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〔原文 (Original)〕

Asset Owners and the Transition Portfolio Allocation Problem

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In the last year, global financial institutions have exhibited a reduced capacity and/or willingness to publicly support the energy transition. Executives at some institutions have been strongarmed into holding back their convictions that a net-zero carbon trajectory is the path to take, while others have all but sighed in relief that they do not have to pretend anymore.

When speaking to large global asset owners, however, the attitude is more homogenously in favour of the transition. Put simply, these investors - which have planning horizons reaching out even as far as the year 2100 - have discovered their portfolios could be profoundly affected by a 1.7°C or 2.7°C warming scenario. They have also learned how great the return of USD 1 of investment in climate mitigation and adaptation today could be in terms of losses avoided in the future.

For purposes of this article, we will define a 1.7°C scenario as a successful transition, and 2.7C as a failed transition.

The asset allocation problem of the energy transition

It is not a bold assumption that risky assets will be more volatile in a higher temperature scenario. Intensified volatility in the physical world will lead to greater volatility in the financial world. It is also straightforward to imagine that portfolio returns would be lower in a 2.7°C scenario. Recently, S&P Global released a report estimating the costs of physical climate change risks to be around USD1.5trn per annum by the 2050s. Investors will have to share this burden. Consequently, they would prefer a scenario where warming is limited as much as possible.

The natural inclination for investors when they see adverse scenarios is to seek hedges that protect returns, or simply assets that are negatively correlated to the adverse shock. The mathematical motivation for this underpins modern portfolio theory: a combination of two assets that have a correlation lower than 1 gives rise to an 'efficient frontier' where the investor can achieve a better return/risk ratio by combining the two assets than they would if only holding one of them. The lower/more negative correlation of the assets, the higher return/risk ratio possible.

If the transition fails, it is likely because hydrocarbon companies continue to be successful: therefore investing in hydrocarbon companies is a good hedge against a stalled decarbonisation effort. However, if the transition fails the eventual policy response to accelerate decarbonisation will be such that transitioning/transitioned companies are going to outperform, meaning they will be a good hedge, too.

These two hypotheses seemingly directly contradict each other, but this tension is something asset owners will have to get comfortable with.

Non-transitioning assets: unattractive as hedges for fiduciary investors

Hedging a failed transition (2.7°C scenario) by allocating capital to high carbon emitting companies, including in the oil and gas

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sector, is a strategy predicated on the belief that the returns will compensate for the lower payback and higher volatility of other assets in such a scenario.

The first drawback with this strategy is that there might be substantially more financial downside risks to it than meets the eye. Oil and gas assets can - even if they are often perceived to be relatively safe investments - be extremely volatile and subject to major drawdowns. The US high-yield shale sell-off of 2015 is one example of the systemic losses that can be realised in this sector. Other risks associated with the fossil fuel sector abound: Deepwater Horizon and Dieselgate in 2015 are just some examples. Moreover, there are compelling reasons to believe that government spending on climate adaptation, to address the physical risks of greater warming, will be funded via levies on the oil and gas sector, especially if it continues to rake in profits in a failed transition. Therefore, the upside of oil and gas investments may be limited, and the downside substantial.

A second drawback relates to the fiduciary duty of long-term investors. To a 20-something worker today, whose money you steward, holding everything else equal one dollar is more valuable in absolute terms in a 1.7°C world than in a 2.7°C world. Air conditioning will be more expensive, food prices will be very volatile, and coral reefs will be priceless in a 2.7°C world. Ten years on from the Paris Agreement, it is worth remembering that today a much larger proportion of the global population will be alive in 2100, and will actually face the consequences of the investment choices made in the here and now.

Transition assets: returns vis-a-vis government policy changes

On the flip side, an investor could seek transitioning assets as a hedge. This remains the main strategy of large global asset owners.

However, the short- to medium-term financial results of this strategy have arguably been unsatisfactory. Renewables companies have, in general, underperformed fossil fuel companies: The classic example is the transition leader company Orsted, which compares unfavorably with various oil majors.

But it is important to remember that claims of fossil outperformance are not universal. Indeed, they depend on the time horizon studied and asset classes considered. For example, consider the S&P500 Investment Grade Corporate Bond Index and its carbon efficient equivalent (S&P500 Bond Investment Grade Carbon Efficient Index). The latter index is a reweighted version of the former. It is relatively sector neutral but overweights companies with higher carbon efficiency, and underweights those with low carbon efficiency. Since its launch in 2018, the outperformance in total return terms of the carbon efficient index has been roughly 20 basis points per year on a duration neutral basis - a fairly stable transition outperformance.

This is one area where transition-aligned assets have done well. What explains the outperformance of non-transition assets in other markets? If you ask asset owners, one answer is fairly common - it is because of policy shifts away from the transition. Many countries are finding the energy transition has been weaponised in the political discourse, and has been opposed for ideological reasons rather than for rational energy decisions. And when government policy adjusts to accommodate the preference of non-transition entities, of course, the returns on transitioning assets struggle. This is a very real battle that asset owners are seeing today.

The policy conundrum and government debt

So what are asset owners to do? From their perspective, non-transitioning assets

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are unattractive in the long-term, while transitioning assets are being depressed by policy decisions in the short- to medium term.

One could argue that asset owners should be engaging with governments to align policy with a faster transition, thereby avoiding the negative returns and high volatility of a 2.7°C scenario and supporting transition investment allocations. Realistically, however, the capacity for asset owners, which themselves are often tied closely to sovereigns to affect change is very limited.

This introduces a dilemma: asset owners are very large investors in government debt, making them important lenders to governments. Yet they have limited opportunities to engage. This is not unimportant in a time of globally rising government debt burden.

However, as lenders, asset owners could use the structure of their lending, i.e. the bond formats, in order to incentivise policies that give them superior portfolio outcomes, while steering clear of actually dictating specific measures.

The first bond format to consider are use-of-proceed (UoP) bonds, such as Japan's sovereign GX (Green Transformation) bonds. By investing in such bonds, investors signal to governments that they are interested in the transition and gain an opportunity to engage technically on what that transition looks like. This is a very important discussion to have. The drawback is that UoP bonds from a financial standpoint do not add negative correlation to the asset allocation exercise. A UoP bond behaves very similarly to a traditional government bond.

Are there instruments that allow investors to ask more directly for certain policy outcomes, without becoming political? One way is through inflation-linked bonds, where the return on the bonds is dependent upon the rate of inflation. High inflation is bad for an investment portfolio in general. An inflation-linked bond provides the investor a hedge for this poor outcome, while at the same time incentivising the government to not run high inflation (because then they will have to pay higher interest).

Inflation-linked bonds, therefore, allow investors to capture the negative correlation between economic outcomes and asset returns, without getting involved in policy.

Imagine, then, that we had a transition-linked bond. This would work similarly to an inflation-linked bond, where the investor would receive a higher payout/coupon if policy fails to bring about the transition, and a lower one if it is successful. Such a bond would provide negative correlation and allocation outcomes with higher risk-return efficiency for investors.

It would provide incentives for policy makers to execute an investor-preferred outcome and policy, as they would face a lower cost-of-debt if the transition is successful, and a higher one if not.

It would also allow the general public to infer, from bond market pricing, on how likely it is that the transition will be successful, thus allowing for better planning.