Sustainable Finance as a connection between corporate social responsibility and social responsible investing

Abstract

This paper, *Sustainable finance as a connection between corporate social responsibility and social responsible investing*, focuses on the development of terminology, concepts and instruments to introduce the concept of sustainable development into the financial practise and financial academic literature. Current developments on financial markets show an increasing interest for both socially responsible investments (SRI) and sustainable corporate responsibility (CSR). The primary goal of this study is the application of finance as a connection between CSR and SRI. The first part of this paper argues that finance urgently needs a 'sustainability approach' to connect the initiatives from the CSR companies with the investor preferences of the SRI capital market. This part is entirely devoted to the 'exchange syntax' of sustainable finance. The exchange syntax refers to the terminology of the distinguished sustainability concepts, their interconnections and the ethical values behind them. Traditional finance is used as a benchmark for describing new developments. The second part of the paper further develops the concept of sustainable corporate finance, defining it as a multi-attribute approach to finance the company in such a way that all of the company's financial, social and environmental elements are interrelated and integrated (see Soppe (2004)). The core elements are the mission statement of the company, the relevant ethical framework, assumptions on human behaviour and the finance choices on the ownership of the company. The latter aspect will be emphasized as the crucial element of sustainable (corporate) finance and a sustainable market economy.

Sustainable finance as a connection between corporate social responsibility and social responsible investing

Introduction

Where the finance literature of the 20th century focused on risk/return equilibriums (asset-pricing models such as CAPM, APT) and strict selfish human behaviour[1] (e.g. agency theory), the challenge of the coming decennia is on integrating management- strategic- and sustainability values into financial theory. The behavioural finance scholars have already extended the traditional finance assumptions on rational economic man. Richard Thaler, for example, in his acceptance speech upon receiving his honorary doctorate from the Erasmus University Rotterdam[2], expanded the assumptions on economic agents from rational behaviour to bounded rationality, from selfishness to bounded selfishness, and from willpower to bounded willpower. Even arbitrage was expanded to bounded arbitrage. All of these extensions from the strictly selfish behaviour of economic agents to a more enlightened form of human behaviour widen the research horizon beyond the neoclassical equilibrium models.

In this study, sustainability analysis is used as a strategic instrument in finance to improve societal welfare. An important point of departure is that sustainability and ethical values should be approached as regular strategic investment projects. Rather than aiming at the traditional discounted-cash-flow (DCF) method in finance, this study pursues a broader strategic investment approach. For example, Smit and Trigeorgis (2004) synthesise cutting-edge developments in corporate finance and related fields:[3]

> "The gap between finance and corporate strategy remains embarrassingly large, as academics and practitioners alike have recognised for some time now. The most important managerial decisions— in terms of both the size of expenditures and their impact on the future of the firm— are strategic decisions, yet they are the least well understood and often are made without the discipline of rigorous analysis' (p. 23, introduction)."

Sustainability in finance therefore, is interpreted as a strategic choice based on normative decisions regarding how to manage a company in the long run. Research on sustainable finance implicitly aims at filling the gap between finance and corporate strategy.

Sustainability as a societal phenomenon entered the economic literature many decades ago. Initially, sustainability was launched in the strict environmental interpretation during United Nations conferences in the 1970s and 1980s. Then, during the 1980s and the 1990s, sustainability gradually entered the business ethics literature and the management literature as an internal responsibility of corporations and management— designated as Corporate Social Responsibility (CSR). The literature offers many definitions to describe the CSR concept. Kakabadse, Rozuel and Davies (2005) present an extensive historical overview of the development of the concept of CSR, provide two tables with definitions[4] and describe the core elements. They classify CSR as a contribution of the business and civil society (Kakabadse et al., figure 2, p. 286) to the sustainable development of the economy, and refer to the well-known economic, social and environmental responsibilities of CSR companies. The above developments have one thing in common: the initiatives to improve the business climate are predominantly supply-driven. In other words, the company itself— or its stakeholders— want to redefine their goals and reorganise the production process into a more sustainable entity with broader goals than financial success alone.

In the discipline of finance, however, the process of sustainable development is primarily demand-driven. In capital markets, sustainability is initiated primarily by the rapidly growing market for socially responsible financial products. The roots of socially responsible investing (SRI) are difficult to trace exactly, but SRI presumably goes back to the 18th century in the US. Many religious investors, whose traditions embrace peace and non-violence, have actively avoided investing in certain kinds of enterprises, the so-called 'sin' stocks— alcohol, tobacco, weapons and gambling (Louche (2004)). In the 1960s, some major charitable institutions like the Ford Foundation and the Corporate Assistance Fund (founded by the Taconic Foundation) announced that ethical investments had become part of their philanthropic programme (Bruyn (1987)). Sparkes (2002) calls SRI a global revolution, the first handbook on CSR is launched - Blowfield and Murray (2008) – there are worldwide networks and conferences on CSR, but there is still an intensive discussion on the economic contribution of social responsibility to the economic process.

The primary research objective of this study is neither a specialised analysis of the above-mentioned socially responsible investments nor a specific study of corporate social responsibility. The literature on these two topics is already extensive. This paper focuses on the connection between these two theoretical concepts by developing the concept of sustainable finance. This study introduces sustainability in finance as the connecting concept between CSR and SRI. Financial markets connect the savings of households through financial institutions with business ideas in the real economic markets. This is accompanied by (asymmetrical) information problems in all (financial) markets and incentive problems at all levels of the production process[5]. The coming analysis is devoted to developing the arguments and pursuing the case that since market circumstances are changing, we therefore need new approaches of finance. Or, in terms of Currie (2005): there is a 'need for a new theory of economic reform'. She argued that the major reason for economic reform is the worldwide privatisation process and the inherent withdrawal of governments to effectuate social changes. Sustainable finance – as a connection between corporate social responsibility and social responsible investing - is one tool in that change process.

The next section first presents and develops the core sustainability concepts of this study: *sustainable development*, *sustainable corporate finance*, *sustainable market economy* and finally, *sustainable finance*. Then, the balance sheet of a traditional and a sustainable company is presented, in an attempt to portray the general transition old to new company perceptions. Subsequently, the sustainable finance concept is reconsidered to link all other concepts and represented in one graph to identify the sustainable company. The final section concludes.

Developing sustainability concepts

Sustainability in traditional finance is usually described in terms of sustainable growth rates or sustainable dividends. The sustainable growth rate is defined as the rate at which a firm can grow while keeping its profitability and financial policies unchanged (e.g. Palepu, Healy and Bernard (2000), Brealey and Myers (1991) or Weston and Copeland (1992)). The sustainable growth rates of general financial planning models aim at a stable risk and return for the owners of the residual risk of the company, and include financial variables only. More exactly, the sustainable growth rate g_s is a function of: the return on equity (ROE), the retention rate (1- payout ratio), the asset turnover (sales divided by total assets), the profit margin on sales and the financial leverage of a company. In other words, sustainability is defined in terms of a stable operational policy and a stable financial policy (leverage) for its owners, the shareholders. Traditional sustainable growth rates are defined in terms of shareholder wealth only. A lower payout ratio (thus, a higher retention rate), for example, increases the sustainable growth of the company. Retention of cash flows, in general, strengthens the financial resistance of the firm. Yet, an increase of the profit margin m, or higher leverage through an increase in the level of debt (higher L) also implies higher sustainable growth in traditional financial theory. This approach is consistent with the neoclassical assumptions on the behaviour of economic agents. In a stakeholders approach, however, both the increase of profit margin m, and higher leverage may be inconsistent with consumer- or creditor interests, for example.

The coming subsections will discuss the core elements of sustainable finance. First a general discussion on *sustainable development* is presented. Then the paper's three core sustainability concepts of finance are defined: *sustainable corporate finance*, *sustainable market economy* and finally *sustainable finance*.

Sustainable development

A widely used definition of sustainable development is the one established by the Brundtland Commission (Brundtland (1987) and generally accepted by the WCED 1987[6]. In that authoritative report, sustainable development is defined as, 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (p. 43). The commission referred to 'common concerns, common challenges and common endeavours', using these as the basis for proposals for institutional and legal changes. This academic endeavour was followed by a worldwide initiative of the global business society itself. Schmidheiny (1992) published a declaration of the business council for sustainable development— subscribed by 49 other captains of industry. All major topics were addressed: from the theoretical concept of sustainable development itself to complex topics such as the growth controversy, the pricing of the environment, the energy market, the role of the capital market and the influences of sustainable development on trade.

In recent years, lively discussions have taken place regarding the uniformity of the concept of sustainable development. Fergus and Rowney (2005a) reviewed the concept extensively and built a semantic framework of sustainable development in which the neoclassical economic model for business is an accepted, but not necessarily implemented, tool within the development of social relationships. The semantic roots, as identified by Lélé (1991)[7], were later extended by Fergus and Rowney within the context of an economical, ecological and social future direction of human progress. Implementing the neo-classical dominant paradigm, Fergus and Rowney finally identify 'sustaining growth' as an objective in itself. They argue that a definition, in general, is intended to clarify things in order to free us for action. But a definition can easily become a means of control— and that is what happened to the Brundtland definition of sustainable development. Fergus and Rowney (2005a) conclude that new insights and perspectives are necessary, reminding us that the neoclassical market approach is not necessarily the only context within which sustainable development can be attained.

Today, many countries and companies have embraced and implemented the concept of sustainable development at different levels. There is a growing understanding that sustainability is not the exclusive responsibility of one society, country or sector. Sustainability, in practice, constitutes a set of actions; sustainable development is therefore incremental and builds on what already exists. Boadi (2002) discusses three arguments in favour of sustainable development. First, there is the '*healthy environment*' argument, which emphasises the need to stop the environmental degradation caused by traditional economic development[8]. A second approach maintains that sustainability is a *holistic* concept that is based on the idea that the whole is greater than the sum of the parts. This is a powerful aspect of sustainability, but at the same time a major obstacle for progress, in practice. Sustainable development avoids the shortcomings of approaching social policy from the single perspective of the market-based economy. However, an integrated approach of economics, environment and social equity calls for a critical mass in favour of collective care; this is difficult (if not impossible) to obtain in a world that is evolving in the direction of individualism. Free riders, in particular, are endangering social cohesion. The third argument, used by Boadi to illustrate the necessity of sustainable development, is the inherent *promotion of equity*. Sustainability basically incorporates a two-dimensional commitment to equity: between present- and future generations, and between the rich and the poor of the world's population. Boadi argues that the art of sustainable development, from the perspective of the policymaker, is to ensure a fair distribution between the current costs and both current- and future benefits.

The sustainable development concept has also shortcomings. The concept is ambiguous and vague in some points, which makes policymaking more difficult. Further it attaches values to the environment that tend to disguise economic growth. This paper contributes to the sustainable development discussion by emphasising the role of financial markets and institutions in the sustainable economy. However, in order to avoid any further complication in terminology, I will stick to the generally accepted WCED definition of sustainable development as presented in the first paragraph of this section. Subsequent subsections will address the specific role of finance and financial markets.

Sustainable corporate finance

In this study on the connection between sustainable development and corporate finance, the CSR literature is used as a footing for the sustainable corporate finance concept. Although the financial policy of the firm is merely one aspect of its strategic decision-making, it is a crucial aspect. The major problem is that finance explicitly or implicitly interferes with all decisions in the firm. Orlitzky and Benjamin (2001) make a strong case that CSR is directly related to financial risk. Based on a meta-analysis of over 1200 US and international business- and trade journal articles from 1970 until 2000, they developed six hypotheses linking CSP (corporate social performance) to firm risk. A minority of the articles measured financial risk explicitly. However, those that were integrated quantitatively were separated according to the temporal order of measures taken: (a) prior CSP → subsequent risk, (b) prior risk → subsequent CSP, and (c) contemporaneous (cross-sectional) measures. They concluded that the empirical study supports the theoretical argument that the higher a firm's CSP, the lower its financial risk. More specifically, the relation between CSP and risk appears to be one of reciprocal causality, because prior CSP is negatively related to subsequent financial risk, and prior financial risk is negatively related to subsequent CSP. Additionally, CSP is more strongly correlated with measures of market risk than measures of accounting risk. Of all CSP measures, *reputation regarding social responsibility* appeared to be the most important one in terms of risk implications.

Taking into account the general relationship between CSR and financial risk as described above, it is important to develop an 'exchange syntax' to transmit sustainability developments into the (traditional) financial literature. The term *sustainable corporate finance* could be used as an example of such exchange syntax. In the academic literature, the term is hardly used. In former research, Soppe (2004), the concept is explored extensively. There, sustainable corporate finance (SCF) is defined in the conclusion as: '*a multi-attribute approach to finance the company in such a way that all the company's financial, social and environmental elements are interrelated and integrated*'. That paper further deduces sustainable corporate finance from traditional finance theory by identifying four criteria (building blocks) by which sustainable corporate finance distinguishes itself from traditional finance and behavioural finance. Through a closer look at a) the consisting elements of the 'theory of the firm', b) the assumed behaviour of the economic agents, c) the discussion on the ownership of the firm and d) the ethical framework of the company, the paper proposes an alternative financial policy. It is concluded that a sustainably financed company is a multi-attribute optimiser of goals, where short termism is replaced by a long term view. The assumptions of, and approach to, human behaviour are based on cooperation and trust, instead of purely selfish behaviour. The sustainable company, further, is one that is owned by a portfolio of stakeholders in a virtue-ethical/integrative-ethical framework. Figure 1 serves to illustrate the discussion on sustainability in finance that will be continued in later sections.

Figure 1: Building blocks of sustainable corporate finance

		TRADITIONAL	**BEHAVIOURAL**	**SUSTAINABLE**
Building block:				
1)	'Theory of the firm'; the company as:	Black Box	Hierarchic set of rules	Multi-attribute optimiser (Profit & People & Planet)
2)	Human nature actors	Selfish	Selfish and/or cooperative	Cooperative/trust
3)	Ownership paradigm	Shareholders	Shareholders	'Portfolio' of stakeholders
4)	Ethical Framework	Utilitarian	Duty ethical/ rule based	Virtue-ethical/ integrative

Source: Soppe (2004), p. 220.

Sustainable corporate finance is more or less automatically evolving from traditional and behavioural finance. The traditional neoclassical economic thinking of the post Second World War period is bashed by social changed for many decades now. As a result, behavioural finance is developed as the theoretical refinement of the traditional general equilibrium models. Sustainable finance, finally, extends the behavioural and pure financial goals of the company to a broader horizon than shareholders' interest alone.

Sustainable finance

The development of CSR and SRI are used as a footing for sustainable finance. After 25 years of development, the market of socially responsible investments for example, is reaching another stage. Although well-developed socially responsible markets are in evidence in the US, the UK and continental Europe, they are all applying their own style of social responsibility. SRI markets are emerging also in regions like Australia, Canada and Japan with their own specific characteristics. Sparkes (2002) asserts that the SRI development is so strong that we can expect the imminent begin of the global revolution. Despite its impressive growth in the last decades, SRI is still a niche market with limited power, compared to the regular worldwide financial markets. Also Haigh and Hazelton (2004) argue that social investments and shareholder activism, in their current form, lack the power to create significant corporate change. Shareholder advocacy has been largely unsuccessful to date, and the claim that SRI funds systematically outperform their regular peers will likely continue to occupy the attention of empirical researchers for the foreseeable future. The Haig and Hazelton paper is innovative in the SRI literature in the sense that they adopt a legitimacy framework to explain the continued presence of SRI funds. Both consumers and suppliers of SRI funds appear to be motivated by prospects other than mere superior returns. Many investors choose to direct only a small proportion of their investment monies into SRI funds, suggesting that SRI allows investors to 'alleviate their conscience' and legitimate their current holdings of more conventional investments. Also institutional legitimacy has been explored, and Smith (1990) argues that corporations (and by extension, capital markets) must find ways to legitimate their power by producing evidence that they can deal effectively with the externalities of capitalist production. Haigh and Hazelton (2004) suggest that the mechanism for solving the legitimacy problem of SRI funds is collective lobbying of corporations and, especially, governments.

This paper argues that the broader sustainable finance concept can lead to greater acceptance of behavioural approaches to the instabilities of financial markets. Despite the general acceptance of the sustainability concept in all scientific disciplines, the concept of sustainable finance has not yet captured the attention of the academic literature. Apart from the commercial[1] and institutional use[2] of the term on the Internet, only Jeucken (2004) has introduced and analysed the term in economic theory (without presenting a definition). His work focuses on the banking sector, and more specifically, identifies facets of the response of banks to sustainability issues. In that research, sustainability is primarily analysed in relation to financing risk and product development. However, just as finance embraces more than the banking sector, sustainable finance is broader than sustainable banking.

Finance is the connection between the markets of real goods and services, on the one hand, and the purely financial markets, on the other. Figure 2 distinguishes between two types of transactions: monetary transactions and real economic transactions.

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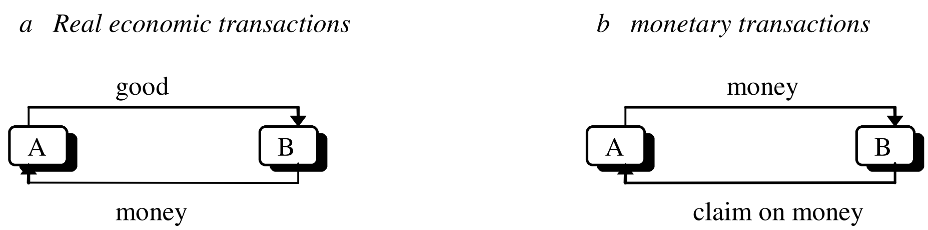
[1] See e.g. Sustainable Finance Limited (SFL): http://www.sustainablefinance.co.uk/aboutus/services.htm.
[2] See e.g. the site of the World Bank Group: http://www.ifc.org/ifcext/enviro.nsf/Content/SFMF.

Figure 2 The difference between monetary and real economic transactions



The crucial difference between the two types of transactions is that trust is more important in monetary transactions than in real economic transactions. In monetary transactions, both elements in the trade concern claims that cannot be consumed immediately. The possession of money is a claim in itself, and the other part of the monetary transaction is a *future* claim on money. Real economic transactions, however, deal with money, on the one hand, and an immediate delivery of services or physical goods, on the other. The time lag between the money and the claim of money makes financial transactions more vulnerable for moral hazard. It is concluded that trust is even more important in financial markets than in the real economic economy. Without trust, financial markets cannot perform at all.

Sustainable finance embraces the entire universe of SRI, CSR, sustainable banking and sustainable corporate finance. The following definition attempts to portray the concept:

> *Sustainable finance deals with institutional policies, or systems of analysis, where all financial decisions aim at a long term integrated approach to optimise a firm's social, environmental and financial mission statement*.

An essential element of the sustainable finance concept is the three-dimensional goal function, where finance is more of a restrictive variable than a goal in itself. In the market economy, financial viability and continuity are prerequisites for existence. But excellence and sustainability extend beyond these targets. The economy is there to sustain wealth and happiness, and not vice versa. Financial performance, as a goal in itself, can easily be used for the selfish aims of a single production factor (e.g. the provider of capital). In the sustainable finance concept, the word *shareholders* mean that the 'holder' owns a 'share' in the company— implying more than just a financial claim. Sharing is considered in this view as commitment to the firm's total performance, which also includes the social and environmental performance. The next section discusses the sustainable market economy and develops the argument that the allocation of ownership and responsibility could be distributed more equally among the stakeholders.

Sustainable market economy

A *sustainable market economy* is one step beyond the concept of sustainable finance. The term *sustainable market economy* will be rooted in a macroeconomic approach and connected to a modern version of the economic output model, with production factors as known from the classical microeconomic theory, mostly derived from David Ricardo (see e.g. Nentjes (1971), p.21-29).

$$Y = \mathbf{f}\,(C, L, N) \qquad [1]$$

In this concept, Y represents the *total production* (or income) of an economy, C represents the production factor *capital goods*, L is labour and N stands for *nature*, implying that the traditional factor *land/ground* is extended from a simple resource that can be exploited for production and consumption purposes only to *nature*, as a metaphor of the environment. The environment as a stakeholder as such is explicitly included in the production process. Also the government (by means of its collective production) is part of this production function. The factor *capital goods* represents the real economic accumulation of former savings. The reward of capital goods is usually called interest, and can therefore be interpreted as the representative of the financial capital (financial sector) in this model.

In order to explain the concept of the sustainable market economy, we must ask the following crucial question: who owns the corporate residual risk and return in the production process of the market economy? The current widely accepted answer is the shareholder, who is therefore also considered to be optimally suited to monitor the board and management (see Alchian and Demsetz (1972) and Berle and Means (1932)) and many more. There is also a lot of criticism on this so-called shareholder paradigm, see e.g. Stout (2002), Engelen (2002) and Boatright (1999). From the perspective of sustainable finance, we claim that, in terms of equation [1], it is an unbalanced position if it is C (the provider of just one production factor (capital)) that theoretically owns the residual returns alone. It is argued that in a sustainable economy the residual return of the company belongs to a portfolio of stakeholdes implying that the ultimate control of the company is distributed equally among all stakeholders in the economy. The interest of the production factors labour (L) and nature (N) are of equal importance for the total output in the economy and should (therefore) also bear the ultimate risk and returns of the total of activities of the economy.

Based on the theoretical work on transaction costs of Coase (1937) and the theory of the firm by Williamson (1979) and Williamson (1985), which provides the crucial background in the concept the sustainable market economy, is the notion that the transaction costs (in this case the cost assignment of ownership) should be as low as possible. Then, according to Hansmann (1996), the optimal owner of the residual risk is **dependent on the character of the market**. The theoretically optimal position is to assign ownership to that class of patrons for whom the problems of market contracting (that is, the costs of market imperfections) are most severe (p. 21). That policy should provide a natural motivation for that specific group of patrons to organise the production process in the most cost-efficient way. In other words, it is not a law of nature that shareholders, being the representatives of the production factor capital, are always optimally suited to take the ultimate residual risk and return position of the company. In Soppe (2008), applying the so-called stakeholder equity model, it is argued that there is no *a priori* reason to assume that it is always the shareholder that fits the role of residual risk and return position best. Historically, circumstances in the first part of the 20th century when capital was a scarce resource, suggest that the shareholders were optimally suited to own the residual risk. However, capital has become abundant in modern financial markets, which reduces the necessity of ownership exclusively by the providers of capital. Just as during the communist experiments in the former century, where labour dominated the decision control of companies, it is reasonable to expect that the dominance of capital today, in the very same production function, will also fail. Sustainability demands stable social relationships between capital, labour and nature.

Today, the global economy consists of a complex network of different stakeholders that all have their own (implicit or explicit) claim on the company resources. The modern market economy can be defined in terms of a stakeholder approach, see e.g. Freeman (1984) representing a broad approach and Clarkson (1995) favouring a more strict stakeholder concept, in which all stakeholders have equal interests in, and an equal claim on the total output of the economy. In an attempt to minimize agency costs and transactions costs in its broadest sense, the case is made that sustainable finance is a suitable vehicle to attain a stable stakeholder economy. For that purpose a company needs a clear mission statement aiming at multilevel company goals (see figure 1 the 5th column on the sustainable company). A sustainable market economy is now defined as:

> *A market economy in which all major stakeholders hold proportional financial responsibility for the residual risk of the company.*

In this definition, a sustainable market economy is dominated by companies in which a substantial amount of the issued equity of each of the companies (at least 51%) is sold to the major stakeholders of each company. The percentage of stocks held by internal stakeholders is called *stakeholders equity* (SE). In that model, the legal ownership of a company's residual profits (including the potential losses) is no longer only for 'pure' capital providers; legal ownership is shared also by shareholders that provide capital but also have other stakes in the company (e.g. employees, environmental NGOs or institutional investors with clear stakeholders interests). A broader group of stakeholders thus has greater interest in the firm and more responsibility— beyond their pure stakeholder interest[9]. The traditional shareholders, on the other hand, still get the same reward for investments (although the short-term higher expected return as a result of highly speculative projects may diminish), but lose monitoring power because ownership is now dispersed among the relevant stakeholders of the company.

In the sustainable market economy, therefore, corporate governance needs to be changed in the sense that a majority (at least) of the issued shares of the company is owned by the major stakeholders of the company, dependent on the magnitude of the stake of the relevant stakeholder in the turnover of the company. The above defined *stakeholders equity* (SE) aims at creating more corporate democracy and dispersion of shareholder's ownership of the company. In regular agency theory, the alignment of interests by providing the management with options and shares as part of their remuneration package is a well-accepted tool to lower agency costs. Sustainable finance extends this model to other stakeholders. In a sustainable financial system, agency relations cannot be restricted to shareholders and management alone. Other stakeholders have a similar financial claim on the company, dependent on the cash-flow involvement of each stakeholder. The ultimate goal of stakeholder's participation in equity capital of companies is to extend the planning horizon of the companies and in doing so creating a more responsible and sustainable market economy.

Figure 3 presents an overview of the different sustainability concepts as described in this section. It is important to note that the holistic concepts that are depicted are highly dependent on each other.

Figure 3: Summarising the sustainability concepts

	SUSTAINABLE CORPORATE FINANCE
	(inclusive CSR)
+/+	SOCIALLY RESPONSIBLE INVESTING (SRI)
+/+	SUSTAINABLE BANKING
=	**SUSTAINABLE FINANCE**
+/+	STAKEHOLDERS EQUITY
=	**SUSTAINABLE MARKET ECONOMY**
+/+	FUTURE GENERATIONS INTEREST
=	**SUSTAINABLE DEVELOPMENT****

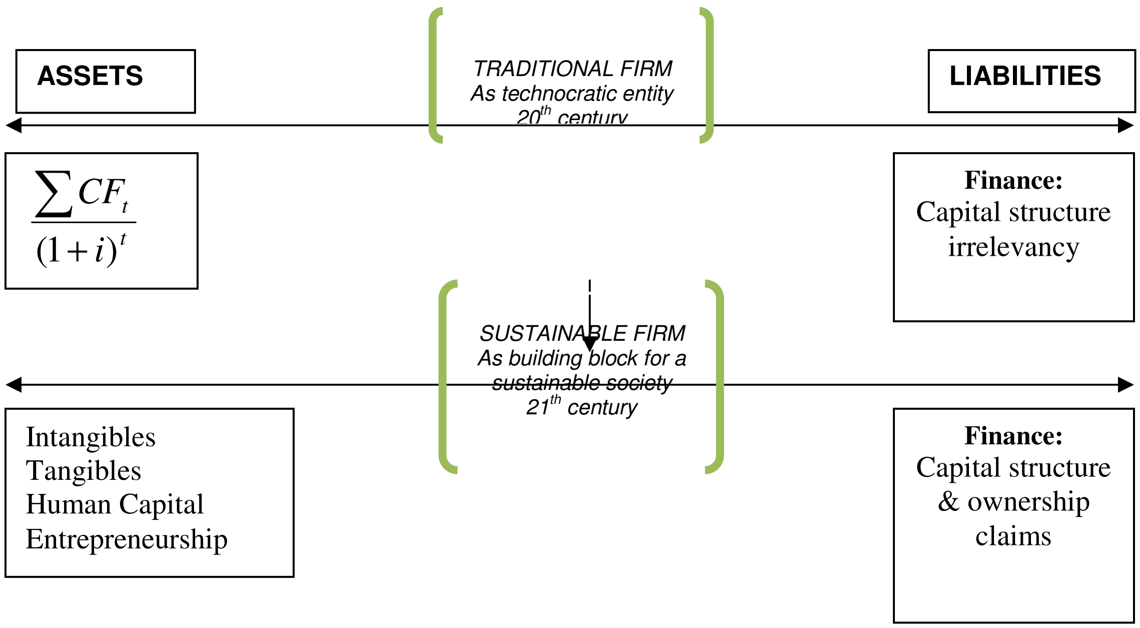
** In the figure above, the concept of sustainable development is positioned at the end of the aggregation. Nevertheless, it could just as well appear at the beginning. Sustainable development is a living concept, active in all levels of the terms portrayed.

The figure shows the linkage between sustainable corporate finance, sustainable finance and the sustainable market economy by adding well known concepts as CSR, SRI, sustainable banking and the new concept of stakeholder equity (SE). Sustainable finance is depicted in the middle of the economic process.

Implementing the sustainability concepts

In an attempt to implement the sustainability concepts into the balance sheet of a company, figure 4 now illustrates the balance sheets of two distinguished types of companies: the traditional company and the sustainable company. The upper part of the schedule defines the firm in the traditional neoclassic perception: the firm is perceived as a technocratic entity and as such is completely separated from the social process. The neoclassical finance approach proxies the value of the firm's assets (value of the firm) by calculating the present value of the expected future cash flow of the sum of all direct-investment projects. In that typical Friedman approach (Friedman (1970)), it is the government that is responsible for the social welfare of society, and firms (as laid down in their statutes) must simply maximise their economic efficiency in terms of profits.

Figure 4 The transition of balance sheets from traditional finance into sustainable finance



The strict positivistic approach of traditional finance to value the assets by estimating the expected value of future cash flow, should replace the burden of the accountants to value the assets of the firm at one specific point in time. This path-breaking insight was introduced by Modigliani and Miller (1958), and paved the way for their seminal capital structure irrelevancy hypothesis. In that view, the liability side of the balance sheet merely represents the capital structure; it is supposed to be important for the ownership structure (stocks and debt) of the firm, but is irrelevant for the value of the firm. The positivistic finance approach opposed and attacked the normative approach of the management accounting of that time (approximately 1960-70). In the period afterwards, research in management accounting also evolved from a purely normative accounting practice and 'a priori' research (Nelson (1973)) in the beginning, to a more objective decision-usefulness approach. Accounting-decision models then, according to Ryan, Scapens and Theobald (1992), encouraged the emergence of the empirical accounting approach and the positive accounting research. These days, the positivistic approaches dominate both finance and management accounting literature.

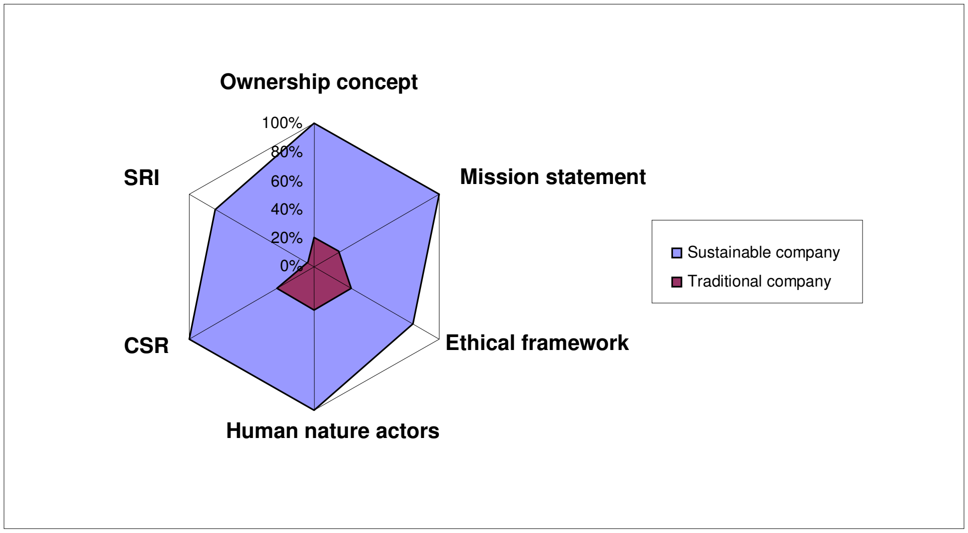
The lower part of the schedule represents the sustainable company. In that view, the stakeholders approach is applied and capitalised in the balance sheet. The assets of the firm are a reflection of human efforts in the past. Cornell and Shapiro (1987) have already proposed a balance sheet that includes implicit claims of various stakeholders (e.g. the value of human capital). Assets are no longer part of a technocratic project to produce the highest possible return, but are the result of specific stakeholder efforts from the past, and are valued in such a way that sustainable production is secured in the near future. The theoretical problem addresses the pricing of these implicit (moral) claims. However, a company that chooses to apply a sustainable financial policy makes an explicit choice to incorporate a broader definition of the goals of the company. Depending on the normative choice regarding the definition of the firm, the shareholders paradigm could be extended to a stakeholders approach. Such a choice, once made, will have severe consequences for the (financial) policy of the firm. More debt implies greater external monitoring power; more equity implies further agency conflicts between the shareholder and the board of a company. Within this perspective, it is hard to argue that the financial claim coming from the capital providers (stock- and debt holders) can be based on pure positivistic market analyses alone. A normative choice on who holds the ultimate risk and return is always implicitly there. This challenges us to develop a new terminology in finance as based on sustainability concepts.

Sustainable corporate finance again

After the description of the terminology and the sustainability syntax of this paper, it is time to return to the key question and title of the paper: how can sustainable finance be a connection between CSR and SRI? Considering the well-developed streams of literature on corporate social responsibility, on the one hand, and the literature on socially responsible investing, on the other, how are both research fields connected, and can the finance discipline contribute to sustainable development in economics. Let's return to the concept of sustainable corporate finance. SFC is built on four 'building blocks' (criteria). First in the row is the mission statement of the company. In the modern 'theory of the firm' it is acknowledged that a company needs a balanced position between all relevant stakeholders instead of approaching the company as a set of technocratic direct investment projects that are primarily generating cash flows. Reputational risk has become part of the company risk and financial risk. A company that is financed in a sustainable way makes a normative choice in the mission statement to ascribe an equal interest to all relevant stakeholders. The second building block concerns the assumed behaviour of the company's economic participants. Rather than assuming and encouraging agency relations, sustainable finance features cooperation and trust as the key elements for human behaviour. Stewardship relations could be encouraged, for example, by developing a remuneration policy where market salaries for CEOs are not just considered in relation to an international labour market for CEOs, but also in relation to nearby stakeholders of the company such as clients and other employees. A more sustainable solution at the company level could be a salary construction in which all company workers take relatively equal risk and responsibility for total company performance. The third essential element of sustainable corporate finance concerns the ownership of the company's equity. This study proposes the stakeholders' equity model, in which the major stakeholders of a company hold the majority of the company's equity. In that concept, the reduction of long-term governance costs should outweigh the potential increase of agency costs. The fourth and final building block of the concept of sustainable corporate finance is the assumed ethical framework. A company that is financed in a sustainable way builds on virtue-ethical and integrative human behaviour instead of the typical utilitarian approach in traditional financial theory.

Graph 1 represents the connection between sustainable finance, as defined in former sections, with the SRI and CSR concepts in literature. The radar chart scores the elements of corporate sustainable finance (as presented above): ownership concept, mission statement, ethical framework and assumed human nature of the economic subject together with the CSR and SRI concepts for both a traditional- and a sustainable company. The six axes of the graph represent the percentage of commitment that a company has to one specific element of sustainability. The ownership concept ranges from the pure shareholder model to the pure stakeholder model, the mission statement depends on the extent of explicitly referring to the three-layered company goal setting, the ethical framework diverges between strict act-utilitarianism up to a virtue ethical and integrity approach (Kaptein and Wempe (2002), and the assumed human nature of economic actors varies between strictly selfish behaviour to optimal stewardship relations. The CSR and SRI concepts are basically derived from similar values and stakeholder approaches. Graph 1 shows a theoretical example of a traditional and a sustainable firm, as represented by the chosen points on the six distinguished axes. The graph depicts a pure company perspective.

Graph 1 *Theoretical elements of the sustainable company **



* The axes of the graph represent the percentage of commitment that a company has to one specific element of sustainability. The ownership concept ranges from the pure shareholder model to the full dual stakeholder model, the mission statement depends on the level of explicitly referring to the three-layered company goal setting, the ethical framework diverges between strict act-utilitarianism until an integrity approach, and the assumed human nature of economic actors varies between strictly selfish behaviour to optimal stewardship relations. The CSR and SRI concepts derive from similar values and stakeholder approaches.

A CSR company, as generally portrayed in the literature, clearly approaches the market from a stakeholder perspective, which has immediate consequences for managerial policy (see e.g. Zakham (2008)). The intensity and the number of stakeholders that can be addressed vary between every company and sector. The percentage on the 'ownership concept' axis can therefore be positioned between 0% (pure shareholder model) to attention for shareholdership for just the environment and customers (say 50%) up share possessions of all relevant stakeholders, including the community (100%). The axis represents a theoretically continuous sustainability score. The mission statement of the CSR company is crucial in communicating a sustainable (finance) policy, but is as such an insufficient infrastructure to measure the company's performance from that perspective. Window dressing is a well-known phenomenon in e.g. environmental management control (see Parego (2005)) or in general reporting of CSR companies (Idowu and Towler (2004). However, communicating a triple bottom line is an intentional start and a crucial condition for stakeholder awareness and sustainable finance. Concerning the ethical framework, the traditional company differs from the CSR company in the sense that the organization's moral character changes from an amoral institution to a company that pursues organizational integrity as a necessary condition. The strictly utilitarian approach of the traditional company evolves via the more individual responsibility of the virtue-ethical approach to a communitarian approach of the CSR company. The ultimate sustainable company could be based on the integrity approach as proposed in the 'balanced company' of Kaptein and Wempe (2002). In that theory of corporate integrity, the company is considered an autonomous moral entity. Then there is the axis of the assumptions on the human nature of actors. Where all finance theory on the traditional firm is based on the assumptions underlying the agency theory (the strictly selfish behaviour of rational economic man), the sustainable company relies on a stewardship theory of management (Davis, Schoorman and Donaldson (1997). In stewardship theory, the model of man is based on a steward whose behaviour is ordered such that pro-organizational, collectivistic behaviours have higher utility than individualistic, self-serving behaviours. This model is the complete opposite of rational economic man. The 100% score of the CSR company on this axis is therefore merely a theoretical position assuming cooperative human behaviour of the economic agents involved instead of the selfish point of departure of human behaviour in the traditional company. Summarizing the CSR company, we find that this type of company, which distinguished itself from the traditional company, can be explicitly defined in terms of the building blocks of sustainable finance.

The SRI concept makes use of sustainable finance elements similar to the ones described above. Socially responsible investors are also searching for stakeholder care, sustainable mission statements, honourable governance relations and a cooperative attitude of economic subjects in general. SRI activities, however, are situated on the supply side of the capital markets. From the latter perspective it easily be seen that the CSR and SRI concepts have been developed relatively independently from each other. SRI is investor-driven; CSR is company-driven. Finance is by definition the connection between supply of financial instruments and the demand of companies for such products. Sustainable finance, therefore, is suitable for combining both strands of literature. A CSR company may use SRI capital, if it is available in the market— although this is not a necessary condition for sustainable finance.

Concluding remarks

Summarizing the question on the connection between CSR and SRI, we find that both theoretical approaches can be reduced to (at least one of) the building blocks of sustainable finance as represented on the axis of the above radar chart. Theoretically, a continuous spectrum of each element of sustainable finance is distinguished between the traditional firm and the sustainable firm. It is crucial to realize that finance decisions are the foundation of managerial policy in general. Funding a company's activities or deciding on the capital structure of the company implies structuring the control rights and establishing the monitoring positions. Within the limits of the legal conditions of a country, any participant of the economic process can freely develop corporate governance structures in a market economy. The ultimate answer, therefore, on the question of how finance can contribute to sustainable development in the economy can be found in the 'power of free choice'. Just as Hayek and Friedman already argued in classical economic thinking: freedom and morality are two sides of the same coin. In a free society, economic agents choose their own values, one of which could be sustainable finance. From a practical perspective, this could involve shareholders or boards of companies that decide that the mission statement of the company should explicitly refer to the interests of all production factors: capital, labor and the environment. From a scientific-theoretical perspective, the 'power of free choice' implies that sustainable finance deserves and requires more attention in the academic literature and in economic education. This study hopes to trigger that discussion.

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Endnotes;

[1] See chapter 2: Moral Economic Man, by Zsolnai, L., 2002.*Ethics in the economy*, Peter Lang, Bern.

[2] The ceremony took place on November 8, 2005 at the EUR, celebrating the university's 92nd *Dies Natalis*.

[3] They emphasise, in particular, the role of real options and game theory. Game theoretic approaches are fruitful in financial research because they allow more players (stakeholders) in the economic analysis, including future generations (the explicit option to wait).

[4] One table with definitions of CSR is based on academic research; the other contains definitions as produced by business and civil society's representatives.

[5] Especially the 'lemons' problem endangers a proper functioning of the capital markets. The lemons problem is based on Akerlof, G.A., 1970, *The market for 'lemons'; Qualitative uncertainty and the market mechanism,* Quarterly Journal of Economics*,* 84, pp. 488-500. Akerlof basically argues that due to asymmetrical information general market prices are always overvalued because low-quality suppliers get the same market price as high-quality suppliers. This encourages suppliers with low morality to enlarge the business at the expense of highly moral suppliers, endangering the necessary trust in financial markets. See also Gresham's law: 'bad money always drives out good money'.

[6] The term 'sustainable development' was popularised by the World Commission on Environment and Development (WCED) in its 1987 report entitled Our Common Future.

[7] The literal meaning of 'sustain' is: *to maintain or to prolong*; 'develop' means: *to build on or change the use of*. Lélé (1991) described these words as 'contradictory and trivial,' p.608. Fergus and Rowney therefore conclude that the context itself is crucial in providing a meaning.

[8] Because the environment is not a priced stakeholder in the traditional finance concept, there is an economic impulse to externalise these costs, which deteriorates the quality of the environment.

[9] See Soppe, A.B.M., 2008, *Sustainable finance and the stakeholder equity model*, in Chris Cowton, and Michaela Haase, eds.: Trends in business and economics ethics (Springer Verlag, Berlin), pp.199-228.