ESG Spotlight

Fossil fuel divestment – A shareholder perspective

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Themes:
Fossil fuel divestment, stranded assets, GHG regulation

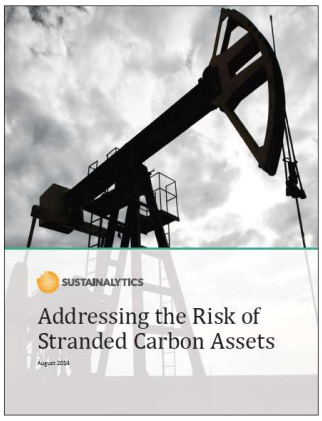
Sectors:
Oil and gas, coal, electric utilities

Geography:
Global

Key Insights

- Six of the world's 10 largest oil, gas and coal companies are **more than 33% owned by PRI signatories**. These companies, which include **ExxonMobil**, may face increased support for climate change shareholder resolutions going forward.
- **Royal Dutch Shell and BHP Billiton are more than 4% owned** by investors that have committed to the Montreal Pledge or Portfolio Decarbonization Coalition. These companies may face heightened scrutiny from their investors on divestment risks.
- While divestment is **unlikely to cause permanent share price effects**, it could have indirect financial implications for fossil fuel companies, including negative impacts on firm reputation, recruitment capabilities and bargaining power.

For additional research, please see our 2014 report on stranded assets:



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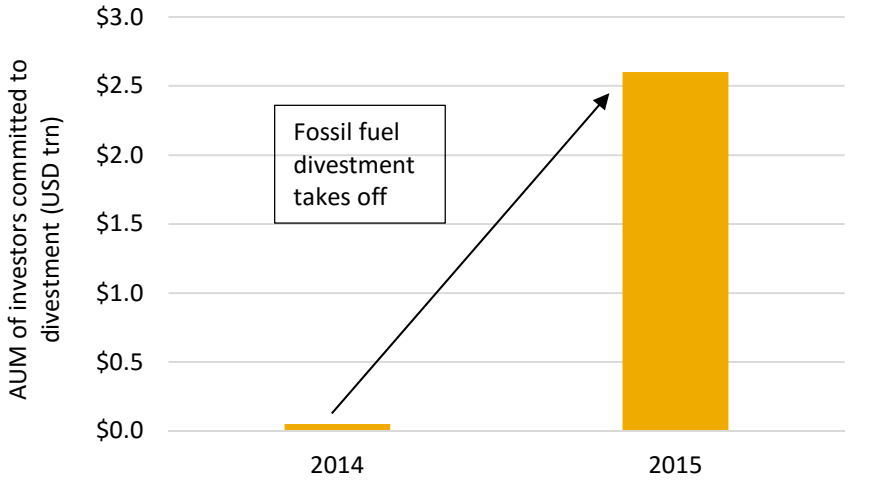
Fossil fuel divestment picks up steam

Fossil fuel divestment, a phrase that was virtually unrecognized before 2012, has suddenly become part of mainstream investor discourse. Investors representing USD 2.6trn in assets under management have committed to divest from fossil fuel companies, up from USD 50bn in 2014. While only a fraction of these assets are invested in the world's listed oil, gas and coal firms, momentum in the divestment movement is clearly building. We expect that conversations around fossil fuel divestment will intensify in the months ahead, almost irrespective of the outcome of the Paris climate conference that started on 30 November. Should fossil fuel companies be concerned? In this brief research note, we summarize the rationale for fossil fuel divestment, explore how large investors are operationalizing their commitments and, using the world's ten largest oil, gas and coal companies as a case study, look at the proportion of outstanding shares owned by investors that may be relatively sympathetic to fossil fuel divestment.

A (short-term) history of fossil fuel divestment



Source: Arabella Advisors, 2015[1]

The divestment rationale – Varied motivations

Investors with USD 2.6trn have committed to divest from fossil fuels

Fossil fuel divestment is the practice of withdrawing investment (equity and debt) from companies involved in fossil fuel production, or from investment funds that hold fossil fuel companies. Spearheaded in 2012 by US-based climate group 350.org, the movement has since grown to attract over 430 global institutions with USD 2.6trn in collective assets under management (AUM).[2] This represents approximately 4% of total global AUM.[3]

Approaches to divestment

Two main forms

Divestment can take two forms: a complete exit from all fossil fuel companies in an investor's portfolio, or a conditional approach where shareholders divest from oil, gas and coal companies that meet certain criteria (for example, companies that derive more than 50% of their revenue from fossil fuel production). The latter is the preferred vehicle for most fiduciary investors, as it allows for smoother portfolio integration.

The ethical argument

The motivations behind fossil fuel divestment are varied. Some shareholders divest for moral/ethical reasons. The ethical argument recognizes fossil fuel companies as significant contributors to climate change, and highlights the negative physical and social effects of climate change, including: increases in the frequency and severity of extreme weather events; rising sea levels; increased flooding and drought; reduced biodiversity; and impacts on human migration. Prominent organizations that have committed to divest from fossil fuel companies for ethical reasons include The World Council of Churches and the British Medical Association.[4]

An investment case for divestment

Divestment can also be motivated by financial considerations. Indeed, while the divestment movement circa 2012 largely consisted of religious institutions, universities, foundations and individuals citing moral/ethical factors, the momentum today is being carried by fiduciary investors and an investment case for divestment.

A carbon bubble in the markets?

Inflated valuation of fossil fuel stocks

The financial rationale for divestment hinges on the carbon bubble hypothesis and the risk of stranded assets. The carbon bubble hypothesis asserts that the valuation of the world's listed oil, gas and coal firms is artificially inflated because a material proportion of their proven reserves will need to be left in the ground in order to limit climate change to two degrees Celsius above pre-industrial levels, a temperature increase that is often regarded as the maximum that can be sustained without experiencing the most dangerous climate impacts.[5]

Policies may make fossil fuel extraction less attractive

Proponents of the carbon bubble hypothesis argue that governments will eventually implement policies, including carbon taxes and greenhouse gas regulations, which will give teeth to this target and make it economically unattractive for fossil fuel companies to exploit all of the reserves that currently sit on their balance sheets. This would in turn lead to stranded assets. According to a recent study from Citi Group, up to USD 100trn in fossil fuel assets could become stranded if policymakers implement a legal framework to pursue the two degree Celsius target.[6]

Exposure to the carbon bubble

Like any hypothesis, the carbon bubble is a vision of the future that may or may not materialize. It is clearly a long-term play, and if the bubble did indeed burst, we would expect to see dramatic differences in the exposure of individual oil, gas and coal companies. Indeed, as we argued in our 2014 report on stranded assets ("Addressing the Risk of Stranded Carbon Assets"), a company's exposure to the carbon bubble is likely to be driven to a significant extent by its carbon intensity and its involvement in high-cost production.[7]

The market is taking a closer look at oil, gas and coal companies

Despite the long-term uncertainty associated with carbon pricing, greenhouse gas regulation and the possibility of a legally binding global emissions reduction framework, the market is taking an increasingly critical look at the future income streams of fossil fuel companies (although, as we show below, the investment case for divestment is currently being applied almost exclusively to coal companies).

Some divestors are motivated by pragmatism

A final group of "divestors" sit in what we have termed the pragmatic camp. It includes those organizations that choose to divest because of perceived reputational gains, as well as smaller investors that do not have the resources to conduct specialized, carbon-related research at the individual security level. Pragmatic divestors can be fully aligned with the financial rationale (or the ethical rationale) for fossil fuel divestment, but their strategy is guided by pragmatism.

Fossil fuel divestment – A (short-term) misnomer?

A focus on coal companies

As mentioned earlier, 430 global institutions with an estimated USD 2.6trn in collective AUM have committed to fossil fuel divestment. But when we review the announcements of these organizations, especially those from large fiduciary investors, it becomes apparent that there is a heightened focus on coal companies and, to a lesser extent, on utilities that burn coal.

Allianz is the latest fiduciary investor to commit to divestment

The table on the following page summarizes seven divestment announcements made by high-profile global investors. The most recent announcement was made by Allianz, the world's largest insurance company, which said in November that it will pull out over USD 4bn in equity and fixed income investments from mining companies that derive over 30% of their revenues from coal, and utilities that produce over 30% of their power from coal.[8]

Coal companies are being targeted

These announcements show that coal companies (and, to a lesser extent, utilities that burn coal) are being targeted ahead of oil and gas companies. Even where oil and gas companies fall under the divestment umbrella, as they do in the cases of Rockefeller Brothers and the Dutch pension giant PFZW, coal companies are the initial target. In many ways, fossil fuel divestment is a misnomer – coal divestment would be a more accurate description of what most large divestors are doing, at least so far.

Divesting from coal stocks

The focus on coal stocks is partly a function of portfolio mechanics. Listed coal companies tend to be much smaller and more geographically concentrated than their oil and gas peers, which makes it easier for investors to divest from a portfolio rebalancing and asset allocation standpoint. But the primary driver is economics. Companies in both sectors will undoubtedly face challenges as a result of future carbon

Structural problems facing coal

constraints, but for coal plays, structural problems have already emerged. These include negative price effects from the US shale gas bonanza, the surge of renewable generation (particularly in Europe) and tightening environmental regulations, which hit coal first because it is the most polluting fossil fuel.

High-profile fossil fuel divestments

Investor	Date of announcement	Total AUM (USD bn)	Divestment (USD bn)	Affected AUM (%)	Target	Revenue test*
Allianz	Nov-2015	$522	$4.28	0.82%	Coal companies, utilities	30%
PFZW	Nov-2015	$172	$1.80	1.05%	Fossil fuel companies	Not disclosed
CalPERS/CalSTRS	Sep-2015	$476	$0.19	0.04%	Coal companies	50%
Norwegian Sovereign Wealth Fund	Jun-2015	$890	$8.00	0.90%	Coal companies, utilities	30%
AXA	May-2015	$615	$0.56	0.09%	Coal companies, utilities	50%
Rockefeller Brothers Fund	Sep-2014	$0.86	$0.06	6.98%	Fossil fuel companies	Not disclosed
Stanford University	May-2014	$22	Not disclosed	Unknown	Coal companies	50%

* Some investors target companies that earn more than half of their revenue from fossil fuels. **Source:** Sustainalytics, 2015

The relationship between coal and water

An additional and perhaps less well-documented threat to future coal demand is water scarcity. As water is a significant input in coal production, used to extract and wash coal, and to cool the steam in coal-fired power plants, shortages can constrain production. In China, which produces and consumes almost as much coal as the rest of the world combined, this problem is particularly acute. It is estimated that 83% of China's coal lies in water-scarce or water-stressed regions.[9] This analysis illustrates the interrelated nature of ESG issues, as climate change can exacerbate drought and water scarcity risks, which can in turn impact coal production.

The coal sector is down 77% since 2013

The coal sector has lost 77% of its value

The headwinds facing coal are demonstrated in the price chart below, which tracks the 10-year performance of the global coal and oil and gas industries against the MSCI All Country World Index (MSCI ACWI). The coal industry has been a consistent underperformer since Q1 2013, having lost approximately 77% of its value from January 2013 to October 2015. Investors who had fully divested from coal stocks or who were otherwise underweighting coal during this period would have benefitted.

Yet the chart also shows that coal stocks outperformed the oil and gas sector and the global equity market in the months preceding the 2008 financial crisis and for the first

two years thereafter. We are certainly not forecasting a coal recovery, but this analysis underscores the importance for investors of taking a long-term view when considering divestment. Recent claims about the outperformance of "ex fossil fuel" and "ex coal" indices are often based on five and, in some cases, three years' worth of data.[10]

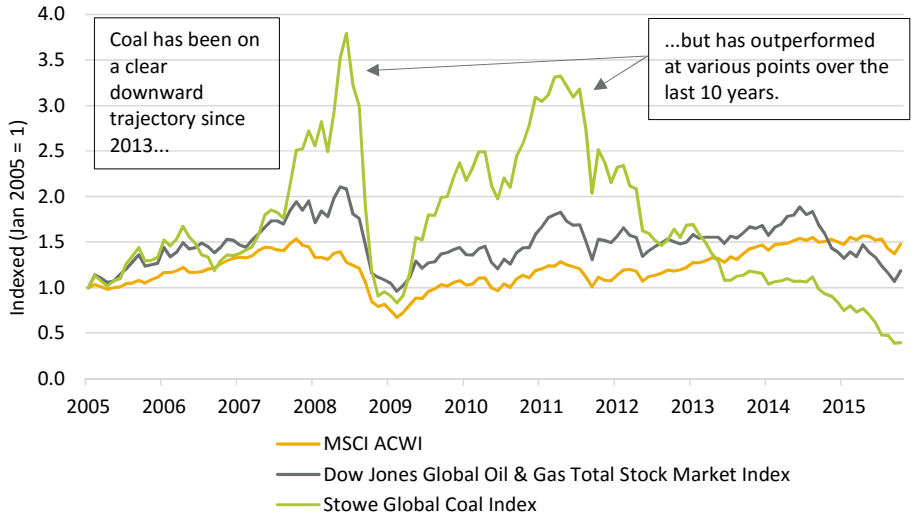
Divesting in a high oil price environment?

The relative rush to exit coal ahead of oil and gas should also be seen from the perspective of global oil prices. If some fiduciary divestors are finding it difficult to divest from oil and gas stocks with oil at USD 45/barrel (or are simply delaying the decision), they will almost certainly find it more difficult if oil prices begin to trend upward, as this would push up the value of the oil and gas stocks they are trying to sell.

Market forecasts are sometimes wrong

We do not wish to speculate on the future of oil prices, but the current market consensus of sustained low prices into 2016 and beyond could turn out to be as unfounded as Goldman Sachs' 2011 forecast of USD 140/barrel in 2012[11] or, most spectacularly, the 2008 forecast of the former chief economist of Canada's fifth-largest bank that oil would reach USD 200/barrel.[12] Our point is not that oil (and gas) prices could start to climb in 2016, contrary to the market's expectations; rather, our point is that if oil prices begin to climb, fiduciary divestors may be compelled to reassess their commitment to divest from oil and gas companies (although probably not from coal companies).

Financial performance of the global coal and oil and gas industries, 2005–2015



Source: Bloomberg

A second wave of divestment?

We certainly would not rule out the possibility of a "second wave" of divestment activity focused on oil and gas stocks (indeed, some large investors, including PFZW, have already announced plans to divest from high-carbon companies in the energy, materials and utilities sectors). But for many investors, making the leap from coal companies to oil and gas companies will likely necessitate a clearer regulatory signal from policymakers. While the Paris climate conference is unlikely to deliver the clarity that many market participants are hoping for, at least in the form of a legally binding global emissions framework, it may nonetheless provide regulatory momentum and lay the foundation for a potential second wave of divestment targeting oil and gas firms.

Divestment awareness – Looking at ownership data

A critical look at future returns

The sudden surge in investor support for fossil fuel divestment is certainly remarkable, even if we take into account that: **(1)** only a small fraction of most investors' portfolios is invested in listed oil, gas and coal companies, and **(2)** many investors who have committed to divest may not follow through (perhaps especially in the case of oil and gas). What can be safely concluded from the groundswell of support for fossil fuel divestment, especially from sophisticated fiduciary investors such as Norway's USD 890bn sovereign wealth fund (which, ironically, is fueled by Norway's oil revenues), is that the market is taking an increasingly critical look at the revenue streams of companies involved in fossil fuel extraction.

Divestment risk vs. divestment awareness

With this perspective in mind, it is useful to consider which oil, gas and coal firms are significantly owned by investors that may be relatively sympathetic to fossil fuel divestment. While a company's "divestment risk" is likely to be driven by many factors, including the company's carbon intensity and its involvement in high-cost production, we are concerned here with the "divestment awareness" of fossil fuel investors and their marginal inclination to implement a divestment strategy.

The Principles for Responsible Investment, the Montreal Pledge and the Portfolio Decarbonization Coalition

Our approach was to take the world's 10 largest publicly traded oil, gas and coal companies[13] and cross-reference their shareholders with **(1)** investors that have signed the United Nations-supported Principles for Responsible Investment (PRI) and **(2)** investors that have joined either the Montreal Pledge (MP) or the Portfolio Decarbonization Coalition (PDC).[14]

Ownership of large oil, gas and coal companies by investor type*

Company	Country	Industry	Fossil fuel	Emissions from proven reserves (Gt CO2)	Percentage of outstanding shares owned by PRI signatories	Percentage of outstanding shares owned by MP/PDC signatories
Adani Enterprises	India	Traders & Distributors	Coal	25.4	4.1%	0.1%
Anglo American	UK	Diversified Metals	Coal	13.5	53.2%	3.8%
BHP Billiton	Australia	Diversified Metals	Coal	12.4	49.1%	4.1%
Peabody Energy	US	Oil & Gas Producers	Coal	11.5	25.9%	0.9%
Glencore	Switzerland	Diversified Metals	Coal	10.7	13.3%	1.0%
ExxonMobil	US	Oil & Gas Producers	Oil and gas	8.2	33.7%	1.1%
Lukoil	Russia	Oil & Gas Producers	Oil and gas	7.0	2.9%	0.6%
BP	UK	Oil & Gas Producers	Oil and gas	6.7	42.4%	3.1%
Royal Dutch Shell	Netherlands	Oil & Gas Producers	Oil and gas	4.5	51.8%	4.5%
Chevron	US	Oil & Gas Producers	Oil and gas	4.1	40.4%	0.9%

*Ownership data as of November 18/2015. Analysis based on publicly disclosed ownership.

Source: Fossil Free Indexes, Bloomberg, Sustainalytics

The results of our analysis are shown in the table above. Six of the world's ten largest oil, gas and coal companies are more than one-third owned by PRI signatories. These include **Anglo American** and **Royal Dutch Shell**, both of which are majority owned by PRI signatories (53% and 52% respectively), as well as **BHP Billiton** (49%), **BP** (42%), **Chevron** (40%) and **ExxonMobil** (34%). We do not wish to conflate the interests of the PRI's 1,229 asset owner and asset manager signatories, but given the PRI's emphasis on active ownership, companies meaningfully owned by PRI signatories may face increased

support for shareholder resolutions that address their climate change strategy and emissions disclosure practices.

Royal Dutch Shell is 4.5% owned by investors committed to carbon measurement and reduction

The proportion of outstanding shares owned by investors that have endorsed the MP or PDC is much less significant, which is understandable given the relatively small number of investors backing these initiatives (108 for the MP; 23 for the PDC). Still, the proportion is in some cases material. **Royal Dutch Shell**, for instance, is 4.5% owned by investors that are committed to carbon measurement or to reducing the carbon intensity of their portfolios. These investors include AXA, which owns nearly 2% of Royal Dutch Shell's outstanding shares, and Old Mutual, which owns nearly 0.5%. **Anglo American** and **BHP Billiton** are approximately 4% owned by MP or PDC investors, while just over 3% of **BP**'s outstanding shares are owned by these investors. Companies significantly owned by MP or PDC investors may face a particularly high level of scrutiny concerning their exposure to the carbon bubble hypothesis, stranded assets and even broader concerns such as the depth and quality of their emissions disclosure and climate change management. At the time of writing the PDC is overseeing the decarbonisation of USD 230bn in AUM,[15] while the MP has attracted investors with USD 8trn in AUM.[16]

What does divestment mean for companies?

In search of permanent stock price effects

In this section we consider the potential effects of divestment on fossil fuel companies. Divestors guided by a financial or pragmatic strategy may not be concerned with influencing the economics of oil, gas and coal firms, and most divestment campaigns and ethical investors are focused on challenging the reputation of the fossil fuel industry (not on changing its economics). It is nevertheless instructive to explore the potential financial consequences of divestment, as momentum today is being carried by large fiduciary investors that have the potential to move the market.

Pushing up the cost of capital

From a direct standpoint, we find that even a highly coordinated sell-off by divestors is unlikely to have lasting financial repercussions for the company involved, although there is some empirical support for this possibility. In order for divestment to have meaningful financial implications, we would have to see a coordinated sell-off significant enough to cause permanent negative effects in a company's share price. If this were to happen, it could indeed have material financial consequences, as the company's weighted average cost of capital would increase. This would in turn convert profitable projects into unprofitable ones (at the margin). Like the policy measures (carbon taxes and greenhouse gas regulations) that proponents of the carbon bubble hypothesis expect governments will eventually implement, this scenario would motivate fossil fuel companies to revise their business model, explore adjacencies (which, interestingly, Big Oil is tepidly doing with renewables) and possibly exit the fossil fuel business.

Implications of an efficient market

The major challenge with this scenario is that the negative share price effects need to be permanent in order to affect a company's cost of capital. In an efficient market setting, share price effects can only be permanent if the liquidity shock (which in this case is the significant sell-off by divestors) is associated with new information about the

Divestment does not deliver new informational value

expected income stream generated by underlying assets. As the mere act of divestors selling their shares will not deliver any new informational value to the market, divestors' actions are unlikely to generate permanent price effects.

The coordination problem

The challenges of a coordinated effort

Even if we relax our assumption about the efficient market setting, and open up the possibility that divestors could create permanent negative share price effects *without* delivering information not already priced in by the market, there is the problem of coordination. If divestors could coordinate their actions, we calculate that there could potentially be a market moving effect. For eight of the 10 companies in our sample, the total number of outstanding shares owned by investors that are relatively sympathetic to divestment is a multiple of their average daily trading volume.

Investors belonging to the MP or PDC own 108 million shares of Royal Dutch Shell

For example, in the case of **Royal Dutch Shell**, investors that are committed to the MP or PDC own 108 million shares, which is over 18 times the company's average daily trading volume of 5.8 million shares. A coordinated effort among the 25 shareholders representing these 108 million shares would almost certainly push down the market price for Royal Dutch Shell's shares. Of course, fiduciary investors exiting a position are incentivized to *avoid* moving the market downward, as this would only reduce their proceeds from the trade, but we assume investors accept this possibility under the spirit of generating sustainable impact.

Investors that are part of the MP or PDC own 139 million shares of Glencore

In the case of **Glencore**, which is the most heavily traded stock in our sample, we calculate that investors that are part of the MP or PDC own 139 million outstanding shares, which is roughly twice the size of the company's average daily trading volume. Only in the cases of **Adani Enterprises** and **Peabody Energy** do we find that the total number of outstanding shares owned by MP or PDC investors is below the average daily trading volume. Of course, a high multiple of the divestment's size relative to a company's trading volume is a necessary condition for exerting price pressure, but not a sufficient one. For a price effect to become permanent, additional requirements (such as the emergence of an additional liquidity premium for holding the company's shares) would need to be met. In any case, a coordinated effort would likely be required to trigger the negative stock price effects in the first place.

The possibility of permanent share price effects

It is unclear what mechanism could lead a diverse set of global shareholders to coordinate their selling efforts. Indeed, a coordinated effort of this kind would be unprecedented and could possibly even trigger legal ramifications, as securities rules in many countries require shareholder activists to disclose joint campaigns. However, if we assume a solution to the coordination problem, there is evidence that significant divestments could have a permanent price effect when comparing the situation with index reshufflings. Numerous empirical studies have been conducted in this field. One of them is Shinhua Liu's study (2006), which shows significant permanent price effects for additions and deletions to the Nikkei 225 index over a period of more than 30 years,[17] which the author attributes to the fact that securities cannot be considered as perfect substitutes for each other, due to the institutional environment in which investors operate. There are certainly parallels between this situation and the case of fossil fuel divestment, due to a reputational segmentation of the market.

The indirect effects of divestment

While divestment is unlikely to have *direct* financial consequences, there is reason to believe it could have meaningful financial implications from an indirect standpoint.[18] For instance, companies targeted in fossil fuel divestment campaigns could potentially experience negative reputational effects, which could challenge their ability, at the margin, to attract new employees and customers. Similarly, there is the possibility that oil, gas and coal companies subjected to divestment strategies could become stigmatized. In addition to causing negative brand effects, this could weaken companies' bargaining power in negotiations with suppliers and other stakeholders, and potentially trigger greater oversight by regulators. In the extreme, divestment could have real impacts on demand for a company's products or services. **Peabody Energy**, the world's largest private sector coal company, acknowledged as much in its most recent annual report, stating "divestment efforts affecting the investment community…could significantly affect demand for our products or our securities."[19]

Conclusion – Final impacts of divestment uncertain

A second wave of divestment?

Fossil fuel divestment may have only recently entered investors' lexicon, but the movement's rapid growth reveals genuine investor concern about the future profitability of oil, gas and coal firms, particularly in the context of a possible carbon bubble and the risk of stranded assets. Fiduciary divestors have to date targeted coal firms ahead of oil and gas firms, based largely on the severe headwinds facing the coal sector. Oil and gas plays could be targeted under a second wave of the divesting movement, but this will likely depend on greater regulatory certainty from policymakers. We consider it unlikely that the Paris climate conference will deliver a legally binding emissions reduction framework, but it may nonetheless contribute to regulatory momentum and lead investors to reassess how they value their fossil fuel investments.

Financial impacts most likely to materialize indirectly

Divestment risk among oil, gas and coal companies is conventionally associated with their carbon intensity and involvement in high-cost production, but grouping shareholders based on their awareness of climate change-related risks and marginal inclination to act on the investment case for fossil fuel divestment offers a unique perspective. From this vantage point, Anglo American, Royal Dutch Shell and BP stand out as companies that are meaningfully owned by both PRI signatories and investors committed to the Montreal Pledge and Portfolio Decarbonization Coalition. These companies may face increased support for shareholder resolutions that address their climate change strategy and heighted scrutiny concerning their exposure to the carbon bubble hypothesis. Our analysis suggests that divestment in and of itself is unlikely to cause permanent negative share price effects, although evidence from index reshufflings gives some empirical support for this possibility.

Possible material impacts of carbon regulation

Our findings underscore the growing importance for listed oil, gas and coal firms of engaging with their institutional investors on climate change-related issues and understanding which shareholders may be sympathetic to divestment. For investors, our analysis contributes to the growing body of research pointing to possible material implications of substantive carbon regulation.

Endnotes

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13. Based on the potential carbon emissions of their reported reserves. Data are from Fossil Free Indexes, LLC. We excluded state-owned companies from our sample. For more information, see http://gofossilfree.org/top-200/

14. Investors that have taken the Montreal Pledge are committed to measuring and publicly disclosing the carbon footprint of their investment portfolios on an annual basis, while those that are part of the Portfolio Decarbonization Coalition are committed to reducing the carbon intensity of their investment portfolios. For more information on the Montreal Pledge and the Portfolio Decarbonization Coalition, see http://montrealpledge.org/ and http://unepfi.org/pdc/

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About Sustainalytics

Sustainalytics supports investors around the world with the development and implementation of responsible investment strategies. The firm partners with institutional investors, pension plans and asset managers that integrate environmental, social and governance information and assessments into their investment decisions.

Headquartered in Amsterdam, Sustainalytics has offices in Boston, Bucharest, Frankfurt, London, New York City, Paris, Singapore, Timisoara and Toronto, and representatives in Brussels, Copenhagen and Washington, D.C. The firm has 200 staff members, including more than 120 analysts with varied multidisciplinary expertise and a thorough understanding of more than 40 industries. In 2012, 2013 and 2014, Sustainalytics was voted best independent responsible investment research firm in the **Extel IRRI survey**.

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