Stranded Assets: A Climate Risk Challenge

Authors: Ben Caldecott, Elizabeth Harnett, Theodor Cojoianu, Irem Kok, and Alexander Pfeiffer
Editor: Ana R. Rios

Executive Summary

Over the last few years, the topic of "stranded assets" resulting from environment-related risk factors has loomed larger. These factors include the effects of physical climate change as well as societal and regulatory responses to climate change. Despite the increasing prominence of these stranded assets as a topic of significant interest to academics, governments, financial institutions, and corporations, there has been little work specifically looking at this issue in Latin America and the Caribbean (LAC). This is a significant omission, given the region's exposure to environment-related risk factors, the presence of extensive fossil fuel resources that may become "unburnable" given carbon budget constraints, and the particular challenges and opportunities facing lower-income and emerging economies in LAC.

This report includes an extensive literature review, reviews of case studies, in-depth interviews, extensive informal consultation, and a survey instrument to identify gaps in the stranded asset literature. The report builds on work undertaken in 2015 by the Inter-American Development Bank (IDB) on the issue of stranded assets. It aims to provide a deeper understanding of the issue and the existing literature about it, as well as highlight opportunities for future work, especially in LAC.

What Are Stranded Assets?

Stranded assets are defined as assets that have suffered from unanticipated or premature write-downs, devaluations, or conversion to liabilities (Caldecott, Howarth, and McSharry, 2013). Environment-related risks that can cause asset stranding include:

- Environmental challenges (e.g., climate change, natural capital degradation)
- Changing resource landscapes (e.g., shale gas abundance, phosphate scarcity)
- New government regulations (e.g., carbon pricing, air pollution regulation)
- Falling clean technology costs (e.g., solar photovoltaic, onshore wind, electric vehicles)
- Evolving social norms (e.g., fossil fuel divestment campaigns) and consumer behavior (e.g., certification schemes)
- Litigation (e.g., carbon liability) and changing statutory interpretations (e.g., fiduciary duty, disclosure requirements)

Focus on these risks has been accelerated by a wide range of support from a variety of significant international figures.[1] In addition, research on the topic of "unburnable carbon," which is strongly linked to the concept of stranded assets, has sparked one of the fastest-growing social movements in history – the fossil fuel free divestment campaign. The campaign may not have a direct impact on company share value, but indirect impacts are likely to occur as a result of uncertainty and stigmatization affecting staff recruitment and retention, brand value, and the ability of stigmatized firms to influence policy (Ansar, Tilbury, and Caldecott, 2013). The divestment campaign has also contributed to an increase in support for shareholder resolutions that require greater disclosure from large listed fossil fuel companies.

[1] Mark Carney, the Governor of the Bank of England, became one of the most recent major figures to endorse this focus in a speech at Lloyd's of London on September 29, 2015 (Carney, 2015). Others have included U.S. President Barack Obama; UN Secretary-General Ban Ki-moon; Jim Kim, President of the World Bank; Christiana Figueres, Executive Secretary of the United Nations Framework Convention on Climate Change; Angel Gurría, Secretary-General of the Organization for Economic Cooperation and Development; Lord Stern of Brentford; and Ben van Beurden, CEO of Shell plc.

Why Do Stranded Assets Matter?

Stranded assets are not just the result of climate change, and they involve sectors other than fossil fuels. Stranded assets are not considered a new phenomenon, but many interviewees expect that stranding will increase in the coming decades as a result of environmental and technological changes. Asked to rank the factors that will strand assets in the future, falling clean technology costs and physical environmental change were identified as the most likely.

Interviewees focused on the temporal aspect of stranding, noting that some assets will be stranded permanently, while others will only be temporarily affected by extreme weather or changing prices. Fossil fuels were seen as the sector most likely to be affected by stranding. However, other sectors were also highlighted as being at risk. Infrastructure (including transport, ports, and inefficient buildings), agriculture, real estate, mining, and utilities were all highlighted as being potentially affected by asset stranding.

Recent estimates suggest that 60 to 80 percent of publicly listed fossil fuel reserves must be considered "unburnable" if the world is to avoid disastrous climate change, potentially costing the fossil fuel industry $28 trillion in revenues over the next two decades (Carbon Tracker, 2013a; Kepler Cheuvreux, 2014). This would likely be reflected in lower share prices, but could potentially lead to financial instability as a result of significant economic losses. However, if these unburnable fossil fuel reserves were to be burnt, the outcomes could be even worse, with subsequent climate change irrevocably altering the environment and affecting economic production as well as investment risk and returns (IPCC, 2014). Recent discussions of stranded assets are now moving beyond the "carbon bubble" and "unburnable carbon" and focusing more on how a wider range of environment-related political, economic, and social factors could affect asset values and stranded assets. Regardless of government policies, stranding can occur for a variety of reasons including the downward cost curve for renewables, pressure from investors, and pressure from students (Murray, 2015) .

Sovereign debt could be at risk for economies that are climate-sensitive either through direct physical climate risks (such as storms or drought) or through overexposure to the fossil fuel sector (i.e. countries with large state-owned resources companies).

Investors – both asset owners and asset managers – are coming under increasing pressure to measure and disclose their exposure to stranded-asset risk. The interview process revealed that some investors have begun to explore this exposure in-depth and are taking steps to reduce their exposure. For asset managers, there is growing pressure to offer low-carbon

products, including divestment and carbon footprinting tools. As a result, many fund managers are now offering equity strategies with a low-carbon tilt. However, interviewees noted that few tools were readily available to reduce stranding risk for other asset classes.

The survey also highlighted the absence of climate risk management strategies. The survey showed that 73 percent of participants did not have (or did not know) someone in their investment/financial organization responsible for ensuring that relevant climate risks had been considered. Nevertheless, survey respondents did use a variety of management tools – most notably negative and positive screening, although the non-use of tools remains high.

The survey found that only 20 percent of respondents believe there is adequate information to properly analyze corporate exposure to climate change. Providing management tools and strategies suitable for a wide range of investors of different sizes, asset class focuses, and geographies is important, but so is the ease of use of the tools.

Many financial institutions in LAC are mainly concerned with the economic growth and governance of the companies in which they are invested, and less so about environmental issues. Indigenous communities' rights and threats to a company's social license to operate are on the radar of financial institutions, and are currently considered more salient than issues such as stranded assets. Pension funds across the region tend to be more receptive to the impact of climate change and stranded assets on their portfolios given their long-term mandates. The consideration of environmental issues has gained more traction with financial industry associations across the region (e.g., the Brazilian Federation of Banks). Interviewees also pointed to the role of central banks, providing the example of the Brazilian central bank, which has a mandate to encourage all financial institutions to develop environmental, social, and governance risk management practices and processes, which it then judges in terms of whether they are fit for purpose.

The size of financial markets and the ownership of pension funds in LAC are important in determining the adoption of responsible investment principles across the investment value chain. Pension funds in LAC (particularly Chile and Peru) tend to be owned by international financial institutions, which have yet to deploy their responsible investment experience in the region even though on the global investment landscape they are considered leaders in responsible investment integration in decision-making.

The survey and interviews highlighted the ongoing shift toward greater awareness of stranded assets and broader climate consideration among financial communities internationally. However, interviewees based in Europe, the United States, and Australia showed greater urgency and appetite for integrating these issues than did interviewees in LAC, for whom issues of economic growth and governance were greater priorities.

Conclusions

Stranded assets resulting from environment-related risk factors, including the effects of physical climate change and societal and regulatory responses to climate change, have become increasingly prominent. This has been driven in large part by changes in the real economy (e.g., the falling cost of renewables), as well as by the attention generated by the Paris Agreement.

Levels of awareness and interest differ across countries and regions. Much of the early work on stranded assets originated in the United Kingdom, rapidly spreading to the United States and from there to other countries. There is currently significantly more awareness of stranded assets among financial institutions in the United States, Europe (particularly the United Kingdom, France, Netherlands, Sweden, Denmark, and Norway), China, and Australia than elsewhere.

While awareness of stranded assets among financial institutions has increased rapidly, developments in practice have not kept up. New products and tools have been launched to cater to new demand, but they are often based on carbon footprinting and related methodologies that financial institutions are increasingly questioning. There are growing calls for a new generation of data, analytical methods, and tools to help financial institutions differentiate between assets and companies that are more or less exposed to environment-related risks. Developing this next generation of analytics is critically important if financial institutions are to take account of environment-related risks that can strand assets through their decision-making.

Understanding the implications of stranded assets for successful low-carbon development is in an incipient phase. There has been some work on the need for a "just transition," but this has been relatively high-level work that pre-dates much of the discourse on stranded assets. There is very little work looking at how to systematically identify assets that could be stranded by decarbonization in order to develop policy responses that can preempt destabilizing opposition that might result. There are significant opportunities to create tools to help policymakers understand when and where assets may become stranded, in turn enabling them to develop adequate policy and regulatory responses. There is an opportunity for pioneering work in this field in LAC.

Stranded assets could be a systemic risk to financial stability and should therefore be a topic of concern for central banks and financial regulators. There are also issues related to macro and microprudential regulation and the conduct and practices of financial institutions that make stranded assets of relevance to supervisory bodies. Much of the work in this area has been led by the Bank of England, with the Financial Stability Board and the

European Systemic Risk Board also producing work. Other central banks are likely to follow suit. There could be opportunities for LAC regulators to pioneer developments in this area, particularly given that the Brazilian central bank has a progressive mandate to encourage all financial institutions to develop environmental, social, and governance risk management practices and processes.

Greater attention to framing and diffusing risks and opportunities, and to providing diverse but practical management tools, is needed to support the uptake of responses to stranded assets. This is particularly the case in LAC, where other factors such as governance and development issues vie for primacy among investment priorities, and where there are more limited opportunities for sustainable options in the smaller financial markets.