

Sustainable investing: How to do it

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Executive summary

IN THE TRANSITION to a sustainable economy, companies are increasingly adopting the goal of long-term value creation, which integrates financial, social and environmental value. Investors have an important stewardship role to steer companies to sustainable business practices that will achieve long-term value creation.

POLICY PROPOSALS FROM the European Union High Level Expert Group on Sustainable Finance, published in January 2018, promote a fiduciary duty to include sustainability in investment, company disclosure of sustainability information and a unified classification system (or taxonomy) of sustainable investments from which investors can choose. A fiduciary duty to include sustainability in the investment process and to disclose sustainability information can accelerate sustainable investment.

BUT AN OFFICIAL taxonomy might stifle innovation in sustainable investment. While such a taxonomy might bring much needed clarity in certain markets, such as the emerging market for green bonds, the general approach to sustainable investment should be market-led. Investors and banks are best placed to assess which companies are prepared for the transition to a sustainable economy.

THIS POLICY CONTRIBUTION proposes an active investment approach to sustainable investment. This active approach is based on fundamental analysis of companies' environmental, social and governance (ESG) factors and engagement with investee companies on material ESG factors. The aim is to uncover and realise companies' social and environmental value alongside their financial value.

BUILDING ON PREVIOUS research (De Jong *et al*, 2017), we present a six-point plan for sustainable investing. These points range from active investment in concentrated portfolios and long investment horizons, to deep engagement with companies and shorter investment chains.

1 Introduction

Sustainable investment is gaining momentum in Europe, both among investors and in policy circles. Sustainable investment can be defined as a long-term oriented investment approach, which integrates environmental, social and governance (ESG) factors into the research, analysis and selection process of securities within an investment portfolio. Sustainable assets under management in Europe have risen from €2.7 trillion (covering 18 percent of total assets under management) in 2007 to €11.1 trillion (53 percent) in 2015 (Eurosif, 2016; GSIA, 2017)¹. Table 1 shows that Europe accounts for more than half of the global market for sustainable investments, which amounts to €21.0 trillion. Sustainable investment is less advanced in the United States, where materialism is more pronounced².

Table 1: Proportion of sustainable assets as a share of total assets under management (2015)

Region	SI assets (in € billions)	Total AUM (in € billions)	Proportion SI assets(%)
Europe	11,059	21,025	53%
United States	8,012	37,094	22%
Canada	998	2,639	38%
Asia	483	18,583	3%
Australia	474	937	51%
Total	21,026	79,947	26%

Source: Bruegel based on GSIA (2017). Note: SI assets = sustainable assets; AUM = assets under management.

In 2017 the European Commission set up a High Level Expert Group on Sustainable Finance (HLEG) to investigate how sustainable finance could be promoted in Europe. The High Level Expert Group published its final report *Financing a Sustainable European Economy* in January 2018 (HLEG, 2018). Based on the HLEG recommendations, the European Commission adopted an action plan for sustainable finance with three key elements: a fiduciary duty to include sustainability in the investment process, company disclosure of sustainability information and a unified classification system or taxonomy of sustainable investments (European Commission, 2018a).

This Policy Contribution questions the proposed administrative approach to classifying sustainable investments. An official classification system, even with input from leading sustainable investors, will lead to rigidities, with cumbersome procedures to include new companies and products, and wrong-headed attempts to game the system. Moreover, it might set off an active lobby for inclusion, with larger incumbent companies having more levers than smaller ‘sustainable’ start-ups.

A market-led approach would be better able to cope with the dynamic field of sustainable investment. Institutional investors are well placed to identify frontrunners (and laggards) in the transition to a sustainable economy. Schoenmaker (2017) sets out the case for sustainable investing – the why question. This Policy Contribution explains how sustainable investment can be done. Truly sustainable investment implies a move from passive investment in a market index (which can be buttressed with ESG ratings) to active investment in a concentrated portfolio. Fundamental analysis of the sustainability of companies’ business models and deep engagement with investee companies are key elements of this active approach.

1 The Eurosif study examined trends in the 13 largest European countries: Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Poland, Spain, Sweden, Switzerland and the United Kingdom.

2 In societies where materialism is less pronounced (eg Europe), it is easier to move to sustainable investment, which combines financial, social and environmental dimensions (Yan *et al*, 2018).

2 Long-term value creation

To guide the transformation towards a sustainable and inclusive economy, the United Nations developed the 2030 Agenda for Sustainable Development with 17 concrete sustainable development goals (SDGs) (UN, 2015). The private sector has a vital role in reaching these SDGs. This is a change from the old mindset about sustainability in which development issues were considered to be exclusive ‘government territory’ through regulation and taxation. Companies are also able to drive progress towards the 17 goals: they have the ability to innovate, to scale, to invest and to employ (Tulder, 2018).

The corporate sector can play this important role in achieving the SDGs through long-term value creation. The concept of long-term value creation means that a company aims to optimise its financial, social and environmental value in the long term (Schoenmaker, 2017). The optimisation requires careful balancing of the three elements, with none being neglected in favour of the others. Unfortunately, current business practices are still too narrowly focused on short-term financial returns, meaning that they fail to achieve inclusive capitalism. For decades, maximising profits (shareholder view) has been the primary objective in corporate finance. But the shareholder model is holding companies back from sustainable business practices.

Recent research argues for a broader corporate objective than shareholder value in a narrow sense (eg Hart and Zingales, 2017). The starting point is a distinction between shareholder value, which aims for maximisation of financial value only, and stakeholder value, which aims for maximisation of integrated value and incorporates social and environmental externalities. A key assumption is that these externalities are linked to a company’s operations. Companies therefore face a choice in the degree of sustainability in their business model. Investors, as shareholders, can guide that choice by their voting at company annual general meetings.

Table 2: Share of equity held by institutional investors (2016)

Type of institutional investor	Amount (in € trillions)	Share of equity markets
Investment funds	22.8	41.1%
Investment funds (excl. pension funds/insurers)	10.6	19.1%
Pension funds and insurance companies	21.7	39.1%
Traditional institutional investors	32.3	58.2%
Sovereign wealth funds	3.1	5.6%
Hedge funds	0.9	1.6%
Alternative institutional investors	4.0	7.2%
Total institutional investors	36.3	65.4%

Source: Schoenmaker and Schramade (2019). Note: Pension funds and insurers invest directly in equity as well as indirectly via investment funds. This indirect investment is deducted from the equity managed by investment funds in the second row to avoid double counting. As only data for institutional investors in developed countries is available, the share is calculated as a percentage of developed equity markets.

Institutional investors, including pension funds, insurers and investment funds, are driving sustainable investment. Table 2 shows that they hold about 65 percent of listed equities and thus form a strong force in corporate governance. Empirical evidence on institutional investors’ ESG strategies shows financial motivations are becoming a more important factor behind investors’ push for social and environmental performance (Dyck *et al*, 2018). There is a business case for full ESG integration in investment. Companies that perform well on material ESG issues tend to demonstrate a superior financial performance (see for example Khan *et al*, 2016). This is consistent with the idea that strong management of material ESG issues brings a real competitive advantage. In a meta-study, Friede *et al* (2015) found that some 90 percent of studies find a non-negative relationship between ESG and company financial

performance, while the great majority of studies report a positive relationship.

When the objectives of corporations are broadened to optimise their integrated value, which combines their financial, social and environmental value, the interests of stakeholders are ranked equally. Such a move to the stakeholder model requires new rules for corporate governance and decision-making about corporate investments in order to deal with the different interests. As set out in Schoenmaker (2017), the net present value rule for investment decisions can incorporate social and environmental aspects in its calculation. In terms of corporate governance, sustainability can be included in executive contracts and compensation. It is also important to include sustainability in the fiduciary duty of investors to their clients, as proposed by the European Commission.

3 Policy proposals

The European Commission's 'Financing Sustainable Growth' action plan aims to promote greater investment in longer-term and sustainable activities (European Commission, 2018a)³. Key elements of the plan include:

1. Establishing an EU classification system for sustainable activities: this taxonomy would provide the basis for using the classification system in various areas (eg standards and labels for sustainable finance products, differing capital requirements for green and brown assets, and sustainability benchmarks);
2. Incorporating sustainability in investors' duties: this proposal will require institutional investors and asset managers to integrate sustainability considerations in the investment decision-making process;
3. Strengthening sustainability disclosure: this proposal will strengthen corporate reporting on sustainability issues, enabling investors and other stakeholders to better assess companies' long-term value creation and their exposure to sustainability risks.

These elements suggest a dual foundation of the action plan. The public sector would take the lead in classifying investments as sustainable, but private investors would be required to include those sustainability criteria in their decision-making processes, and private companies would have to disclose sustainability information in addition to financial information.

On the first element, the Commission (2018b) has published a framework for establishing a unified EU classification system for sustainable economic activities, also known as the Taxonomy Regulation proposal. In this proposal, whether an economic activity qualifies as being environmentally sustainable depends on four requirements:

- The activity must contribute substantially to one of the six EU environmental objectives;
- The activity must not do significant harm to any of the other five EU environmental objectives;
- The activity must comply with minimum social safeguards;
- The activity must comply with technical screening criteria.

The technical screening criteria will determine whether an activity can be considered to substantially contribute to one of the environmental objectives and not significantly harm the other environmental objectives (see Box 1). While the concept of sustainability has usually

3 The Commission's action plan is based on the recommendations of the High Level Expert Group on Sustainable Finance (HLEG, 2018). See here for an overview of the Commission's policies: https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en.

environmental and social aspects (eg UN, 2015), the Commission has chosen to focus on environmental standards and to meet only the minimum social standards of the International Labour Organisation, leaving out social goals such as paying a living wage⁴ and access to education and healthcare in low and medium-income countries.

A technical expert group on sustainable finance was set by the European Commission in July 2018 to develop the technical screening criteria for the EU taxonomy or classification system of environmentally sustainable economic activities. While the technical expert group is drawn from the European agencies (the European Environment Agency, the European Supervisory Authorities and the European Investment Bank), the private sector, and academia, it has only an advisory status. The Commission retains final responsibility for adopting and amending the technical screening criteria.

Box 1: The EU's environmental objectives

Article 5 of the proposed Taxonomy Regulation (European Commission, 2018b) lists the following environmental objectives:

- Climate change mitigation;
- Climate change adaptation;
- Sustainable use and protection of water and marine resources;
- Transition to a circular economy, waste prevention and recycling;
- Pollution prevention and control;
- Protection of healthy ecosystems.

These environmental objectives are science based. Steffen *et al* (2015) lists several planetary boundaries, including climate change, biodiversity, land-system change, freshwater use, biochemical flows and ocean acidification. Reduced use of biochemical flows (in particular phosphorus and nitrogen in agriculture) is part of the fifth objective, while land-system change and biodiversity are part of the sixth objective.

The latter two elements of the action plan (incorporating sustainability in investors' duties and strengthening sustainability disclosure) support the broadening of investors' horizons in the direction of long-term value creation, integrating the financial, social and environmental aspects. By specifying the obligation for companies to provide sustainability related information to investors, sustainability can be fully integrated in private investment decision-making and accelerate sustainable investment in Europe, which is already widespread (see Table 1).

But it is not clear why the private sector should follow official guidelines about what constitutes sustainable investment. An official-led classification system might stifle innovation in sustainable investment for several reasons. First, the transition to a sustainable economy is a dynamic process with creative destruction: new technologies and approaches emerge and some of the old ones become obsolete (Schumpeter, 1942). This technological revolution is inherently uncertain. It is not clear how regulators can guide that process of transition by labeling some companies or projects as "contributing substantially to the sustainability objectives" and others not (Article 5 of the proposed Taxonomy Regulation; see Box 1). Private investors and banks have a direct incentive to find out which new business models and technologies are the most promising in the sustainability transition, as their own money is at stake.

Second, large incumbent companies will lobby the Commission to include current business practices as sustainable in the classification system and thus preserve the status

⁴ A living wage is a wage for a full-time worker sufficient to provide his or her family's basic needs for an acceptable standard of living. A living wage varies with the local cost of living.

quo. By contrast, smaller companies, which lack the resources and time for lobbying activities, are often more innovative in sustainability terms. If they are considered uncertain and unproven, new practices might be excluded from the group of sustainable activities in the classification system.

Third, administrative obstacles might need to be overcome before new practices can be included in the official sustainability definition. That would hamper investment in start-ups and small companies that drive and uncover new sustainable business practices.

The example of the adoption of tighter nitrogen oxides and other emissions standards for passenger cars is instructive. The European Council has watered down ambitious European Commission and European Parliament attempts to impose tighter standards, after intensive lobbying by the car industry⁵.

While a taxonomy might bring much needed clarity in certain markets, such as the emerging market for green bonds, the general approach towards sustainable investment should be market-led. Investors are best placed to see in what way companies are prepared for the transition to a sustainable economy.

4 An active investment approach

How can the private sector foster sustainable investment? The internalisation of social and environmental externalities is an ongoing process. Some externalities are already internalised through best business practices at companies, including, for example, energy and material savings in the production process and cultivation of an inspired workforce. Further externalities might be internalised in the future under pressure from governments, such as social and environmental regulations and taxes, societal pressure from NGOs and consumers, and technological developments, such as low-cost solar and wind energy (Schoenmaker, 2017).

Investors are increasingly using ESG ratings and ESG indices to incorporate the social and environmental considerations into the investment process. The advantage of these ESG ratings is that they provide investors with a quick approximation of a firm's ESG quality. However, ESG ratings have a number of limitations by design (Schoenmaker and Schramade, 2019).

First, ratings focus little on material issues (ie issues that are relevant to the investee companies), while it is crucial for investment purposes to focus on material issues. This means that a materially negative (and potentially fatal) issue is easily cancelled out by high scores on immaterial items, resulting in serious mistakes. An example of a material issue for manufacturing is health and safety conditions for the workforce. Second, ESG ratings are based on reported data and policies, which is only a fraction of what is needed for a good assessment and sometimes can even be contradictory. Moreover, this creates biases in scores, for example, in relation to size (as the ratings favour large companies with big sustainability departments). Other firms, especially small ones, might get low ratings because they do not put enough information on their policies into the public domain, or they get misclassified and compared with the wrong kinds of firms. Third, scores are 'industry neutral' and based mainly on operations, while taking little account of the products and services of the companies in question. This can result in ratings that are intuitively wrong, as the least bad companies in very unsustainable industries (say coal or tobacco) still get very high scores and can be named sustainability leaders.

⁵ See for example Julia Fioretti and Waverly Colville, 'EU parliament says governments delayed new rules on car emissions', Reuters, 28 February 2017, available at <https://www.reuters.com/article/us-volkswagen-emissions-europe/eu-parliament-says-governments-delayed-new-rules-on-car-emissions-idUSKBN167208>.

Hence, it is not surprising to see a lack of correlation in the scores of different ratings agencies. For 1,600 stocks in the MSCI World benchmark, Howard (2016) found a correlation of 26 percent between the scores assigned by the two largest rating agencies. In sum, ESG ratings need to get better. Investors should not accept them as conclusive on a company's sustainability quality, but rather as a starting point for analysis. What is more, they should reconsider some of their core assumptions to really embed ESG in their investment processes.

Table 3: Sustainable investments by method (2015)

Method	Sustainable investments (in € billion)	Share (in %)
1. Negative/exclusionary screening	10,163	44%
2. Norms-based screening	5,094	22%
3. Positive/best-in-class-screening	494	2%
4. ESG integration	2,650	12%
5. Corporate engagement	4,275	19%
6. Sustainability-themed investing	145	1%
7. Impact investing	98	0.4%
Total	11,059	

Source: Bruegel based on GSIA (2017). Note: The figures do not add up to the total, as some investors combine several methods for sustainable investment. Negative/exclusionary screening is the exclusion from a fund of certain sectors or companies based on specific ESG criteria; Norms-based screening is screening of investments against minimum standards of business practice based on international norms; Positive/best-in-class screening is investment in sectors or companies selected for positive ESG performance relative to industry peers; ESG integration is the systematic and explicit inclusion by investment managers of ESG factors into financial analysis; Corporate engagement relates to the use of shareholder power to influence corporate behaviour, including through direct corporate engagement (ie communicating with senior management and/or boards of companies), filing or co-filing shareholder proposals, and proxy voting that is guided by comprehensive ESG guidelines; Sustainability-themed investing is investment in themes or assets specifically related to sustainability (for example clean energy, green technology or sustainable agriculture); Impact investing involves targeted investments aimed at solving social or environmental problems.

Table 3 reports on sustainable investment methods in Europe. The first three methods are screening-based and rely on ESG ratings or ESG indices. These methods are used for two-thirds of sustainable investments. The remaining four methods rely to some extent on an active investment approach. Investing in sustainable companies, defined as companies that pursue long-term value creation, requires fundamental analysis of their business models and their underlying value drivers (Schramade, 2016). In that way, fundamental analysts can assess companies' social and environmental value, alongside their financial value. Such fundamental analysis also allows for an assessment of companies' preparedness for the transition to a sustainable economy, based on low-carbon and circular concepts. The incorporation of ESG information into stock prices then becomes an adaptive process, dependent on the number of fundamental analysts, how they have their decisions determined by ESG factors, and the quality of their learning (Lo, 2017).

Busch *et al* (2016) and Dyllick and Muff (2016), among others, have made the paradoxical observation that increased sustainable investment had not yet spurred sustainable development. There is a need to step up sustainable investment from the current ESG approaches that have limited effects to a truly sustainable investment approach focused on long-term value creation. This means an active investment approach through selecting companies that contribute positively to the SDGs, while avoiding those that contribute negatively. New measurement methods are emerging that link the selection of companies directly to SDG impact (Schramade, 2017)⁶.

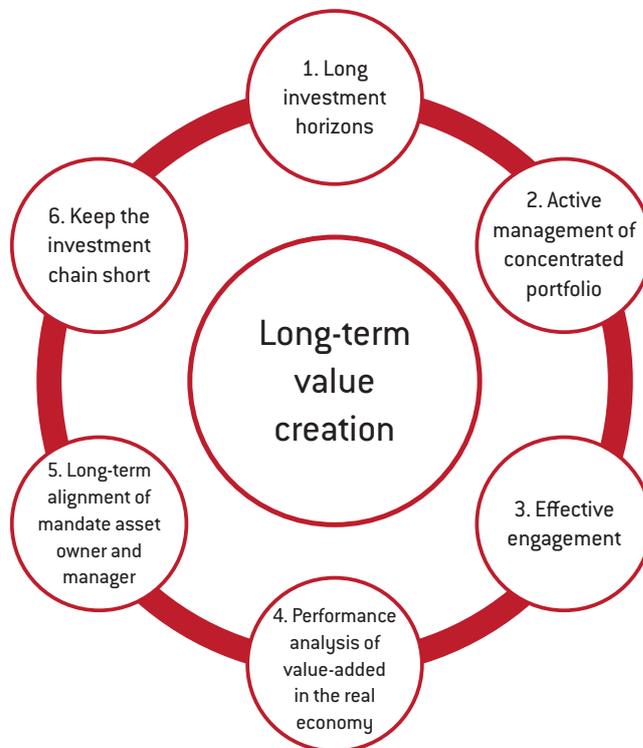
⁶ The Erasmus Platform for Sustainable Value Creation, which is a collaboration of Erasmus University and the financial sector, is working on the measurement of direct SDG impact; <https://www.rsm.nl/erasmus-platform-for-sustainable-value-creation/home/>.

5 A six-point plan for sustainable investing

How can sustainable investing based on an active investment approach be achieved? The short answer is that investors should facilitate firms in their long-term value creation processes. The longer answer is that investors can realise long-term investment returns by investing in and engaging with companies that are capable of adding value over the long-term, thereby having a positive effect on the value of their portfolios and on society (Schoenmaker and Schramade, 2019).

Investing for long-term value creation combines a long-term strategy aligned with achieving the SDGs. The underlying assumption is that the UN 2030 Agenda for Sustainable Development (UN, 2015) will be, at least partly, achieved; the SDGs are thus relevant for the long-term outlook of companies and investors. The incorporation of sustainability into the fiduciary duty of institutional investors, as part of the Commission's action plan (European Commission, 2018a), would promote sustainable investment. De Jong *et al* (2017) distil a six-point plan for institutional investors to enable them to pursue sustainable investment strategies aimed at long-term value creation (Figure 1 and points 1-6, below).

Figure 1: Sustainable investment aimed at long-term value creation



Source: De Jong *et al* (2017).

Point 1: Long investment horizons

With long-term value creation in mind, it does not make sense to buy stocks for periods of just a few months or even weeks. Rather, one should buy stocks with a multi-year horizon (5+ years), both in terms of intended holding period and in terms of confidence in the sustainability of the business model. It is important to distinguish intended holding periods from observed holding periods. The latter might simply be a result of a very passive investment stance. An active investor could have a very long intended holding period but might still decide to terminate a position early based on new long-term information (Edmans, 2017).

Point 2: Active management of a concentrated portfolio

By its nature, thorough fundamental ESG analysis can be done for a limited number of companies only, resulting in more concentrated portfolios. Concentrated portfolios contrast the prescription of the standard capital asset pricing model that every investor would hold a portfolio of all securities available in the market. Statman (2004) shows that a well-diversified stock portfolio needs to include just 50 to 100 stocks to eliminate idiosyncratic or unsystematic variance of stock returns. There are diminishing benefits of diversification beyond those 100 stocks⁷. Holding a concentrated portfolio allows for the kind of in-depth fundamental ESG integrated analysis that can provide an information advantage, with the investor who can first collect information systematically also reaping the benefits of this information (Van Nieuwerburgh and Veldkamp, 2010). A concentrated portfolio is also a necessary, though not sufficient, condition for effective engagement (point 3).

Point 3: Effective engagement

To be effective, engagement with investee companies should take place over the long-term, both behind the scenes by meeting with companies and in the annual general meeting by voting (McCahery *et al*, 2016). This requires human resources, expertise and time. By building on the fundamental analysis conducted in the investment process, important synergy benefits can be reaped making engagement more effective and efficient than stand-alone engagement strategies. Early evidence shows that institutional investors have a positive impact on companies' social and environmental performance (Dyck *et al*, 2018).

Point 4: Performance analysis of value-added in the real economy

Performance analysis based on companies' value-added in the real economy (both financial value and social and environmental value) can, for example, measure a company's performance against specific key performance indicators (KPIs) or a company's contribution to the global sustainability goals. Nevertheless, the development of these alternative performance measures is still in its infancy. By contrast, a passive benchmark strategy (with minimum tracking error) does not allow (large) deviations from the market benchmark. Some investors adopt an absolute return target (see Box 2). An absolute return is appealing because it is often more closely aligned with the goals of the beneficiaries, which are typically to build capital over the long run rather than beat market indices.

Point 5: Long-term alignment of the mandates of asset owner and asset manager

De Jong *et al* (2017) indicate that asset managers are primarily motivated by their beneficiaries (asset owners or clients) to pursue sustainable investment strategies aimed at long-term value creation, but the incentives in place are often not aligned. The incorporation of sustainability in investors' and asset managers' fiduciary duty will foster the alignment of mandates over the long term.

Point 6: Keep the investment chain short

The investment chain (between parties and within parties) should be kept as short as possible because each player in the investment chain adds complexity, and may hold the next player accountable to a shorter period. As a result, valuable information might be lost. The investment chain is similar to a manufacturing supply chain: outsourcing might bring benefits from specialisation, but also increases vulnerability.

Illustrating the working of the six points, Box 2 provides an example of a large pension fund, Sweden's Alecta, which applies these points in practice. Alecta's sustainable investment strategy is focused on long-term value creation.

⁷ Risk management should monitor that the stocks are not overly correlated (reducing their diversification potential) and are spread over sectors and countries. Moreover, diversification gains are mainly driven by a well-balanced allocation over different asset classes, including equities, bonds and alternative investments (ie real estate, private equity, hedge funds, commodities and infrastructure).

Box 2: Investing for long-term value creation at Alecta

Alecta is a large Swedish pension fund with assets under management of €84 billion in 2017. The pension fund adopts a 15 to 20 year perspective on the asset side and applies ESG integration in its investment process.

Alecta's asset management model is based on active management of a limited number of shareholdings (slightly more than 100 listed shareholdings in 2017). This active management is done through independent in-house analysis, focusing on the absolute return and risks of investments based on a five-year average. This has significant advantages compared with index management. Each investment decision is preceded by a sustainability review of the company under consideration. When Alecta invests in a company, it often becomes one of the largest shareholders, which enables it to engage in a close dialogue with the company, and to influence the company in the desired direction.

Alecta's total management costs are 0.09 percent of assets under management, of which investment management costs are 0.02 percent. Alecta can keep its operating costs very low, because it has cut out (expensive) external asset managers and consultants. The asset mix and return were as follows at end-2017:

Investments	Market value (in € billions)	Share	Total return (in %)	
			2017	2013-2017
Shares	35.1	42%	12.6%	14.1%
Debt securities	42.6	50%	1.0%	3.2%
Real estate	6.6	8%	12.1%	12.5%
Total investments	84.3	100%	6.7%	8.2%

Source: Alecta Annual Report 2017.

6 Conclusions

This Policy Contribution promotes an active investment approach with concentrated portfolios. Such a strategy facilitates fundamental analysis of investee companies' business models and their preparedness for the transition to a sustainable economy. This active investment approach contrasts with the more passive investment approach followed by the majority of institutional investors. These investors buttress their market benchmarks with ESG ratings to improve the sustainability of their investments. However, external ESG ratings only contain limited information on a company's true sustainability. There is an analogy with the overreliance on external credit ratings for subprime mortgages in the run up to the global financial crisis.

On the policy side, the European Commission's proposals to incorporate sustainability into the fiduciary duty of investors and to require companies to disclose on sustainability issues would facilitate an active investment approach (European Commission, 2018a). However, the regulatory approach to creating a European taxonomy of sustainable investments could stifle innovation. The selection of (emerging) sustainable companies is best left to the market. Investors find it in their self-interest to follow sustainable investment strategies aimed at long-term value creation, provided that the right conditions for such a long-term approach are in place.

References

- Busch, T., R. Bauer and M. Orlitzky (2016) 'Sustainable Development and Financial Markets', *Business & Society*, 55(3): 303-329.
- De Jong, A., D. Schoenmaker, M. Gruenwald and A. Pala (2017) *Large Shareholders in Corporate Governance*, research for the Monitoring Committee Corporate Governance, Rotterdam School of Management, Erasmus University, Rotterdam
- Dyck, A., K. Lins, L. Roth and H. Wagner (2018) 'Do Institutional Investors Drive Corporate Social Responsibility? International Evidence', *Journal of Financial Economics*, forthcoming
- Dyllick, T. and K. Muff (2016) 'Clarifying the meaning of sustainable business introducing a typology from business-as-usual to true business sustainability', *Organization & Environment* 29(2): 156-74
- Edmans, A. (2017) 'The answer to short-termism isn't asking investors to be patient', *Harvard Business Review*, July
- European Commission (2018a) 'Action Plan: Financing Sustainable Growth', COM(2018) 97 final
- European Commission (2018b) 'Proposal for a Regulation of the European Parliament and of the Council on the establishment of a framework to facilitate sustainable investment', COM(2018) 353 final
- Eurosif (2016) *European SRI Study 2016*, European Sustainable Investment Forum, Brussels
- Friede, G., T. Busch and A. Bassen (2015) 'ESG and financial performance: aggregated evidence from more than 2000 empirical studies', *Journal of Sustainable Finance and Investment*, 5(4): 210-233
- GSIA (2017) *2016 Global Sustainable Investment Review*, Global Sustainable Investment Alliance
- Hart, O., and Zingales, L. (2017) 'Companies Should Maximize Shareholder Welfare Not Market Value', *Journal of Law, Finance, and Accounting* 2: 247-274
- High Level Expert Group on Sustainable Finance (2018) *Financing a Sustainable European Economy*, Final Report, European Union
- Howard, J. (2016) 'Painting by numbers - the difficulties of measuring sustainability', *Market Insights*, Schroders, London
- Khan, M., G. Serafeim and A. Yoon (2016) 'Corporate Sustainability: First Evidence on Materiality', *Accounting Review*, 91(6): 1697-1724
- Lo, A. (2017) *Adaptive Markets: Financial Evolution at the Speed of Thought*, Princeton University Press, Princeton
- McCahery, J., Z. Sautner and L. Starks (2016) 'Behind the Scenes: The Corporate Governance Preferences of Institutional Investors', *Journal of Finance*, 71(6): 2905-2932
- Schoenmaker, D. (2017) *Investing for the common good: a sustainable finance framework*, Essay and Lectures Series, Bruegel
- Schoenmaker, D. and W. Schramade (2019) *Principles of Sustainable Finance*, Oxford University Press, Oxford, forthcoming
- Schramade, W. (2016) 'Bridging Sustainability and Finance: The Value Driver Adjustment Approach', *Journal of Applied Corporate Finance*, 28(2): 17-28
- Schramade, W. (2017) 'Investing in the UN Sustainable Development Goals: opportunities for companies and investors', *Journal of Applied Corporate Finance*, 29(2): 87-99
- Schumpeter, J. (1942) *Capitalism, Socialism and Democracy*, London, Routledge
- Statman, M. (2004) 'The Diversification Puzzle', *Financial Analysts Journal*, 60(4): 44-53
- Steffen, W., K. Richardson, J. Rockström, S. Cornell, I. Fetzer, E. Bennett, R. Biggs, S. Carpenter, W. de

Vries, C. de Wit, C. Folke, D. Gerten, J. Heinke, G. Mace, L. Persson, V. Ramanathan, B. Reyers and S. Sörlinet (2015) 'Planetary boundaries: Guiding human development on a changing planet', *Science* 347(6223): 736-47

Tulder, R. van (2018) 'Business & the Sustainable Development Goals: A Framework for Effective Corporate Involvement', *RSM Series on Positive Change* Volume 0, Rotterdam School of Management, Erasmus University Rotterdam

United Nations (2015) *UN Sustainable Development Goals (UN SDGs) - Transforming our world: the 2030 Agenda for Sustainable Development*, A/RES/70/1, New York

Van Nieuwerburgh, S. and L. Veldkamp (2010) 'Information acquisition and portfolio under-diversification', *Review of Economic Studies*, 77(2): 779-805

Yan, S., F. Ferraro, and J. Almandoz (2018) 'The rise of socially responsible investment funds: the paradoxical role of the financial logic', *Administrative Science Quarterly*, forthcoming