)	Index Return (%)	Composite 3-Yr St Dev (%)	Index 3-Yr St Dev (%)	Internal Dispersion (%)	Number of Portfolios	Total Composite Assets (mil.)	Total Firm Assets (bil.)
2021	19.21	18.45	19.04	14.52	16.83	N.A.	≤ 5	177.7	161.3
2020	28.12	27.30	16.82	N.A.	N.A.	N.A.	≤ 5	1.5	149.8
2019	33.17	32.32	27.30	N.A.	N.A.	N.A.	≤ 5	1.2	140.5

Inception Date: 12/31/2018

1. Columbia Threadneedle Investments EMEA APAC 'the Firm' claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS Standards. Columbia Threadneedle Investments EMEA APAC has been independently verified by Ernst & Young LLP for the periods 1st January 2000 to 31st December 2020. The verification reports are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.
2. The 'Firm' is defined as all portfolios managed by Columbia Threadneedle Investments EMEA APAC (prior to 1 January 2021, the firm was known as Threadneedle Asset Management) which includes Threadneedle Asset Management Limited, (TAML), Threadneedle International Limited, (TINTL), Threadneedle Investments Singapore (Pte.) Limited, (TIS), and Threadneedle Management Luxembourg S.A. (TMLSA), excluding directly invested property portfolios. The firm definition was expanded in 2015 to include portfolios managed by then newly established affiliates of Threadneedle Asset Management in Singapore. TAML & TINTL are authorised and regulated in the UK by the Financial Conduct Authority (FCA). TINTL is also registered as an investment adviser with the U.S. Securities and Exchange Commission and as a Commodities Trading Advisor with the U.S. Commodity Futures Trading Commission. TIS is regulated in Singapore by the Monetary Authority of Singapore. TMLSA is authorised and regulated in Luxembourg by the Commission de Surveillance du Secteur Financier (CSSF). On 1 July 2020, Threadneedle Asset Management Malaysia Sdn. Bhd (TAMM) was removed from the firm. Columbia Threadneedle Investments is the global brand name of the Columbia and Threadneedle group of companies. Beginning 30 March 2015, the Columbia and Threadneedle group of companies, which includes multiple separate and distinct GIPS-compliant firms, began using the global offering brand Columbia Threadneedle Investments.
3. A concentrated global equity strategy with a focus on high quality companies that seeks to deliver both positive sustainable outcomes, in accordance with the UN Sustainable Development Goals (SDGs), and superior financial returns. Derivatives are not allowed. The composite was created November 30, 2018.
4. The portfolio returns used in composites are calculated using daily authorised global close valuations with cash flows at start of the day. Composite returns are calculated by using underlying portfolio beginning of period weights and monthly returns. Periodic returns are geometrically linked to produce longer period returns. Gross of fee returns are presented before management and custodian fees but after the deduction of trading expenses. Returns are gross of withholding tax. Net of fee returns are calculated by deducting the representative fee from the monthly gross return. Policies for valuing investments, calculating performance, and preparing GIPS Reports, as well as the list of composite descriptions, list of pooled fund descriptions for limited distribution pooled funds, and the list of broad distribution pooled funds are available upon request.
5. The dispersion of annual returns is measured by the equal weighted standard deviation of portfolio returns represented within the composite for the full year. Dispersion is only shown in instances where there are six or more portfolios throughout the entire reporting period. The Standard Deviation will not be presented unless there is 36 months of monthly return data available.
6. The three-year annualised ex-post standard deviation measures the variability of the gross-of-fees composite and benchmark returns over the preceding 36-month period.
7. The following fee schedule represents the current representative fee schedule for institutional clients seeking investment management services in the designated strategy: 0.65% on the first £50m; 0.6% on the next £100m; 0.55% on the next £350m; 0.5% thereafter. Gross of fee performance information does not reflect the deduction of management fees. The following statement demonstrates, with a hypothetical example, the compound effect fees have on investment return: If a portfolio's annual rate of return is 10% for 5 years and the annual management fee is 65 basis points, the gross total 5-year return would be 61.1% and the 5-year return net of fees would be 55.9%.
8. The benchmark for this strategy is the MSCI AC World Index. The MSCI AC World Index is designed to provide a broad measure of equity-market performance throughout the world and is comprised of stocks from 23 developed countries and 24 emerging markets Index returns reflect the reinvestment of dividends and other earnings and are not covered by the report of the independent verifiers.
9. Past performance is no guarantee of future results and there is the possibility of loss of value. There can be no assurance that an investment objective will be met or that return expectations will be achieved. Care should be used when comparing these results to those published by other investment advisers, other investment vehicles and unmanaged indices due to possible differences in calculation methods.
10. The percentage of non-fee-paying assets in the composite as of the end of 2020 and 2019 were 100% and 100% respectively.

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