

Discussion Paper

Pension Funds and the Principles for Responsible Investment: Multiplying Stakeholder Salience?

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Abstract

From a simple idea to unite pension funds in their quest for responsible investment at its launch in April 2006, the United Nations supported Principles for Responsible Investment (PRI) have grown in just one decade into an initiative with more than 1,500 fee paying signatories. These signatories consist of asset owners (e.g. pension funds, charities), the asset managers that serve them and service providers to both groups. Jointly, the PRI's signatories hold over \$60 trillion in assets under management, which makes PRI into one of the more prevalent non-for-profit organisations worldwide. This paper undertakes an empirical investigation of the stakeholder relationships PRI and its asset owner signatories during five crucial years of PRI's emergence: 2007-2011. Guided by stakeholder salience theory, we explore the factors that drive asset owners to subscribe to PRI. Using a variety of public data sources, we overcome the limitation of self-reported data qualifying the findings of Majoch et al. (2016). We find that for asset owners the most salient factors are utilitarian power, societal and pragmatic legitimacy, management values, and coalition building though the relevance of individual factor is not static but evolves over time with PRI's emergence.

Keywords

legitimacy, pension funds, power, principles for responsible investment (PRI), stakeholder salience theory

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1 Introduction

This paper undertakes an empirical investigation of the stakeholder relationships between asset owners and the United Nations supported Principles for Responsible Investment (PRI) initiative. We conduct the analysis guided by stakeholder salience theory (Gifford, 2012; Mitchell, Agle, & Wood, 1997) using a set of public data proxies.

The PRI is a responsible investment (RI) initiative promoting the consideration of environmental, social and governance (ESG) factors by institutional investors. Despite being headquartered in London with offices around the world, it is formally a Dutch non-for-profit organization. In its first decade of existence since 2006 it has been tremendously successful in expanding its membership and currently it is considered the most important international RI initiative in existence (Vitols, 2011). The PRI is aimed primarily at asset owners. However, at the point of writing this paper, asset owners account for only 20% of the signatory body (PRI, 2016b), versus 66% asset managers. Asset owners are instrumental to the achievement of the objectives of the responsible investment movement, however they have been slower to adopt environmental, social and governance (ESG) considerations than asset managers.

They are instrumental because as the main and powerful clients to the enormous investment management industry that manages their assets, representing on average around 34% of GDP in OECD countries (Sievänen, Rita, & Scholtens, 2013) and owning more than a quarter of publicly listed stock globally (Clowes, 2000), they set standards, also with regard to ESG. As of 2012 pension funds alone were the largest class of investors with \$33.9 trillion of assets under management (AUM) (Létourneau, 2015). Considering developments such as the recent introduction of state pension auto-enrollment in the UK, the weight and role of asset owners in the financial industry can be expected to continue to grow (Vitols, 2011). Despite this, asset owners are still not subject to the same type of client pressures as asset managers in terms of ESG, as there is still a low degree of accountability between for example pension funds and their beneficiaries.

However, the absolute number of over 300 asset owners signed up to the PRI is not insignificant, and proves that the PRI and its claim to sign and implement the six principles for responsible investment was considered to be salient by management at 300 asset owner institutions. This claim can be described as a stakeholder claim based on Freeman's definition of a stakeholder as 'any group or individual who can affect or is affected by the achievement of the organization's objectives' (Freeman, 1984). In its mission statement the PRI says it is 'working to achieve a sustainable global financial system by encouraging adoption of the Principles (...)' (PRI, 2016b).

Therefore, the PRI is affected by an institutional investor's decision to incorporate the PRI principles in their investment practice or not. This makes the PRI a stakeholder to asset owners, and their claim to sign the principles a stakeholder claim, and apparently a salient one.

The aim of this paper is to provide an insight into the sources of salience of the PRI's claim in the eyes of asset owners. We adopt a theoretical framework of stakeholder salience formulated by Mitchell et al. (1997) and extended by (Gifford, 2012) to identify public data proxies that represent different attributes in the relationship between the PRI and its signatories. We then compare the extent to which these attributes are present over a five year sample period between 2007 and 2011, for a group of asset owner signatories and non-signatories. This points us in the direction of attributes associated with the PRI and the claim it puts forward to asset owners – to commit to the six principles for responsible investment – and lets us identify those that generate the most salience.

2 Literature review

The academic community has been examining the institutional and organizational developments linked to the idea of sustainability almost as a running commentary as they developed. In 2006, the very year the UN PRI was launched, Waddock wrote about corporate responsibility referring to the various voluntary initiatives that are at the center of the CSR and ESG movement as an emerging voluntary responsibility assurance system. She lists the UN PRI, with its at the time \$6.5 trillion of signatory AUM, as part of this emerging institutional infrastructure, alongside the regional Sustainable Investment Forums, the Investor Responsibility Research Center, and the Interfaith Center on Corporate Responsibility, one designed specifically to hold institutional investors more accountable, responsible and transparent (Waddock, 2008).

Since the publication of Waddock's article, the PRI has celebrated its first ten year anniversary and grown its signatory AUM by an additional \$56 trillion. It has been argued to be a greenwash lacking any firm moral foundation (Eccles, 2010), and also to be a positive force by facilitating the adoption of RI by institutional investors (Sievänen, Sumelius, Islam, & Sell, 2013), but overall in itself the PRI has attracted limited academic attention compared to other RI initiatives such as the extensively researched UNGC (Cetindamar, 2007; Janney, Dess, & Forlani, 2009; Kell, 2013; Knudsen, 2011; Andreas Rasche, 2009; A. Rasche & Waddock, 2014; Voegtlin & Pless, 2014; Williams, 2004) despite its rapid rise to the dominant position in the ESG industry. This paper makes one step towards remedying the PRI's under-researched status and, at the same time, constitutes another contribution to the rich literature on institutional responsible investment.

What makes the PRI especially relevant to this paper as an initiative is that, besides being a general investor association, the PRI itself emphasizes its focus on asset owners as the drivers of ESG in the broader financial market, or the source of a 'multiplier effect' for responsible investment (PRI Association, 2016). The PRI shares this focus with not only this paper but also many other academics analyzing and commentating the development of RI. Asset owners, and pension funds in particular as a type of institutional investor have inspired many academic studies on the adoption and implementation of ESG. Researchers are interested in what drives this type of investor specifically to employ ESG strategies, what differentiates those that adopt them from the ones that do not, and what the consequences are from a performance and other perspectives.

2.1 Asset owners as drivers of the RI market

The unique position of asset owners in the economy as institutions controlling an increasing portion of capital while acting as fiduciary to a beneficiary body routinely large enough to be representative of all of society has been mentioned earlier in this paper as the motivation for its focus on this type of investor. From the perspective of fostering a more sustainable economy, asset owners are the very beginning of the institutional food chain (Monks, 2001). As put by Scholtens (2006), '*Finance is the grease to the economy*', controlling when and where capital is invested, as well as evaluating and monitoring the recipients of that capital. More sustainable finance would therefore mean a more sustainable economy.

The effectiveness of the trickle-down effect of interest of institutional investors in ESG has been debated, as the improved sustainability of company operations fails to materialize to a satisfactory extent. Busch, Bauer, and Orlitzky (2016) argue that for truly sustainable investments to be realistic, a shift towards a more long-term mindset and more reliable ESG data are needed. They do however confirm that institutional investors have a key role to play in driving increased economic sustainability. However, regardless of the actual size of the end effect on operational sustainability, as the owners of capital, asset owners either create demand for ESG aware management of that capital or they do not. Asset owners lead and asset managers, financial intermediaries, and eventually the broader economy, follow, at least in theory.

There is some empirical evidence for this effect, notably the Scholtens and Sievänen (2013) study which questions why SRI adoption differs between countries. The researchers find that the size of the pension industry matters, a finding which supports the hypothesis of an earlier paper by (Scholtens, 2006) arguing the existence of a transmission mechanism between the financial system and the economy, the practical functioning of which Busch et al. (2016) question.

Scholtens et al. identify some key institutional investors as drivers of SRI in their countries, such as the Norwegian Petroleum Fund, the Swedish church, and the Danish public pension funds.

This characteristic of asset owners in relation to ESG has been used as an argument for asset owner adoption of RI in the literature. In a widely cited paper, S Prakash Sethi (2005) argues that pension funds are well positioned to encourage a more sustainable economy by engaging in responsible investment, and observes that this type of institutional investor tends to also take long term risks, such as environmental risk, more seriously because of the nature of their commitments to beneficiaries which encourages a more beta focused investment approach rather than dynamically pursuing alpha (Clark & Knight, 2011). The literature does indeed identify the pension funds that do take on responsible investment as committed and innovative adopters of ESG (Cox & Schneider, 2008).

2.2 Universal owner hypothesis

Asset owners' focus on risk-driven ESG can also be linked to many of these institutions' universal owner status (J. Hawley & Williams, 2007; J. P. Hawley & Williams, 2000). The universal owner hypothesis proposes that the largest institutional investors are *de facto* invested in the market as a whole and so their portfolio will benefit more from a stable and growing overall economy than from one stock outperforming by taking advantage of externalities such as environmental damage or destructive impact on communities (Monks, 2001). Monks states: '*Nothing is external to a global shareowner*' (Monks, 2001, p. 105), arguing that to an asset owner investing across all countries and economic sectors, it is not in their economic interest to invest in destructive environmental and hiring practices in emerging economies because all that will happen is they will compete with their investees in the developed world which are part of their broader portfolio. This would result in no net gain, only higher exposure to reputational and financial risks associated with irresponsible environmental and social practices.

In line with this logic, researchers have argued that the universal owner perspective marks large asset owners as investors that have a lot to benefit from considering ESG (Kiernan, 2007; Lydenberg, 2007; Thamotheram & Wildsmith, 2006). Gjessing and Syse (2007) take Norway's Government Pension Fund Global, a sovereign wealth fund with close to \$900 bn. AUM, as an example of an asset owner who recognizes the importance of sustainable investing to the ultimate diversified portfolio (Stiglitz et al., 2000) such as they hold. Others among the globally largest asset owners such as the Swedish AP Funds, or the California Public Employees' Retirement System (CalPERS) have also acknowledged this and assumed leadership positions in incorporating ESG into their investment practices, driving demand for ESG investing through

awarding mandates to asset managers (Clark & Monk, 2010; Gjessing & Syse, 2007; J. Hawley & Williams, 2007).

2.3 Drivers of asset owner ESG practices

Academic literature has explored the motivation of different types of organizations to adopt CSR and sustainability policies extensively with a variety of approaches, drawing upon theoretical foundations such as institutional theory (Bengtsson, 2008b; Sandberg, Juravle, Hedesström, & Hamilton, 2009), stakeholder theory, or the instrumental stakeholder approach (Harjoto & Jo, 2011; Hockerts & Moir, 2004), and identifying motivations ranging from the purely self-interested, instrumental, to the relational, and moral (Aguilera, Rupp, Williams, & Ganapathi, 2007; Baron, 2009; Brickson, 2007). Some researchers such as Mackey, Mackey, and Barney (2007) and Barnett (2007) have taken a market-based view, explaining the adoption of CSR with market, and supply and demand drivers. Others draw attention to regulation and tax incentives (Gond, Kang, & Moon, 2011; Juravle & Lewis, 2009; Scholtens, 2005). Campbell (2007) develops an institutional theory of corporate responsibility, identifying specific institutional conditions under which organizations are likely to pursue social responsibility.

In addition to this broader, well developed literature, a much smaller number of studies have focused explicitly on the determinants of asset owner ESG practices. They have taken a variety of approaches and advanced our understanding of this phenomenon, although as pointed out by Sievänen (2014) the academic community is far from a consensus on why institutional investors, and asset owners, do or do not adopt RI. In a recent empirical study, Létourneau (2015) compares the ESG practices of 158 public asset owners from 47 countries and finds evidence of the significance of many country level characteristics such as population size and national wealth, and of the impact of the institutional context. The importance of country-specific factors and the institutional environment has often been underlined in studies addressing RI adoption by pension funds (Bengtsson, 2008a, 2008b; Cox & Schneider, 2008; Sandberg et al., 2009; Scholtens & Dam, 2007).

A notable example is the recent Sievänen, Rita, et al. (2013) study on the drivers of responsible investment among European pension funds, using a survey of 250 institutions across 15 European countries. The study identifies several characteristics correlated with a higher likelihood of a pension fund adopting an ESG approach, including legal origin of headquarter country and its ownership, as well as that the outcome is a function of fund size. Sievänen and her co-authors recognize the need for further research on the dynamic aspect of pension fund

ESG adoption, which our study undertakes by taking Gifford's temporal dimension into account in an examination of five years of PRI membership data.

Two papers by Juravle and Lewis (2008) and Sievänen (2014) also approach the adoption of RI by pension funds from the opposite direction, investigating the impediments to implementing RI policies. While the first identify uncertainty around the financial consequences of ESG, fiduciary duty and the agency problem, the latter focuses rather on the persisting confusion around and lack of accepted guidelines for the implementation of responsible investment.

Apostolakis, Kraanen, and Dijk (2016) make an interesting contribution to the debate on pension fund fiduciary duty and RI with a recently conducted qualitative study of attitudes towards responsible investment of pension fund beneficiaries and managers in Denmark. They find that beneficiaries are significantly more favourable towards responsible investment than their pension fund managers, which leads the study to conclude that a more democratic pension system would help advance the adoption of responsible investment by asset owners. Similar positive results on beneficiary opinions on responsible investment were found by Borgers and Pownall (2014) in a survey of Dutch households, by Jansson (2014) in the Swedish context and Zwaan, Brimble, and Stewart (2015) in the Australian superannuation context.

As noted by Patrick Bernhagen and Mitchell (2010) in their paper on the determinants of corporate membership of the UNGC, non-state actors are increasingly taking over the capacity for dealing with challenges like climate change and globalisation and it is our role as researchers to pursue this process as a subject of academic enquiry. These researchers also stand behind a series of papers attempting to explain the drivers of organizational commitment to the UN Global Compact (UNGC) (Bennie, Bernhagen, & Mitchell, 2007; Patrick Bernhagen & Mitchell, 2010; P. Bernhagen, Mitchell, & Thissen-Smits, 2013). They recognize the often symbolic nature of these motivations and find further support for the importance of the political and institutional environment to the adoption of voluntary codes and principles.

3 Theory and hypotheses development

This paper employs the stakeholder salience model developed by Mitchell et al. (1997) and extended by Gifford (2012). The stakeholder salience model describes attributes attached to a stakeholder or their claim that increase their legitimacy in the eyes of management. In this part of the paper we summarize the attributes as theorised by the original authors and explain how applying them to the PRI-asset owner context informs the formulation of our research hypotheses.

Mitchell and his co-authors highlight that their articulation of the stakeholder salience model is primarily aimed at feeding and catalysing further research and the model will benefit from further clarification, empirical application, and development. They call for a critical evaluation of their choices of attributes. We take these propositions on board by incorporating Gifford's additions to the framework in our study and also by letting previous literature (Majoch et al., 2016) and our understanding of the particular context of institutional responsible investment inform our application of the model.

In their paper Mitchell et al. (1997) review the preexisting academic work on stakeholder relationships and concepts of power and legitimacy in the organizational literature. They identify three main attributes of stakeholder salience and differentiate between their types.

Power in the stakeholder salience model is based on definitions by Weber (2009) as 'the probability that one actor within a social relationship would be in a position to carry out his own will despite resistance' and Dowling and Pfeffer (1975) as 'a relationship among social actors in which one social actor, A, can get another social actor, B, to do something that B would not otherwise have done'. Mitchell et al. follow Etzioni's typology, where power can be coercive, utilitarian or normative (Etzioni, 1964).

We exclude coercive power from our analysis, as the PRI is a voluntary, aspirational initiative and as a stakeholder has no means to coerce an asset owner to sign it. Considering means of coercion beyond material and symbolic means covered by utilitarian and normative power attributes, we are left with formal and legal requirements of institutional investors. There exists some RI regulation, mostly on disclosure, such as the amendment to the UK Pensions Act in 2000, requiring pension funds to report on the extent of incorporation of ESG into investment strategy. Similar regulations are in place also in ex. Austria, Belgium, France, Germany, Italy, Spain, Sweden, Australia (OECD, 2007). Swedish public pension funds are required by law to consider ethical aspects of investment (Bengtsson, 2008b) but even there it is a general requirement and PRI membership remains unregulated and most likely to remain so.

The remaining types of power are potentially very relevant to the PRI's claim to sign. Utilitarian power is defined as a material incentive, or material means of influence. It applies to the PRI-asset owner relationship within the paradigm of universal owner hypothesis, that is if through signing the principles, an asset owner can encourage and promote a more sustainable economic and financial system then in the long term it should reap the financial rewards from that (J. Hawley & Williams, 2007; Thamotheeram & Wildsmith, 2006). Voluntary sustainability codes are a means for organizations to address externalities that may negatively impact their

performance (S Prakash Sethi & Schepers, 2014) and the PRI is the main option for institutional investors. The timeframe in which ESG risk materializes in investments is also of relevance to asset owners in particular. Academic studies have repeatedly analyzed the link between corporate social performance and risk (Bouslah, Kryzanowski, & M'Zali, 2013; Jo & Na, 2012; Lee & Faff, 2009; Oikonomou, Brooks, & Pavelin, 2012; Salama, Anderson, & Toms, 2011; Sassen, Hinze, & Hardeck, 2016; Sharfman & Fernando, 2008), prompting meta-analyses as early as five years before the launch of the PRI (Orlitzky & Benjamin, 2001). But the most costly risks directly linked to ESG such as those created by climate change or stranded assets are not relevant to monthly investment performance. They have a much longer time horizon, as do asset owners, further strengthening the business case for asset owners integrating ESG into their investment approach (S Prakash Sethi, 2005; Thamotheram & Wildsmith, 2006, 2007). Based on these arguments, we propose the following:

Hypothesis 1a: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the attribute of utilitarian power.

We also expect normative power to play a role. Normative power is tied to symbolic rewards that are non-coercive and non-material. Reputation and approval are examples of such rewards (Etzioni, 1964).

Especially for public pension funds, some degree of commitment to sustainable principles is becoming the norm and part of a license to operate (Majoch et al., 2016). There is still a large degree of discussion on the role state asset owners have to play in tackling sustainability issues and how it relates to their fiduciary duty (Richardson, 2007; S Prakash Sethi, 2005). This debate also extends to private pension plans (Lanoff, 1980) and has been identified as one of the main impediments to ESG adoption by asset owners (Juravle & Lewis, 2008). However, in light of the emerging academic consensus on the materiality of ESG issues (Clark, Feiner, & Viehs, 2015), recommendations such as from the Local Government Pension Scheme Advisory Board and the Law Commission in the UK, stipulating that it is pension funds' fiduciary duty to consider all material factors (UK Law Commission, 2016), are increasingly becoming endorsements of, rather than barriers to, responsible investment practices by asset owners.

The universal owner hypothesis also plays a role in laying the foundations for this hypothesis: state pension funds are often financial institutions who through the enormity of their combined assets are invested in the long term sustainable economic growth itself. Since within that logic, not taking ESG factors into account can lead to unmanaged externalities destroying value in the long term, greater social expectations are placed on public pension funds to take responsibility

for these risks (S Prakash Sethi, 2005). This increases the potential for normative and symbolic means to contribute to the salience of the PRI's claim, motivating our next hypothesis:

Hypothesis 1b: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the attribute of normative power.

Urgency is an attribute that adds a time dimension to the model. Mitchell et al. define urgency as the 'degree to which stakeholder claims call for immediate attention' (1997, p. 867). This can be achieved through imposing a sense of time-related urgency or criticality associated with the claim. We do not expect a significant relationship between the perception of the PRI's claim as salient and the attribute of urgency. This is in part guided by the findings from Majoch et al.'s (2016) study of PRI signatories, and partly by the more long-termist and conservative nature of asset owners (Cox, Brammer, & Millington, 2004), and their limited exposure to immediate social pressures.

Hypothesis 2: The salience of the PRI's stakeholder claim in the eyes of asset owners has no relationship with the attribute of urgency.

The definition of legitimacy adopted by Mitchell and his co-authors has its roots, among other traditions, in institutional theory (DiMaggio, 1983). It is formulated by Suchman as 'a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (1995, p. 574). They operationalize this definition for the purpose of the model with the use of levels of societal systems in which legitimacy is obtained: individual, organizational and societal.

Organizational legitimacy has its source in the perception that the organization is credible, legitimate and respected. Gifford (2012) also underlines the importance of being perceived as mainstream in the SRI context. The image of the PRI as a mainstream investor association and its UN backing which increases legitimacy through association is expected to play a role in how asset owners perceive the PRI's claim, forming the basis of our next hypothesis:

Hypothesis 3a: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the PRI's organizational legitimacy.

Societal legitimacy as a source of salience highlights the importance of the external environment in which the organization operates. An organization is perceived as possessing societal legitimacy if it is in line with the norms and values of the broader system and society. For the purpose of this study, this translates to the PRI's claim of investors to commit to the six principles being aligned with the broader social and policy environment and norms. Consistent

with Meyer and Rowan (1977) and Baron (2009) who emphasize the role of public judgment and approval as drivers of organizational behaviour, we expect this type of legitimacy to contribute to the salience of the PRI's claim:

Hypothesis 3b: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the attribute of societal legitimacy.

Individual legitimacy can be relevant to the claim of signing the PRI in several ways. Previous literature has documented the role of 'champions', defined as individuals who through their organizational roles and private activism promote change within organizations (Anderson & Bateman, 2000), in pushing for responsible investment and sustainable organizational behaviour (Black, 2009; Juravle & Lewis, 2009; Lewis & Juravle, 2010). It is possible that this sort of human agency has helped some asset owners make the decision to sign the PRI. Another possibility is that individuals within the PRI itself have been perceived as strongly credible and therefore increased the salience of the PRI's claim. It is in that sense that Gifford (2012) applies individual legitimacy in his analysis of stakeholder salience in company engagements, and finds strong evidence of its importance. We therefore hypothesize that individual legitimacy will also play a role in asset owners' decision to prioritize the PRI's claim:

Hypothesis 3c: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the attribute of individual legitimacy.

Mitchell and his co-authors specify that the attribute of urgency is not static and can vary over time. It also proposes that urgency on its own does not create salience, but it adds to salience in the presence of other attributes. They recognize that there are aspects of the dynamic of stakeholder relationships that are still to be explored but limit their input to recognizing that theoretically these aspects exist.

Gifford takes these ideas and builds on them by adding what he defines as moderating factors to the model. Moderating factors, similarly to urgency, can amplify the effect of the other attributes. The first we discuss is relative stakeholder size. In the context of Gifford's study, the relationship between salience and the size of the investor and their stake in the company they engage with seemed almost certain. The empirical results did not confirm this. However, in the case of asset owners we expect a somewhat different application of this attribute. We expect that the smaller asset owners who lack the resources to invest in developing their own policy and approach to ESG (Bhattacharyya, 2010; L. A. Perez-Batres, Doh, Miller, & Pisani, 2012; Udayasankar, 2008), or in engaging companies on ESG single-handedly may be inclined to sign the PRI motivated by the benefits of being part of a large investor association giving access to

broad ESG resources and know-how, and also to collaborative engagement opportunities. Based on this interpretation we formulate our 4th hypothesis as follows:

Hypothesis 4: The salience of the claim to sign the PRI in the eyes of asset owners is inversely related to their size.

Another factor moderating perceived salience was proposed to be coalition building. As formulated by Gifford, this refers to stakeholders forming coalitions and presenting their claim jointly to management. In the context of shareholder engagements, Gifford's study found strong support for this hypothesis. As applied to the relationship between investors and the PRI at the point of signing in Majoch et al. (2016), coalition building takes on a different interpretation. Coalition building can be a motivating factor for investors who are looking for the legitimizing effect of being part of a large and credible investor association in an emergent field like ESG, and those who are looking for greater ESG impact and knowledge sharing through collaboration (Majoch et al., 2016). It is in this sense that we hypothesize that:

Hypothesis 5: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the moderating factor of coalition building.

Mitchell et al. recognize that it is implied in their focus on managers as decision makers that the characteristics of the managers themselves will play a role in determining how salient stakeholders and their claims appear to them. They cite management values as a significant factor covered in existing literature and worth exploring in further work on sources of stakeholder salience. Gifford adds management values to the model as a moderating factor and finds strong support for their contribution to the success of shareholder engagements. Majoch et al. (2016) also suggest that management values play a role in managers' perception of the PRI's claim as salient, therefore we include this attribute in our hypotheses:

Hypothesis 6: The salience of the claim to sign the PRI in the eyes of asset owners is enhanced by the alignment with trustee values.

Pragmatic legitimacy was added by Gifford not as a moderating factor but as an additional type of legitimacy among Mitchell et al.'s society-level types. Gifford's extended model combines the categories introduced by Wood (1991) with pragmatic legitimacy based on a conceptualization by Suchman (1995): the utility of the claim as seen by its audience. Gifford underlines the importance of the strength of the argument itself from the perspective of managers. This type of legitimacy is different from those identified by Wood in that it is attached to the stakeholder claim itself, making it all the more relevant to the salience of the claim to sign the PRI. It implies self-interest and therefore is translated in the context of this study as the perceived strength of

the business case for signing the initiative. In light of the progressive mainstreaming of responsible investment ideas and the growing case for ESG materiality, and again in line with the universal owner hypothesis, we propose that asset owners perceive the PRI's claim as salient owing to its greater pragmatic legitimacy:

Hypothesis 7: The salience of the claim to sign the PRI in the eyes of asset owners is positively correlated with the attribute of pragmatic legitimacy.

Gifford also extends the idea of dynamism from just urgency to all of the stakeholder relationship, putting forward the argument that different attributes can produce salience at different times in the relationship. This links back to literature in the field of institutional theory which discusses this sort of dynamic for instance in their legitimacy seeking behaviour which varies over the life of an organization (Sonpar, Pazzaglia, & Kornijenko, 2010). We incorporate this element of the stakeholder model in the final hypothesis:

Hypothesis 8: The sources of salience of the claim to sign the PRI in the eyes of asset owners have a temporal dimension and will therefore display variation over time.

4 Data and method

In this paper we use public data proxies for each of the attributes, which we can then correlate with the asset owner decision whether to prioritize the PRI's claim and sign the principles or not. This section of the paper explains our choice of data and the process of its collection. We bring in relevant theory and existing literature to motivate the choice of each proxy, and explain instances where our choice is limited by data access and availability. We also summarize the general characteristics of the resulting dataset.

4.1 Choice of variables

We use a combination of variables from public datasets and hand collected data to act as proxy for different attributes contributing to salience.

Utilitarian power is a difficult attribute to capture with data in the asset owner context. Because of the dispersed nature of their beneficiary base, and the little interest it takes in the running of these funds, there is no materially defined power such as in the client relationship between an investment manager and their asset owner client (Majoch et al., 2016).

In this study we interpret utilitarian power as the material incentive that universal owner funds see in integrating ESG, as exemplified by large public pension funds such as CalPERS or the AP

funds. In the face of the difficulty that divesting from underperforming holdings poses for these giants (S Prakash Sethi, 2005), they are increasingly turning to ESG as a way of managing externalities in the economy and ensuring sustainable financial performance in the long term. A look at our source of pension fund AUM, IPE's annual list of 1000 largest pension funds, reveals that among the top 100 pension funds by AUM globally there are roughly twice as many public funds as there are private. These proportions are the same for the relative amount of assets controlled by the pension funds in our sample – public pension funds control roughly twice the AUM that private plans do.

Based on this, we create dummy variables identifying corporate and non-corporate pension funds and use them as proxies for utilitarian power. Large public asset owners are more likely to be universal owners, restricted by their own size in the choice of investment strategies they can employ to maximise their returns. In line with the universal owner hypothesis, they are therefore more likely to be financially motivated in their choice to adopt the PRI. And indeed, Sievänen, Rita, et al. (2013) find that European public pension funds are more likely to adopt RI policies. Blackburn (2006) also finds a connection between the ownership of the pension fund and their responsible investment activity.

In addition to this, despite the lack of direct utilitarian power being exercised by beneficiaries, public attention and scrutiny are more focused on state pension funds (Juravle & Lewis, 2009), possibly creating some pressure to act in a way that promotes the long term wellbeing of the economy and therefore the society to which public pensions are fiduciaries.

Our normative power hypothesis rests in part on the view of asset owners as organizations seeking legitimacy as embedded in the environment in which they operate (Dowling & Pfeffer, 1975; Meyer & Rowan, 1977). We therefore choose a data proxy for this attribute which reflects the institutional environment of an asset owner to which they will be compelled to conform. We use a measure of national corporate social performance developed by Ioannou and Serafeim (2012a), as the national context has been documented as an important factor in CSR behavior (Matten & Moon, 2008; Scholtens & Sievänen, 2013; Sievänen, Rita, et al., 2013). We expect that in countries where organizations have high social and environmental standards of performance, an asset owner will be under more symbolic pressure to also declare a commitment to such standards by signing the PRI.

We employ two media coverage based variables and political variables to act as proxies for Mitchell et al.'s legitimacy attributes. We follow the literature linking the extent of media coverage to perceived legitimacy in our choice of media coverage variables for the

organizational and individual legitimacy attributes (Deeds, Mang, & Frandsen, 2004; McQuail, 1985; Pollock & Rindova, 2003). The most recent and closely related study using media coverage of RI is Dumas and Louche (2015) who also use the Factiva database to trace the development of RI and the degree of its institutionalisation, or mainstreaming.

Societal legitimacy is represented in our study by the proportion of political votes cast for green and left wing parties in the asset owner's headquarter country. We were looking for a variable that would reflect the extent to which signing the PRI would suggest an asset owner's efforts to align itself with the expressed norms dominant in the society in which it operates in an effort to maintain legitimacy and avoid criticism from the public (Baron, 2009; Meyer & Rowan, 1977).

We choose political votes as a comprehensive and consistently trackable expression of societal values through a mechanism of democratic political representation (Clark & Monk, 2010). Political leanings have been cited in the literature as encouraging or discouraging ESG adoption by organizations, for instance in the study by Ioannou and Serafeim (2012a) which finds that in more leftist societies organizations take on lower societal responsibility, as society places that responsibility on the government rather than financial institutions.

Informed by this finding, we use the proportion of votes cast for left wing parties and green parties as a proxy for societal legitimacy. We expect that the proportion of voters for the green party will be linked to the amount of societal expectation of investors to carry their share of responsibility for societal and environmental issues, whereas left wing votes will reflect a societal expectation of investors to stand back while the democratically elected government handles issues too important to entrust to the financial sector.

The data proxy we use for urgency is also media-based. We use the Factiva database to measure the extent of coverage of negative ESG occurrences such as the Bangladesh factory collapse. These events can create a sense of urgency to sign the principles for reputational and symbolic reasons. It has been previously observed in the literature that for example the financial crisis of 2008, which accounts for a large portion of the data points in this variable, caused a major loss of legitimacy for the financial markets (Morgan, 2010). It has also been argued by several studies that CSR activity and policies can act as insulation in terms of loss of legitimacy and reputation against such negative events (Minor & Morgan, 2011; Vanhamme & Grobbsen, 2008). Crisis management literature would therefore classify signing the PRI as an insulating measure where the organization attempts to dissociate itself from the crisis therefore limiting the negative impact on its own image (Coombs, 1995).

One of the possible organizational responses in such circumstances is to use externally communicated ESG policy and activity as a shield against reputational and legitimacy losses (Vanhamme & Grobbsen, 2008). Joining the PRI is one form of externally communicated ESG policy, and therefore we decide to treat signing the PRI coinciding with a surge in media coverage of ESG scandals as a manifestation of urgency contributing to the salience of the claim to sign the principles.

We choose a proxy for pragmatic legitimacy based on the perceived materiality of ESG factors to investment. We make the assumption that in more performance focused societies, an organization is more likely to perceive the PRI's claim as salient if it also believes in the ESG materiality argument. Our measure of the degree to which a culture values and rewards performance is taken from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study led by Robert J. House of the Wharton School of Business, University of Pennsylvania, analyzing the attitudes of managers in 58 countries.

The GLOBE study also provides our proxy for coalition building. Coalition building as a moderating factor is represented by the GLOBE measure of institutional collectivism, which is the degree to which a culture (as measured by a survey of managerial subjects) encourages and rewards collaborative and collective behavior. We assume that management of asset owners headquartered in countries where management generally places a greater value on collective and collaborative behavior are more likely to perceive the claim to sign the PRI as salient due to the PRI's investor association status and the opportunities it creates to address the implementation of ESG, engagement with companies, and other challenges collectively.

Our measure of management values is the degree of female representation among asset owner trustees. This choice is motivated by academic literature which links diversity in the boardroom to management values. There is also a documented positive relationship between the gender of directors and CSR, which is particularly relevant to the responsible investment context (Bear, Rahman, & Post, 2010). We expect that alignment of managerial values as measured by trustee gender diversity will be positively correlated with the degree of perceived salience of the PRI's claim.

And finally, the relative stakeholder size is represented by the total AUM of the asset owner. We expect that smaller asset owners will perceive the claim to sign the PRI as salient thanks to the associated opportunities for resource and knowledge sharing on ESG which benefit smaller organizations.

Table 1 Explanation of data represented by each variable

PRIsignatory	dummy variable: 1 = PRI signatory, 0 = non-signatory
corpension	dummy variable indicating whether subject is a corporate pension
noncorpension	dummy variable indicating whether subject is a non-corporate pension
nationalCSPscore	Ioannou and Serafeim (2012b) CSP country score
indivlegit	combined measure of media attention on PRI CEO in each country by year
orglegit	combined measure of media attention on PRI in each country by year
leftvotes	proportion of votes cast for left-wing parties in each country by year
greenvotes	proportion of votes cast for green parties in each country by year
femaletrustees0–20	dummy variable indicating if female board of trustees representation is < 20%
femaletrustees20–33	dummy variable indicating if female board of trustees representation = 20–33%
femaletrustees>33	dummy variable indicating if female board of trustees representation is > 33%
AUMlog	log value of assets under management (in \$bn.) of subject
coalitionbuilding	GLOBE measure of institutional collectivism
pragmaticlegit	GLOBE measure of performance orientation
holdingsturnover	rate of turnover of holdings where 1 = 100%
urgency	log value of media mentions of negative ESG events, annual by country

Table 1 matches the variable names as they appear in the tables reporting on regression results, and the data they represent

Table 2 Data selection summary

Model component	Proxy	Rationale and literature
Power utilitarian	Corporate/non-corporate pension	Because of the relatively larger size of their assets, public pensions are more likely to qualify as universal owners, which exposes them to the material implications of not being able to benefit from externalities, and forces them instead to promote an economy that accounts for externalities via sustainability and RI (S Prakash Sethi, 2005). Government owned pensions are also more exposed to public scrutiny (Juravle & Lewis, 2009) and to anticipate regulation in connection to RI than their corporate counterparts.
Power normative	National CSP score	We make the assumption that in countries with a better CSR-performing organizational environment, a fund is under more normative pressure to conform to such an environment by making a public RI commitment (Dowling & Pfeffer, 1975; Meyer & Rowan, 1977).
Power coercive	n/a	Coercive power is excluded from the model based on the PRI being a voluntary initiative and the lack of evidence of this attribute in Majoch et al. (2016).
Urgency	Media coverage of ESG related controversies	A media based measure of urgency is included as a control variable, based on the insignificance of this attribute in Majoch et al. (2016) and difficulty in obtaining data capturing the attribute on a generalizable scale.
Legitimacy organizational	Media coverage of PRI	We proxy organizational legitimacy with a variable based on the degree of media coverage of the PRI annually by country. Media coverage and legitimacy have been frequently linked in academic literature (Deeds, Mang, & Frandsen, 2004; McQuail, 1985; Pollock & Rindova, 2003; Suchman, 1995). Most relevantly, Dumas and Louche (2015) recently used media coverage sourced from the same database (Factiva) as a measure of institutionalization, or mainstreaming, of responsible investment.
Legitimacy societal	Political votes cast in HQ country for left parties and green parties	In democratic societies, the public's attitude towards social issues is expressed most directly through political party votes. Based on findings of Ioannou and Serafeim (2012a) we expect that in countries with left leaning societies investors will experience less pressure to publicly support CSR initiatives, and the degree of this pressure will be positively correlated with the proportion of votes cast for green parties.
Legitimacy individual	Media-coverage of PRI CEO	We extend the media based measure of legitimacy to PRI founder and CEO Dr. James Gifford as the most visible individual associated with the initiative in the sample period.

Pragmatic legitimacy	GLOBE measure of performance orientation	Defined as a measure of the degree to which society and organizations encourage and reward performance as measured at country level (Summer, 2006), we expect this data proxy to reflect an institutional characteristic of business case oriented pensions and therefore to be positively correlated with the likelihood of pension fund membership of the PRI if investors are convinced of the business case for responsible investment.
Management values	Proportion of female trustees	Recent academic literature has increasingly established a relationship between the gender balance of management and the strength of ESG management of an organization (Bear, Rahman, and Post, 2010). Based on this we use gender balance among pension fund trustees as a proxy for alignment of management values with those of the PRI.
Relative economic size	Assets under management	Natural logarithm of assets under management number to capture the relative economic size of the PRI as a stakeholder.
Coalition building	GLOBE measure of Institutional collectivism	We base the interpretation of this moderating factor on Majoch et al. (2016). Coalition building is therefore the extent to which investors value the collaborative and knowledge sharing character of the PRI, evocative of how collectivism is theorized in CSR literature by Aguilera (2007) and Brickson (2007). Our chosen data proxy for this factor measures the degree to which the institutional practice encourages and rewards collaborative and collective behaviour.
Controls outside model	Holdings turnover	We control for asset turnover as a measure of long-termism. The choice to include a measure of long-termism is motivated by the attention granted to this characteristic in the responsible investment industry. Its credibility is however contested.

Table 2 summarizes the choice of data proxies used in the application of the stakeholder salience model to public asset owner data.

4.2 Data collection method

The PRI asset owner signatory list was obtained directly from PRI Signatory Relations and Outreach. The PRI Reporting and Assessment survey was the source of the signatories' assets under management figures. For asset owner non-signatories the AUM data comes from the P&I Top 1000 Pension Funds list and the P&I/Towers Watson 300 Largest Asset Owner lists.

The source of the CSP country scores in our model is a study by Ioannou and Serafeim (2012b) which develops and calculates a composite measure of environmental and social performance of companies by country. The underlying data used in that study comes from Thomson Reuters ASSET4, and aggregates 900 evaluation criteria in a strictly quality controlled analysis process. The country scores we use in this paper are the weighted averages of the environmental and social scores as listed in the Ioannou and Serafeim (2012b) paper.

All media coverage data is collected with the use of Factiva – a Dow Jones database of media material into which keywords are entered specific to each data type. For individual legitimacy, this would have been ‘James Gifford’, ‘J. Gifford’ or ‘PRI CEO’. For organizational legitimacy, ‘UNPRI’, ‘PRI’, ‘Principles for Responsible Investment’. For urgency, the search terms are variations of keywords referring to major negative ESG events as identified by the researchers in collaboration with the PRI Clearinghouse. We start by searching for a larger number of events but the final list included in the urgency variable is made up of only those events that received considerable coverage from financial press. The search terms are entered in English, English being the common language of finance worldwide (Clark, Hebb, & Wojcik, 2007; Lazaro & Medalla, 2004). The resulting data is annual and at the country level.

The political votes data was obtained from the Comparative Political Dataset III (1990-2011) – a public dataset of institutional and political data maintained by the University of Berne. The dataset provided us with annual proportions of votes cast for green and leftwing parties in OECD and EU countries in our sample. For the US data, the liberal party is included as left wing.

The GLOBE variables in our dataset are taken from the Global Leadership and Organizational Behavior Effectiveness (GLOBE) study, a publicly accessible dataset of cultural attitudes of managers across 58 countries. We use the 2004 version of the data, giving us information on institutional collectivism (proxy for coalition building) and performance orientation (proxy for pragmatic legitimacy). The framework used in the GLOBE dataset was developed based on previous literature in the fields of organizational and leadership studies (Hofstede, 1980; Inglehart, 1997; Schwartz, 1994), and has been widely adopted in management literature studying cultural factors (Alas, 2006; Resick, Hanges, Dickson, & Mitchelson, 2006).

Holdings turnover data was collected with the help of the Thomson Reuters Thomson One database. The board diversity data is collected manually by the researcher. Both these variables are time-invariant due to the unavailability of historic data for all or parts of the samples.

4.3 Sample and data

The source of the non-signatory asset owner sample was the IPE list of the 1000 largest asset owners published annually in the September issue of the IPE magazine. The coverage of the list has been global since 2010. The list of asset owners for years 2007-2009 has therefore been filled in manually by the researchers, partially with the help of the P&I/Towers Watson Top 300 Pension Funds list that has global coverage going back as far as our sample.

The resulting sample of asset owners is made up of 667 organizations in the main model and 527 organizations in the extended models, due to Stata automatically dropping subjects with missing observations. In our case, the missing observations are in the diversity variables. This data was hand collected by the researchers and for some organizations either there was no board membership disclosure or it was not sufficiently clear what the gender of the board members was so in the interest of data quality, the data was recorded as missing.

In the extended model 133 subjects are signatories and 394 are non-signatories. In the basic model these numbers are 163 and 504 respectively. Tables 3 and 4 provide some information about the make-up of our samples. Table 6 contains a correlation matrix of the variables. Summary statistics are reported in table 5.

Table 3 Summary of asset owner sample

Signature year		2006	2007	2008	2009	2010	2011	Total
Signatories	Basic model	45	35	25	19	21	18	163
Non-signatories	Basic model							504
Signatories	Full model	41	27	19	16	16	14	133
Non-signatories	Full model							394

Table 3 shows a breakdown of the sample by sample year, signatory status, and totals in the basic and full variations of the model.

Table 4 Breakdown of categorical variables by signature year based on basic model sample

	Totals	2006	2007	2008	2009	2010	2011
Corporate pension	120						
Signatory	21	3	1	3	2	8	4
Non-signatory	99						
Non-corporate pension	241						
Signatory	126	38	33	20	16	9	10
Non-signatory	115						
Diversity less than 20%	137						
Signatory	30	9	7	5	3	3	3
Non-signatory	107						
Diversity 20-33%	171						
Signatory	40	11	7	7	7	6	2
Non-signatory	131						
Diversity over 33%	154						
Signatory	52	18	11	6	5	4	8
Non-signatory	102						

Table 4 breaks down the categorical variables in our model by signatory status and sample year, basing the numbers on the subjects included in the basic model (larger sample).

Table 5 Summary statistics of variables in asset owner models

VARIABLES	N	mean	SD	min	max
PRIsignatory	3335	0.185008	0.388362	0	1
corppension	3335	0.17991	0.38417	0	1
noncorppension	3335	0.361319	0.480455	0	1
nationalCSPscore	3335	-0.71251	0.219589	-1.66073	-0.31471
indivlegit	3335	1.872933	0.853055	0	2.880047
orglegit	3335	3.320287	0.531261	0	3.902965
leftvotes	3335	34.36582	17.74154	0	60.6
greenvotes	3335	2.936822	3.641575	0	11.8
femaletrustees0–20	2635	0.259962	0.438697	0	1
femaletrustees20–33	2635	0.324478	0.468268	0	1
femaletrustees>33	2635	0.29222	0.454869	0	1
AUMlog	3335	2.770542	1.616212	-4.78717	6.977682
coalitionbuilding	3335	4.409798	0.356259	3.84	5.6
pragmaticlegit	3335	4.159115	0.918434	0	5.04
holdingsturnover	3335	0.265258	0.165521	0	1.44
urgency	3335	9.070637	0.624448	7.885235	9.550929

Table 5 presents summary statistics for all variables in the asset owner models. The first column gives the number of observations in the dataset, the following columns report the mean, standard deviation (SD), and minimum and maximum values.

In table 5 we present some summary statistics for our variables. When transforming variables using the natural logarithm, wherever 0 is a meaningful value in the data, such as 0% as a proportion of external managers who are signatories to the PRI, we create a variable equal to $x+1$ before the transformation to avoid dropping observations where the log of 0 is undefined. The data contains 6 dummy variables, 12 continuous variables, and two of the signatory commitment measures are categorical.

Table 6 Correlation matrix of explanatory variables

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1)	corppension	1.00														
(2)	noncorppension	-0.35** (0.00)	1.00													
(3)	nationalCSPscore	0.02 (0.15)	0.18** (0.00)	1.00												
(4)	indivlegit	-0.06*** (0.00)	-0.01 (0.64)	-0.11** (0.00)	1.00											
(5)	orglegit	-0.01 (0.43)	-0.04* (0.03)	-0.08** (0.00)	0.73** (0.00)	1.00										
(6)	leftvotes	0.08** (0.00)	-0.30*** (0.00)	-0.25*** (0.00)	0.01 (0.62)	-0.00 (0.92)	1.00									
(7)	greenvotes	-0.15** (0.00)	0.18** (0.00)	0.34** (0.00)	-0.08** (0.00)	-0.02 (0.22)	-0.04* (0.04)	1.00								
(8)	femaletrustees0-20	0.09*** (0.00)	0.03 (0.15)	0.02 (0.31)	-0.01 (0.67)	-0.02 (0.43)	0.05* (0.01)	-0.07** (0.00)	1.00							
(9)	femaletrustees20-33	0.15*** (0.00)	-0.10** (0.00)	0.03 (0.10)	-0.01 (0.58)	0.05 (0.01)	0.04 (0.06)	-0.01 (0.45)	-0.41** (0.00)	1.00						
(10)	femaletrustees>33	-0.16*** (0.00)	0.11** (0.00)	-0.09** (0.00)	0.05* (0.01)	0.03 (0.13)	-0.04 (0.05)	0.10*** (0.00)	-0.38** (0.00)	-0.45*** (0.00)	1.00					
(11)	AUMlog	-0.10*** (0.00)	-0.04* (0.03)	-0.07*** (0.00)	0.05*** (0.00)	-0.02 (0.37)	-0.03 (0.07)	-0.11** (0.00)	-0.08** (0.00)	-0.00 (0.84)	0.05* (0.01)	1.00				
(12)	coalitionbuilding	-0.04* (0.02)	0.10** (0.00)	0.55*** (0.00)	-0.08** (0.00)	-0.05** (0.00)	-0.11*** (0.00)	0.20*** (0.00)	0.12*** (0.00)	-0.04 (0.06)	-0.14*** (0.00)	-0.13** (0.00)	1.00			
(13)	pragmaticlegit	-0.06*** (0.00)	0.05** (0.00)	-0.29** (0.00)	0.11** (0.00)	0.10** (0.00)	-0.09** (0.00)	-0.33*** (0.00)	-0.06** (0.00)	0.06*** (0.00)	0.04* (0.04)	0.10** (0.00)	-0.40** (0.00)	1.00		
(14)	holdingsturnover	0.09** (0.00)	-0.01 (0.40)	0.04* (0.02)	-0.03 (0.15)	-0.00 (1.00)	0.04* (0.04)	0.03 (0.10)	0.03 (0.16)	-0.05* (0.02)	0.01 (0.78)	0.02 (0.37)	-0.01 (0.42)	-0.03 (0.06)	1.00	
(15)	urgency	0.00 (1.00)	-0.00 (1.00)	-0.00 (1.00)	0.16*** (0.00)	0.12** (0.00)	-0.00 (0.91)	0.03 (0.13)	0.00 (1.00)	-0.00 (1.00)	0.00 (1.00)	0.00 (1.00)	-0.00 (1.00)	0.00 (1.00)	0.00 (0.99)	1.00

Table 6 shows the correlations between the independent variables appearing in any of the asset owner model variations. p -values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

5 Analysis

5.1 Method

The analysis investigates the impact of particular subject characteristics on the likelihood of our outcome variable being 1 or 0. The outcome variable is an asset owner being a signatory in a given year or not, and the independent variables are our data proxies for particular attributes and moderating factors in the stakeholder salience model, as put forward in our hypotheses. We attempt via this model to uncover what factors influence the perceived salience of the claim to sign the PRI in the eyes of asset owners.

For this type of model focusing on a binary outcome, logistic regression is more appropriate than linear models, which require assumptions such as normality, continuity and linearity that are not fulfilled in data with binary outcomes (Scott Long, 1997). We use the statistical software package Stata13, which is particularly suited to working with panel datasets and offers a well-developed functionality in terms of non-linear models. Our choice of this type of model is also validated by previous literature which has employed similar statistical approaches to binary outcomes (Davis, Payne, & McMahan, 2007), not least of all in the previous mentioned literature on UNGC subscription¹, and the notable Sievänen, Rita, et al. (2013) study investigating a research question close to our own.

Because we are interested in the effect of independent variables on the likelihood of the outcome of our binary dependent variable for a particular organization, for our purpose the random effects model is appropriate. We run five cross section models to examine the temporal dimension of the effects of different factors on perceived salience of the PRI's claim.

5.2 Results

We run the first binary model (basic model) with only the main attributes originally put forward by Mitchell et al. (1997), only adding Gifford's moderating factors in the second model (extended model) to see if they indeed have a moderating effect on the original attributes. Several of Gifford's additions to the model are statistically significant and their addition does amplify the coefficients of the original framework as well as improve the overall model fit. The extended model passes the likelihood ratio test for nested models at $p=.000$ level and reduces

¹ Bennie et al. (2007), Patrick Bernhagen and Mitchell (2010), Luis A Perez-Batres, Miller, and Pisani (2011)

the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) measures of model fit by 80.32 and 52.35 respectively on average², indicating an improvement in model fit.

The addition of control variables (full model), turnover and our measure of urgency, results in a model that fails the likelihood ratio test at $p=0.1342$, indicating that the addition of these variables does not improve the model fit despite both controls achieving statistical significance in two separate years. There is also an increase in the AIC and BIC measures when the controls are added.

The results of all three models are compared side by side in Table 7. All of the models are statistically significant with a Likelihood Ratio Chi-Square statistic equaling $p=.0000$. The McFadden's pseudo R-squared values in the extended model range from 0.43 to 0.66 in the last sample year, indicating excellent model fit. All of the extended cross section models pass the Hosmer-Lemeshow goodness of fit test with very good results starting at $\text{Prob} > \chi^2 = 0.2162$ in 2007 and reaching $\text{Prob} > \chi^2 = 0.9314$ in 2011 indicating a well calibrated model. All of the extended models also have an area under the Receiver Operating Characteristic (ROC) curve of over 0.9, suggesting that the model performs extremely well in categorizing subjects into the binary categories based on the model's predictors.

As a robustness test, we stepwise reduce each cross section model and compare the results. The variables dropped from the more parsimonious models that are significant in the extended model (with no controls) are the indicator variable for corporate pension, country level CSP, and trustee board diversity above 33% in the year 2008. Assets under management are dropped in 2009, and corporate pension again dropped in 2007 in the same model. The full model with controls also drops the trustee diversity above 33% variable in the year 2008. As a result we treat these particular coefficients with more caution. There is however a small reduction in Pseudo R squared and AIC and BIC measures compared to the full model, giving conflicting information on if the more streamlined model has an advantage in terms of how well it fits the data. The areas under the ROC curve also tend to be bigger for the original models, although marginally. Overall the test confirms our main results.

Table 7 on the next page shows the results of cross-section analyses first using only the original stakeholder salience model as formulated by Mitchell et al. (1997), then including Gifford's additions and finally using all factors and controls. Table 7 report logged odds, and the results

² We compare the mean of the AIC and BIC scores of all five years of the basic model and the extended model.

expressed as odds ratios (OR) are included in Appendix 1. Table 8 on the following page shows the outcomes of the stepwise reduced models, maintaining the same order.

5.2.1 Power attributes

Hypothesis 1a, stating that utilitarian power in the form of financial incentive felt by non-corporate pension plans is positively correlated with the prioritization and perception as salient of the claim to sign the PRI, is confirmed by the results. The values of the odds ratios for non-corporate pensions are much higher than those of corporate pensions and are more statistically significant, for example OR=3.6, $p=0.103$ in 2007 for corporate pensions, versus OR=16.9, $p=0.000$ for non-corporate pensions.

Hypothesis 1b, proposing that normative power, or the symbolic incentive felt by asset owners to conform to the institutional environment in which they operate, is not confirmed by the data. In fact, the results indicate a negative correlation, the opposite of what the researchers expected. According to the model, in countries with higher organizational levels of social and environmental performance, asset owners are less likely to perceive the claim to sign the PRI as salient. The effect appears in the later years of the sample (year 2009 in the full model).

A possible explanation for normative power having the opposite to expected effect on asset owners is that our choice of proxy data does not reflect the normative context in which asset owners operate as closely as we thought. The underlying data used to compute the CSP performance score is collected from companies in all sectors of the economy with only around 1,200 observations out of 12,764 (that is less than 10%) coming from insurance and finance sectors. Perhaps asset owners feel sufficiently separate from other industries that they do not feel the pressure to conform to the normative environment our data describes.

It is also possible that in a country with overall well ESG-performing companies asset owners feel that there is no need for them to publicly subscribe to an ESG initiative, since they are already part of a sustainability conscious economy.

Table 7 Results of cross-section analysis of asset owner PRI adoption.

PRIsignatory	(2007)	(2008)	(2009)	(2010)	(2011)	(2007)	(2008)	(2009)	(2010)	(2011)	(2007)	(2008)	(2009)	(2010)	(2011)
corpension	0.524 (0.454)	0.630 (0.286)	0.770 (0.168)	1.270** (0.007)	1.381** (0.006)	1.420* (0.047)	1.741* (0.012)	1.811** (0.003)	1.811** (0.003)	1.805** (0.006)	1.214 (0.123)	1.278 (0.076)	1.627* (0.019)	1.753** (0.005)	1.584* (0.017)
noncorpension	2.700*** (0.000)	2.711*** (0.000)	2.974*** (0.000)	2.793*** (0.000)	2.988*** (0.000)	3.020*** (0.000)	3.356*** (0.000)	2.997*** (0.000)	2.997*** (0.000)	3.154*** (0.000)	2.810*** (0.000)	3.053*** (0.000)	3.364*** (0.000)	3.176*** (0.000)	3.189*** (0.000)
nationalCSPscore	0.742 (0.272)	0.633 (0.328)	0.181 (0.780)	0.394 (0.527)	0.592 (0.373)	-1.382 (0.143)	-2.490* (0.013)	-1.964* (0.039)	-1.964* (0.039)	-2.881** (0.008)	-1.423 (0.149)	-1.421 (0.135)	-2.578* (0.011)	-2.151* (0.026)	-3.038** (0.006)
indivlegitimacy	0.128 (0.511)	0.00231 (0.990)	-0.0779 (0.664)	0.0221 (0.902)	0.232 (0.250)	0.0684 (0.765)	-0.0723 (0.747)	0.104 (0.646)	0.104 (0.646)	0.409 (0.137)	0.117 (0.637)	0.0713 (0.757)	-0.0163 (0.944)	0.153 (0.514)	0.404 (0.137)
orglegitimacy	0.0833 (0.774)	0.150 (0.604)	0.174 (0.544)	0.131 (0.660)	0.227 (0.446)	0.0358 (0.920)	0.190 (0.605)	0.174 (0.662)	0.174 (0.662)	0.289 (0.490)	-0.0664 (0.847)	0.0129 (0.971)	0.178 (0.627)	0.174 (0.658)	0.290 (0.492)
leftvotes	-0.0412*** (0.000)	-0.0583*** (0.000)	-0.0700*** (0.000)	-0.0841*** (0.000)	-0.123*** (0.000)	-0.0649*** (0.000)	-0.0814*** (0.000)	-0.0938*** (0.000)	-0.0938*** (0.000)	-0.148*** (0.000)	-0.0489*** (0.000)	-0.0683*** (0.000)	-0.0844*** (0.000)	-0.0994*** (0.000)	-0.152*** (0.000)
greenvotes	0.0788 (0.056)	0.117** (0.003)	0.129** (0.001)	0.155*** (0.000)	0.265*** (0.000)	0.167*** (0.001)	0.210*** (0.000)	0.203*** (0.000)	0.203*** (0.000)	0.386*** (0.000)	0.134* (0.011)	0.165** (0.001)	0.214*** (0.000)	0.209*** (0.000)	0.375*** (0.000)
femaletrustees0-20						0.629 (0.327)	0.728 (0.259)	0.282 (0.643)	0.282 (0.643)	0.181 (0.799)	0.383 (0.558)	0.663 (0.308)	0.750 (0.245)	0.218 (0.727)	0.205 (0.778)
femaletrustees20-33						0.764 (0.226)	1.358* (0.035)	0.959 (0.113)	0.959 (0.113)	0.882 (0.223)	0.564 (0.380)	0.759 (0.236)	1.329* (0.039)	0.940 (0.130)	0.841 (0.255)
femaletrustees>33						1.236* (0.048)	1.397* (0.027)	0.987 (0.098)	0.987 (0.098)	1.274 (0.072)	1.238* (0.050)	1.279* (0.044)	1.421* (0.024)	1.043 (0.086)	1.320 (0.066)
AUMlog						-0.0554 (0.604)	-0.0454 (0.663)	-0.183* (0.042)	-0.183* (0.042)	-0.245* (0.027)	-0.00714 (0.949)	-0.0705 (0.508)	-0.0435 (0.682)	-0.218* (0.019)	-0.256* (0.023)
coalitionbuilding						2.128*** (0.000)	2.548*** (0.000)	2.741*** (0.000)	2.741*** (0.000)	3.911*** (0.000)	2.382*** (0.000)	2.170*** (0.000)	2.569*** (0.000)	2.907*** (0.000)	3.983*** (0.000)
pragmaticlegit						0.765* (0.013)	0.594* (0.025)	0.683** (0.008)	0.683** (0.008)	0.861** (0.003)	0.657* (0.031)	0.742* (0.015)	0.588* (0.025)	0.715** (0.008)	0.851** (0.004)
holdingsturnover											1.641 (0.126)	2.418* (0.020)	1.621 (0.131)	1.599 (0.123)	1.966 (0.110)
urgency											-0.0593 (0.813)	0.213 (0.409)	-0.310 (0.246)	-0.832** (0.002)	0.428 (0.207)
_cons	-2.915** (0.007)	-2.301* (0.025)	-2.130* (0.035)	-1.340 (0.186)	-1.094 (0.274)	-16.20** (0.003)	-18.28*** (0.001)	-21.02*** (0.000)	-21.02*** (0.000)	-28.59*** (0.000)	-18.54** (0.002)	-19.16** (0.002)	-16.00** (0.006)	-15.70* (0.011)	-32.91*** (0.000)
N	667	667	667	667	667	527	527	527	527	527	527	527	527	527	527
pseudo R2	0.307	0.386	0.448	0.475	0.578	0.434	0.502	0.529	0.529	0.664	0.370	0.446	0.509	0.551	0.670
AIC	354.8	372.5	369.9	382.7	329.2	297.4	289.2	295.4	295.4	230.3	289.5	295.6	289.8	286.5	230.3
BIC	390.8	408.5	405.9	418.7	365.2	361.4	353.2	359.4	359.4	294.3	362.0	368.1	362.3	359.1	302.8

p-values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7 reports the results of cross section logistic regression analyzing asset owner adoption of the PRI. The panels extend from 2007 to 2011. The first panel shows the results from the basic model, containing only Mitchell et al.'s (1997) original components of the stakeholder salience model. The second panel shows an extended model with Gifford's additions. The final panel shows the extended model with added control variables.

Table 8 Results of stepwise reduced models for each variation of the model.

PRIsignatory	(2007)	(2008)	(2009)	(2010)	(2011)	(2007)	(2008)	(2009)	(2010)	(2011)	(2007)	(2008)	(2009)	(2010)	(2011)
corpension				1.335** (0.004)	1.492** (0.002)			1.842** (0.007)	1.934** (0.001)	1.868** (0.004)			1.842** (0.007)	1.985*** (0.001)	1.868** (0.004)
noncorpension	2.512*** (0.000)	2.457*** (0.000)	3.385*** (0.000)	2.822*** (0.000)	3.021*** (0.000)	2.368*** (0.000)	2.470*** (0.000)	3.385*** (0.000)	3.027*** (0.000)	3.186*** (0.000)	2.368*** (0.000)	2.522*** (0.000)	3.385*** (0.000)	3.219*** (0.000)	3.186*** (0.000)
nationalCSPscore								-2.551* (0.011)	-1.964* (0.035)	-2.795** (0.010)			-2.551* (0.011)	-2.004* (0.033)	-2.795** (0.010)
indivlegit										0.531* (0.025)					0.531* (0.025)
leftvotes	-0.0417*** (0.000)	-0.0600*** (0.000)	-0.0800*** (0.000)	-0.0845*** (0.000)	-0.121*** (0.000)	-0.0446*** (0.000)	-0.0619*** (0.000)	-0.0800*** (0.000)	-0.0943*** (0.000)	-0.149*** (0.000)	-0.0446*** (0.000)	-0.0650*** (0.000)	-0.0800*** (0.000)	-0.0977*** (0.000)	-0.149*** (0.000)
greenvotes	0.0861* (0.029)	0.126** (0.001)	0.212*** (0.000)	0.159*** (0.000)	0.266*** (0.000)	0.106* (0.024)	0.154*** (0.001)	0.212*** (0.000)	0.222*** (0.000)	0.408*** (0.000)	0.106* (0.024)	0.155*** (0.001)	0.212*** (0.000)	0.230*** (0.000)	0.408*** (0.000)
femaletrustees20-33								0.824* (0.044)					0.824* (0.044)		
femaletrustees>33						0.826* (0.015)		0.853* (0.032)		0.770* (0.049)	0.826* (0.015)		0.853* (0.032)		0.770* (0.049)
AUMlog									-0.178* (0.046)	-0.259* (0.018)				-0.203* (0.026)	-0.259* (0.018)
coalitionbuilding						0.669* (0.030)	0.714* (0.014)	0.590* (0.025)	0.708** (0.003)	0.873** (0.002)	1.848*** (0.000)	1.515*** (0.000)	2.624*** (0.000)	2.473*** (0.000)	3.521*** (0.000)
pragmaticlegit						1.848*** (0.000)	1.513*** (0.000)	2.624*** (0.000)	2.413*** (0.000)	3.521*** (0.000)	0.669* (0.030)	0.700* (0.014)	0.590* (0.025)	0.751** (0.003)	0.873** (0.002)
holdingsturnover												2.365* (0.015)			
urgency														-0.756** (0.003)	
_cons	-2.708*** (0.000)	-1.953*** (0.000)	-1.465*** (0.000)	-1.152** (0.002)	-0.376 (0.317)	-13.91*** (0.000)	-11.76*** (0.000)	-18.70*** (0.000)	-15.93*** (0.000)	-22.36*** (0.000)	-13.91*** (0.000)	-12.30*** (0.000)	-18.70*** (0.000)	-9.592* (0.013)	-22.36*** (0.000)
N	667	667	667	667	667	527	527	527	527	527	527	527	527	527	527
pseudo R2	0.303	0.381	0.443	0.474	0.572	0.350	0.409	0.499	0.517	0.658	0.350	0.422	0.499	0.533	0.658
AIC	349.3	367.5	364.8	377.4	327.2	277.4	290.8	281.1	289.8	225.9	277.4	287.2	281.1	282.9	225.9
BIC	367.3	385.5	382.8	399.9	349.7	307.2	316.4	323.8	328.2	272.8	307.2	317.0	323.8	325.5	272.8

p -values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8 reports the results from the stepwise reduced regression models. The first panel is the basic model with only the original Mitchell et al. (1997) attributes. The second panel is the extended model with Gifford's additions. The final panel to the right is the extended model with controls. The table only shows the statistically significant factors which were not dropped in the stepwise reduction.

This result can be better understood when we take into account that to date asset owners specifically have been under little public pressure to engage in ESG, aside from rare exceptions such as Share Action in the UK, and some Nordic pension funds. Moreover, the legitimacy of such policies has been questioned in the light of their fiduciary duty (Sandberg, 2013). Juravle and Lewis (2008) identify fiduciary duty as one of the three impediments to responsible investment adoption by pension funds, next to concerns over financial performance and the agency problem. Although the debate around fiduciary duty has been leaning towards accepting ESG recently, in the sample years in this study it was still very much an open question (Richardson, 2007; S Prakash Sethi, 2005; Woods & Urwin, 2012). Therefore asset owners may have been insulated from the symbolic pressures to sign the PRI such as the pressure to conform to a certain institutional norm.

5.2.2 Legitimacy attributes

Hypotheses 3a and 3c find no support in the data. Neither individual nor organizational legitimacy show a correlation with the decision to sign the PRI. This finding is in line with Majoch et al. (2016) where no support for these attributes was found in data on investment managers. Also in this study, this finding is counter-intuitive and again we are forced to question if despite previous literature using media coverage as a proxy for legitimacy, this measure is right for illustrating the degree to which the increasing perception of the PRI as a highly legitimate initiative has helped it attract more and more signatories.

Societal legitimacy found consistent support in the data, as proposed in hypothesis 3b. When a higher proportion of votes is cast in favour of parties classified as green, asset owners are more likely to sign the PRI (OR=1.49*** in 2011). When societal support is high for leftwing parties, asset owners are less likely to sign the PRI (OR=0.86*** in 2011), possibly in line with the left wing belief that it is mainly the state that can be trusted to take on responsibility for matters such as societal wellbeing, and that they are outside the remit and competencies of businesses or financial institutions.

5.2.3 Moderating factors

The addition of Gifford's moderating factors to the model resulted in a better model fit and more explanatory power, proving that they are relevant to the salience of the claim to sign the PRI and improve our ability to predict if an asset owner finds the claim salient or not. Hypothesis 4 tests statistically significant with the expected odds ratio below 0 in the later sample years (OR=0.78* in 2011), confirming that smaller asset owners perceive the claim to sign the PRI as salient, possibly due to their limited ability to establish themselves as ESG investors with their

own smaller resources. The lack of effect in the earlier years can be related to the large number of big pension funds that were first specifically targeted by the PRI to quickly build AUM and momentum for the initiative.

Coalition building (hypothesis 5) returns positive and strongly statistically significant results throughout the sample years, which complements the finding on relative stakeholder size. For example, one unit increase in the GLOBE measure of collectivism results in an $OR=38.68^{***}$ increase of an investor being a PRI signatory. Collaboratively minded institutional investors can benefit from the information sharing and implementation support available from the PRI, as well as the opportunity to engage with stakeholders collectively, especially useful if their size is too small to invest significant resources into ESG (PRI, 2016). Coalition building is more of a deciding factor for asset owners than it was found to be for investment managers who are perhaps more competitive among themselves by nature of their industry.

Hypothesis 6 is confirmed in our analysis, but only in the earlier years and only for the highest degree of trustee diversity at over 33%. This is the threshold frequently cited as the critical mass needed for female board representation to make a difference in organizations. The positive finding on management values is in line with Majoch et al. (2016) who found that management values contribute significantly to the perceived salience of the PRI's claim in the initiative's early years and then give up the spotlight to other attributes such as pragmatic legitimacy.

Pragmatic legitimacy is another moderating factor that the results show is positively correlated with the perception of the claim to sign the PRI as salient by asset owners across all sample years, confirming hypothesis 7 and pointing to the importance of the business case to asset owners.

Our penultimate hypothesis applied the temporal dimension of stakeholder relationships to the sources of stakeholder claim salience. Again, we see variation over time in terms of the attributes and moderating factors that achieve statistical significance in our models, confirming that the sources of salience in the eyes of asset owners are dynamic, for example in the case of management values which lose their influence in the later years in the study.

6 Discussion

Our empirical exploration of the sources of perceived salience of the claim to sign the PRI in the eyes of asset owners has yielded some useful, and some unexpected results. Of the main attributes proposed by Mitchell et al. only normative power and societal legitimacy behaved as

expected, returning strongly positive and robust results. Normative power displays a negative effect on the probability of PRI membership in the later sample years, contrary to hypothesis 1b.

The results from Gifford's additions to the stakeholder salience model are more in line with the researchers' expectations. All variables have the predicted effect on the likelihood of an asset owner falling into the signatory category, with management values results varying across measures and sample years – an outcome the researchers were prepared for considering a similarly dynamic relationship of management values with investment manager perceptions of the claim to sign found in Majoch et al. (2016).

6.1 Main framework

From the main framework, the attributes of utilitarian power and societal legitimacy are the most powerful influencers of the perceived salience of the claim to sign the PRI in the eyes of asset owners, suggesting that these investors are the most likely to be swayed by material arguments and the type of legitimacy that has its source in expressed societal attitudes.

6.1.1 Power attributes

Our interpretation of utilitarian power for the purpose of this study drew on the universal owner hypothesis and how it impacts the material implications of taking up responsible investment in a way that is unique and specific to asset owners (Gjessing & Syse, 2007; J. Hawley & Williams, 2007; Kiernan, 2007; S Prakash Sethi, 2005; Thamotheram & Wildsmith, 2006). We proposed that non-corporate pension funds have more utilitarian incentives to explore responsible investment as their size tends to place them in the universal owner category, meaning their portfolios are more likely to benefit from an economy that accounts for and manages externalities. Our findings confirm this expectation, highlighting utilitarian power as a salient attribute to asset owners.

Normative power as an attribute showed a negative relationship in the later sample years with the likelihood of an asset owner perceiving the claim to sign the PRI as salient and prioritizing it. We apply this attribute as symbolic pressure from the external environment in which the asset owner operates. The expectation was that the relationship would be either positive or not significant. The negative relationship has several potential explanations. For one, considered in conjunction with the finding that in the sample years, the size of an asset owner was also negatively correlated with the outcome variable, and the lower odds of small asset owners to be subject to any public pressure established by Sievänen, Rita, et al. (2013), the result appears less surprising.

The source of these symbolic pressures is also highly relevant – we use a measure based on the overall organizational environment at national level, using underlying data on company sustainability across a wide range of industry sectors out of which investment is a very small part. We are guided in our choice by the early observations of Meyer and Rowan (1977) on the adoption of norms and codes by organizations fueled by a search for legitimacy through conformity. Perhaps however asset owners do not feel compelled to conform to standards shared by organizations in apparel, mining, motor, defense, and other industries in which they invest. Being an institutional investor sets them apart not only within the investment industry but also the wider market and that distinction pervades the way asset owners' role within responsible investment is understood. They become a focus of researchers as well as initiatives such as the PRI because they are believed to be in the position to persuade companies to act more sustainably (Juravle & Lewis, 2009), and even to create RI momentum in the rest of the investment sector (PRI, 2016a). In countries with better CSP, this expectation may be less acutely felt by asset owners, resulting in a negative correlation of normative power with PRI membership.

As discussed in the results section, our empirical application of this attribute is also only one possibility and had we chosen a different data proxy the results may have differed. If for example, asset owners were more frequently the target of public campaigns on sustainability themes, data on this type of symbolic pressure would be a more direct measure of normative power and our results are not sufficient foundation based on which to expect the direction or significance of the correlation of such a variable with signing the PRI would be the same. However, with the data available to us at this time, we conclude that normative power in the asset owner context is a complex attribute that requires further empirical investigation to establish its sources and its relevance to stakeholder salience.

6.1.2 Legitimacy attributes

The only legitimacy attribute found to be significant in our analysis was societal legitimacy. This is another attribute, next to normative power, the application of which was at its heart guided by Meyer and Rowan's (1997) view of organizations as seeking to conform to norms institutionalized in society to gain legitimacy and avoid criticism. In contrast to normative power, as an attribute with its source in what is accepted in society, it is represented with a measure focused on society as a whole rather than on organizations in a particular state.

Societal legitimacy is a salient attribute in the eyes of asset owners. The correlation is not as strong as for most of the other salient attributes found in our dataset, but it is consistent and

maintains statistical significance across the sample years. In countries with more political votes cast for parties classified as green, asset owners are more likely to sign the PRI, we assume because they view the claim as possessing societal legitimacy. So although asset owners appear to not be majorly influenced by normative pressures from their environment, they do align themselves with norms expressed by society (Meyer & Rowan, 1977). This is an interesting finding as seen in context with our normative power result, because it highlights that perhaps which source of salience is relevant to asset owners has something to do with the group or environment which it is attached to. Companies and their stance on and performance with regard to sustainability appear to have less relevance to asset owners than societal attitudes to investor responsibility do.

6.2 Moderating factors

The factors influencing salience added by Gifford were proven to be highly relevant to asset owners' perception of the claim to sign the PRI. Both coalition building and pragmatic legitimacy were shown by the model to have a consistent positive correlation with the likelihood of an asset owner being a signatory to the PRI, and a further two moderating factors: management values and relative economic size have shown a more complex relationship with the outcome variable.

6.2.1 Relative stakeholder size

Relative economic size is a dynamic attribute which gains statistical significance in the later sample years (2009-2011). As suggested in the results section, this distribution of outcomes across the sample years can be explained in part by the effort made by the PRI initially to recruit the support of the largest pension funds. The negative correlation in the later years can be linked to the recurring theme of the resource barriers which small asset owners experience in adopting ESG (Herringer, Firer, & Viviers, 2009; PRI, 2011) that being part of a large investor association with the aim of supporting signatories in ESG implementation can alleviate, and the curvilinear relationship found by Sievänen, Rita, et al. (2013) between fund size and ESG where both the largest and smallest pension funds are the most likely to engage in responsible investment.

Continuing the theme of size as related to resource constraints, a case could also be made that as the legitimacy and influence of the PRI grows over the years, smaller investors may be compelled to become signatories to improve their own ESG credentials by association (Long & Driscoll, 2008). This argument is in line with the portrayal of voluntary codes as legitimacy-conferring instruments as found in L. A. Perez-Batres et al. (2012), however a firm link between this strategy and organization size has not been empirically established. A closer examination of

these interdependencies in future research may lead to a more complete understanding of legitimacy seeking behaviour and the role sustainability initiatives play in it.

6.2.2 Coalition building

Another striking characteristic of asset owners who perceive the claim to sign the PRI as salient is they come from more collectivistic institutional backgrounds, highlighting coalition building as an important source of salience in our analysis. In Majoch et al.'s (2016) findings, coalition building was often cited by signatories as an incentive to sign the PRI because it is one of the ways in which signatories can overcome resource barriers to ESG integration (Majoch et al., 2016), which refers us to our previous finding on relative economic size, and ties in with the arguments put forward by Thamotheram and Wildsmith (2007) about how collective action is in the best interest of asset owners based on the potential to maximise legitimacy, overall market returns and ESG impact, and how the PRI offers an easy framework for asset owners to collaborate within.

6.2.3 Management values

Management values are a particularly time- and scale-sensitive attribute. We find no effect of our measure of management values at the lower level and it is only at its highest level that the effect is the strongest. Since our data proxy is female board of trustees representation, this finding contributes to the board diversity literature, confirming the existence of a critical mass of 30% for the addition of female board members to have an observable effect on the organization (Kramer, Konrad, Erkut, & Hooper, 2006; Torchia, Calabrò, & Huse, 2011). In our empirical investigation management values have been shown to be a complex factor whose influence shifts over time, but which is found to be relevant across investor types.

This finding is especially interesting and at the same time potentially disconcerting to practitioners, as over its lifetime responsible investment has rapidly shifted away from any ethics and values associations, a development traced by Dumas and Louche (2015). Meanwhile, a variety of academic studies have established links between values and responsible investment, and our study now further increased their number. For instance, Scholtens and Sievänen (2013) find that because responsible investment resonates with many typically feminine values (Puaschunder, 2011), in societies with more feminine characteristics, responsible investment is more developed. Waldman and Siegel (2008) argue that the values and beliefs of leaders specifically drive organizational CSR behaviour, which our results appear to confirm in the context of RI and leadership in institutional investment organizations. Relational and moral

motives were also empirically shown to be the most common reason why senior management support CSR (Harwood et al., 2011).

Despite the RI movement's own emphasis of materiality and the academic literature's continued focus on the already enormous debate around ESG and financial performance (Clark et al., 2015; Orlitzky, Schmidt, & Rynes, 2003; Revelli & Viviani, 2015), values firmly refuse to stop being relevant. Our results confirm that they did not disappear from the equation with the onset of the professionalisation of RI in 1998 (Dumas & Louche, 2015).

6.2.4 Pragmatic legitimacy

The persistence of values as an ingredient of the RI movement does not diminish the role of pragmatic legitimacy. The two coexist, but in the case of asset owners in our sample pragmatic legitimacy appears to be a less elusive factor. It is a consistently salient attribute showing that the business case for signing the PRI is a highly relevant argument to asset owners. While asset managers have ex. short term market outperformance and the challenges of practical ESG integration to worry about, the business case for RI is much more straightforward for the long-termist asset owners with mostly outsourced investment. Next to the universal owner hypothesis logic, a long term investment horizon and obligations to beneficiaries also make responsible investment a pragmatic choice for asset owners.

As argued by S Prakash Sethi (2005), a focus on short term financial criteria exclusively is not a viable option for pension funds and needs to be replaced with a concern with sustainable growth. A similar stance is taken by a variety of academic literature arguing the pragmatic benefits of transparency, long-termism, active ownership, collective action and other aspects of ESG, which can be found in the PRI's six principles, to asset owners (Clark & Hebb, 2004; Hebb, 2006; Kiernan, 2007; Thamotheram & Wildsmith, 2007).

6.2.5 Temporal aspect

The dynamism of the sources of stakeholder salience over time is demonstrated in the results through the different sets of factors found to be salient throughout the sample years. There are attributes that stay consistent like utilitarian power and those that are only salient in some years such as management values. This paper studies only a five year period of the initiative's existence which is relatively short in the life of an organization but already the temporal aspect is visible, contributing new empirical evidence to the literature on the dynamic dimension of stakeholder relationships (Fassin, 2010; Sachs & Maurer, 2009).

6.3 Limitations

The use of proxies and their level of adequacy is also a common limitation in this stream of research which applies to this study. In several instances in the paper we recognize that the apparent importance or non-importance of particular sources of salience may be due to the particular data proxy that comes with its own assumptions. We are limited in our choice of proxies by the decision to base our analysis exclusively on public data, to complement our previous exploratory study using confidential data (Majoch et al., 2016), and to ensure replicability of the study for the purpose of possible future analyses of later periods in the PRI's history, such as the next five years leading up to the PRI's ten year anniversary in which the collective signatory AUM surpassed 50 trillion USD and the temporal dimension of the sources of stakeholder salience has undoubtedly seen some developments not covered in this paper.

7 Conclusion

This study contributes to the still developing understanding of the drivers of RI among asset owners (Sievänen, 2014). More specifically, it explores the sources of salience that drive asset owners to adopt a voluntary sustainability code, expanding the scope of the literature on these initiatives whose focus has so far been mostly on corporates (Knudsen, 2012). By using a variety of public data it overcomes the limitation of self-reported data qualifying the findings of Majoch et al. (2016). It reports on our attempt to identify the sources of salience of the claim to sign the PRI in the eyes of asset owners. We have found that for asset owners the most salient factors are utilitarian power, societal and pragmatic legitimacy, management values, and coalition building, and that their relevance is not static but changes over time. The study further broadens the scope of the literature on the drivers of responsible investment (Juravle & Lewis, 2009; Létourneau, 2015; Scholtens & Sievänen, 2013; Sievänen, 2014; Sievänen, Rita, et al., 2013; Solomon, Solomon, & Norton, 2002) and offers a new empirical application of the stakeholder salience model as encouraged by Mitchell et al. (1997).

Perhaps the most striking finding is the combined significance of utilitarian power and pragmatic legitimacy as sources of salience of the claim to adopt the six principles for responsible investment. This combination shows that at the very least asset owners think that ESG plays a role in their survival and success, which in turn is promising from the perspective of the RI movement's objective of permanently establishing itself in the mainstream of the financial industry.

In terms of contribution to practice, the results from our study inform sustainability initiatives such as the PRI of the source of the salience of their claims, helping them to understand what strategies they can expect to be effective in targeting different types of institutional investor. They can also be useful to other stakeholders to asset owners who seek to exert influence, and to policy makers who may be interested in the ability of voluntary codes to elicit systemic change in the financial system and the broader economy.

Our findings point to a distinct set of sources of salience characteristic of asset owner signatories. This contributes to our understanding of asset owners as a distinct type of financial actor and the drivers of their adoption of responsible investment. The role of asset owners in the RI movement has been and continues to be important. According to a study by Dumas and Louche (2015) pension funds were key actors in a period of professionalization of responsible investment between 1998 and 2000 and continued to be a focus for financial media coverage in the subsequent years 2001-2004 in the context of ESG materiality and regulation. Asset owners continue to play an important role in the development of RI, not least by generating demand for ESG integration among asset managers and sustainable behaviour among their investees. They were the primary target for the PRI originally and their ESG integration is believed to be the source of a multiplier effect across the investment industry (PRI, 2016a). This study is another step towards our collective understanding of asset owners and what drives their response to stakeholder claims. Its relevance is amplified by the growing dominance of this class of investors in the global economy (Létourneau, 2015) and the ongoing academic debate surrounding the adequacy of voluntary codes such as the PRI in the last 15 years as an alternative to regulation (L. A. Perez-Batres et al., 2012; S. Prakash Sethi & Schepers, 2013; S Prakash Sethi & Schepers, 2014) in the face of one of the biggest and most complex global challenges that is sustainability.

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Appendix 1 Results of cross-section analysis of asset owner PRI adoption expressed in odds ratios.

Results of cross-section analysis of asset owner PRI adoption: basic model

	(2007)	(2008)	(2009)	(2010)	(2011)
corpension	1.688 (0.454)	1.878 (0.286)	2.159 (0.168)	3.561** (0.007)	3.980** (0.006)
noncorpension	14.88*** (0.000)	15.04*** (0.000)	19.58*** (0.000)	16.32*** (0.000)	19.84*** (0.000)
nationalCSPscore	2.101 (0.272)	1.883 (0.328)	1.199 (0.780)	1.483 (0.527)	1.808 (0.373)
indivlegitimacy	1.136 (0.511)	1.002 (0.990)	0.925 (0.664)	1.022 (0.902)	1.261 (0.250)
orglegitimacy	1.087 (0.774)	1.161 (0.604)	1.190 (0.544)	1.140 (0.660)	1.255 (0.446)
leftvotes	0.960*** (0.000)	0.943*** (0.000)	0.932*** (0.000)	0.919*** (0.000)	0.885*** (0.000)
greenvotes	1.082 (0.056)	1.124** (0.003)	1.138** (0.001)	1.167*** (0.000)	1.304*** (0.000)
N	667	667	667	667	667

Exponentiated coefficients; p -values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This table reports results of cross section logistic regression analyzing asset owner adoption of the PRI, expressed in Odds Ratios. The panels extend from 2007 to 2011. The factors in the model include only a selection of the original Mitchell et al. stakeholder salience attributes.

Results of cross-section analysis of asset owner PRI adoption: extended model with Gifford's additions

PRIsignatory	(2007)	(2008)	(2009)	(2010)	(2011)
corpension	3.564 (0.103)	4.204* (0.044)	5.804* (0.011)	5.897** (0.003)	5.738** (0.007)
noncorpension	16.85*** (0.000)	20.36*** (0.000)	28.53*** (0.000)	20.28*** (0.000)	24.18*** (0.000)
nationalCSPscore	0.247 (0.154)	0.250 (0.142)	0.0831* (0.013)	0.142* (0.041)	0.0561** (0.008)
indivlegitimacy	1.107 (0.677)	1.068 (0.774)	0.928 (0.741)	1.120 (0.619)	1.531 (0.123)
orglegitimacy	0.953 (0.890)	1.044 (0.903)	1.216 (0.593)	1.167 (0.699)	1.309 (0.522)
leftvotes	0.953*** (0.000)	0.938*** (0.000)	0.922*** (0.000)	0.910*** (0.000)	0.861*** (0.000)
greenvotes	1.146** (0.008)	1.179*** (0.001)	1.230*** (0.000)	1.232*** (0.000)	1.490*** (0.000)
Femaletrustees0-20	1.466 (0.554)	1.869 (0.330)	2.060 (0.263)	1.347 (0.624)	1.213 (0.785)
femaletrustees20-33	1.770 (0.369)	2.161 (0.222)	3.897* (0.035)	2.576 (0.117)	2.291 (0.248)
Femaletrustees>33	3.427* (0.048)	3.471* (0.047)	4.074* (0.027)	2.631 (0.103)	3.364 (0.084)
AUMlog	1.009 (0.937)	0.946 (0.604)	0.955 (0.658)	0.832* (0.041)	0.780* (0.025)
coalitionbuilding	10.66*** (0.000)	8.717*** (0.000)	13.28*** (0.000)	13.45*** (0.000)	38.68*** (0.000)
pragmaticlegit	1.938* (0.031)	2.169* (0.012)	1.826* (0.022)	1.927** (0.009)	2.270** (0.004)
N	527	527	527	527	527

Exponentiated coefficients; p -values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This table reports results of cross section logistic regression analyzing asset owner adoption of the PRI, expressed in Odds Ratios. The panels extend from 2007 to 2011. The factors in the model include both the original Mitchell et al. stakeholder salience attributes and Gifford's additions to the model.

Results of cross-section analysis of asset owner PRI adoption: full model with controls

PRIsignatory	(2007)	(2008)	(2009)	(2010)	(2011)
corpension	3.367 (0.123)	3.589 (0.076)	5.087* (0.019)	5.772** (0.005)	4.872* (0.017)
noncorpension	16.62*** (0.000)	21.18*** (0.000)	28.92*** (0.000)	23.96*** (0.000)	24.26*** (0.000)
nationalCSPscore	0.241 (0.149)	0.242 (0.135)	0.0759* (0.011)	0.116* (0.026)	0.0479** (0.006)
indivlegitimacy	1.124 (0.637)	1.074 (0.757)	0.984 (0.944)	1.166 (0.514)	1.498 (0.137)
orglegitimacy	0.936 (0.847)	1.013 (0.971)	1.195 (0.627)	1.190 (0.658)	1.336 (0.492)
leftvotes	0.952*** (0.000)	0.934*** (0.000)	0.919*** (0.000)	0.905*** (0.000)	0.859*** (0.000)
greenvotes	1.144* (0.011)	1.180** (0.001)	1.238*** (0.000)	1.233*** (0.000)	1.455*** (0.000)
Femaletrustees0-20	1.467 (0.558)	1.940 (0.308)	2.117 (0.245)	1.244 (0.727)	1.228 (0.778)
femaletrustees20-33	1.758 (0.380)	2.135 (0.236)	3.779* (0.039)	2.559 (0.130)	2.319 (0.255)
Femaletrustees>33	3.448* (0.050)	3.594* (0.044)	4.142* (0.024)	2.837 (0.086)	3.745 (0.066)
AUMlog	0.993 (0.949)	0.932 (0.508)	0.957 (0.682)	0.804* (0.019)	0.774* (0.023)
coalitionbuilding	10.82*** (0.000)	8.759*** (0.000)	13.05*** (0.000)	18.30*** (0.000)	53.68*** (0.000)
pragmaticlegit	1.929* (0.031)	2.100* (0.015)	1.800* (0.025)	2.044** (0.008)	2.342** (0.004)
holdingsturnover	5.161 (0.126)	11.22* (0.020)	5.058 (0.131)	4.946 (0.123)	7.139 (0.110)
urgency	0.942 (0.813)	1.237 (0.409)	0.734 (0.246)	0.435** (0.002)	1.534 (0.207)
N	527	527	527	527	527

Exponentiated coefficients; p -values in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This table reports results of cross section logistic regression analyzing asset owner adoption of the PRI, expressed in Odds Ratios. The panels extend from 2007 to 2011.