PRI Principles for Responsible Investment

UNEP FINANCE INITIATIVE | United Nations Global Compact

An investor initiative in partnership with UNEP Finance Initiative and UN Global Compact

SHIFTING PERCEPTIONS:

ESG, CREDIT RISK AND RATINGS

PART 1:

THE STATE OF PLAY

The Rockefeller Foundation

UN environment

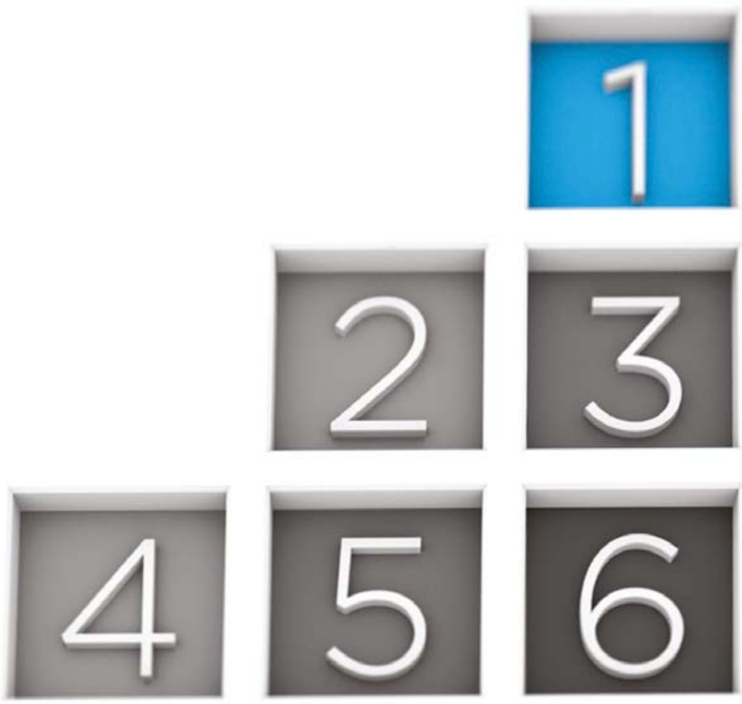
Inquiry: Design of a Sustainable Financial System

THE SIX PRINCIPLES

PREAMBLE TO THE PRINCIPLES

As institutional investors, we have a duty to act in the best long-term interests of our beneficiaries. In this fiduciary role, we believe that environmental, social, and governance (ESG) issues can affect the performance of investment portfolios (to varying degrees across companies, sectors, regions, asset classes and through time). We also recognise that applying these Principles may better align investors with broader objectives of society. Therefore, where consistent with our fiduciary responsibilities, we commit to the following:

1. **We will incorporate ESG issues into investment analysis and decision-making processes.**
2. We will be active owners and incorporate ESG issues into our ownership policies and practices.
3. We will seek appropriate disclosure on ESG issues by the entities in which we invest.
4. We will promote acceptance and implementation of the Principles within the investment industry.
5. We will work together to enhance our effectiveness in implementing the Principles.
6. We will each report on our activities and progress towards implementing the Principles.



PRI's MISSION

We believe that an economically efficient, sustainable global financial system is a necessity for long-term value creation. Such a system will reward long-term, responsible investment and benefit the environment and society as a whole.

The PRI will work to achieve this sustainable global financial system by encouraging adoption of the Principles and collaboration on their implementation; by fostering good governance, integrity and accountability; and by addressing obstacles to a sustainable financial system that lie within market practices, structures and regulation.

ABBREVIATIONS

ACCR	Advisory Committee on Credit Ratings
AM	Asset Manager
AO	Asset Owner
AUM	Assets Under Management
CDS	Credit Default Swap
CRA	Credit Rating Agency
ESG	Environment, Social and Governance
ESMA	European Securities and Markets Authority
ETF	Exchange-Traded Fund
FI	Fixed Income
HY	High Yield
IG	Investment Grade
PM	Portfolio Manager
PRI	Principles for Responsible Investments
SEC	US Securities and Exchange Commission
SSA	Sovereign, Supranational and Agency

ACKNOWLEDGEMENTS

The PRI would like to thank the Advisory Committee on Credit Ratings (ACCR) and its chairs, My-Linh Ngo from BlueBay Asset Management and Ole Hagen Jørgensen from Global Evolution. The ACCR comprises 18 members from investors and credit rating agencies among the signatories of the 2016 ESG in Credit Ratings Statement and it includes the co-director of the UNEP Inquiry, Nick Robins. The guidance by the ACCR and input from those available for interviews (listed in Appendix 1) have been instrumental for this report, as well as the financial support provided by the Rockefeller Foundation.

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EXECUTIVE SUMMARY

Investors and credit rating agencies (CRAs) are ramping up efforts to consider environmental, social and governance (ESG) factors in credit risk analysis.

This report is the first in a three-part series by the Principles for Responsible Investment (PRI) on its initiative to enhance the *systematic* and *transparent* consideration of ESG issues in the assessment of the creditworthiness of borrowers in fixed income (FI) markets.

It provides a snapshot of the current state of play on ESG in credit risk analysis (in terms of thinking and activities) to better understand what investors and CRAs are already doing, what they are aiming for and what their expectations are. Parts two and three will provide more in-depth coverage on existing challenges as well as future opportunities.

There is tangible evidence of progress in ESG consideration by investors and CRAs, including increased resource allocation. However, they are at different stages in this process and look at credit risk from different perspectives:

INVESTORS

- **Some efforts made by investors in ESG integration are incipient; some are partial, and some are more advanced**: Overall, ESG analysis is yet to be systematically integrated into credit risk assessment. It can be advisory in nature and the responsibility often falls on ESG analysts alone to raise "red flags". Hence, at this stage, full ESG integration appears some way off.
- **Investors may not have realistic expectations of CRAs:** This is partly due to confusion around what ratings measure and expectations that ratings need to be calibrated to capture risks that they are not designed for (i.e. beyond default risk).

CREDIT RATING AGENCIES

- **CRAs are integrating many ESG factors into their credit rating analysis, but must communicate this better:** While an assessment of governance has traditionally been included, CRAs acknowledge that they need to be more explicit and transparent about other ESG factors — namely social and environmental ones — too.
- **CRAs are bolstering their research efforts:** CRAs are increasingly researching ESG topics beyond traditional rating analysis. This is contributing to the development of evaluation tools and deeper understanding of the issues at stake. However, it remains to be seen whether research insight is embedded in rating analysis going forward.

The report also sheds light on areas of best practice and bottlenecks, including:

- **Visibility of ESG factors**: There are no "perfect" time horizons for assessing these, as they depend on the nature of the factors. Investors are asking for more guidance from CRAs, about the direction of risks; while this is provided to an extent by Credit Watches, Outlooks and Outlook statements, CRAs could take a more granular approach to ESG consideration and include scenario analysis to address long-term trends and risk trajectories. These are particularly important when it comes to assessing the possibility of upgrades or downgrades on which markets trade. There is also a lack of agreement on which time horizon to focus on, since ESG analysts tend to be more long-term oriented than portfolio managers (PMs), while CRAs vary.
- **Materiality of ESG risks**: It is important to differentiate the ESG factors that may affect the financial performance of an issuer, its risk of default and the trading performance of its securities. These are not always straightforward to identify, however, due to data restrictions, confusion about which metrics to prioritise, and the nature of ESG risks (which may be new to both investors and CRAs). When considering the risk of default, some thought should also be given to how ESG factors may affect expected losses.
- **"E" gaining traction**: CRAs and investors most frequently cite governance as the ESG factor that is likely to directly impact creditworthiness. However, recent research by investors and CRAs suggest their focus is intensifying on environmental and green factors in particular, and less so on social factors which are less tangible.
- **Communication and transparency**: Improvements are needed on both sides: CRAs generally agree that they need to enhance their external communication and transparency with investors. At the same time, investors have to improve internal dialogue (and cooperation) between ESG analysts and portfolio managers, who have the final investment call.
- **Limited research**: Academic and market research analysis on ESG factors and creditworthiness exists, but is limited and lagging that on equities. With that said, existing publications support the notion that there is a clear link between ESG factors and creditworthiness.

The findings of this report point to a number of themes that will shape the agenda of industry forums led by the PRI over the next year. The forums will enable market participants to address some of the questions which have emerged so far. For example:

- How can investors and CRAs address the issue of timeframes for long-term ESG risks?
- How can investors and CRAs use their improving ESG competence to enhance information disclosure by issuers?
- Should investors give consideration to "non-credit" rating tools (i.e. an ESG score) that can help them assess risks beyond default risks?
- Do regulators play a role in facilitating the systematic and transparent integration of ESG consideration in credit assessment?
- How could institutions on both the investor and the CRA side — and their credit analysts — be incentivised to enhance their ESG competence and incorporate it systematically in their analysis?
- As ESG factors are often intangible, how can qualitative assessment be improved for the purpose of credit risk analysis?

This report is only the beginning of more work that lies ahead. The PRI acknowledges that these findings may not necessarily reflect industry views across the board, particularly on the investor side. We strongly encourage interested parties to work with us in taking this important project forward by getting involved in the activities being planned with the help of the ACCR.

The PRI welcomes all feedback on this initiative; the challenge is to channel efforts constructively, efficiently and effectively to drive real change.

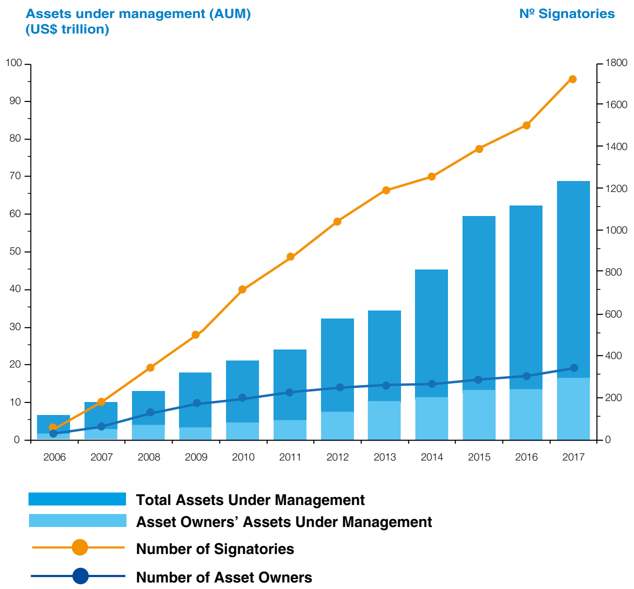
WHY ESG FACTORS MATTER IN CREDIT RISK ANALYSIS

The more visible impact of climate change in recent years, as well as corporate scandals which have triggered sizable financial losses and the devastating effects of the global financial crisis, are all stark reminders of why oversight, lack of transparency and accountability can negatively affect FI market pricing, volatility and, ultimately, financial stability.

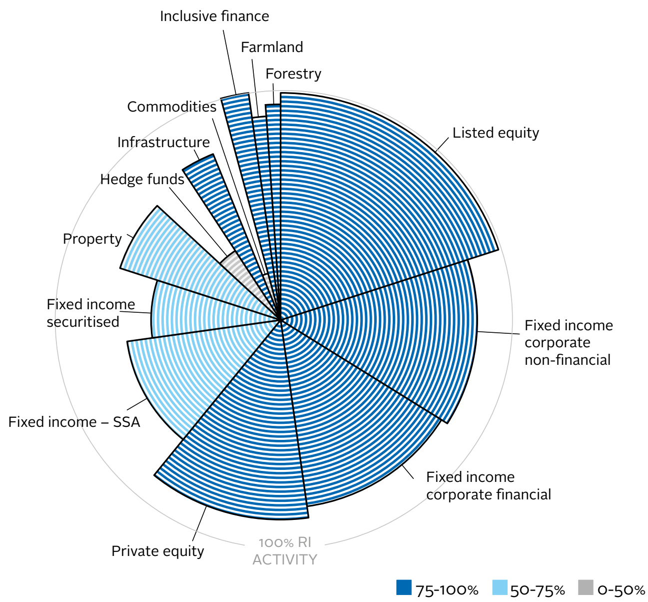
The world is changing and ESG risks are becoming more visible. Some may already feature in traditional credit risk evaluation, but have not been labelled as such. No longer perceived as long-term, others have started to be incorporated only in recent years. Other risks are nascent or merely viewed as potential at this stage. Finally, investor awareness has increased following numerous examples of securities' underperformance when ESG risks have been overlooked

Investor demand for ESG-linked assets is growing and, correspondingly, the need to better understand related issues: the number of PRI signatories exceeded 1,700 this year with assets under management (AUM) totalling over US$70 trn. Of this total, FI assets represent almost US$30 trn (or 41% of AUM), with the majority invested in sovereign and non-financial corporate bonds.[1] At present, systematic integration in the investment process is more advanced for the latter compared to other FI assets.

PRI signatories and asset under management. Source: PRI

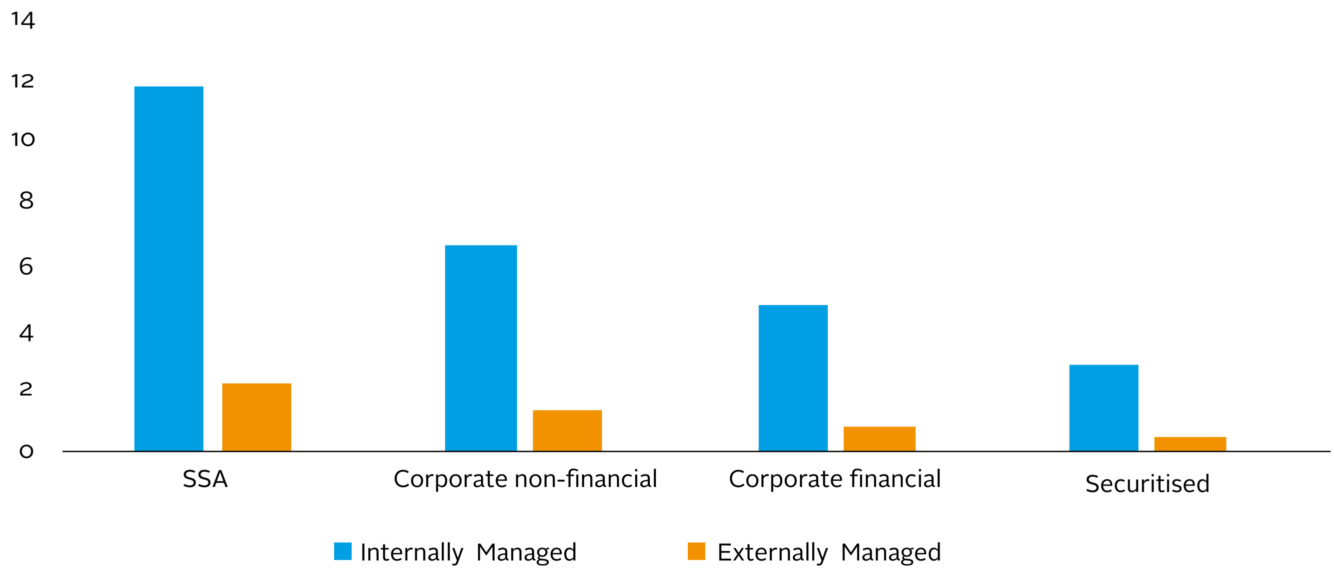


Proportion of reporting PRI investment managers conducting some level of responsible investment by asset class (2016). Source: PRI

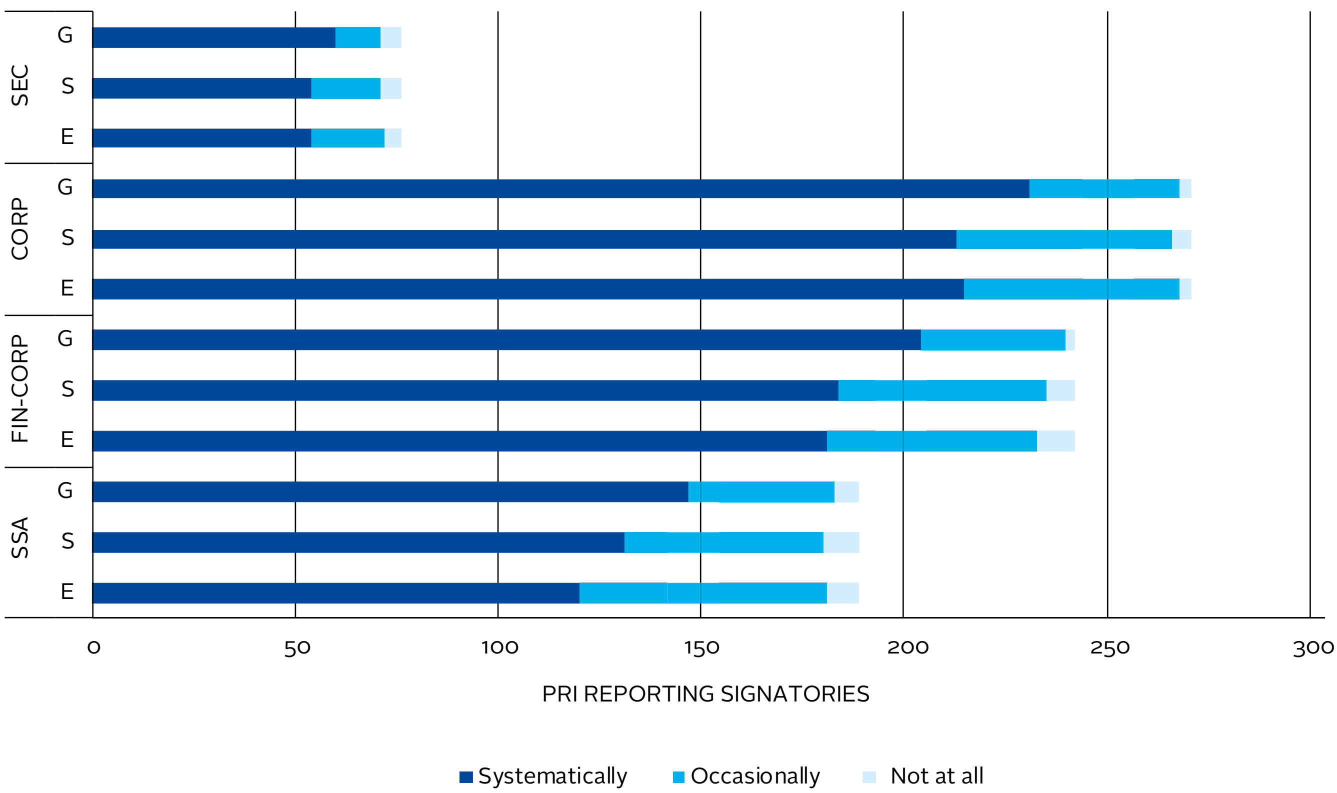


1 Some of these funds are managed directly by the internal teams of asset owners (AOs) or asset managers (AMs) and some are outsourced to external managers. In addition, some of these funds are invested with passive strategies that aim to replicate the investment holdings of a particular index, whilst others take an active approach that seeks to outperform the market.

AUM of PRI signatories by type of FI instruments (2016, US$trn.), Source: PRI



To what extent are FI investors integrating ESG factors into their investment process? Source: PRI



Beyond stewardship, the business case for a more environmentally sustainable and socially responsible society has come to the fore in recent years — from a risk management perspective as well as a way to spot market mispricing and opportunities.

Investors appreciate the need for a high-level view of which ESG issues might impact their portfolio, but need a clearer understanding of the implications across asset classes.

When it comes to FI instruments, market participants can learn from ESG integration practices in equity analysis. ESG integration in equities is more advanced despite the comparatively smaller size of the market (partly because shareholder voting rights has facilitated progress). However, FI as an asset class is different, with multiple stakeholders involved and different time horizons to consider (Ngo, 2016).

Ultimately, one of investors' main objectives is to maximise returns while minimising risks, including those related to ESG factors. In the case of FI, investors buy bonds for reasons ranging from capital preservation or appreciation, income, portfolio diversification to a hedge against inflation or economic weakness.

The case for capital preservation is particularly pressing for insurers and pensions funds, which own large portions of FI securities for asset-liability management purposes and have a fiduciary duty towards their policyholders and/ or beneficiaries. This has gained further prominence since the start of the decade with the introduction of "bail in" regulations, which require that creditors bear some of the burden of a borrower's default by having some of the debt that they are owed written off.

Incorporating ESG considerations into credit risk analysis is not a tick-box exercise due to the multi-faceted nature of credit risk is related to the likelihood of default by an issuer. However, there may also be ESG factors that affect creditworthiness indirectly (resource scarcity, for instance, might add to inflationary pressures, prompting a tightening of monetary policy and a rise in the cost of capital which, coupled with adverse market conditions and poor liquidity, could prompt a default).

Broadly speaking, ESG factors can affect the price performance of a bond and its credit risk at different levels:

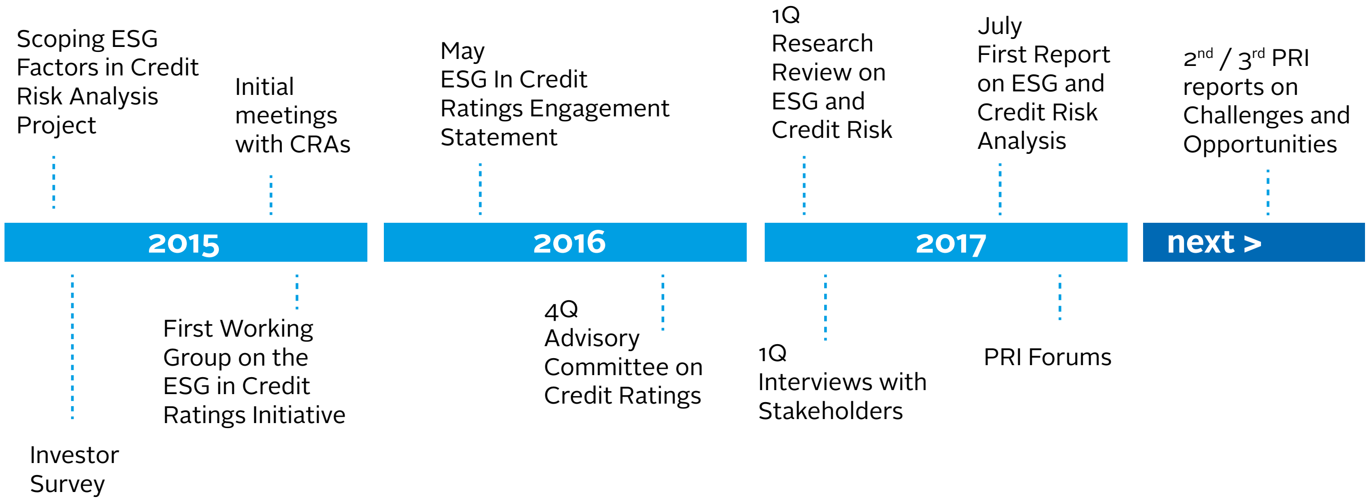
- **Issuer/company level:** These are risks that affect a specific bond issue or its issuer and not the market as a whole. They are generally related to factors such as the governance of an issuer, its regulatory compliance, the strength of its balance sheet and, at the corporate level, brand reputation. For example, the yield on the corporate debt of the car manufacturer Volkswagen rose and stayed high for a prolonged period of time in the aftermath of the emission scandal.
- **Industry/geographic level:** These risks stem from wider-ranging issues affecting the entire industry or region that the issuer belongs to. They can be related to regulatory factors, technological changes associated with the business activity the company is involved in, and/or the markets it sources or sells to. For example, utilities are relatively more exposed to climate change risks than financials.

History has also taught us that there can be ramifications if idiosyncratic risks affect an issuer's industry peers. For example, the Volkswagen emissions scandal has marked a turning point in the future of diesel cars. Moreover, with adequate risk management even "black swan" events (i.e. unexpected events with major impact that are extremely difficult to anticipate) can be mitigated.[2] A case in point is the 2013 landslide at Rio Tinto's Bingham Canyon mine in Utah, where nobody was injured because Rio Tinto's laser scanning system sent early warning signals, enabling a prompt evacuation of the site.

Not all ESG factors which may affect bonds' price performance influence an issuer's creditworthiness — a point that will be explored further in the report. Nevertheless, with emerging evidence of a link between ESG factors and creditworthiness, it is critical that market participants ensure — where material — that these factors are systematically included in their assessment processes (see section with takeaways from existing research). Transparency is also key to delivering robust credit risk analysis, just as fostering a culture of awareness can help to eliminate "blind spots" in the process.

2 The term "black swan" event in the context of financial markets was first coined by Nassim N. Taleb (Taleb, 2008).

ESG in credit ratings initiative timeline. Source: PRI



THE PRI ESG IN CREDIT RATINGS INITIATIVE

The PRI has already published several reports that focus on ESG factors in FI, including one on corporate (2013) and one on sovereign bonds (2013), as well as a general guide for investors (2014).

This document is part of a project which started in 2015 when the PRI conducted an investor survey and launched a working group on the importance of engaging with CRAs to enhance the systematic integration and transparency of ESG factors in credit risk analysis.

A major milestone was reached in May 2016 with the publication of the Statement on ESG in Credit Ratings, in which investors and CRAs publicly stated their recognition of the value of considering ESG factors in credit risk analysis, and committing to collaborating on the following:

- Developing a better understanding of ESG issues as they relate to creditworthiness;
- Crafting practical solutions for more systematic and transparent incorporation of ESG factors in credit ratings and analysis.

With a roadmap developed to take the project forward, the ACCR was assembled in late 2016 to start the work which has formed the backbone of this report and is based on:

- **Stakeholder interviews:** Interviews were conducted with practitioners from CRAs and investors with questions aimed at understanding their motivations for considering ESG factors, their internal research and analysis processes (see Appendix 1).
- **The PRI *Report on progress***: Information supplied as part of the PRI's annual signatory Reporting & Assessment requirement.

PRI Statement on ESG in Credit Ratings as of June 2017

* The CRAs include Beyond Ratings which is not yet a credit rating agency but has applied to become one

- **An investor survey by the PRI:** Insights gained from an original survey in early 2015 – designed to gauge how FI investors consider ESG factors in their assessment of an issuer's creditworthiness – as well as opinions on the consideration of ESG factors by CRAs.
- **Research review:** A review of available research on the link between various ESG factors and creditworthiness. This review, which is not intended to be a meta study, was conducted in 1Q 2017 (see Appendix 3).

THE STATE OF PLAY

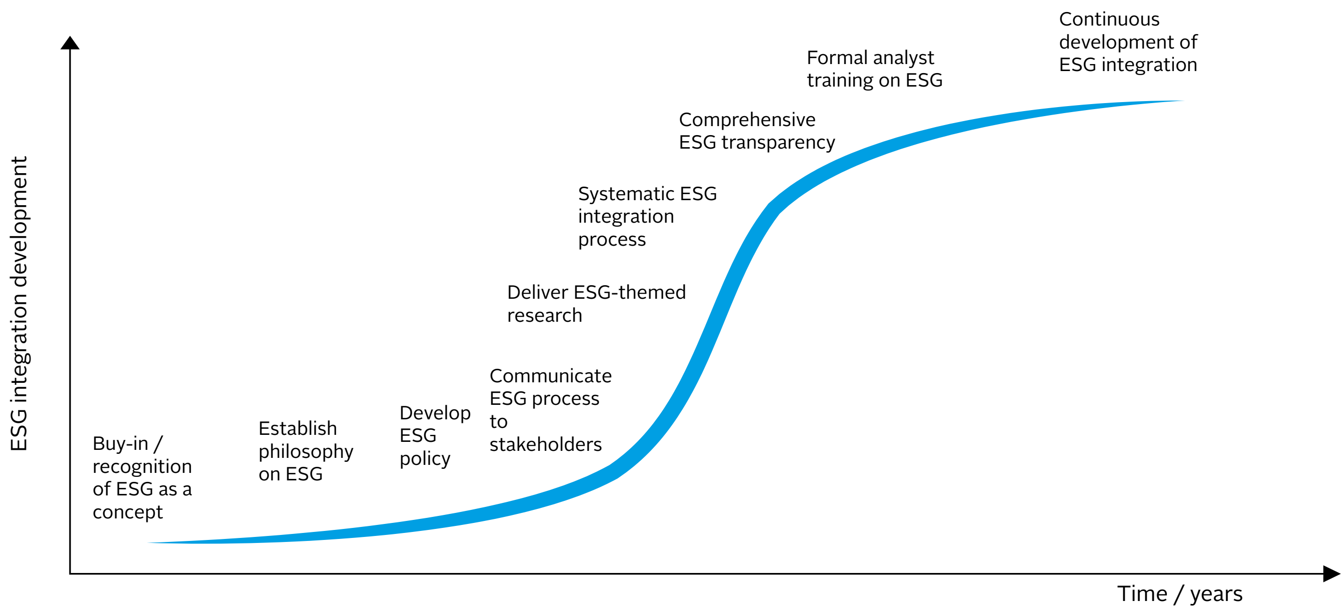
Widespread support for the PRI statement on ESG in credit ratings is a testament to the fact that the financial community is taking ESG considerations increasingly seriously. Hitherto, there have been few attempts to explicitly unpick the motivations, thinking and practice of both investors and CRAs with regards to integrating ESG factors into credit analysis.

While there seems to have been much ad-hoc investor engagement with CRAs on ESG-related issues in recent years, the latest PRI-led initiative is critical in creating space to do this in a more coordinated manner. This dialogue is still in its infancy but has already brought to light several interesting themes.

Encouragingly, both investors and CRAs are allocating more resources to focus on ESG issues. This includes dedicated ESG analysts and published research by CRAs. Additionally, both sides are looking for new measures (developed internally or through external providers) to quantify and incorporate these risks more systematically into their assessments. S&P Dow Jones Indices, for example, recently bought a controlling stake in Trucost plc, a UK environmental consultant firm and a specialist in carbon, environmental data and risk analysis.

Investors and CRAs have moved ahead of initial recognition of ESG as a relevant investment concept, but when integrating ESG in credit risk analysis they are both at different stages.

Illustrative timeline of ESG integration development. Source: PRI



HOW INVESTORS ARE APPROACHING ESG FACTORS AND CREDIT RISK

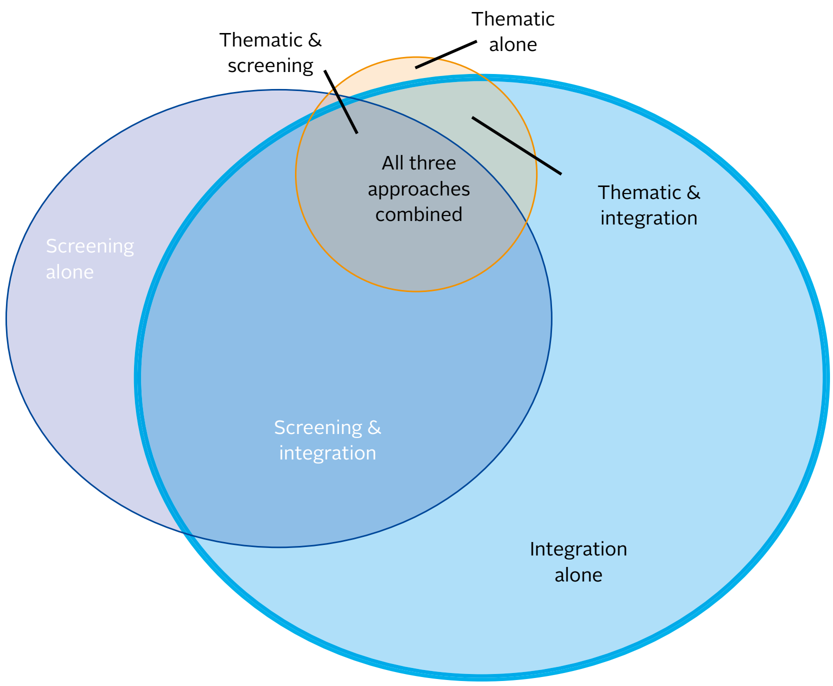
A majority of PRI signatories say they use some form of ESG approach when investing in FI instruments, including strategies such as screening and thematic investments (see Appendix 2).[3] It is important to acknowledge that sensitivity to ESG issues among PRI signatories is relatively high compared to other investors. Still, total AUM invested in FI by PRI signatories represent over one-third of the overall FI market — and is growing.

Integration appears by far the most popular strategy for incorporating ESG factors in FI investment decisions, followed by integration *with* screening approaches. Strategies containing a thematic element are less popular.

3 In 2017, 1,248 investors reported to the PRI on their 2016 activities and portfolio allocation. This number is less than the total number of 1,714 signatories; service providers do not report and for new signatories reporting is optional in the first year.

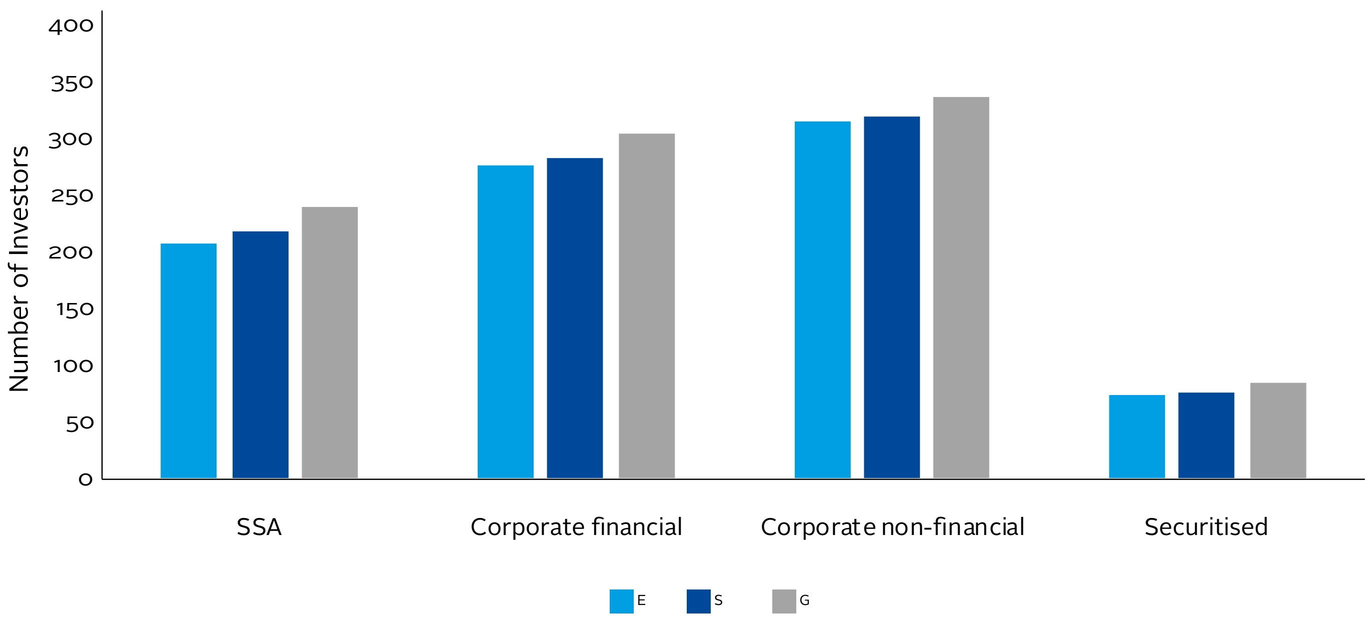
Strategies for incorporating ESG into investment decisions by total volume of directly managed FI assets. Source: PRI

Combined FI approaches in US$trn.	
Screening alone	$2.3
Thematic alone	$0.1
Integration alone	$9.6
Screening + integration strategies	$5.8
Thematic + integration strategies	$0.1
Screening + thematic strategies	$0.4
All three strategies combined	$1.4
No incorporation strategies applied	$2.3
Grand total (actively managed)	$21.9



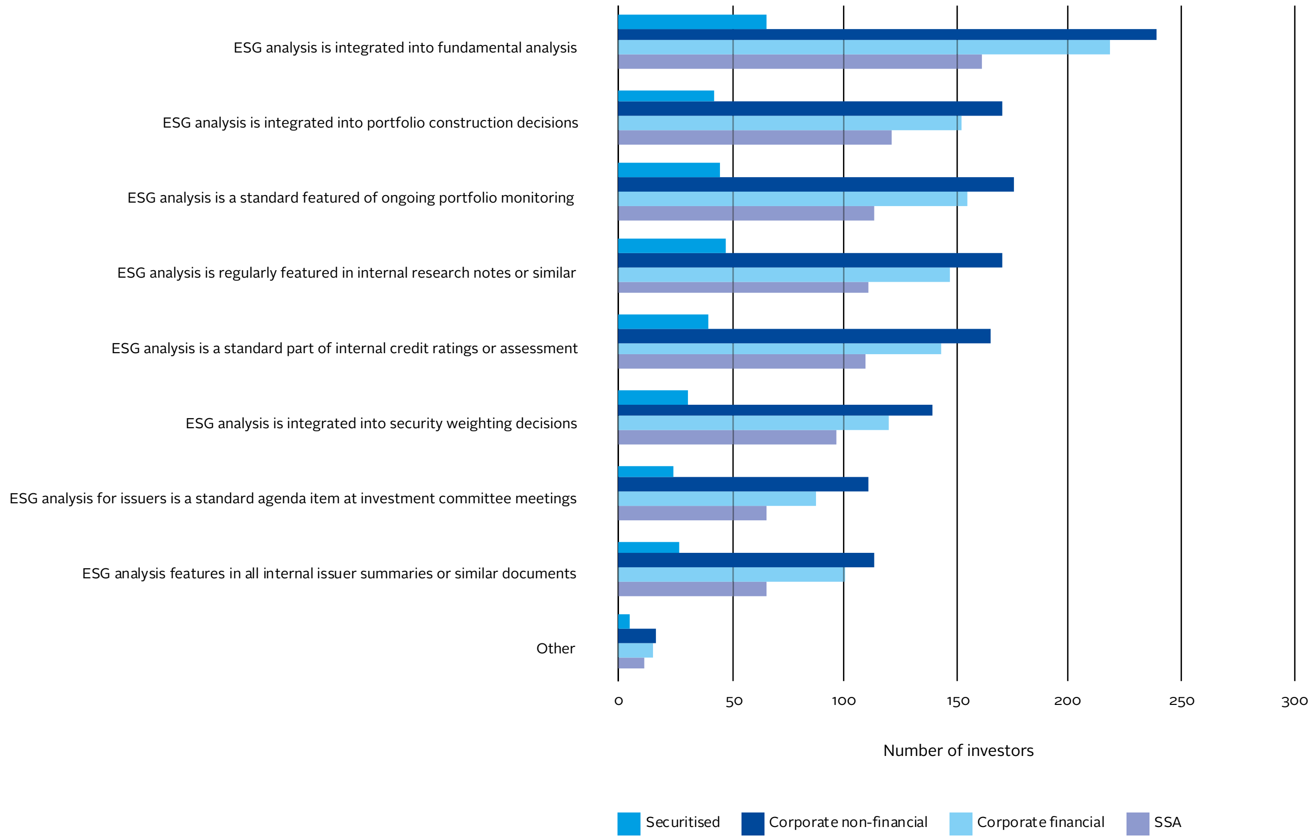
Across FI instruments, governance is consistently cited as the ESG factor that is considered the most systematically – a finding in line with interview insights that will be discussed later in the report.

Which ESG factors are PRI signatories considering systematically in FI? Source: PRI



Investors are using ESG analysis in their investment decision making at various levels. The chart below shows that a significant number of FI investors are integrating ESG in their internal credit rating and credit risk assessment.

How is ESG data used in the ESG integration process of direct FI income investors? Source: PRI

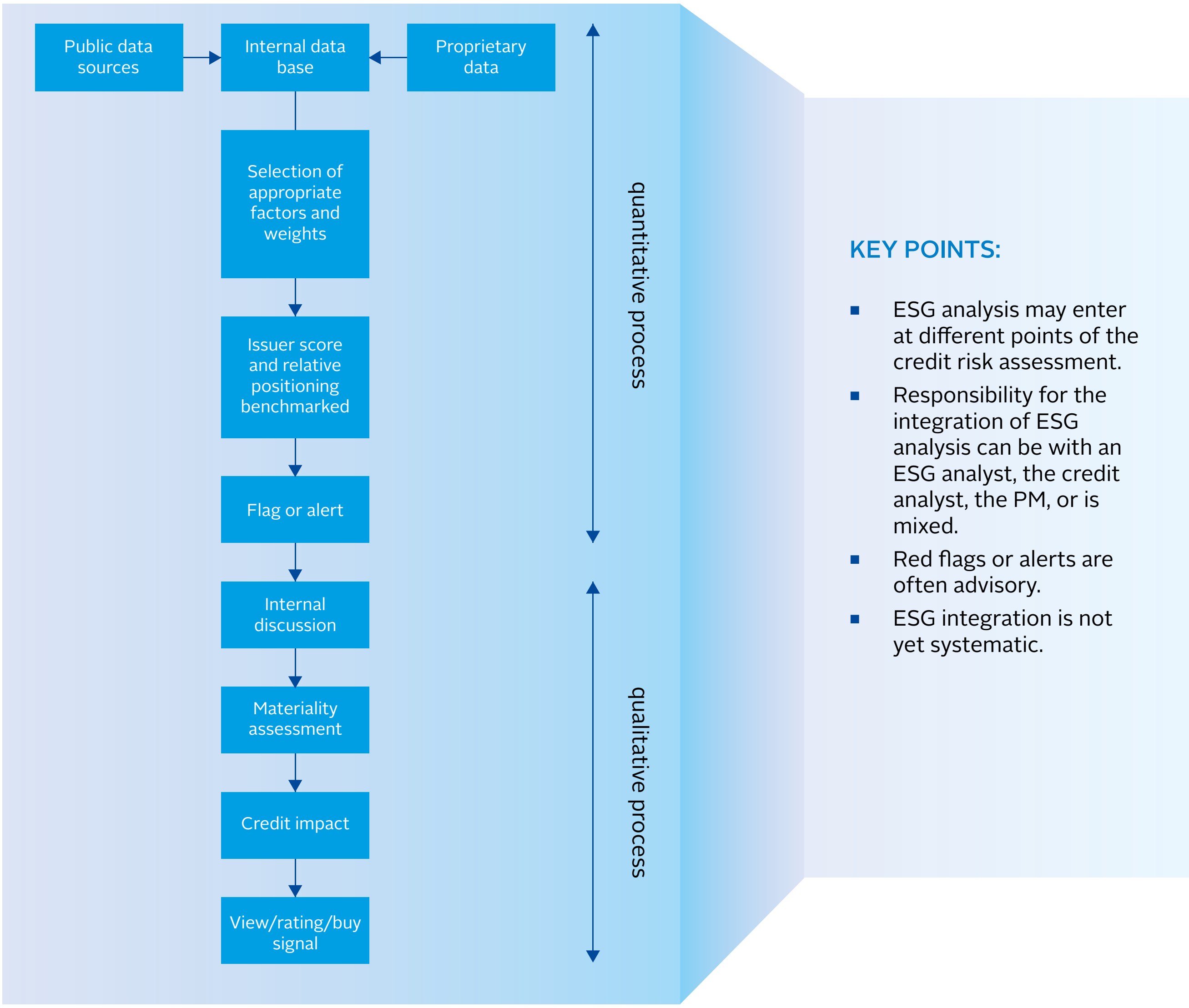


The interviews conducted for this report show that most managers claim to have partial integration of ESG analysis in their investment process, or are in the process of integration. However, where ESG consideration rests only with ESG analysts, views differ on how they are integrated into mainstream credit analysis and incorporated by PMs in their final investment call.

The majority of investors interviewed admit to being less advanced on systematically incorporating ESG into FI valuations, including credit analysis, compared to equity investors. Overall, ESG consideration is still far from being an integral element of the credit assessment process.

The diagram overleaf illustrates the steps that, based on the interviews, investors seem to be adopting when considering ESG factors. It is for illustrative purposes only: not all investors follow all the steps, and some may be more reliant on quantitative approaches than others, for example.

Illustrative diagram of ESG integration by investors in credit risk analysis. Source: PRI



Three points stand out from our latest findings:

- **ESG analysis and integration:** ESG analysis is generally conducted by ESG analysts and then shared with credit analysts; investors interviewed noted that securing internal investment buy-in for ESG consideration is still a work in progress. Many of those interviewed are cognisant that this is a potential weakness as the link between the "flag" raised by ESG analysts and the final credit quality assessment may not be systematic.
- **Blend of qualitative and quantitative approaches:** Similar to the CRAs' methodology, ESG integration in credit risk analysis is based on a mix of qualitative and quantitative indicators. In most cases, analysis relies on publicly available information as well as proprietary indicators.[4]
- **Subjectivity:** Managers select "appropriate" factors and weights, inevitably incorporating an element of personal judgment in their analysis, similar to CRAs. However, these approaches are seldom back-tested. Even when quantitative factors are included, the investment decision depends on an analyst's final judgement.

4 Some of the asset managers interviewed for the report have been quoted but other PRI signatories have also documented their approach. For example AXA (2013); Oddo (2013); Robeco (2014).

What investors say

ESG ANALYSIS AND INTEGRATION

"It is up to the PMs to get in touch with the ESG team, if they are looking at a new issue and aren't sure about which ESG issues they should focus on"(Addenda, Lambert & Minns, 2017).

"To date our approach to ESG integration has been more as a series of ongoing conversations with credit analysts to raise awareness and understanding. We are not yet at a stage where we are explicitly factoring a formal weighting to it in portfolio construction" (BlueBay AM, Ngo, 2017).

"An important part of the ESG integration process for us has been to work on building relationships internally, in order to broaden understanding within investment teams and achieve increased buy-in...It's a gradual process of informal training on what ESG means...we use scores as a flagging mechanism which credit analysts can then use to investigate issues further and where relevant, integrate the findings into their analysis and recommendations" (Legal & General, Ogden, 2017).

QUANTITATIVE/QUALITATIVE MIXED APPROACH

"We use multiple factors in our analysis covering quantitative data as well as qualitative issuer interviews...we do look at Moody's Investors Service, DBRS and S&P Global Ratings analysis on corporate bonds but then we form our own analysis" (Addenda, Lambert & Minns, 2017).

"ESG model draws upon carefully selected series of research, statistical and survey data provided by international organisations, offering a comprehensive framework to complement our analysis of country-specific macroeconomic developments. ESG factors make up 40% of the Country Credit Model (CCM), our proprietary analytical tool that rates relative sovereign debt creditworthiness in emerging markets" (Neuberger Berman, 2013).

"To understand the implications for financial variables, such as spreads, returns or rates, it is necessary to econometrically integrate ESG dynamics into valuation models" (Global Evolution, Hagen J. 2017).

SUBJECTIVITY

"From an investment perspective, we see the G, governance, as being the most relevant, so we wanted to acknowledge that by giving that component the highest weighting in generating an overall issuer ESG score using E, S and G scores from our third-party provider...we have done that by making the G score 50% and the others [S and E] 25% and 25% of the overall score" (BlueBay AM, Ngo, 2017).

WHAT RATING AGENCIES ARE DOING ON ESG FACTORS

The motivation behind CRAs embracing the PRI ESG Credit Ratings initiative is indicative of a genuine desire to work towards the vision of the Statement; so far, nine have signed and four are part of the ACCR and participated in the interviews.[5] The CRAs vary in size, history and service offering, as well as regional focus.

CRA type	Progress on ESG	Key findings
Global CRAs This group contains the two largest and most established CRAs: Moody's Investors Service and S&P Global Ratings.	**Leading the pack — strong efforts** Visible progress in complementing rating analysis with additional research publications on ESG considerations to refine and improve methodologies and transparency.	■ **Motivation:** See signing statement as a reaffirmation of what they were already doing in terms of ESG integration and transparency. Client demand is increasing but still localised. ■ **Focus:** Publication of papers on how they integrate ESG into their criteria; exploring creation of additional ESG scores; recent research focus is evident primarily on climate change and "green" evaluation. ■ **Internal capacity:** Expanding. Hiring staff with ESG backgrounds as well as equipping existing credit analysts and rating committees with ESG expertise; providing new ESG evaluation tools; expanding analytics and sourcing expertise from third-party providers (e.g. S&P Dow Jones Indices' acquisition of Trucost plc). ■ **Transparency:** Both CRAs acknowledge there is scope for improvement. ■ **Challenges:** Investor willingness to pay for non-rating ESG-orientated products and services; meeting growing demand for more extensive commentary on ESG issues for issuers beyond current credit ratings.
Smaller/regional CRAs-Specialists This group contains smaller and more specialised agencies: Liberum Ratings, RAM Ratings and Scope Ratings AG.	**Catching up — good efforts** Younger; less developed in the publication of working frameworks than the global agencies, but demonstrating strong commitment to incorporating ESG factors as they grow.	■ **Motivation:** Belief in the value of ESG and an interest in satisfying increasing investor demands in this area. ■ **Focus:** Most still at the development stage of formal measures and using them consistently in all ratings. ■ **Internal capacity:** Nascent. As an example, a CRA has charged some of its most senior staff to establish a taskforce that will develop the necessary framework, processes, internal capacity and manage their commitments under the statement. ■ **Transparency:** Internal methodologies are generally still being developed and transparency, besides high-level methodology papers, is limited. ■ **Challenges:** As the smaller and regional CRAs are still relying mostly on issuers' fees, they face more commercial pressure, potentially compromising ESG integration.
Regional CRAs — Chinese This group represents a sub-set of the regional ones and includes Dagong Global Credit Ratings, China Chengxin and Golden Credit Ratings.	**Early days — focusing on green** Generally consider ESG from a green bond perspective.	■ **Motivation:** Government policy in China has generated significant interest in green bonds and CRAs have responded by developing green bond rating processes. ■ **Focus:** Almost exclusively on the environmental impact of the projects rated. ■ **Internal capacity:** Expanding to meet increasing demand for green bond assessment processes. ■ **Transparency:** Remains an issue due to language barriers and significant discrepancies between ratings assigned by local agencies and global agencies for the same issuer (*FT*, 2017). ■ **Challenges:** One CRA notes that the biggest challenge to its rating process is how to internalise environmental costs.

5 The nine CRAs include Beyond Ratings which is not a credit rating agency yet but has applied to become one.

ESG factors are not completely new to credit analysis: During the interviews, CRAs highlighted that ESG consideration has always been embedded in their rating analysis.

"We see the PRI statement as a reaffirmation of what we were already doing in the space" (S&P Global Ratings, Wilkins, 2017).

"ESG considerations are part of the holistic assessment of credit risk that we undertake for a rated entity. They are an important element in our assessment of an entity's creditworthiness where they represent a material credit risk" (Moody's Investors Service, 2015).

"Among the many categories of risk S&P Global Ratings examines within its ratings framework are environmental, social and governance (ESG) risks. Since all rated entities operate in the natural and social worlds, we regard these risks as ubiquitous across the ratings spectrum...managing environmental and social risk is included in the business and financial risk profile assessment for corporate ratings, as applicable and when environmental and social risks are ratings significant"(S&P Global Ratings, 2015).

Until recently, however, ESG factors may have not been labelled as such. But this is changing.

For instance, they are increasingly mentioned in, or are the focus of, CRAs' publications. In 2015, Moody's Investors Services published *Environmental, Social and Governance (ESG) Risks — Global: Moody's Approach to Assessing ESG Risks in Ratings and Research*. The same year, S&P Global Ratings published *ESG Risks in Corporate Credit Ratings — An Overview*. RAM Ratings observes: "In our more than 25 years of rating experience, ESG risk factors, where relevant and material, already feature in several of our rating methodologies or rating actions" (2016).

Meanwhile, CRAs are responding to growing client demand, although some noted that sensitivity to related issues is more established in Europe and still developing in other regions.

"Scope's strategy is to build a "new framework that takes in account ESG issues as they are important to investors" (Scope Ratings AG, Theodore, 2017).

The challenge is on disclosure: The main challenge for CRAs is on the disclosure and transparency front, not so much on putting in place an ESG integration framework, which they have already. They acknowledge, though, that there is scope to refine these methodologies, expand analytics and disclosure, as well as their internal ESG expertise and resources, and are working across all these areas.

"As we engaged more fully on the ESG side we recognised there were ways of doing a better job on providing more transparency and systematic inclusion of ESG factors in the reporting" (Moody's Investors Service, Cahill, 2017).

"As we progress in our journey and after careful study, we may introduce more disclosure on ESG issues into our publications as well as various rating tools and criteria to enhance the understanding and assessment of ESG risks in due course" (RAM Ratings, Dass, 2016).

Moody's Investors Service has published ESG-related commentary where it sees these risks as material. S&P Global Ratings does this within its *Key Credit Factors*, which documents how the firm interprets its own general corporate criteria to take into account specific industry dynamics or factors. *Key Credit Factors* describes ESG risks that could be material to ratings for that industry unless the risks are already covered in management and governance criteria.

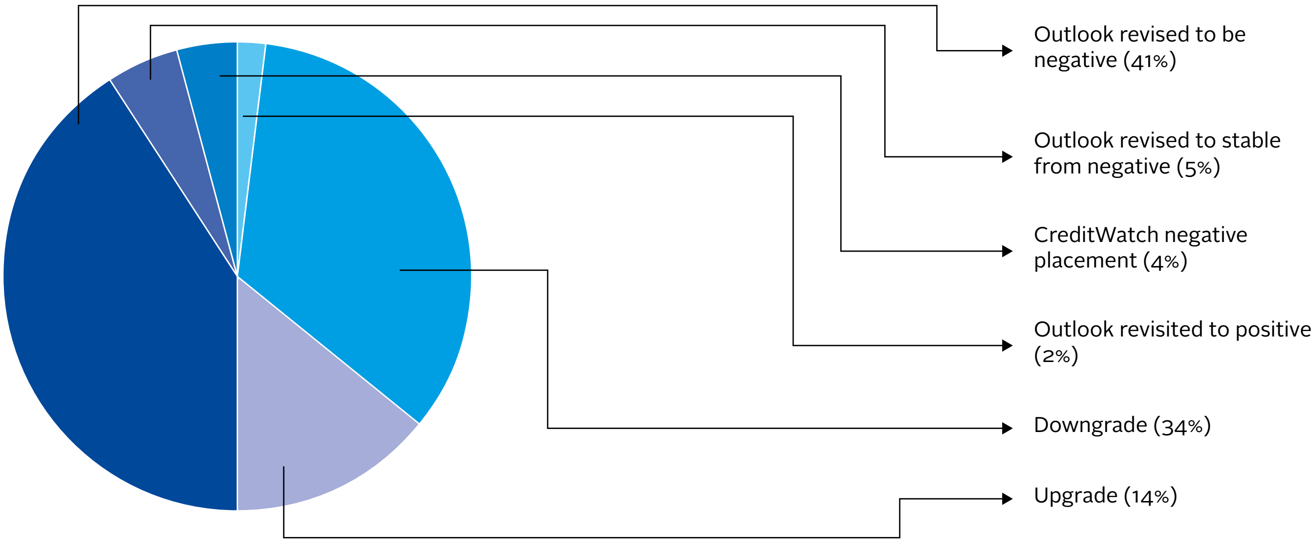
S&P Global Ratings also published a review of its global corporate rating actions since 19 November 2013 to assess the impact of extreme weather events and environmental and climate risks.[6]

In reviewing all 38 corporate subsectors, it identified 299 cases in which these risks have either resulted in (or contributed to) a corporate rating revision, or were significant factors in its rating analysis. In 56 of these cases, environmental and climate risks had a direct and material impact on credit quality, resulting in a rating Outlook or Credit Watch action or adjustment - nearly 80% of which were negative in direction. The lion's share of these ratings were in the oil refining and regulated utilities, as well as unregulated power and gas sub-sectors.

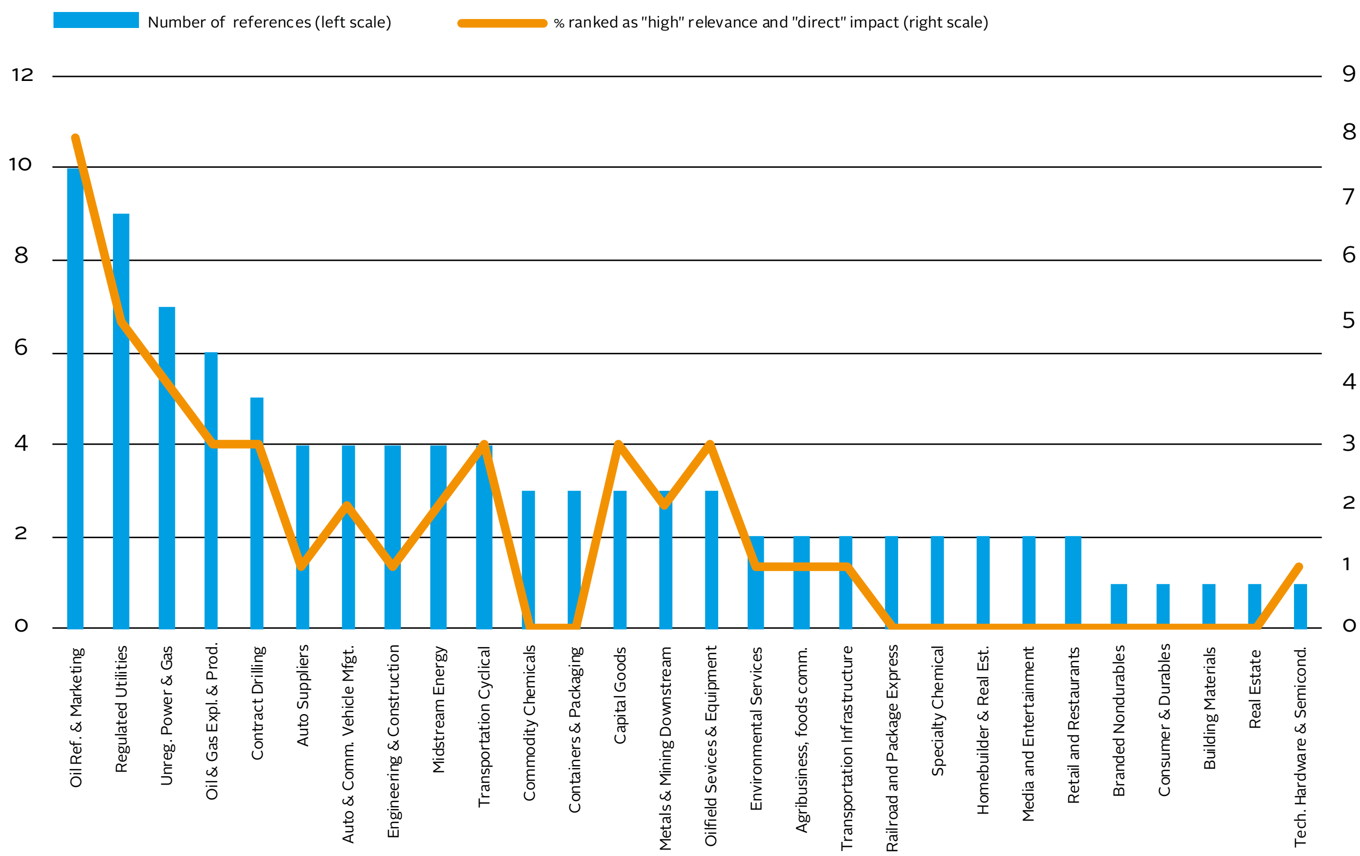
Finally, both CRAs have published papers outlining their approaches to ESG in their ratings, and have delivered further research and related case studies.

6 This date marks the launch date of S&P Global Ratings' updated corporate ratings methodology with increased transparency into ratings processes.

Rating actions related to environment & climate risk. Source: S&P Global Ratings (2015)



Number of environment and climate references in Key Credit Article Factors and their impact and relevance per industry. Source: S&P Global Ratings (2015)



Even younger CRAs — including Liberum Ratings, RAM Ratings and Scope Ratings — are beginning to make progress. For example, RAM Ratings published its first paper, *Primer on ESG in credit ratings*, in September 2016, and in general is demonstrating strong commitment to incorporating ESG factors as it grows and can commit additional resources.

Systematic ESG consideration: Demonstrating that ESG factors are systematically included in rating assessments is more difficult. Again, this is down to the choice of factors that CRAs deem to be material in their risk analysis. One approach taken by Moody's Investors Service is highlighted in the box below. It is not prescriptive, rather an example of a top-down approach to systematic integration and disclosure.

It is also worth noting that the approach has been implemented in stages over several years: a heat map of environmental risks by sectors was followed by more detailed sector analysis, before including explicitly some of these risks in the rating assessment and the accompanying statement of a particular issuer.

Example of possible top-down ESG integration approach from Moody's Investors Service

PHASE 1 Assessment of key ESG risk factors	Environmental risks: Heat map shows wide variations in credit impact across sectors (Moody's Investors Service, 2015).
PHASE 2 Analysis of the risk impact on various sectors	▪ Global unregulated utilities and power companies: Carbon transition brings risks and opportunities (Moody's Investors Service, 2016). ▪ Automotive sector faces rising credit risks from carbon transition (Moody's Investors Service, 2016).
PHASE 3 Link to rating methodology	Appendix 1 from the above document on the automotive sector contains a heat map that helps to assess corporate relative positioning against carbon transition risks. The map sets quantitative factors and indicators for product breadth and strength that help rank companies from lowest to highest risk. This score is then considered when assessing implications for credit ratings (Moody's Investors Service, 2016).
PHASE 4 Visibility in individual rating assessment	Moody's Investors Service published an in-depth review of BMW AG, which discusses how the firm is positioned to weather the technological and regulatory challenges facing the auto industry, including the transition to alternative fuel vehicles (Moody's Investors Service, 2017).

Comments by another CRA also highlight how ESG considerations are taken into account at various stages of the ratings methodology:

> "ESG factors are analysed at various points in ratings methodology. The incidence of environmental and social risks are most commonly addressed in the business risk profile, for example country risk issues connected with supply chains and the reputational risks that can arise for a rated issuer if the company's corporate responsibility statements are contradicted by the emergence of contradictory facts. Industry risk and competitive position are the locations for comparative peer analysis on how industry risks are managed by the issuer, along with competitive advantages or disadvantages that arise from management decisions. Management decision making and the effectiveness of board oversight are further reviewed and assessed with the management and governance modifier in our ratings methodology, to ensure that both the incurrence of environmental and social risks and opportunities and their management and oversight by the board of directors receive a comprehensive review" (S&P Global Ratings, Hazell, 2017).

ESG IN SOVEREIGN RATINGS

It is important to acknowledge credit ratings on sovereign debt, as the government debt market is by far the largest across types of FI instruments. Typically viewed as safer risk assets than private sector bonds — because of the comparatively lower probability of default of a sovereign country and governments' ability to generate revenues via higher taxation — they are not however immune to credit risk.

In fact, the share of government bonds with an AAA rating by the largest three global CRAs has been shrinking since the global financial crisis, as governments in many developed economies have been forced to bail out banks and public finances have been squeezed by weak economic growth. As global recovery has been slow and uneven, highlighting that cyclical as well as structural forces are undermining traditional growth paradigms, it has become even more compelling for investors and CRAs to assess the drivers of potential growth through an ESG lens.[7]

A country's competitiveness, its potential growth, governance and political stability are all important ingredients of prosperity as well as critical in reducing vulnerability to shocks and increasing resilience during economic downturns. When these occur, they can be more moderate and short-lived if the social and institutional fabric of a country is strong.

There are many factors to take into account in relation to how ESG considerations feature in sovereign credit: availability and management of resources (including population trends, human capital, education and health), emerging technologies, the distribution of growth dividends, government regulations and policies. Ultimately, what matters from a credit perspective is a government's ability (and political stability) to generate enough revenues to repay its financial obligations — and it is becoming increasingly apparent that ESG factors may affect this.

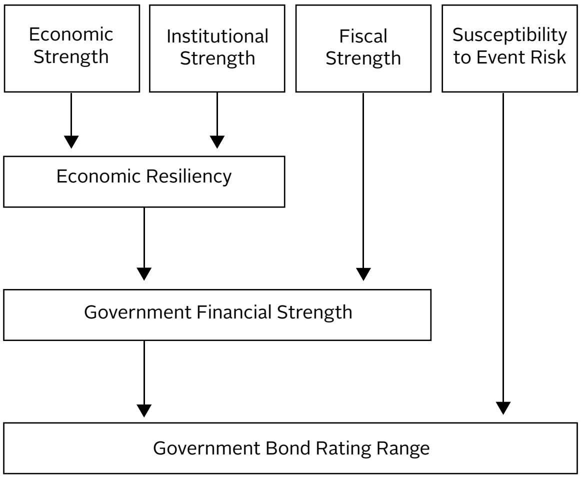
Each CRA uses a different framework when assessing sovereign debt, but with the following factors in common:

- Economic growth (and potential growth)
- Governance

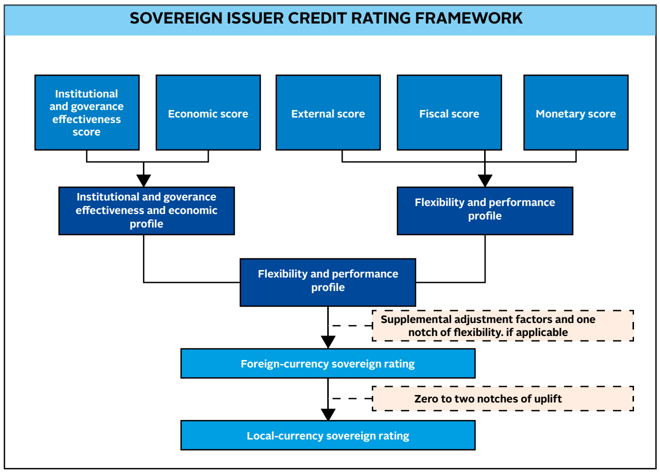
7 See 'The Case for a Global Policy Upgrade' by International Monetary Fund Managing Director Christine Lagarde, January 12, 2016

Examples of CRA frameworks for assessing sovereign debt

Moody's Investors Service

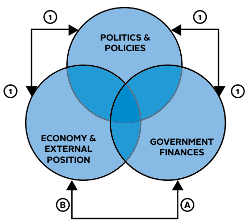


S&P Global Ratings



RAM Ratings

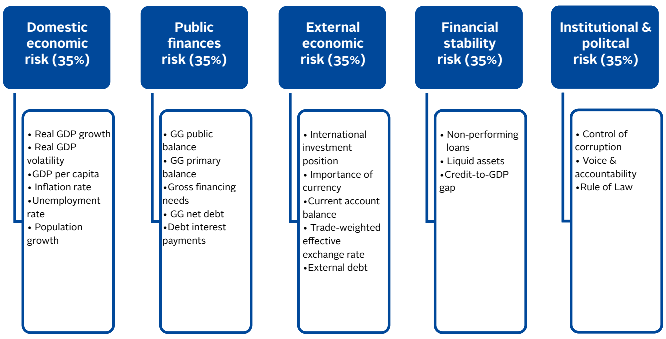
SOVEREIGN CREDIT ASSESSMENT: THE LOOP



1. The state of the economy and/or government finances may determine the policy options available
2. Conversely, the state of the economy and/or government finances could also be a reflection of the country's political and policy environment and decisions

A. The economy represents the sourceof both the government's revenue and spending responsibilities.
B. Economic conditions could also be a reflection of the government's financial health and management. Prudent fiscal policies (alongside monetary and other economic policies) lend to a stable macroeconomic environmen, which is critical for sustainable growth.

Scope Ratings AG



The link between sovereign credit ratings and governance is relatively direct and intuitive, while the channels through which environmental and social factors affect economic growth over the long term are less obvious.

"About 30% of past sovereign defaults have been directly related to institutional and political weaknesses, ranging from political instability to weak budget management and governance problems or to political unwillingness to pay" (Moody's Investors Service 2016).

Example of quantitative metrics to capture institutional strength and governance (Moody's Investors Service, 2016).

Broad Rating Factors	Rating Sub-Factor	Sub-Factor Weighting (towards Factor)	Sub-Factor Indicators	Indicator Weighting (towards Sub-Factor)
Factor 2: Institutional Strength	Institutional Frawework and Effectiveness	75%	Worldwide Government Effectiveness Index	50%
			Worldwide Rule of Law Index	25%
			Worldwide Control of Corruption Index	25%
	Policy Credibility and Effectiveness	25%	Inflation t-4 to t+5	50%
			Inflation t-9 to t	50%
	Adjustments to Factor Score	0=6 scores max	Track Record of Default	0=3 scores
			Others	0=6 scores

"Broadly 25% of the rating of a sovereign is on institutional effectiveness and governance standards. This is not just for emerging markets. It was these governance factors that were the drivers for downgrades on the US and the UK" (S&P Global Ratings, Kraemer, 2017).

Although there is broad consensus on why economic growth is important to sovereign credit ratings, the need to explore the environmental and social channels through which growth might be compromised or boosted requires greater attention by CRAs at a time of significant change (including demographic, technological and environmental trends).

"The history of sovereign defaults suggests that a wealthy, diversified, resilient, market-oriented, and adaptable economy, coupled with a track record of sustained economic growth, provides a sovereign with a strong revenue base, enhances its fiscal and monetary policy flexibility, and ultimately boosts its debt-bearing capacity" (S&P Global Ratings, 2015).

"The intrinsic strength of the economy – focusing on growth potential, diversification, competitiveness, national income, and scale – is important in determining a country's resilience or shock-absorption capacity. A sovereign's relative ability to generate revenue and service debt over the medium term relies on fostering economic growth and prosperity" (Moody's Investors Service, 2016).

"In a nutshell, a country's economy represents the revenue base and spending obligations of a sovereign government. RAM Ratings' assessment of the economy aims to identify conditions or vulnerabilities that could impact, constrain or disrupt economic performance; whether the country and government is able and willing to respond to these constraints and/or shocks; and the implications that such actions could have for the government's finances" (RAM Ratings, 2012).

S&P Global Ratings recognises: "More precisely, a sovereign's economic score would be one category worse if its economic activity were vulnerable due to constant exposure to natural disasters or adverse weather conditions" (S&P Global Ratings, 2013).

Acknowledging that it is on environmental risks and the impact on ratings that the challenge is the most complicated, the CRA published *Storm Alert: Natural Disasters Can Damage Sovereign Creditworthiness* in an attempt to make more transparent what countries credit ratings were most at risk because of climate-related factors (S&P Global Ratings, 2015).

On social factors S&P Global Ratings notes: "In our ratings methodologies we can make an adjustment if we feel there are basic needs that are being unsatisfied — these are an explicit adjustment to the fiscal performance that we can and do apply where necessary" (S&P Global Ratings, Kraemer, 2017).

SPOTLIGHT ON CHINESE CRAS

The group of Chinese CRAs which support the PRI Credit Ratings Initiative deserves a separate mention as they generally consider ESG factors from a green bond rather than a credit risk perspective. Green bond assessments are designed to evaluate the governance and transparency of a bond's issuer, as well as measure the environmental impact of the project that the bond aims to finance.

Green bond issuance in China is burgeoning, accounting for 39% of global issuance in 2016 and about 30% of the outstanding amount, as highlighted by the Climate Bond Initiative (2016). China as a sovereign country has shown significant commitment to green initiatives, spurred by hosting the G20 presidency and driven by a need to address air pollution, desertification of farmland and other water issues which have accompanied rapid economic growth over the past three decades.

The focus on green bonds, while not directly ESG integration, is playing an important role in raising awareness of environmental factors and the techniques and skills required to assess them. All the CRAs that participated in the PRI's report maintain that it takes time and effort to raise the level of understanding and analytical skills of their workforce. The focus on green bond assessment may be a good base from which to develop a more complete and integrated ESG assessment process in credit risk analysis.

TAKEAWAYS FROM EXISTING RESEARCH

Academic and market research on ESG factors and creditworthiness exists, but is limited and lagging that which explores links between ESG factors and equities. This report does not feature a meta study, but extrapolates key points from available publications, which suggest (see Appendix 3):

- Both academic and market research supports the notion that there is a clear link between ESG factors and the credit risk of a borrower;
- Most academic research is based on credit ratings to measure credit risk and very few papers use alternative measures. This is a limitation because, since credit ratings are opinions on the relative likelihood of an issuer's default, it is difficult to test quantitively whether ESG factors have been included in the ratings;
- Research based on credit default swap (CDS) spreads as a measure of credit risk is emerging. Available papers point to wider CDS spreads for companies that score relatively poorly on ESG.
- Anecdotal observation of defaults, particularly of investment-grade (IG) corporates, highlight that governance has a clearer link to corporate failures, while environmental and social issues are more difficult to capture, or are less well understood.
- Academic research exploring the link between ESG factors and sovereign creditworthiness is less well supported. Nevertheless, there is much evidence on the impact of ESG factors on macroeconomic variables and potential growth, which are important in sovereign credit risk.

INVESTOR-CRA DISCONNECTS

Over the course of this initiative and in comparing feedback from investors and CRAs, several themes have emerged as well as disconnects in the expectations of some investors and CRAs. These are summarised in the table below.

Subject area	CRA positioning	Investor positioning	Potential reconciliation
Visibility of ESG risks	**Time horizons used are deemed appropriate** to the degree that they can be considered plausible. Agencies express their rating horizons differently. Broadly speaking, these range between three and five years for IG corporate (or longer); they are shorter for HY corporates (typically two years or less) and longer for sovereign ratings (typically around 10 years).	**Time horizons aligned with investment objectives**. These may vary considerably between AOs and AMs. Whilst many AOs' liabilities are long-term (decades), AMs' analytical period is more aligned with the trading horizon, with an eye towards quarterly or annual performance.	**CRAs** could consider being more transparent around the time horizon they believe is appropriate. **Investors** could acknowledge the diminishing marginal visibility of risks as they move further into the future. They could also consider how they can internally reconcile any misaligned time horizons between ESG analysts who may be longer-term focused than in-house credit analysts and PMs.
Materiality of ESG risks	**Focus on those material to credit risk** i.e. the relative likelihood of an issuer/issue's default (and may include the expected financial loss in the event of a default).	**Focus on those material to the overall investment risk** which can affect the financial performance of an issuer/issue (including credit risk).	**CRAs** could do more scenario analysis (for example different assumptions on climate change) and demonstrate how increased ESG research capacity and competence is altering rating decisions. **Investors** could complement credit risks analysis with ESG non-rating tools to assess risks that may affect the yield and the volatility of the price of a bond.
Transparency	**Do not view ESG as a separate risk-factor category** when it comes to creditworthiness assessment. The more established CRAs are at embedding these risks systematically within their assessment process (as opposed to adding a separate ESG pillar), the more challenging it is to demonstrate this integration.	**Separate ESG treatment helps investors to be more accountable to clients.** Some investors demand that CRAs put explicit weights on the E, S and G factors in their methodologies. They insist on greater transparency from CRAs and explicit disclosure when it comes to ESG considerations to avoid double-counting.	**CRAs** need to make more efforts on the communication front to demonstrate how rating conclusions are reached. They could introduce more consistent language, highlighting ESG risk factors in their ratings commentaries, particularly where these are possible downgrade/upgrade triggers. **Investors** could introduce more systematic collaboration between ESG analysts and credit analysts/ PMs.
Data availability and competence	**Testing the ground for possible additional ESG risk scoring metrics.** CRAs' ability to conduct robust analysis when it comes to ESG integration is also a function of the availability and quality of the data (which could explain why more visible efforts are in the environmental space).	**Some investors already produce proprietary ESG scores and conduct in-house research.** However, many still cite a lack of quality data coverage, standardisation and, when a plurality of data is available, they are unsure about which metrics to use.	**Both CRAs and investors** are deepening their knowledge and expertise on ESG risks. Research/ credit analysts and PMs would benefit from systematic ESG training and ESG analysts from credit risk training. Both could better engage with issuers on ESG transparency, asking more comprehensive questions, as competence in ESG areas improves.

VISIBILITY OF ESG RISKS IN CREDIT RISK ANALYSIS

This is one of the areas where views tend to differ most between investors and CRAs in terms of how to achieve greater transparency and the systematic integration of ESG factors.

- **Investors and CRAs struggle to agree on what is a "reasonable" time horizon to consider.** Investors tend to align their time horizons with their investment objectives: some buy and hold long-term bonds until maturity (for instance for asset-liability management); others trade more frequently. For the former, a CRA's long-term rating may not be forward-looking enough, while for the latter it could be too long-term. On their part, CRAs maintain that they are as forward-looking as possible, with a degree of plausibility.
- **Views on visibility are mixed**. When talking about the visibility of risks, some investors ask CRAs to expand on the spectrum of ESG factors that they consider in their risk assessment, whilst others ask them to be more forward-looking.

INVESTORS	"It is difficult to have the direct time horizon [between investors and CRAs] linked together" (Addenda Capital, Lambert & Minn, 2017); "If you say a certain risk is a risk from a profitability perspective but it is so far into the future that it doesn't even feature in discounted terms, then it isn't really relevant from a credit perspective" (Aberdeen, Kuhn & Frings, 2017). "CRAs' adjustments of ratings are not very frequent" (Global Evolution, Hagen J. 2017). "The risk of asset stranding in particular industries is becoming more immediate as time goes by and can be very relevant for credit assessment" (Colonial First State Global AM, Spencer, 2017).
CRAs	"As the time frame for a risk or event lengthens into the future, the consequences of the event become less certain, as does the importance of that risk relative to other risks faced by an issuer...With longer time frames, there is also less visibility into the impact that a particular risk will have on the overall cash flow-generating ability of an issuer or sector" (Moody's Investors Service, 2015). "Credit ratings for corporates have a shorter time horizon than the time horizon over which most ESG risks tend to materialise and this is causing perception issues. Commentators are saying we ignore ESG risk but this is not the case at all, it is just that many of the risks are not likely to crystallise in any material way in the rating time horizon," S&P notes. "In our experience a foreseeable horizon is generally less than two years for a speculative-grade credit (rated 'BB+' and below) and no more than five years for an investment-grade credit ('BBB-' and above), reflecting the fact that investment- and speculative-grade credits are differentially vulnerable to the many factors in the business, financial, natural, and social environments" (S&P Global Ratings, Wilkins, 2017). "A credit rating time fame cannot be longer than three years – you can't know what will happen in the long term" (Scope Ratings AG, Theodore, 2017).

Moody's Investors Service summarises the problem as such: "The forward visibility for some risks is higher than others. Corporate issuers typically disclose the maturity of their near-term and medium-term debt obligations and liquidity facility arrangements. For other risks, including whether or how fast disruptive technologies will develop, or whether a transformative merger or other event will occur, there is much less disclosure and much less visibility. The predictability of future financial performance for most issuers diminishes considerably after a few years, which further complicates an attempt to assess how a very long-term risk will affect an issuer's leverage and cash flow" (Moody's Investors Service, 2015).

MATERIALITY OF ESG FACTORS TO CREDIT RISK

Many investors believe that CRAs should take a more proactive approach to highlighting ESG considerations in their analysis. Investors are not, however, asking CRAs to provide early warnings on future defaults and "black swan" events, and they recognise that an assessment of ESG factors will not eliminate credit risk nor surprises. In the latter case, financial markets may even have an advantage as they can price unexpected information almost instantly, unlike CRAs which must follow internal procedures before adjusting an outlook or rating. Still, CRAs may have access to material non-public information, putting them in a relatively better position to assess risks.

In general, there appears to be demand from some investors for public discussion of ESG risks facing an issuer, irrespective of whether they are material to creditworthiness or not. However, just because an ESG factor may appear immaterial to credit risk, it does not mean that it may not become material in the future. For example, a company may meet the costs of an environmental accident easily, but if the frequency of accidents starts to increase (all else equal), its financial strength may deteriorate. Similarly, when considering the costs of fines that a heavy-polluting company could potentially face, credit analysts should also factor in the possibility that these fines could increase in the future, that heavier taxes could be levied, or that new capex might be needed as a result of legislative changes (possibly resulting in a loss of market share by the issuer during the transition phase). The potential consequences of underestimating these risks go well beyond financial penalties and include reputational risk, which can be long-lasting even when damage control measures are implemented promptly.

INVESTORS

"Ratings have weights assigned to the various indicators that reflect creditworthiness — these weights are arbitrarily set and are not evidence-based" (Global Evolution, Hagen J. 2017).

"CRAs might not be looking broadly enough and might miss significant risks" (Legal & General, Ogden, 2017).

"I don't completely agree with the statement that CRAs have systematically factored ESG criteria into their methodology. There is scope to better capture indirect, embedded ESG risks which are value/supply chain related... such risks appear to be increasing so may be more investment relevant going forward than in the past" (BlueBay AM, Ngo, 2017).

CRAs

"ESG considerations are rarely the main driver of credit outcomes. Broader ratings factors — notably the financial strength of a given debt issuer — will typically form a more important part of our credit assessment. And even when ESG risks have material implications, the credit impact may be mitigated by other considerations. Additionally, the impact of ESG risks is not always clear-cut in terms of materiality, scale and timing. Often issuers have considerable operational and financial flexibility and a track record of adjusting to emerging ESG risks without them becoming material to credit quality...ESG considerations are explicitly scored factors in some of our rating methodologies. In these instances, we regard ESG as material, industry-wide risks that justify explicit mention in the relevant methodology, either in the form of explained qualitative adjustments to the methodology grid-indicated ratings scores, or an explicit factor within our grid-indicated factors" (Moody's Investors Service, 2015).

There is an "external perception that every visible ESG risk identified will have a direct rating impact. Rating deliberations, which are guided by our methodologies, ultimately place greater weight on factors that are significant and have long-term implications on the entity or issuer we rate. There could also be instances when ESG risks are visible, but have no immediate impact. There are many elements which are considered in any rating outcome on a rating, after the time frame and magnitude of these risks are given due consideration" (RAM Ratings, Dass, 2017).

"E" GAINING TRACTION

Investors and CRAs agree that governance plays a crucial role when assessing creditworthiness. This is unsurprising, as weak governance increases the probability of distress more than, for instance, environmental accidents or others related to social factors (against which an issuer might be insured). Even when Honduras was hit by Hurricane Mitch, significantly impacting the country's infrastructure and economy — as well as having devastating social consequences — there was no sovereign default.

Furthermore, governance is directly applicable to all issuers, whereas environmental and social risks (and hence the probability of their materialisation and their frequency) may vary depending on the issuer's sector, its location and the diversification of its industry within the country. However, insurance is no excuse for complacency: as climate-related incidents increase for example, insurance premiums might become unaffordable, resulting in underinsurance, which could impact issuer credit ratings.

INVESTORS →

"Governance – is always the most important factor and always will be" (Aberdeen, Kuhn & Frings, 2017).

"The biggest weight in our process is governance" (Neuberger Berman, Nazli, 2017).

"We saw that from a credit perspective governance was the most important issue" (BlueBay, My-Linh Ngo, 2017).

CRAs →

"Governance is the core analytical driver for a bank rating" (Scope Ratings AG, Sam Theodore, 2017).

"Governance is more important because it is more volatile and thus moves markets" (S&P Global Ratings, Kraemer, 2017).

"Governance is very important to us. Interviews start with governance issues because they are fundamentally important for the continuity of the firm" (Liberum Ratings, Pinheiro & Bassi, 2017).

However, beyond governance, there has been an increase in focus on the impact of environmental risks over the last few years, perhaps because they are more quantifiable with greater public resonance — hence the proliferation of research in this field and of metrics to capture these risks. Attention also seems to stem from policy developments, the more tangible impact of climate change and the significant transformation that the market is undergoing to reduce greenhouse gas emissions.

The COP21 Paris Agreement — and the recent withdrawal from it by the US — has also contributed to renewed focus on environmental factors. Certain climate-related risks could diminish or increase, depending on how legislation and policies are implemented by countries to fulfil their nationally determined contributions to reduce greenhouse gas emission. It remains challenging for CRAs to assess the impact on individual companies before policies are announced and for issuers to adjust their strategies in a changing landscape. Nevertheless, awareness that environmental risks can no longer be ignored is increasing.

The pace at which market dynamics are driving the transition towards low-carbon economies is accelerating, partly owing to economies of scale that have reduced the cost of renewable energy. However, in a scenario where this transition occurs late and abruptly, there could be a sudden re-pricing of carbon-intensive assets — assets that are largely financed by debt and could quickly become stranded (i.e. unusable). This could result in a spike in costs and impact an issuer's creditworthiness (ESRB, 2016).

COMMUNICATION AND TRANSPARENCY

Many of the hurdles in the way of systematic and transparent incorporation of ESG factors in credit ratings and analysis can be ascribed to how credit risk-related information is conveyed.

Transparency around the credit assessment framework has improved significantly, CRAs' methodologies and ratings criteria are extensive, and in many jurisdictions, where CRAs are registered and regulated, they are published and publicly available.

Providing greater transparency at the rating level appears more challenging, as CRA analysis is a mix of qualitative and quantitative indicators and not the product of a spreadsheet model or flowchart. It is harder for CRAs to communicate the details of a fully integrated ESG approach compared to when working in ESG silos (i.e. non-rating ESG metrics). Still, many investors argue that CRAs could do more on this front and believe that giving special mention to ESG factors in credit rating assessments will help market participants attach more importance to them. Others demand evidence that CRAs have considered ESG factors, or want increased CRA scrutiny to avoid double counting when conducting their own risk assessment.

"It is important — given the key role of CRAs in the market and the relationship they have with issuers in particular — that CRAs use their influence to raise awareness of ESG factors. That's why improving explicit communications in their analysis is so significant" (BlueBay AM, Ngo, 2017).

Aberdeen, on the investor side, as well as integrating their ESG research into their credit analysis, produce a separate ESG score. "Our ESG score is how we show to our clients that we are doing the work — you don't actually need the ESG score as it is already in the rating but if it is in the rating it is very difficult to prove that you have actually done the ESG work" (Aberdeen, Kuhn & Frings, 2017).

POTENTIAL FOR IMPACT

Because of their unique role in FI markets, CRAs play a crucial part in promoting greater ESG integration in credit risk analysis. This is because ratings:

- Have a wide range of applications;
- Cover the majority of FI instruments;
- Are used by many stakeholders;
- Are closely monitored by market participants.

RANGE OF APPLICATIONS

Market participants typically use the information provided by credit ratings to help them price, trade and assess the credit risk of FI securities, and to determine whether these are suitable for investors, fiduciaries and their institutions.

A combination of investor research, analysis and judgment determine the suitability of a bond investment based on a range of factors, of which credit ratings may be one. Others include proprietary indicators, recommendations by security analysts, auditors and corporate attorneys. The latter are particularly important for FI securities that do not have a rating.

With that said, credit ratings have an important role in the credit risk assessment of a bond issue/issuer and are also used to define and/or limit investment mandates. Many investors in IG credit have limited or no ability to invest in high-yield (HY) speculative-grade credit, for example. Ratings are used by market participants for a range of other applications such as the eligibility of collateral or credit enhancement in structured finance transactions, as the table below illustrates.

The use of ratings by market participants. Source: EU Commission

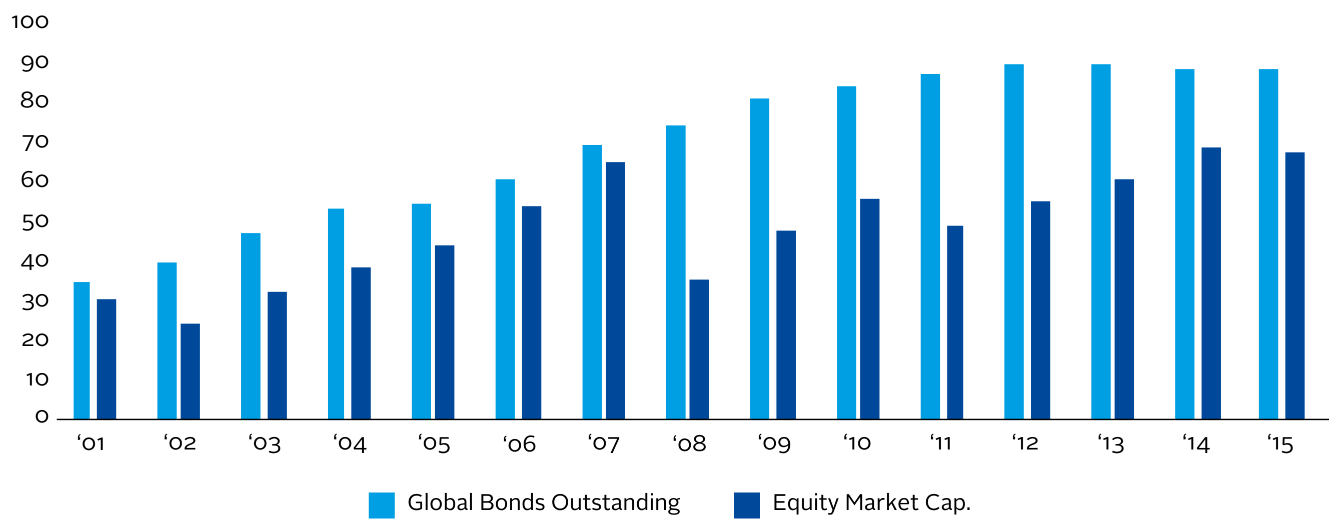
		Credit Institutions/ Banks	Asset Managers/ Investment funds/ Hedge funds	Insurance/ Re-insurance companies	Pension funds	Non-financial corporations	CCPs	Central Banks	Government (national-subnational)
Borrowing and lending activities	To access finance (by demonstrating creditworthiness)	✓		✓	✓	✓			✓
	Making investment decisions (assess creditworthiness)	✓	✓	✓	✓	✓			✓
	Offering trade credit					✓			
	Credit enhancement/structured finance transactions	✓	✓	✓	✓				
	Monitoring and managing credit risk	✓	✓	✓	✓				
	Disclosure, communication and reporting portfolio risk	✓	✓	✓	✓				
	Defining the investment universe		✓	✓	✓				
Collateral frameworks	Value and eligibility of collateral	✓	✓	✓			✓	✓	
	Haircuts						✓	✓	
Contractual uses (investor protection)	Investment mandates/guidelines	✓	✓	✓	✓				
	Reinsurance arrangements								
	Loan agreements, guarantees, letters of credit	✓				✓			
	Derivative covenants/OTC derivatives contracts	✓		✓			✓		
	Prospectuses (bonds, funds)	✓	✓		✓	✓			✓
	Fund rating		✓						
	Collateral agreements (repo and swap transactions)	✓		✓			✓		
Regulatory uses	Monitoring of systemic risk/stress tests	✓		✓				✓	
	Determining capital requirements	✓		✓			✓	✓	
	Determining securitisation exposure	✓		✓				✓	
	Liquidity	✓		✓	✓				

Most common uses of external ratings. OTC=Over The Counter; CCP=Central CounterParty

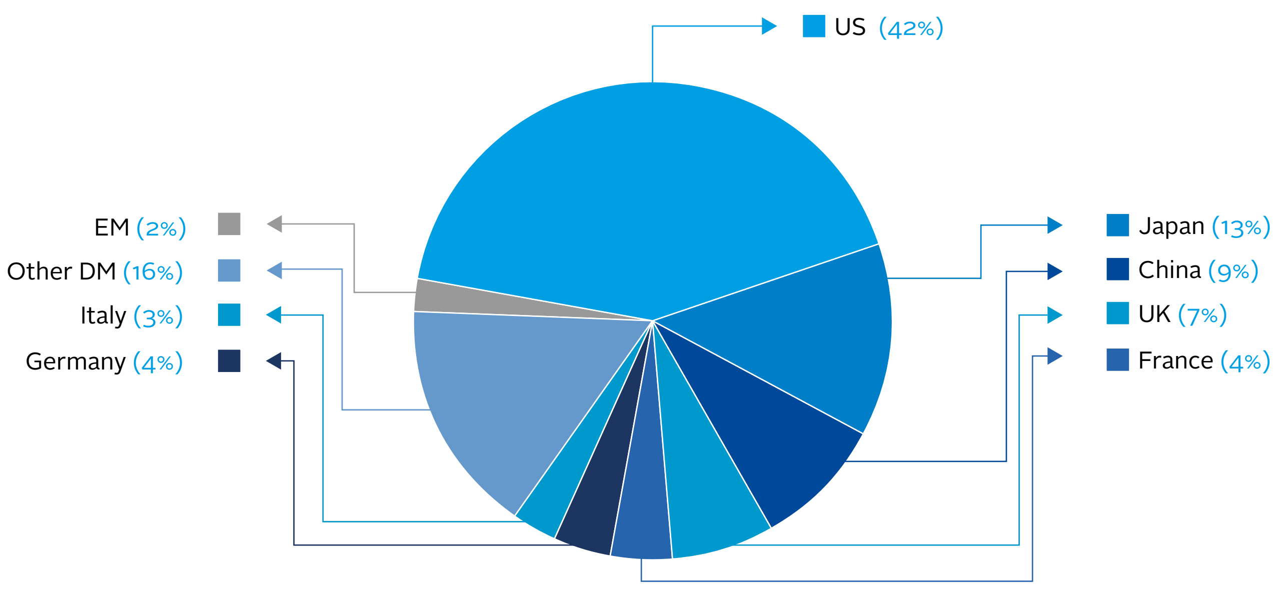
MAJORITY OF FI INSTRUMENTS COVERED

The influential impact of CRAs is better understood when considering the universe of FI instruments with a rating: At US$87.7 trn, debt capital markets are considerably larger than the global listed equity market ($67.1 trn market cap) (SIFMA, 2016). Not all bonds have a credit rating but of 2.3 mn outstanding at end-2015 in the US (which is by far the biggest bond market in the world) 96.5% were from the three largest providers (SEC, 2016). Their share in the EU is also great, at 93% (ESMA, 2016).

Global bond market outstanding and equity market capitalisation (US$trn.). Source: SIFMA

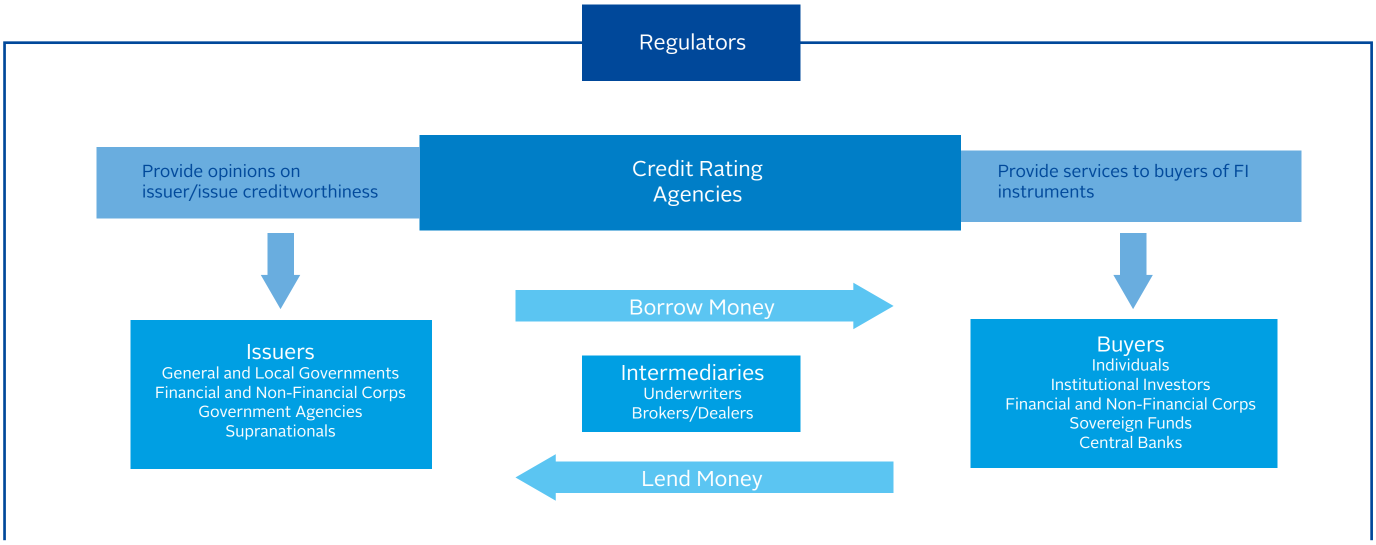


Global bonds outstanding by country (US$trn., 2015). Source: SIFMA



VARIETY OF STAKEHOLDERS INVOLVED

The pool of market players using credit ratings is large: bond issuers want their creditworthiness rated by CRAs when they tap markets to raise capital; bond investors (including central banks) use ratings as third-party opinions to make a more informed decision about their investment or are bound by an investment mandate. Often, credit rating users can be both bond issuers and purchasers simultaneously, reflecting their dual role in FI markets (see diagram).



CLOSELY MONITORED

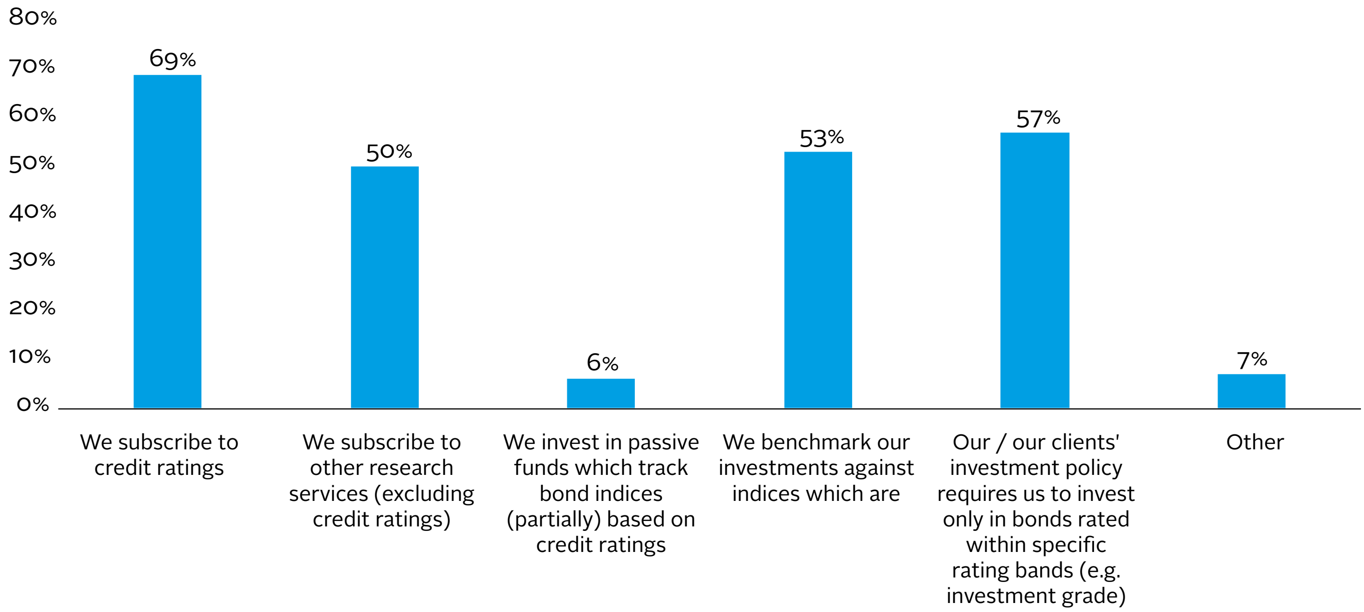
Market reaction to rating changes can be significant, particularly in the case of downgrades, and especially in times of crisis — for passive and active managers alike (Grothe, 2013). The accuracy of CRA analysis, and investor confidence in their ratings, is therefore crucial for the functioning of the bond market and for financial stability.

The role of CRAs has become even more prominent in recent years due to:

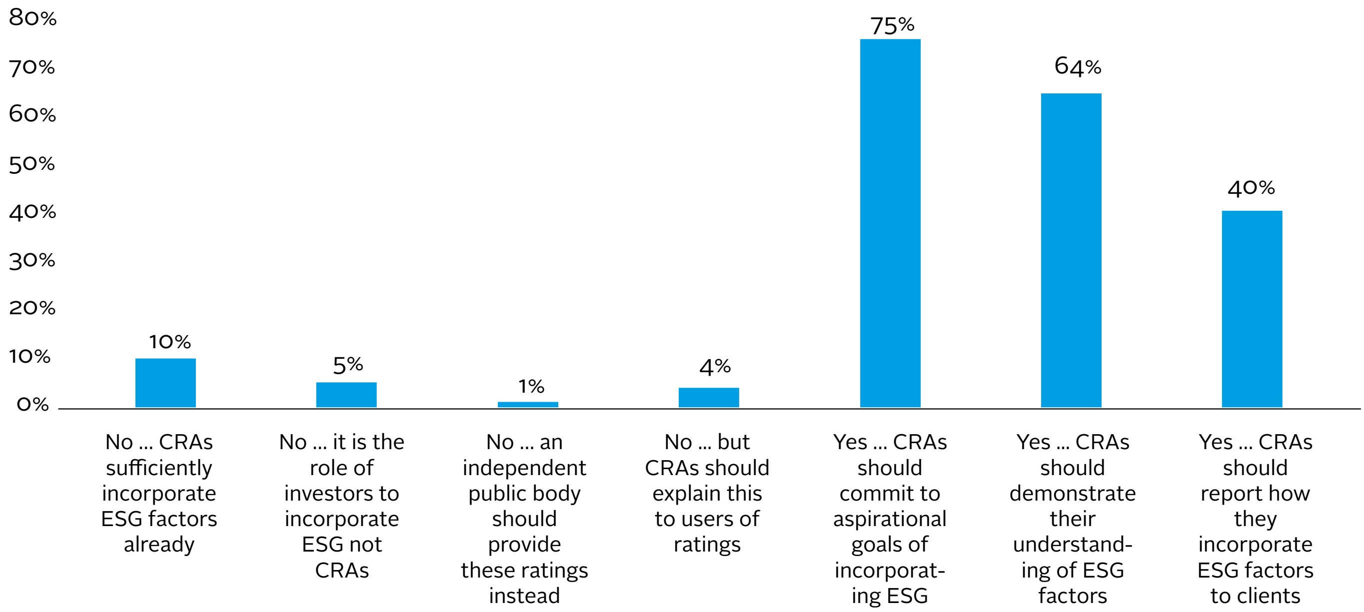
- Credit- and liquidity-related reforms instigated by the financial crisis (for instance, the US Dodd-Frank Act of 2010 and the EU regulatory framework of 2011); these have resulted either in investors being required to hold more FI assets as capital or the same share but of better rating "quality", even if there is active regulatory pressure to reduce asset managers' rating dependency in risk assessment.
- Quantitative easing in many advanced economies, with central banks relying on credit ratings to assess the eligibility of collateral to conduct monetary policy operations;
- The surge in bond exchange-traded funds (ETFs) and passive bond investment strategies (market-weighted and alternative) which form a significant portion of the FI investment universe. Since ETFs and index funds all use indexes, many of which contain credit rating restrictions, changes to those ratings may make passive investors and ETFs forced sellers or buyers in line with portfolio specifications.

Findings from the 2015 survey of PRI signatories reflect the breadth of the use of credit ratings: A majority of respondents subscribed to CRA rating services. At the same time, a majority was also constrained by ratings, either because investors benchmarked their investments against indices (which in turn may be partially constrained by credit ratings) or because their investment strategy or that of their clients has credit rating limits. Most of them expected CRAs to demonstrate an understanding of ESG factors.

How does your organisation (directly or indirectly) use CRA products or services? Source: PRI, Credit Ratings and ESG: Investor Survey Summary (2015)



Do you think CRAs should incorporate ESG factors into their rating methodologies? Source: PRI, Credit Ratings and ESG: Investor Survey Summary (2015)



UNDERSTANDING CREDIT RATINGS AND ESG

It is important to understand what credit ratings actually measure, even if investors are familiar with CRA rating scales. This is crucial because risks that affect FI instruments extend beyond credit risk, which is associated with the default probability of a borrower. For example, they include market, liquidity and interest rate risks (and these may interplay with non-linear effects).

Rating agencies take various approaches — based on definitions, methodologies and time horizons — when assessing credit risk. Broadly speaking, credit risk is the risk that an issuer does not make a timely repayment as promised: it depends on its ability to repay its obligation (and therefore generate cash flow) but also on its willingness to meet its financial commitments when due.

Ratings are calculated based on a range of factors used by CRAs to form an opinion on the overall creditworthiness of an issuer (or with respect to a specific issue). Some of these factors are difficult to identify and quantify; some inevitably depend on a degree of subjectivity in the development of the methodology framework; some information is publicly available and some may only be disclosed to CRA analysts.

Some ratings may also try to capture the expected financial loss suffered in the event of default. The diagram below illustrates how the expected loss may be calculated (although, as previously highlighted, methodologies vary).[8] ESG risks may not only affect the probability of default but also the estimated financial loss an investor may incur as a result.

PD X LGD X EAD = Expected Loss

PD=probability of default (of an issuer/issue)

LGD=loss given default (an estimate of the expected loss in case an issuer defaults)

EAD= exposure at default (the outstanding amount, or exposure to an issuer in the event of an issuer's default)

When assessing credit risk, CRAs do not attempt to capture the environmental impact of a bond issue/issuer, nor its ethical or social impact. For example, they do not focus on measuring the environmental damage in terms of the CO_2 emissions of a company that is a heavy polluter, or the environmental benefit of a company that avoids them. Rather, when analysing a heavy polluting company, they would focus on any material impact — including financial, regulatory and legal factors — that could affect the company's credit profile. CRAs may also assess the level and predictability of an issuer's ability to generate future cash to honour its commitments to debt holders. To this end, they would also take into account its assets and how easily it would be for an issuer to sell them to repay its debt obligations. This could be problematic in the case of stranded assets, for instance.

On the quantitative side, CRA analysis focuses on the issuer's overall financial viability, the strength of its balance sheet, and how it compares to other issuers. For example, using standard credit ratio analysis, CRAs may test: how ESG factors affect an issuer's ability to convert assets into cash (profitability and cash flow analysis); the impact that changing yields — due to an ESG event — may have on the cost of capital, depending on the share of debt used in the issuer's capital structure (interest coverage ratio and capital structure analysis); the extent to which ESG-related costs dent the ability of an issuer to generate profits and add to refinancing risks; and how well an issuer's management uses the assets under its control to generate sales and profit (efficiency ratios).

8 See for example definition of Moody's Investors Service for long-term and short-term obligation ratings (here). S&P Global Ratings states that long-term issue credit ratings are an assessment of default risk but may incorporate an assessment or relative seniority and ultimate recovery in the event of default (here).

The qualitative side complements the quantitative side by adding information that analysts gather from sources including interviews with management, third-parties or the press. Since many ESG factors are intangible, this part of the assessment helps CRAs highlight which companies, despite poor short-term performance, have the potential to recover and prosper in the long-term, and vice versa.

Ultimately, CRAs are tackling this question: What is the level of risk associated with receiving full and timely payment of principal and interest on a specific debt obligation, and how does that risk compare with that of all other debt obligations?

When it comes to ESG factors, those that can impact credit risk need to be separated from those that may have an impact on the financial performance of an issuer ¬without increasing the relative likelihood of default. For example, a hurricane may leave a company out of business, hit revenues only temporarily or even boost them over the long-term if new investments replace outdated capital goods. The consequences depend on the financial strength of the borrower, its ability to absorb higher costs and market supply/demand conditions.

Weak management of ESG risks may cause a company reputational damage, affect its ability to raise funding (debt and equity) and, more broadly, negatively impact its financial performance. In contrast, sound ESG practices may bolster the company's reputation, as well as facilitate access to markets, improve financial performance and appeal to a wider investor base.

WHAT A RATING IS:

- An opinion on the relative likelihood of default of an issuer/issue over a future period.
- Based on analytical judgement, using all the information deemed material by the analysts, compatibly with a documented methodology framework.
- Forward-looking with a varying time horizon depending on the issue/issuer being rated.
- Approved by a committee.
- Dynamic as it is subject to change as facts/ companies change.
- Not normative but a simple statement of the relative likelihood of default.
- Based on a mix of quantitative and qualitative assessment.
- A relative measure subject to calibration – i.e. not an absolute measure.

WHAT A RATING ISN'T:

- A recommendation to buy or sell, i.e. they are not indications of investment merit.
- Absolute measures of credit quality (or default probability).
- Static measures of creditworthiness.

Source: PRI based on a review of the CRAs' published methodologies and discussion with CRAs

While only applicable to the S&P Global Ratings approach, the following statement from its *Guide to Credit Rating Essentials* summarise the degree of qualitative assessment which is at the heart of the rating methodology, even when quantitative factors have been factored in:

"Since there are future events and developments that cannot be foreseen, the assignment of credit ratings is not an exact science...a corporate bond that is rated 'AA' is viewed by the rating agency as having a higher credit quality than a corporate bond with a 'BBB' rating. But the 'AA' rating is not a guarantee that it will not default, only that, in the agency's opinion, it is less likely to default than the 'BBB' bonds" (S&P Global Ratings, 2014).

CONSIDERATIONS FOR THE FUTURE

The analysis so far sets the scene for further work ahead. It aims to frame the debate on how to embrace transparency and systematic consideration of ESG factors in credit risk analysis. There are many areas that need to be explored further; below are a few that have already emerged:

- **Ratings implications:** Some CRAs have started to publish the implications of their rating actions after considering environmental factors. However, more effort is needed on this front (for more ESG factors – more frequently – and by more CRAs). As CRAs hone their expertise in the ESG field, further evidence is needed on how ESG factors are contributing to rating opinions.
- **Addressing time horizon differences:** More emphasis could be put on scenario analysis, in addition to probability assessments, to reconcile some of the different views on time horizons between investors and CRAs. Alternatively, there could be more discussion on the shape of probability distributions around the event of a default. For example, on climate risks, CRAs could outline in their rating criteria the underlying climate assumptions, in terms of global warming and the expected regulatory, legal, consumer, social and market actions. Further transparency could be achieved if the impact on issuer ratings of different climate outcomes were included in the opinions.
- **Boosting the incentives for greater issuer disclosure:** CRAs and institutional investors have a common interest in encouraging issuers to disclose comprehensive information for a more realistic/fair assessment of their credit risk. They are better placed to ask pertinent questions as their ESG competence improves. This could be a positive by-product of investor-CRA engagement on ESG. By recognising ESG risks across their own business models, issuers could demonstrate to CRAs and investors that they are equipped to address/mitigate these risks, thereby avoiding or reducing the prospect of a marked deterioration of their creditworthiness, should these risks materialise.
- **Complementary products:** CRAs are actively producing methodology papers, sector reviews and ESG-themed research in an effort to enhance transparency. This is catalysing the development of new products (i.e. non credit-rating tools) to help investors as they look beyond default risks. Indeed, investors and third-party providers have already started to produce separate ESG investment scores.
- **Regulatory role:** While regulation has boosted corporate social responsibility reporting standards globally, this is just the tip of the iceberg. Turning to AOs and AMs in developed countries (particularly Europe), voluntary measures may be enough to promote change in FI on ESG, but should regulators play a role too? And, is the case for regulatory intervention stronger in emerging markets, where investors and society at large may be less proactive in this regard?
- **Room for further research:** New research could explore the relationship between ESG factors and credit risk priced by financial markets, using measures other than credit ratings as a proxy for the latter. Structural models, for instance (originating from the Merton model), look at the relationship between the default risk of an issuer and its asset (capital) structure: if assets drop below a certain value, an issuer is unable to honour its debt and defaults. Therefore, any ESG factor that improves a firm's asset value or reduces its asset value volatility will have a positive effect on credit quality. While efforts are underway here, more work is needed to refine these models (which present their own challenges because they are complex to analyse).

APPENDICES

1. LIST OF INTERVIEWS

Interviewee	Title	Organisation	Organisation Type
Laurent Frings	Global Head of Credit Research	Aberdeen Asset Management	AM
Wolfgang Kuhn	Head of Pan-European Fixed Income	Aberdeen Asset Management	AM
Barbara Lambert	Senior Portfolio Manager	Addenda Capital Inc.	AM
Brian Minns	Manager, Sustainable Investing	Addenda Capital Inc.	AM
My-Ling Ngo	ESG Specialist	BlueBay Asset Management	AM
Toni Spencer	Head of Credit Research	Colonial First State Global Asset Management	AM
Lin Wenjie	Vice President	Dagong Global Credit Rating	CRA
Ole Hagen Jørgensen	Director of Research	Global Evolution	AM
Dr. Yu Chunjiang	General Rating Director	Golden Credit Rating International Co., Ltd.	CRA
Dr. Fang Yixang	Head of Green Finance Team	Golden Credit Rating International Co., Ltd.	CRA
Simon Beany	Investment Manager	HESTA	AM
Catherine Ogden	Manager - Sustainability & Responsible Investment	Legal & General Investment Management	AM
Henrique Pinheiro Campos	Credit Analyst	Liberum Ratings	CRA
Mauricio Bassi	Technical Director	Liberum Ratings	CRA
Brian Cahill	Managing Director	Moody's Investors Service	CRA
Kaan Nazli	Senior Economist, Emerging Market Debt	Neuberger Berman	AM
Promod Dass	Deputy CEO	RAM Rating Services Berhad	CRA
Sam Theodore	Group Managing Director - Head of Financial Institutions Ratings	Scope Ratings AG	CRA
Laurence Hazell	Director, Governance	S&P Global Ratings	CRA
Michael Wilkins	Managing Director, Environmental & Climate Risk Research	S&P Global Ratings	CRA
Moritz Kraemer	Sovereign Chief Ratings Officer	S&P Global Ratings	CRA

2. TYPES OF RESPONSIBLE INVESTMENT APPROACHES

Incorporation of ESG issues into investment analysis and decision-making processes is covered in Principle 1 of the PRI. Throughout the Reporting Framework that PRI signatories use, ESG incorporation refers to the review and use of ESG information in the investment decision-making process as per the PRI Reporting Framework 2016 Main Definitions.

Type of Approach	Methodology
Screening	a. Negative/exclusionary screening b. Positive/best-in-class screening c. Norms-based screening
Sustainability-themed investment (also referred to as environmentally and socially-themed investment)	Investment in themes or assets specifically related to sustainability.
ESG Integration	The systematic and explicit inclusion by investment managers of environmental, social and governance factors into traditional financial analysis.
Combined approaches	A mix of all the above methodologies.

3. ABSTRACTS FROM RESEARCH ON ESG AND CREDIT RISK

Bond type	Subject focus	Key findings of research
Corporate	Environment	**Bauer & Hann** (2010) find comprehensive evidence that the environmental management of public corporations has credit risk implications for bond investors in terms of "...solvency of borrowing firms, by determining their exposure to potentially costly legal, reputational, and regulatory risks". The paper also finds that "...firms with environmental concerns [such as environmental regulatory compliance and climate change] pay a premium on the cost of financing and have lower credit ratings assigned to them." **The Centre for International Environmental Law** (2015) shows how by not considering directly how dynamic climate trajectories can affect cash flow, and because of other inadequacies in taking into account climate risk, credit ratings may be inflated. It examines a specific case study of the rating assigned to a fixed-rate notes issue by Adani Abbot Point Terminal Pty Ltd's in Australia in 2014.
	Social	**Kane, Velury & Ruf** (2005) document that "firms with good employee relations, to the extent they are dependent on labor in the conduct of business operations, should be more likely to avoid the onset of future financial distress". The paper finds that "knowledge of the state of employee relations is incrementally useful in assessing the likelihood that firms will experience the onset of financial distress". **Bauer, Derwall & Hann** (2009) document that firms with stronger employee relations enjoy a statistically and economically lower cost of debt financing, higher credit ratings, and lower firm-specific risk. The "results support the theory that adequate management of employee relations improves the firm's credit standing by reducing various firm-specific risks that affect the level and stability of expected cash flows, and which cannot easily be diversified away by bondholders". **Sasse, Hize & Hardeck** (2016) examining a large European panel corporate data set prove that higher corporate social performance (including ESG factors), and a higher performance regarding the social dimension in particular, have the potential to increase firm value through lower firm risk.
	Governance	**Ashbaugh-Skaife, Collins & LaFond** (2006) finds that "evidence that a variety of governance attributes explain firm credit ratings after controlling for firm characteristics that prior research has shown to be related to credit ratings" and "our primary analysis documents that firms' governance affects firms' credit ratings". **Alali, Anandarajan & Jiang** (2011), using a sample of US firms, find "that firms characterized by stronger corporate governance have a significantly higher credit rating, and that this association is accentuated for smaller firms relative to larger firms. We find that an improvement in corporate governance is associated with improvement in bond rating".
	General	**Kölbel & Busch** (2013) find that negative media attention regarding corporate social responsibility causes a significant increase in a company's credit risk as measured by CDS spreads. In a later work with Jansco (2017) they identify how management can employ corporate social responsibility activities to manage credit risk. In a more recent paper (2017), they find that that there is very little evidence of a link between ESG performance and financial outperformance, yet there is strong evidence of a link between ESG performance and the cost of capital. **Desclée & Hyman - Barclays** (2016) : using a modelling approach and the Bloomberg Barclays US Investment-Grade Corporate Bond Index finds, among other results, that (1) a positive ESG tilt results in a small but steady performance advantage; (2) when applying separate tilts to E, S and G scores, the positive effect is strongest for a positive tilt towards the governance factor, and weakest for social scores; (3) issuers with high governance scores experience lower incidence of downgrades by credit rating agencies. **Reznick & Viehs - Hermes Investment Management** (2017) supports the view that agencies incorporate some element of ESG research finding correlations between companies' proprietary ESG scores by Hermes (QESG) and their credit ratings. However, they conclude that credit ratings "do not serve as a sufficient proxy for ESG risks".

Bond type	Subject focus	Key findings of research
Sovereign	Environment	**Lederman & Maloney** (2007) and **Frankel** (2010) discuss how countries with an abundance of natural resources can suffer sub-par growth, if those resources are not managed well. Since CRA methodologies highlight that prospects for economic growth are key when assessing sovereign credit risk, it follows that a country's natural resource endowment and how it is used can ultimately affect a country's creditworthiness. **UNEP FI & Global Footprint Network** (2012) developed a methodology and metrics to link natural resource risks to sovereign credit risk. Case studies are highlighted for five nations with different natural resources, production, consumption and trade patterns. They assess the economic significance of a country's resource risks and its ability to absorb shocks associated with such risks, depending on its level of public debt/deficit, its trade deficit or inflation.
	Social	**Becker, Murphy & Tamura** (1990) as well as **Galor & Weil** (1993) with their papers provide good examples of how human capital formation (i.e. developments in education and health) and fertility are important to economic growth.
	Governance	**Depken, LaFountain & Butters** (2006) evaluating the evidence of a link between corruption factors and sovereign credit risk find that "for all four types of sovereign debt... creditworthiness, as reflected by credit ratings, decreases with corruption. This relationship is statistically significant and persists across a variety of different estimators. Furthermore, rough estimates suggest that the relationship between creditworthiness and corruption is also economically significant". **Mellios & Paget-Blanc** (2006) find that sovereign ratings are mostly influenced by per capita income, government income, real exchange rate changes, inflation rate and default history. They also highlight the importance of corruption as measured by Transparency International's Corruption Perceptions Index. **Rodrik** (2008) concludes that governance is not just an "end" but a "means": "Governance has instrumental value insofar as it provides producers and households with greater clarity on the rules of the game and investors with greater assurance that they can appropriate the returns to their efforts". **Ozturk** (2016) points to a positive relationship between sovereign credit ratings and governance indicators. However, he proposes that credit rating agencies consider employing their internal sources to measure the quality of governance, as existing governance indicators have several weaknesses.
	General	**Acemoglu, Johnson & Robinson** (2000) in an empirical study examining the large differences in per capita income across countries note that "countries with better institutions, more secure property rights, and less distortionary policies will invest more in physical and human capital, and will use these factors more efficiently to achieve a greater level of income". **Capelle-Blancard, Crifo, Oueghlissi, Scholtens** (2017) after constructing and ESG index and considering 20 OECD countries between 1996-2012 find (1) a strong negative relationship between ESG performance and sovereign bond spreads; (2) a relatively stronger relationship for long-term than short-term spreads; (3) a more pronounced performance of governance relative to social and environmental factors; (4) a stronger relationship in euro-area countries than in other OECD countries and (5) a stronger relationship after the financial crisis in 2008 compared to the prior period.

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The Principles for Responsible Investment (PRI)

The PRI works with its international network of signatories to put the six Principles for Responsible Investment into practice. Its goals are to understand the investment implications of environmental, social and governance (ESG) issues and to support signatories in integrating these issues into investment and ownership decisions. The PRI acts in the long-term interests of its signatories, of the financial markets and economies in which they operate and ultimately of the environment and society as a whole.

The six Principles for Responsible Investment are a voluntary and aspirational set of investment principles that offer a menu of possible actions for incorporating ESG issues into investment practice. The Principles were developed by investors, for investors. In implementing them, signatories contribute to developing a more sustainable global financial system.

More information: www.unpri.org

PRI Principles for Responsible Investment

The PRI is an investor initiative in partnership with UNEP Finance Initiative and the UN Global Compact.

United Nations Environment Programme Finance Initiative (UNEP FI)

UNEP FI is a unique partnership between the United Nations Environment Programme (UNEP) and the global financial sector. UNEP FI works closely with over 200 financial institutions that are signatories to the UNEP FI Statement on Sustainable Development, and a range of partner organisations, to develop and promote linkages between sustainability and financial performance. Through peer-to-peer networks, research and training, UNEP FI carries out its mission to identify, promote, and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations.

More information: www.unepfi.org

UNEP FINANCE INITIATIVE

United Nations Global Compact

The United Nations Global Compact is a call to companies everywhere to align their operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption, and to take action in support of UN goals and issues embodied in the Sustainable Development Goals. The UN Global Compact is a leadership platform for the development, implementation and disclosure of responsible corporate practices. Launched in 2000, it is the largest corporate sustainability initiative in the world, with more than 8,800 companies and 4,000 non-business signatories based in over 160 countries, and more than 80 Local Networks.

More information: www.unglobalcompact.org

United Nations Global Compact