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The Financial Sector and Sustainable Development:

Logics, principles and actors

Umberto Pisano, André Martinuzzi & Bernulf Bruckner

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The **European Sustainable Development Network** (ESDN) is an informal network of public administrators and other experts who deal with sustainable development strategies and policies. The network covers all 27 EU Member States, plus other European countries. The ESDN is active in promoting sustainable development and facilitating the exchange of good practices in Europe and gives advice to policy-makers at the European and national levels.

ESDN Quarterly Report 27 – December 2012

The Financial Sector and Sustainable Development
Logics, principles and actors

by

Umberto Pisano, André Martinuzzi & Bernulf Bruckner

This ESDN Quarterly Report (QR) offers insight into the relationships, linkages, and differences between the financial sector and sustainable development. Although we recognise the vastness of the task, which is mainly caused by the complexity of the financial sector, we try to provide an explanatory journey and a fertile environment for further reflections and discussions, especially where linkages and differences with sustainable development are portrayed. Despite this complexity, this QR tries to communicate the main financial notions in a language that is as simple as possible, with the intention of avoiding an overload of technicalities. The QR does not aim to be exhaustive, but should uncover those links that are particularly relevant for sustainable development and SD governance. The report is based on the Discussion Paper of the 8th ESDN Workshop, which it expands in all chapters that are also informed by the debates at the workshop and additional desk research.

The QR is structured into four main sections: an introduction, two main chapters, and a conclusive section. At the end, a reference list and two annexes are also provided. The brief introduction is a short overview, outlining the essential points that are touched upon throughout the Quarterly Report. In the first chapter, the objective is to describe the main features of the financial sector, its logic, its actors, and its main institutions, also reflecting upon its linkages with the real economy. The second chapter then introduces the concept of sustainable development and describes the so-called sustainable development principles that help to operationalize such a concept. The main differences with the financial sector are, therefore, analysed together with possible ways of intervention in order to close the gaps between them. Special attention is then attributed to the potentials to enable sustainable development financing. Finally, some conclusions are drawn at the end of the report where we also propose reflections and points for discussion. In the course of writing this report, we developed a Framework for Sustainable Development and the financial sector where we defined six SD principles and compared them with the logic of the financial sector (please see page 27). In Annex I, we provide a Glossary with the most important terms and concepts around the financial sector that should help readers with short and precise explanations. Two interviews with Professor Stefania Rossi (University of Cagliari, Italy) and Alexander Welzl (senior researcher at Economica, Austria) about recent developments in the financial sector and links to sustainable development can be found at the end of the report in Annex II and III.

Contents

Introduction

The current situation and challenges

Currently, the global debate about financial reforms is very much ongoing. Recent developments, like the Euro crisis, the financial and economic crisis, dramatic cuts in public budgets etc., seem to suggest that the current set up of financial markets is no longer adequate in economic, social, and political terms, neither in a short- nor in a long-term perspective, e.g.: the financial system increasingly dominates other parts of the economy; the financial crisis of 2007-08 led to a dramatic reduction in the credit available for individuals, businesses, and governments; the subsequent reduction in consumer spending, government expenditure, and business investment has had a major impact on economic growth and employment (Hewett, 2012); pressure is mounting by the countries' anxiousness of being downgraded on their credit-worthiness by global rating agencies. This also led to intensive discussions in which policy areas to cut budgets, and these developments, in general, put pressure on sustainable development policy and sustainable investment, production, and consumption activities. At the same time, it is increasingly obvious that the sustainable development of the economy and society creates a crucial and fast growing demand for adequate financing and functional financial instruments and markets, and is a substantial and crucial area in which to apply sustainable finance and financial market policy. For instance, the challenges and incentives for companies, consumer households, and public authorities to internalize negative externalities have become a central issue when integrating SD considerations into investment and management decisions (UNEP Finance Initiative, 2007).

The report and its links with the ESDN 2012 Workshop

This report is mainly based on the contents and structure of the discussion paper written for the 8th ESDN Workshop which was held in Brussels in November 2012. The workshop intended to scope the mechanisms and operational design of financial markets, explore the functional and dysfunctional aspects from an SD perspective and, on this basis, develop concrete fields of action for SD policy related to financing, financial markets, and finance governance. The outcomes and discussions of the workshop have been included in this report, as it maintains the intention to provide an orientation for SD policy-makers in the debate around the financial markets and future policy options in their administrations. Together with these themes, the report also takes advantage of and incorporates the topics previously explored by two ESDN case studies that considered, on the one hand, "Barriers and opportunities for taking a long-term perspective in the financial market" and, on the other hand, reflected on "Sustainable investment: options for a contribution to a more sustainable financial sector".

The report's structure

The report is divided in two main chapters. After this introductory section, the first chapter offers an overview of the financial sector, what it provides for the economy, and how this plays out in practice. Therefore, the logic and concepts of financial markets, different financial institutions and the main actors of the financial sector are outlined, together with links to the real economy. In the second chapter, we discuss various

sustainable development principles and what they imply for policy-making in general, as well as relations with the financial market in particular. The chapter continues with an analysis of the main differences between the financial markets and sustainable development, presents various interventions on the financial sector that could help reducing the distances between the two arenas, and introduces the theme of financing sustainable development. A concluding section follows, together with a reference list, and a glossary of most important terms in Annex I. Finally, annex II and III represent two interviews with researchers with the intention of providing more insights and adding more perspectives on the topic.

1. The financial sector and the 'real' economy

Chapter in brief:

- An efficient financial sector is essential to a well-functioning economy: it allocates capital and manages risks in an efficient way.
- The logic of the financial sector is one-dimensional and mainly related to the maximization of financial profits and, especially, to return on investment.
- The financial sector is formed by the different financial markets and the various financial institutions.
- Financial markets are those in which financial assets (securities) can be purchased or sold; they facilitate the flow of funds and, thereby, allow financing and investing. Five financial markets can be distinguished: commodity market, money market, capital market, currency market, and derivatives market.
- Financial institutions provide financial services for their clients and can be differentiated into depository and non-depository institutions.
- To understand the links with the 'real' economy, important issues are to understand how capital is allocated or invested, what reasons determine the decisions over an investment, and which investments are preferred.

1.1. The financial sector and its logic

Financial sector: allocate capital, manages risks, efficiently.

An efficient financial sector is essential to a well-functioning economy. Therefore, it should serve in improving the efficiency of the economy as well as increasing its productivity. In other words, it should be a means to the real economy. The financial sector (or system) has, in general, a very straightforward set of tasks: Firstly, it has to **allocate capital**, i.e. making sure that capital goes to areas where its return is highest. Secondly, it should **manage risks** in a way that, using the ability to absorb risk, it allows capital to go where higher return on investments can be made. Thirdly, it is also supposed to **perform these tasks efficiently** - therefore, at a relatively low cost (Stiglitz, 2010)[1].

The logic

The logic behind the financial sector is one-dimensional and mainly related to the **maximization of financial profits** and, especially, to the **return on investment**. Understood as the net profit over the investment made, the return on investment is the main concern for financial markets. This is also related to a very short time frame in which the **pursuit of short-term profits** – or immediate gain as close as possible to the present time – is also a crucial feature of financial sector logic. A distinctive characteristic of financial markets is the goal of managing risks and **dealing with uncertainty**. To give an example: thanks to financial markets, businesses make use of the so-called hedging

[1] Joseph Stiglitz's final keynote lecture at the Sustainable Business Series, Edinburgh International Book Festival. (see also: http://www.youtube.com/watch?v=_SfjQl7L-74).

practice, which represents a risk management strategy used in limiting or offsetting probability of loss from fluctuations in the prices of commodities, currencies, or securities[2]. This example shows an extremely important service that financial markets provide to the real economy, namely managing risks, avoiding high losses, and allowing smoother operations. Conversely, it is also true that since higher risks leads to higher profits, if someone is not averse to risk, he/she will accept the possibility of losing the investment for a larger return. This also leads to the possibility that individuals in the financial sector who are tempted by larger profits might lose their ability to assess risks.

Another important aspect of the logic of the financial sector is linked to the risk feature we described above, and concerns the evidently inappropriate remuneration structures of some financial institutions. These so-called "**bonuses**" have been a contributory factor of **excessive and imprudent risk-taking** in the financial sector, and, as outlined in the EU's Directive 2010/76/EU (on capital requirements for the trading book and for re-securitisations, and the supervisory review of remuneration policies), this partially led to the failure of individual financial institutions, and then to systemic problems. It is argued in this Directive that remuneration policies that give incentives to take risks can undermine sound and effective risk management and exacerbate excessive risk-taking behaviour. For instance, as pointed out by Sheng (2011) "[s]ince wages and bonuses make up between 30 to 70 per cent of financial sector costs, there are tremendous incentives to generate short-term profits at higher risk".

The financial sector is also highly technical and employs well-prepared and well-paid specialists that work constantly in an extremely competitive environment. Global opportunities, speed, and the need for information are also important features of the sector. Finally, another important feature of the financial sector that cannot be neglected regards the role of debt creation, which assumes constant and continuous growth of the economy.

1.2. The financial sector: financial markets, institutions and key actors

Financial markets

The financial sector is formed mainly by financial markets and financial institutions. A financial market is a market in which financial assets (securities), such as stocks and bonds, can be purchased or sold. Funds are transferred in financial markets when one party purchases financial assets that were previously held by another party. **Financial markets facilitate the flow of funds** and thereby **allow financing and investing** by households, firms, and government agencies (Madura, 2011). In other words, financial markets are crucial in promoting greater economic efficiency, by channelling funds from people who do not have a productive use for them to those who do. Indeed, well-functioning financial markets are a key factor in producing high economic growth

[2] http://www.businessdictionary.com/definition/hedging.html

(Mishkin and Eakins, 2012).

Households and businesses that supply funds to financial markets earn a **return on their investment**; the return is necessary to ensure that funds are supplied to the financial markets. If funds were not supplied, the financial markets would not be able to transfer funds to those who need them. Those participants who receive more money than they spend are referred to as **investors** (or surplus units). Those participants who spend more money than they receive are referred to as **borrowers** (or deficit units).

Securities represent a claim on the issuer's future income or assets

Many borrowers, such as firms and government agencies, access funds from financial markets by issuing securities. Also called financial instruments, **securities represent a claim on the issuer's future income or assets** (any financial claim or piece of property that is subject to ownership). Issuing securities enables corporations and government agencies to obtain money from surplus units and thus to spend more money than they receive from normal operations.

Different financial markets

In the financial sector, there are **different financial markets** that are "created to satisfy particular preferences of market participants" (Madura, 2011). Financial markets can be classified in different ways and, therefore, their number can vary. We distinguish between **five financial markets**, as these five seem widely acknowledged in the literature: (1) commodity market, (2) money market, (3) capital market, (4) currency market, and (5) derivative market.

(1) Commodity market

A commodity is defined by the New Oxford American Dictionary as a raw material or primary agricultural product that can be bought and sold (i.e. copper or coffee). Therefore, commodity markets are **markets where raw or primary products are exchanged**. These raw commodities are traded on regulated commodities exchanges, in which they are bought and sold in standardized contracts.

(2) Money market

Money market securities are **short-term instruments with an original maturity of less than one year**. These are financial instruments with high liquidity and very short maturities. Money market securities are used to "warehouse" funds until needed. The returns earned on these investments are low due to their low risk and high liquidity (Mishkin and Eakins, 2012).

(3) Capital market

The capital markets exist to **provide financing for long-term capital assets**. Households, often through investments in pension and mutual funds, are net investors in the capital markets. Corporations and the federal and state governments are net users of these funds. The three main capital market instruments are **bonds**, **stocks**, and **mortgages**.

When referring to money market securities or capital market securities, it is important to distinguish between the notions of **primary** and **secondary markets**, essentially because the transactions in the primary market and the transactions in the secondary market are

fundamentally different. **Primary markets** facilitate the issuance of new securities and provide funds to the initial issuer of securities (for instance the issuance of new corporate stock or new Treasury securities is a primary market transaction). **Secondary markets** facilitate the trading of existing securities, which allows for a change in the ownership of the securities; hence, these are financial markets in which securities that have been previously issued can be resold (for instance, the sale of existing corporate stock or Treasury security holdings by one investor to another is a secondary market transaction).

(4) Currency market

For funds to be transferred from one country to another, they have to be converted from the currency in the country of origin into the currency of the country they are going to. The currency market or foreign exchange market is **the financial market where exchange rates are determined**. The foreign-exchange markets underpin all other financial markets. They directly influence each country's foreign-trade patterns, determine the flow of international investment, and affect domestic interest and inflation rates. They operate in every corner of the world, in every single currency. Collectively, they form the largest financial market by far (Levinson, 2006).

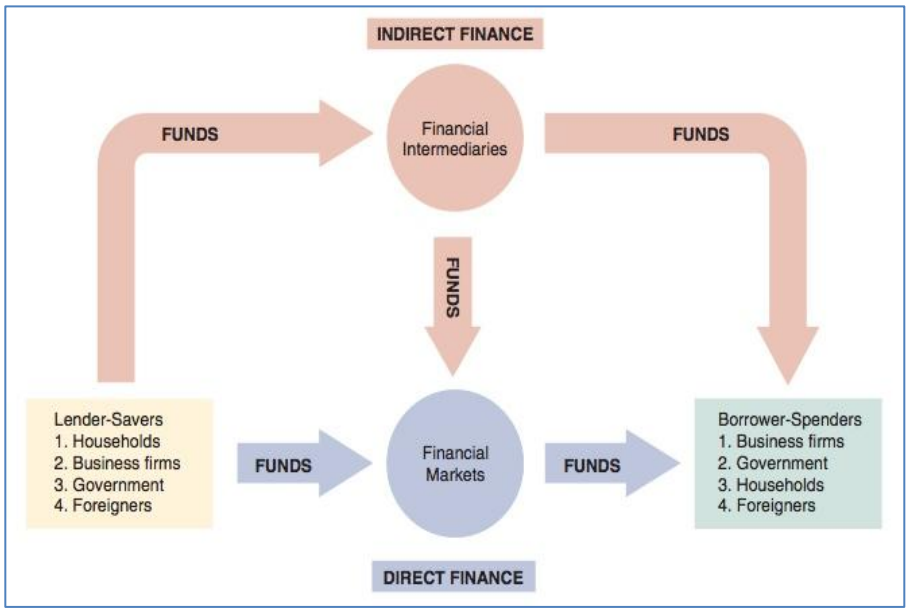
(5) Derivatives market

A market for derivatives is also in place and is very important. Derivative securities are **financial contracts whose values are derived from the values of underlying assets** (such as debt securities or equity securities) and are extremely useful risk-reduction tools. Financial derivatives are so effective in reducing risk because they enable financial institutions to **hedge**, which means *to engage in a financial transaction that reduces or eliminates risk*. The most important financial derivatives that are used to reduce risk are forward contracts, financial futures, options, and swaps.

Direct finance and indirect finance

The flows in the financial system are shown in Figure 1 below. Those who have saved and are lending funds (**lender-savers**), are at the left, and those who must borrow funds to finance their spending (**borrower-spenders**), are at the right. Usually, the main lender-savers are households. On the other hand, the most important borrower-spenders are businesses and the government. The arrows show that funds flow from lender-savers to borrower-spenders via two routes. In what is called direct finance, borrowers borrow funds directly from lenders in financial markets by selling them securities (also called financial instruments), which are claims on the borrower's future income or assets. However, funds also can move from lenders to borrowers by a second route, so-called indirect finance (Mishkin and Eakins, 2012), which involves a financial intermediary that stands between the lender-savers and the borrower-spenders and helps transfer funds from one to the other. A financial intermediary does this by borrowing funds from the lender-savers and then using these funds to make loans to borrower-spenders. The process of indirect finance using financial intermediaries, called financial intermediation, is the primary route for moving funds from lenders to borrowers.

Figure 1: "Flows of Funds Through the Financial System"



Source: Mishkin and Eakins (2012)

Financial intermediaries and institutions

Although the media focus much of their attention on securities markets, particularly the stock market, **financial intermediaries** are a far more important source of financing for corporations than securities markets are. Financial intermediaries play an important role in the economy because they provide liquidity services, promote risk sharing, and solve information problems, thereby allowing small savers and borrowers to benefit from the existence of financial markets. Additionally, financial intermediaries play a key role in improving economic efficiency because they help financial markets channel funds from lender-savers to people with productive investment opportunities. Without a well-functioning set of financial intermediaries, it is usually argued that it would be very hard for an economy to reach its full potential. Also in this case, many distinctions can be made. Therefore, the more encompassing notion of **financial institution** is helpful because it allows being more inclusive and containing the financial intermediaries as well. Financial institutions, institutions that provide financial services for its clients or members, can be divided into:

1. **Depository institutions** (e.g. commercial banks, savings institutions, credit unions) that obtain funds mainly through deposits from the public; and,
2. **Non-depository institutions** (e.g. finance companies, mutual funds, securities firms, insurance companies, pension funds) that finance their investment activities from the sale of securities or insurances.

In aggregate, **commercial banks** are the most dominant depository institution. They serve investors by offering a wide variety of deposit accounts, and they transfer deposited funds to deficit units by providing direct loans or purchasing debt securities. Commercial banks serve both the private and public sectors, as their deposit and lending services are utilized by households, businesses, and government agencies.

Savings institutions, which are sometimes referred to as thrift institutions, are another type of depository institution. Savings institutions include savings and loan associations (S&Ls) and savings banks. Like commercial banks, S&Ls offer deposit accounts to investors and then channel these deposits to borrowers. Whereas commercial banks have concentrated on commercial loans, however, S&Ls have concentrated on residential mortgage loans.

Credit unions differ from commercial banks and savings institutions in that they (1) are nonprofit and (2) restrict their business to the credit union members, who share a common bond (such as a common employer or union). Because of the common bond characteristic, credit unions tend to be much smaller than other depository institutions. They use most of their funds to provide loans to their members.

Most **finance companies** obtain funds by issuing securities and then lend the funds to individuals and small businesses. The functions of finance companies and depository institutions overlap, although each type of institution concentrates on a particular segment of the financial markets.

Mutual funds sell shares to investors and use the funds received to purchase a portfolio of securities. They are the dominant non-depository financial institution when measured in total assets. Some mutual funds concentrate their investment in capital market securities, such as stocks or bonds. Others, known as money market mutual funds, concentrate in money market securities. By purchasing shares of mutual funds and money market mutual funds, small savers are able to invest in a diversified portfolio of securities with a relatively small amount of funds.

Securities firms provide a wide variety of functions in financial markets. Some securities firms use their information resources to act as a broker, executing securities transactions between two parties.

Insurance companies provide individuals and firms with insurance policies that reduce the financial burden associated with death, illness, and damage to property. They charge premiums in exchange for the insurance that they provide. They invest the funds that they receive in the form of premiums until the funds are needed to cover insurance claims. Insurance companies commonly invest the funds in stocks or bonds issued by corporations or in bonds issued by the government. In this way, they finance the needs of borrowers and thus serve as important financial intermediaries.

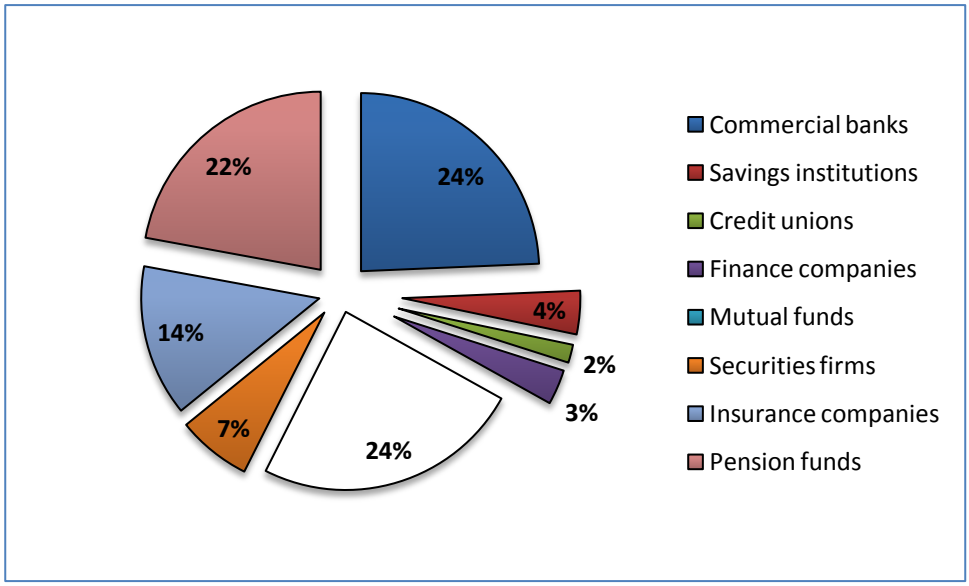
Many corporations and government agencies offer pension plans to their employees. The employees, their employers, or both periodically contribute funds to the plan. **Pension funds** provide an efficient way for individuals to save for their retirement. The pension

funds manage the money until the individuals withdraw the funds from their retirement accounts. The money that is contributed to individual retirement accounts is commonly invested by the pension funds in stocks or bonds issued by corporations or in bonds issued by the government. In this way, pension funds finance the needs of borrowers, and thus serve as important financial intermediaries.

Figure 2 illustrates the relative sizes of the different types of financial institutions, based on assets from the point of view of the United States of America. The percentage for each type of financial institution indicates its proportion of the total dollars in assets held by all financial institutions in the USA. Together, all of these financial institutions hold assets equal to about 46 trillion dollars. Commercial banks hold the largest amount of assets of any depository institution. They have $11.2 trillion in assets, representing 24 percent of the total assets held by all financial institutions. Mutual funds hold the largest amount of assets of any non-depository institution. They have about the same amount of assets as commercial banks. Pension funds have about $10 trillion in assets, or about 22 percent of all assets held by financial institutions.

Figure 2:

Relative size of financial institutions for USA (% of assets in dollars)[3]



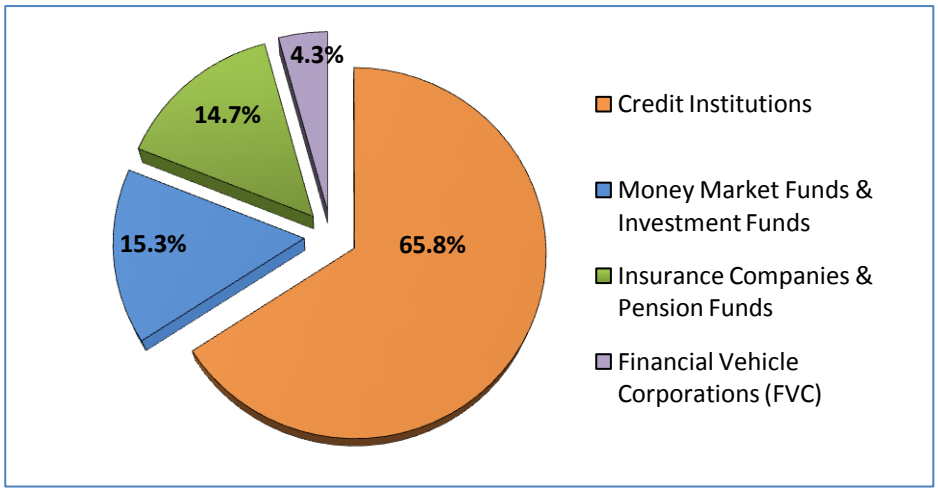
A European perspective

In the European Union, the European Central Bank (ECB)[4] maintains lists of the following three groups of institutions, based on information provided regularly by all members of the European System of Central Banks (ESCB): 1) Monetary financial institutions; 2) Investment funds; 3) Financial vehicle corporations. Therefore, in EU, definitions for financial institutions are slightly different than USA, but with the intent of providing a similar outlook of their sizes (as we did for the USA), we grouped them in four categories: a) Credit institutions; b) Money market funds & Investment Funds; c) Insurance Companies and Pension Funds; d) Financial Vehicle Corporations (FVC).

[3] Adapted from Madura (2011); data from the Board of Governors, Federal Reserve System (2009)
[4] See also: http://www.ecb.europa.eu/stats/money/mfi/html/index.en.html

Figure 3:

Relative size of financial institutions for EU (% of assets in euros)[5]



As can be seen from Figure 3, the relative sizes of the different types of financial institutions, based on assets, provide an overview from the point of view of the European Union. Altogether, European financial institutions hold assets equal to about 50 trillions of Euro. Credit Institutions hold almost two thirds of the total with the largest amount of assets that equals about 33 trillions of euro.

Actors on the financial markets

There is a range of actors that play a crucial role in the financial sector. Although our viewpoint is more directed towards the European Union, some international actors will be also outlined to signify the strong global inter-linkages that characterize the financial sector.

The ECB has to maintain price stability

The **European Central Bank (ECB)** is the main bank for Europe's single currency, the Euro. The ECB was established as the core of the Euro system and the European System of Central Banks (ESCB) with the primary objective of maintaining price stability through influencing money market conditions and steering short-term interest rates. In other words, the ECB controls both the supply of money (i.e. quantity of money) and its price (i.e. the interest rate).

ESCB, Eurosystem

Together with the European Central Bank, two systems are in place in the European Union: 1) the **European System of Central Banks** (**ESCB)** comprises the ECB and the national central banks (NCBs) of all EU Member States whether they have adopted the euro or not; and, 2) the **Eurosystem** is also in place, and comprises the ECB and the NCBs of those countries that have adopted the euro. The **EU national central banks (EU NCBs)** are also part of this system. They are owned by their respective states but are independent by their constitutions.

[5] Own elaboration; data from ECB, 2012

ESM

Recently entered into force in September 2012, the **European Stability Mechanisms** (ESM)[6] has been defined as the "cornerstone of the European firewall and an integral part of the strategy to ensure financial stability in the euro area". The ESM is an inter-governmental institution, based in Luxembourg, set up to provide financial assistance to Eurozone Member States experiencing, or being threatened by, severe financing problems, if this is indispensable for safeguarding financial stability in the Euro area as a whole.

IMF

Another important actor is the **International Monetary Fund** (IMF) with its near-global membership of 188 countries. The IMF supports its membership by providing: (i) policy advice to governments and central banks; (ii) research, statistics, forecasts, and analysis; (iii) loans to help countries overcome economic difficulties; (iv) concessional loans to help fight poverty in developing countries; and (v) technical assistance and training to help countries improve the management of their economies.

Rating Agencies and the 'Big Three'

Since 1975, starting in the USA, a few laws and regulations (i.e. Gramm–Leach–Bliley Act of 1999; Sarbanes–Oxley Act of 2002; Credit Rating Agency Reform Act of 2006) gave rating agencies a very important role in the financial sector[7]. A **credit rating agency** (CRA) is a company that is in the business of rating the credit worthiness of debt. It does so by rating issuers of debt obligations and also by rating the debt instruments themselves. Credit ratings are meant to provide easy-to-use measurements of relative credit risk so that investors can make informed choices. The idea is to facilitate transactions and lower costs for both borrowers and lenders. As a matter of fact, the above mentioned laws 'forced' public authorities to ask for the rating of at least one of the so-called 'Big Three' credit rating agencies: Standard & Poor's, Moody's Investor Service, and Fitch Ratings. Moody's (40%) and S&P (40%) control 80% of the market. Third-ranked is Fitch Ratings that has about a 14% market share[8]. The remaining 6% of the market is shared by approximately one hundred smaller agencies.

US Federal Reserve

In this array of actors, **national banks of major and powerful countries** also have an important part in the financial sector, such as the US Federal Reserve. The **US Federal Reserve System** (also known as the Federal Reserve, and informally as the **Fed**) is the central banking system of the United States. The Congress established three key objectives of its monetary policy: (1) maximum employment, (2) stable prices, and (3) moderate long-term interest rates.

[6] see also: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/132734.pdf
[7] See also: Wall Street Journal, 2009 at: http://online.wsj.com/article/SB123976320479019717.html
[8] http://www.fairobserver.com/360theme/credit-rating-agencies

The World Bank

Another key international actor is the **World Bank Group**, which was conceived in 1944 to reconstruct war-torn Europe, and has evolved into one of the world's largest sources of development assistance, with a mission to fight poverty by helping people to help themselves. The World Bank Group is formed by five institutions, but only two form the World Bank[9]:

1. the International Bank for Reconstruction and Development (IBRD), which lends to governments of middle-income and creditworthy low-income countries; and,
2. the International Development Association (IDA), which provides interest-free loans (also called credits) and grants to governments of the poorest countries.

G-SIFIs

In terms of crucial actors in the financial sector, a last mention goes to the so-called **Global Systematically Important Financial Institutions (G-SIFIs)[10]**, which are financial institutions whose distress or disorderly failure (because of their size, complexity, and systemic interconnectedness) would cause significant disruption to the world's wider financial system and economic activity. In November 2011 the Financial Stability Board published an integrated set of policy measures to address the systemic and moral hazard risks associated with systemically important financial institutions (SIFIs). In that publication, the FSB identified an initial group of G-SIFIs, namely 29 global systemically important banks (G-SIBs), using a methodology developed by the BCBS. The FSB and the standard setting bodies are extending the SIFI framework to other systemically important financial institutions, and they have updated the list first developed in November 2011 which included 29 financial institutions as the G-SIFIs: four were Asian (3 JP and 1 CHN), eight from USA, four from France, four from the UK, two from Germany, two from Switzerland, and one respectively from Belgium, Italy, Netherlands, Spain, Sweden. In the updated list, two banks have been added (BBVA and Standard Chartered) and three banks removed: Dexia, as it is undergoing an orderly resolution process; Commerzbank, and Lloyds, as result of a decline in their global systemic importance[11].

Box 1: List of 28 G-SIFIs in alphabetical order

(adapted from FSB, 2012)

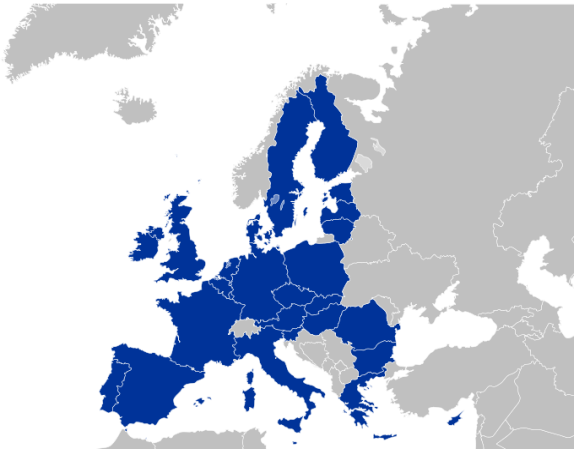
Bank of America	*JP Morgan Chase*
Bank of China	*Mitsubishi UFJ FG*
Bank of New York Mellon	*Mizuho FG*
Barclays	*Morgan Stanley*
BBVA	*Nordea*
BNP Paribas	*Royal Bank of Scotland*
Citigroup	*Santander*
Credit Suisse	*Société Générale*
Deutsche Bank	*Standard Chartered*
Goldman Sachs	*State Street*
Group Crédit Agricole	*Sumitomo Mitsui FG*
Groupe BPCE	*UBS*
HSBC	*Unicredit Group*
ING Bank	*Wells Fargo*

[9] The International Bank for Reconstruction and Development / The World Bank. 2011. A guide to The World Bank. 3rd ed.
[10] See also: http://www.financialstabilityboard.org/publications/r_111104bb.pdf
[11] See also: http://www.financialstabilityboard.org/publications/r_121031ac.pdf

To give an idea of their magnitude, power and relevance, we provide hereby two examples. First, **Deutsche Bank** holds **assets** for more than **$2,844 billion** (Forbes, 2012)[12], which is a little **higher than the sum of the national GDPs of Spain, Portugal, Poland, Austria, and Hungary** together, which are countries with a combined population of around **115 million people**.

Deutsche Bank

As a second example, for instance, the **European Union** has a population of 495 million inhabitants, and a total GDP ranging between $16 and 17 trillion. This value is very similar to the sum of the assets of just **the first seven 'big banks'**: Deutsche Bank, HSBC, BNP Paribas, Mitsubishi UFJ FG, Barclays, Royal Bank of Scotland, and JP Morgan Chase[13].



Deutsche Bank

HSBC

BNP PARIBAS

BARCLAYS

MUFG Mitsubishi UFJ Financial Group

RBS Group

JPMorgan Chase & Co.

Banks's special role

In this discourse, as actors and financial institutions, banks have particular importance. Richard Werner (2012)[14] clearly explains that their function cannot be easily replaced by other financial players or markets. This has also empirically suggested, for instance by Fama (1985), which shows that banks must have a kind of monopoly power compared to other financial institutions, or by Ashcraft (2005), which shows that the closure of small

[12] See also: http://finapps.forbes.com/finapps/jsp/finance/compinfo/CIAtAGlance.jsp?tkr=DB
[13] See also: http://www.forbes.com/global2000/list/#p_1_s_d5_All%20industries_All%20countries_All%20states_
[14] Please refer to the 2012 ESDN Workshop presentation of Richard A. Werner available at: http://www.sd-network.eu/?k=ESDN%20workshops&s=workshop%20documentation&year=2012

regional banks significantly hurts the local economy.

The main reason why banks have a special role in the financial system is to be found especially in their action of **money creation**, which represents the 97% circa of all money supply [please see Box 2 for official statements from Central Banks). Therefore, although only 3% of money comes from central banks, the rest is all 'banks' money. Banks "are not (just) financial intermediaries. They have a license to 'print money' by **creating credit**. There is no such thing as a 'bank loan'. Banks do not lend money, they create it" (Werner, 2012).

Box 2: Bank Credit Creation admitted by Central Banks

(adapted from Werner, 2012)

"The actual process of money creation takes place primarily in banks." (Federal Reserve Bank of Chicago, 1961, p. 3)

"By far the largest role in creating broad money is played by the banking sector ... When banks make loans they create additional deposits for those that have borrowed." (Bank of England, 2007)

"Over time... Banknotes and commercial bank money became fully interchangeable payment media that customers could use according to their needs" (ECB, 2000)

"Contemporary monetary systems are based on the mutually reinforcing roles of central bank money and commercial bank monies." (BIS, 2003)

"The commercial banks can also create money themselves... in the eurosystem, money is primarily created by the extension of credit." (Bundesbank, 2009)

1.3. Links to the real economy

In 2011, Peetz and Genreith concluded their study by arguing that there is a close and mutual relationship between the financial sector and the real economy: capital can trigger economic growth. However, they then argue, "financial wealth cannot sustain itself indefinitely without an adequate 'real economy' foundation". As already noted, Stiglitz clearly explains that an efficient financial sector is essential to a well-functioning economy, but it should serve to improve the efficiency of the economy and to increase its productivity: it should be a means to the economy and not an end in itself (2010).

Additionally, the Fung Institute[15] asked an interesting question: can finance be a perpetual profit machine that makes more money than the real sector? As explained in their article, Sheng (2011), president of the Fung Institute, noted that "in the past 30 years, with growth in technology and financial innovation, finance morphed from being a service agent to a self-serving principal that is larger than the real sector itself". He continues pointing out that "[t]he total size of financial assets has grown dramatically from 108 per cent of global GDP in 1980 to over 400 per cent by 2009 [and if also] the notional value of all derivative contracts were included, **finance would be roughly 16**

[15] see also: http://www.fungglobalinstitute.org/publications/articles/putting-finance-to-work-for-the-real-economy-the-next-reform-16.html

times the size of the global real sector, as measured by GDP". This trend has been called 'Financialisation' and it refers to "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operations of the economy and its governing institutions, both at the national and international levels" (Palley, 2007; Epstein, 2001).

It seems clear, therefore, that to really assess the financial sector in terms of sustainable development, we need to consider what relations it has with the real economy.

The most important aspect one needs to understand is how the financial sector allocates capital in the real economy. In September 2011, a report by 'Forum for the Future', funded by Aviva Investors, outlined this concern: "Investment is about the future. How the future turns out determines the returns on investments and the volatility of these returns. But, in turn, the pattern of investments (where capital is allocated) itself helps to determine the type of future we get."

In order to understand how capital is allocated or invested, we need to consider essentially what reasons determine the decisions over an investment, and therefore, which investments are preferred. The word **investment** can have different facets, but interestingly two of these can give us the idea of how the financial sector perspective is actually very different from the real economy where governments, cities, households, people are embedded. On the one hand, an investment can be understood as the **action or process of investing money for profit** or material result. A second meaning sees an investment as something that is **worth buying because it may be profitable or useful in the future**. It seems that the first definition perfectly addresses the financial sector perspective where a financial gain is pursued: in fact, in finance, an investment is a monetary asset purchased with the idea that the asset will provide income in the future or appreciate and be sold at a higher price[16]. On the other hand, the second side of the definition addresses what usually is meant in the real economy where money is used 'to do something', i.e. a city decides to invest building a road. In other words, the investment here refers to the resulting production and consumption in the real economy.

[16] http://www.investopedia.com/terms/i/investment.asp#ixzz2BjEkWhFL

2. Sustainable development and the financial sector

Chapter in brief:

- Sustainable development is development that "meets the needs of the present without compromising the ability of future generations to meet their own needs"(WCED 1987).
- Sustainable development consists of six principles that need to be taken into account when discussing the link to the financial market: 1) Balancing different policy dimensions; 2) Long timeframes and intergenerational equity; 3) Ecosystems limits and planetary boundaries; 4) Equal opportunities and access; 5) Inclusion and participation; 6) Governance for sustainable development
- Many differences exist between the sustainable development concept and the financial markets.
- The crucial difference between the two arenas is that while sustainable development has a multidimensional and holistic perspective, in which a balance among environmental protection, social equity and economic development is pursued, the financial sector seeks the one-dimensional goal of the maximisation of financial profits.
- Among the interventions suggested, some are closer to the financial sector rationale: 1) Transaction tax/Tobin tax; 2) Disclosure and Transparency; 3) Regulate speculation; 4) Bonuses regulation.
- Although the financial sector and sustainable development seem far apart from each other, a few suggestions can be made to include the SD perspective into finance: (i) internalization of externalities in the calculation of an investment (i.e. in a company's present value); (ii) assigning a long-term horizon to investments, also as a necessity for maintaining the prospect of safeguarding financial capital for the future; (iii) progressive substitution of financial ratios with sustainability ratios; (iv) a changing perspective on the connotation of financial profits.

2.1. Sustainable development principles

Sustainable development

Sustainable development has become a widely known and applied concept. The most commonly used definition goes back to the Brundtland Commission of 1987 that defined it as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED 1987). Since a single and reasonably short definition cannot provide sufficient guidance for implementation, a set of normative principles of sustainable development is often used in addition to the Brundtland definition. The Rio Declaration, itself consisting of 27 principles, and Agenda 21, the action plan to implement Rio, have often been used as a source and as a basis for the formulation of a process-related set of **sustainable development principles**:

Six SD principles

1. Balancing different policy dimensions;
2. Long timeframes and intergenerational equity;
3. Environment preservation, limits to growth, and planetary boundaries;
4. Equal opportunities, access, and intra-generational equity;
5. Inclusion and participation;

6. Governance for sustainable development.

1. Balancing different policy dimensions

The first of these criteria is probably the most encompassing one because it comprises many aspects of sustainable development, and gives also an idea of how to operationalize the concept. Sustainable development is generally understood as a development that aims to balance different policy dimensions - mainly economic prosperity, environmental protection, and social justice. **Balancing sustainable development dimensions** means that a 'holistic' point of view should be followed and a balanced consideration of economic, environmental, and social aspects should be pursued in the process of development (Forum for the Future, 2004).

2. Long timeframes and intergenerational equity

A second crucial issue is the idea of taking into account **long timeframes**. In fact, sustainable development calls for the necessity of a so-called **inter-generational equity**, which refers to the equality of distribution of resources and risks between the current and future generations. Principle 3 of the Rio Declaration states that "[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations" – in this we can derive the principle of inter-generational equity.

3. Environment preservation, limits to growth and planetary boundaries

Principle 3 of the Rio Declaration, the **environment preservation** aspect, is very central in the sustainable development discourse. In fact, whilst sustainable development recognises that the Earth has limits and **planetary boundaries** should be considered (Rockström et al., 2009), it also acknowledges that the economy is embedded in the Earth system, relying on its ecosystems to function, and in return producing waste, consuming resources, and impacting ecosystems back. The consequence of this line of thinking is that the economy also needs to recognise limits to growth (i.e. Meadows et al., 1972). **Ecosystems conservation and enhancement** is, therefore, a key aspect of sustainable development. Consideration of risks is also crucial, and a guiding principle in sustainable development. This consideration can be found in the so-called **precautionary principle**, as defined in the Rio Declaration: "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (UNCED, 1992, Principle 15)[17].

4. Equal opportunities, access and intra-generational equity

As seen, sustainable development is not only about intergenerational equity, but it is also very much interested in **intra-generational** equity, which considers the fairness of distribution of resources and risks within the current generation. This fourth criterion calls for **equal opportunities** and same possibilities in terms of access to resources as important aspect of sustainable development. In sustainable development, a number of terms and concepts are therefore crucial, namely: distribution and re-distribution, well-being, fighting poverty, equal consideration of societies and humans around the world, an urge for democracy, and education propagation.

[17] http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163

5. Inclusion and participation

As fifth criterion, essentially retrieved from the 10th Rio Declaration's Principle, sustainable development is very much based on **inclusion and participation**. Sustainable development "issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate **access to information** (…) and the **opportunity to participate in decision-making processes**. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided" (UNCED, 1992).

6. Governance for sustainable development

As addressed by several academics[18] and international organisations[19], a final key criterion that has acquired importance over time is the principle of **'governance for sustainable development'**. The link between governance and sustainable development is fundamental and was already addressed by the Brundtland Commission in 1987. Governance mechanisms are generally crucial for achieving sustainable development. The goal of sustainable development involves a reform agenda that includes reforms in cross-sectoral governance structures and processes, vertical policy coordination, enhanced participation in policy-making, increased reflexivity (e.g. evidence-based policy-making), and long-term time frames[20]. The first document to frame sustainable development as a governance reform agenda was Agenda 21[21]. The governance aspects of the action plan were reiterated and complemented at the UN World Summit in Johannesburg 2002 (Rio +10). The World Summit Report pointed out that "good governance is essential for sustainable development"[22].

This concept is developed from the notion of **'good governance'**, which is a specifically normative idea that prescribes certain steering procedures and institutions – based on principles, values and norms, i.e. participation, transparency, rule of law, etc. – that should be adopted to achieve the preferred outcomes. The origin of the concept of good governance is associated with international organisations[23] such as the World Bank and the OECD in the context of development policy. As well defined by the UN Economic and Social Commission for Asia and the Pacific (UNESCAP)[24], good governance has eight key features: 1) participatory; 2) consensus oriented; 3) accountable; 4) transparent; 5) responsive; 6) effective and efficient; 7) equitable and inclusive; and, 8) follows the rule of law. To show how good governance and sustainable development are interlinked in a European policy document, the renewed European Union Sustainable Development Strategy (EU SDS) of 2006 is a good example, as it addresses good governance in various

[18] See also: Jordan, 2008; Baker and Eckerberg, 2008; Steurer, 2007; Lafferty, 2004.
[19] UN Johannesburg Plan of Implementation, 2002; OECD, 2002.
[20] OECD, *Governance for Sustainable Development*, OECD Paris, 2002; Lafferty, W.M., 'Adapting Governance Practice to the Goals of Sustainable Development', 2002, http://webs.uvigo.es/dialogos/biblioteca/goals.pdf.
[21] UNCED, Agenda 21, United Nations New York, 1992.
[22] United Nations, *Report of the World Summit on Sustainable Development*, United Nations New York, 2002.
[23] In the European context, the EU has addressed good governance in its White Paper on European Governance (2001).
[24] http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp

policy-guiding principles. To achieve its objectives, the EU SDS sets out an approach to better policy-making based on better regulation and integration of sustainable development criteria into policy-making at all government levels.

2.2. The main differences

When it comes to considering the main differences between sustainable development and the financial markets, many seem to be outstanding, and they are sometimes even self-evident. Although there may be others, especially in categories that are not immediately related to finance (i.e. democracy), we will analyse in detail those differences that seem to us most prominent, and most related to the six sustainable development principles outlined in the previous chapter.

(1) Balancing SD dimensions vs. one-dimensional goal

While sustainable development aims to increase the opportunities for all societies, present and future, the financial sector mainly strives for the short-term **maximization of financial profits** and the **return on investment**. Understood as the net profit over the investment made, the return on investment is the main concern for financial markets, which explains why the financial sector has as a largely **one-dimensional** goal that privileges only the economic dimension.

(2) Long timeframes and intergenerational equity vs. short-term profits

Secondly, a very self-evident difference concerns timeframes. The **pursuit of short-term profits,** or the search for **immediate gain** that is as close as possible to the present, largely defies the ideas of considering the long-term or caring for future generations, which are addressed as inter-generational equity in the sustainable development discourse.

According to Lydenberg (2007), there is a widespread debate within the financial and business community - including the CFA Institute, the Business Roundtable, the Conference Board, the United Nations, the World Economic Forum, and the Aspen Institute. Short-termism is claimed to have a number of detrimental effects on the financial market itself, the real economy, as well as environment and society overall. Among the dangers for financial as well as corporate communities are (Tonello, 2006):

- At the macro-economic level: short-term visions cause **market volatility and the instability** of financial institutions.
- At the micro-economic level: **short-term investment strategies drive short-term thinking in business**
    - undermining management continuity and exposing a public company to the risk of losing sight of its strategic business model, compromising its competitiveness.
    - pressure to meet short-term numbers may induce senior managers to externalize a number of business costs (i.e., the cost of a state-of-the-art pollution system), often to the detriment of the environment and future generations.

One of the main reasons for short-termism to persist as a stable factor in the system (as highlighted by the box-text below), is that while investors can maximise financial return and their actions may have wider impacts on individual companies and the system as a whole, they may not directly be exposed to the consequences.

Box 3:

Examples of the consequences of short-termism on the financial market

(adapted from Forum for the future, 2011)

- **Investors in fossil fuel companies** can gain attractive short-term returns from high oil prices. However, carbon emissions will have an impact on the long-term health of the economy as well as the environment, and the value of investors' portfolios could suffer unless they shift out of these carbon-intensive companies and into alternatives in a managed way.
- In the run-up to the financial crisis, many financial institutions recognised that there were **risks in the complex financial products** they were selling, but they were competing with peers to deliver superior short-term returns, and underestimated or dismissed the longer-term impacts.
- **Private investment in unsustainable 'drag' fishing technology** drove the cod population in Newfoundland, Canada to near-extinction in the 1990s and resulted in permanent damage to local communities with the loss of 40,000 jobs. A longer-term perspective would have yielded greater returns for more investors over a longer period of time, and would have avoided these catastrophic ecosystem and community impacts.

Discounting

Another important aspect to take into account when considering timeframes is the role of the practice called '**discounting**' that takes an important part in the financial sector. What the financial sector always provides is a so-called **present value** of investments, using discounting techniques that provide a value in the present of the gains that will occur in the future. As argued by Schmidheiny and Zorraquin (1996), financial markets discount the future routinely and heavily, while sustainable development is concerned with the importance of the future. Although we are talking about discounting financial flows, it is also true that these financial flows intervene on the real economy, and, furthermore, no consideration is taken over future capital of future generations, but merely individual gain.

(3) Environment preservation, limits to growth and planetary boundaries

For what concerns the **environmental pillar** of sustainable development, there is no incentive for the financial sector to take this into account for two main reasons. First, as we just argued, the financial sector has a one-dimensional goal: it is only interested in the maximisation of financial profits. This can be extended into the argument that the financial sector does not have a real concern in the quality of its investments as long as they are profitable investments. This means that there is no ethical consideration of investments, or no consideration of 'bad' externalities in the calculation of profits. Whether a financial investment is made over a polluting company or a non-polluting company is no concern by the logic of the financial sector. Furthermore, the financial investment will probably be made in the polluting one since it will perhaps provide higher returns because of the fewer costs it has in comparison with the non-polluting

company, which is likely spending more to take care of the environment.

Another interesting point can be made here in terms of the consideration of risks. For instance, Schmidheiny and Zorraquin (1996) assumed that accounting and reporting systems do not adequately convey potential environmental risks or opportunities. If this holds true, therefore, financial markets are compelled to make decisions based on biased information. In the sustainable development discourse, the **precautionary principle** had a crucial importance in our analysis. If it is true that the financial sector does not take into consideration the environmental dimension, then environmental risks can be created when investment decisions are taken. These risks could easily assume a real connotation that, starting from a 'bad' investment, has the potential of affecting thousands or millions of people around the world.

(4) Equal opportunities, access and intra-generational equity

If we look at the precautionary principle from a broader perspective and, hence, we consider the precautionary principle as a guiding attitude for societies, we see again a fundamental difference in the way financial markets deal with risk. Financial markets are supposed to help to manage risks and deal with uncertainty, and this is an extremely important support that financial markets give to the real economy, ideally managing risks, avoiding high losses, and allowing smoother operations. However, in finance, it is also true that higher risks leads to higher profits, which could mean that if one is very attracted by financial profits and not averse to risk, the possibility to lose the investment for a larger return will be accepted.

This concerns very much the so-called **'social' dimension** of sustainable development, where intra-generational equity, equal opportunities, access to resources, well-being, and distribution are key aspects of the discourse. Considering financial risks in a 'precautionary' mode could mean that the effects on the real economy and society are taken into account; for instance, in terms of job loss, company closures or systemic problems to the whole economy. What role could the 'precautionary principle' play in the financial markets to 'safeguard' the society, the environment, and the economy? Is there a chance to develop a "Precautionary Financial Principle"? Interestingly again, the one-dimensional logic of the financial sector poses serious concerns over the possibility of considering a social dimension in its undertakings.

(5) Inclusion and participation

With regards to the **'inclusion and participation'** principle that we underpinned for sustainable development, the first thing that can be noted when looking at differences is the complexity of the financial sector. This is a very technical sector where a high degree of specialty and financial knowledge is needed. Capacities for managing stress, the quantity and speed of information that needs to be taken into account, and the ability of making investment decisions in a very short time and in a highly competitive environment are generally recognised as distinctive requirements for working in the financial sector. Furthermore, the high number of financial instruments that are constructed and the highly complex mathematical foundations of them are probably another distinctive aspect to be considered. All of these characteristics have, on the

other hand, another connotation: because of this complexity, people feel generally excluded from the financial world and have difficulties understanding it. This could somehow go against and differ from what we defined as the criterion of 'inclusion and participation' in the sense that *appropriate access to information* and *opportunities to participate in decision-making processes*, as outlined in the 10th principle of the Rio Declaration, are in reality made to be very difficult, or are practically absent in the operation of the financial markets.

(6) Governance for sustainable development

Finally, in terms of governance for sustainable development, the financial sector in many ways defies the features of what has been portrayed as good governance. We touched upon the **participatory** and the **inclusivity** aspects already, and this goes largely against the logic of the financial sector. Being **effective and efficient** is most probably the one characteristic that is more addressed by the financial sector, in the sense that the financial sector should serve the economy by increasing its efficiency and its productivity (hence its effectiveness). However, what is described in the 'good governance' framework as "effective and efficient" also covers the sustainable use of natural resources and the protection of the environment, and is a slightly different concept, in which processes and institutions produce results that meet the needs of society while making the best use of resources at their disposal.

Finally, **transparency**, **accountability,** and **following the rule of law** are very much linked, especially considering that accountability cannot be enforced without transparency and the rule of law. Transparency also means that information is freely available and directly accessible to those who will be affected by such decisions and their enforcement, and that enough information is provided in a way that is easily understandable. This means, in order to bring the financial sector more in line with good governance procedures, it is necessary that it is transparent to the public and accountable to those who will be affected by its decisions or actions. This is a strong call for societies to decide how much and in what way they are affected by the financial sector, which also means that whenever strong impacts of the financial sector on the real economy, the environment, and/or society are expected, strong regulations, supervision, control, and public debate should hold a key role.

Table 1:

Framework for comparing Sustainable Development and the financial sector

(Our analysis)

Sustainable development	Financial sector
Balancing SD dimensions: environment preservation, social equity, economic development	One-dimensional logic; maximisation of profits and return on investment
Long timeframes and intergenerational equity	Short-term perspective; discounting; present value calculation
Environment preservation, limits to growth, and planetary boundaries	Little to no consideration of environmental effects
Equal opportunities, access, and intra-generational equity	Little to no consideration of social effects
Inclusion and participation	Highly complex; not inclusive, nor open to participation
Governance for SD	Efficiency oriented; shortage of transparency and accountability

2.3. Regulations and interventions

Although the financial markets rationale and the sustainable development discourse seem far apart from each other, we provide an overview of possible interventions on the financial sector that could help in reducing the distances. In terms of regulations, among the interventions that could be implemented, we firstly present those that seem closer to the financial sector and that are already considered at different levels (i.e. EU level): 1) Transaction tax/Tobin tax; 2) Disclosure and Transparency; 3) Regulate speculation; 4) Bonuses regulation. Secondly, we will portray a number of different interventions from a sustainable development perspective that would enable a stronger consideration of the sustainable development criteria in the financial sector.

Regulations for the financial sector

1) Transaction tax/Tobin tax

A Eurozone Financial Transaction Tax (FTT)

Currently, European Member States are discussing a way to introduce a transaction tax, as confirmed on 9 October 2012 by the EU Commissioner for taxation. In the media this is usually addressed as Tobin Tax, which comes from the proposal made by Prof. James Tobin for an international tax on foreign exchange transactions with the purpose of "penalize short-horizon round trips" (Tobin, 1996)[25]. As he explained clearly to "Der Spiegel" in 2001[26], his intention was to **limit exchange rate fluctuations** with a simple idea:

> *"on every exchange of one currency for another a small tax would become due, let's say one half of a percent of the transaction. That would scare speculators away. For there are many investors who put their money into currencies for the very short term. If this money is suddenly withdrawn, the countries have to raise interest rates drastically so that the currency remains attractive. High interest rates often are disastrous for the domestic economy, as was demonstrated by the crises in Mexico, Southeast Asia and Russia during the nineties. My tax would restore some room for manoeuvre to small countries' central banks as against the tyranny of the financial markets".* (Tobin, 2001)

Similar to a Tobin-tax, on 28 September 2011, the European Commission adopted a proposal for a Council Directive on a common system of **financial transaction tax (FTT)**[27], aiming at:

- **harmonising legislation concerning indirect taxation on financial transactions**, which is needed to ensure the proper functioning of the internal market for transactions in financial instruments and to avoid distortion of competition between financial instruments, actors, and market places across the European

[25] ul Haq, M., I. Kaul and I. Grunberg. 1996 The Tobin Tax: Coping with Financial Volatility. Oxford University Press: New York, Oxford.

[26] Der Spiegel. 2001. "They Are Misusing My Name". September 2, 2001 [English translation by Yale Department of Economics: http://www.econ.yale.edu/news/tobin/jt_01-09-02_ds_misusing-name.htm]

[27] see also: http://ec.europa.eu/taxation_customs/resources/documents/taxation/com_2012_631_en.pdf

Union, and at the same time;

- **ensuring that financial institutions make a fair and substantial contribution** to covering the costs of the recent crisis and creating a level playing field with other sectors from a taxation point of view, and
- **creating appropriate disincentives for transactions that do not enhance the efficiency of financial markets,** thereby complementing regulatory measures to avoid future crises.

Although diverse opinions still persist in the EU, ten Member States (Belgium, Germany, Greece, Spain, France, Italy, Austria, Portugal, Slovenia, and Slovakia) have addressed formal requests to the Commission to establish an enhanced cooperation for a common system of FTT and that the Commission was asked to submit a proposal to the Council on that manner. They specified that the scope and objectives should be based on the Commission's proposal of September 2011 for a Council Directive on a common system of financial transaction tax.

2) Disclosure and Transparency

Disclosure, transparency, stronger supervision

With more open information and more appropriate reporting systems, a stronger and more effective supervision could help to avoid negative effects coming from the financial sector. Disclosure and transparency would, therefore, serve to open up secrecy and make information about financial transactions more accessible for the authorities and the public. A concrete example is the **European Market Infrastructure Regulation (EMIR)** proposal that tries to ensure that the details of any over-the-counter (OTC) derivative contract that have been concluded and any modification, or termination of the contract is reported to a trade repository. A trade repository would then maintain it for at least ten years following the termination of the relevant contracts, and would make the necessary information available to relevant supervisory authorities (EU, COM(2010)484/5).

3) 'Regulate' speculation

Ban big speculators

Speculation is intended as the taking of relatively high risks and the acceptance of the possibility of losses in the hope of making large gains[28]. Many say that speculation is a successful instrument for improving efficiency of markets because it allows prices to adapt much more quickly than they would through short selling. What is not 'good' is not speculation as such, but the **big speculators** who are able, for instance, to use hedging instruments to make big profit and move enormous amounts of money with the peril of causing large systemic losses and cascade effects. In this sense, a good option could be to **'regulate' speculation through 'licensing' participants in the markets,** and somehow *banning* those who are too big and able to pose such systemic problems.

[28] http://glossary.reuters.com/index.php/Speculation

4) Bonuses regulation

Regulate bonuses to tackle excessive and imprudent risk-taking

When we talk about bonuses, we usually refer to a compensation system as a provision of financial incentives to work and reach results. Nowadays, "the purpose of bonuses in the financial world seems to have shifted. Instead of being offered as a reward for a job well done, they now appear to be handed out simply because the job was done" (De Cremer[29]). Also, as outlined in the **Directive 2010/76/EU**, what is evident is that the inappropriate remuneration structures of some financial institutions have been a contributory factor of **excessive and imprudent risk-taking** in the banking sector, which partially led to the failure of individual financial institutions, and then to systemic problems. It is especially said that remuneration policies that give incentives to take risks (…) can undermine sound and effective risk management and exacerbate excessive risk-taking behaviour. The mentioned EU directive[30] 2010/76/EU was therefore put in place to regulate this aspect of the financial sector, where a major problem was detected in the wrong incentives that led to excessive risk-taking, which at the end impacted the whole real economy.

Examples from recent developments in the USA

Recent regulation of the financial sector in the USA

On July 12, 2010 president Obama in the USA signed a new regulation for the financial sector with four main objectives[32]: (1) To promote the financial stability of the United States by improving accountability and transparency in the financial system; (2) to end 'too big to fail'; (3) to protect the US taxpayers by ending bailouts; (4) to protect consumers from abusive financial services practices. In Table 2 below, we summarise the main highlights as reported by the US Senate Committee on Banking, Housing & Urban Affairs.

Table 2: Dodd-Frank Wall Street Reform and Consumer Protection Act[31]

The Dodd-Frank Wall Street Reform and Consumer Protection Act	
1) Consumer Protections with Authority and Independence	Creates a new, independent watchdog with the authority to ensure that American consumers get the clear, accurate information they need to shop for other financial products, and to protect them from hidden fees, abusive terms, and deceptive practices.
2) Ends Too Big to Fail Bailouts	Ends the possibility that taxpayers will be asked to write a check to bail out financial firms that threaten the economy.
3) Advance Warning System	Creates a council to identify and address systemic risks posed by large, complex companies, products, and activities before they threaten the stability of the economy.
4) Transparency & Accountability for Exotic Instruments	Eliminates loopholes that allow risky and abusive practices to go on unnoticed and unregulated - including loopholes for over-the-counter derivatives, asset-backed securities, hedge funds, mortgage brokers, and payday lenders.
5) Executive	Provides shareholders with a say on pay, and corporate affairs with a non-

[29] see also: http://bsr.london.edu/lbs-article/583/index.html
[30] http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:329:0003:01:EN:HTML.
See also: http://ec.europa.eu/internal_market/bank/regcapital/legislation_in_force_en.htm#maincontentSec5
[31] http://banking.senate.gov/public/_files/070110_Dodd_Frank_Wall_Street_Reform_comprehensive_summary_Final.pdf
[32] http://www.gpo.gov/fdsys/pkg/PLAW-111publ203/html/PLAW-111publ203.htm

Compensation and Corporate Governance	binding vote on executive compensation and golden parachutes.
6) Protects Investors	Provides tough new rules for transparency and accountability for credit rating agencies to protect investors and businesses.
7) Enforces Regulations on the Books	Strengthens oversight and empowers regulators to aggressively pursue financial fraud, conflicts of interest, and manipulation of the system that benefits special interests at the expense of American families and businesses.

Interventions from a sustainable development perspective

The four interventions outlined above all aim to restrict the financial sector with legal, economic, and/or financial tools. However, it seems that more could be done, especially when taking into account the six SD principles previously defined. We outline four possible interventions: (i) internalization of externalities in the calculation of an investment (i.e. in a company's present value); (ii) assigning a long-term horizon to investments, also as a necessity for maintaining the prospect of safeguarding financial capital for the future; (iii) progressive substitution of financial ratios with sustainability ratios; (iv) a changing perspective on the connotation of financial profits.

(i) Internalization of externalities

Internalization of externalities in investment decisions could potentially contain an answer to many of the sustainable development concerns around financial markets. Environmental, social, and economic threats could be quantitatively assessed and taken into account for financial transactions. This would enable the consideration of balancing different policy dimensions.

(ii) A long-term horizon

Assigning a long-term horizon to investments, also as a necessity for maintaining the prospect of safeguarding financial capital for the future, might also be a possibility. For instance, it could be suggested that a certain percentage of investments need to be 'saved' for the future, or that a 'precautionary financial principle' is included in investment decisions in order to avoid the creation of too high risks that have the potential of posing systemic risks to the real economy.

(iii) Sustainability ratios

The third intervention could be to progressively substitute the base for investment decisions and policies from financial ratios to **sustainability ratios**. The downturn for this suggestion is unfortunately very visible: the problem here is to understand whether sustainable development could be achieved without having to revise current norms and values (or the current worldview in which modern society is dominated by economic materialism) (Jeucken, 2001).

(iv) A changing perspective

Related to the previous intervention, a fourth and last suggestion is probably the most controversial, but perhaps the most effective in terms of prospects for genuine change. Among different instances, the experience of the so-called "Common Welfare Economy" (Felber, 2012) shows the basic elements of an **alternative economic framework**, where, among others, economic success is no longer measured with monetary indicators, such as financial profit. In this case, economic success is defined by providing and/or

improving basic needs, quality of life, communal values, etc. In this case, market values and social values are no longer contrasting.

2.4. Potentials to enable sustainable development financing

In September 2011, Forum For the Future completed a report in which they showed investors how they can help create a resilient, stable, and sustainable economy by investing wisely and using their power to shape the development of capital markets.

ESDN case study on Sustainable Investment

An important part of a more sustainable financial sector, with high potential for enabling sustainable development financing, can be played by so-called Socially Responsible Investments (SRIs). In this regard, the ESDN Office has prepared an ESDN Case Study entitled "**Sustainable investment: options for a contribution to a more sustainable financial sector**" (Endl, 2012, ESDN Case Study No 11), in which we call for a richer overview on this topic. SRI is the most applied and well-known term that represents inter-alia a larger array of instruments all connected with sustainable, green, or ethical investing. The term "socially responsible investment" (SRI) became the most widespread, and may actually be used interchangeably with the term sustainable investment since it also relates to practices that are central to the concept of sustainable development (i.e. considering economic, social, environmental aspects). Therefore, we will use the term SRIs to comprehend this larger picture ,and will use the case study as the main source for this section.

Socially Responsible Investments (SRIs)

SRIs have been created to describe investment strategies that seek to consider both profit and societal well-being. Socially responsible or sustainable investors encourage corporate practices that promote issues such as environmental stewardship, consumer protection, human rights, quality of labour and jobs, as well as sustainable use of natural resources. Today, SRI is an established industry offering a variety of specialised and standardised products to both retail[33] and institutional investors[34].

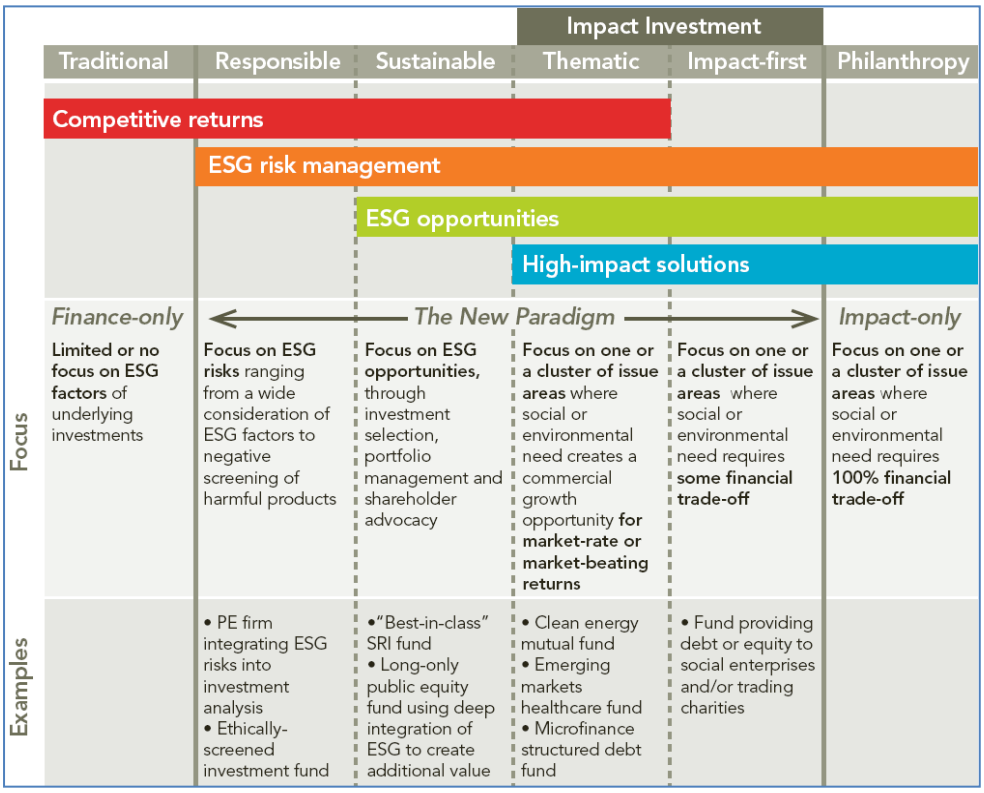
The classification of different investment strategies actually undertaken on the financial capital market is also complex. Bridges Ventures (2012) tries to capture the breadth of these different investment strategies as displayed in Table 3 (below). The term impact investments covers investments made into companies, organizations, and funds with the intention of generating social and environmental impact alongside a financial return (Bridge Ventures, 2012).

[33] A retail investor is an individual investor possessing shares of a given security

[34] An institutional investor is an investor such as a bank, insurance company, retirement fund, hedge fund, or mutual fund, that is financially sophisticated and makes large investments

Figure 4:

Different investment strategies for SRI (Bridges Ventures, 2012)



In this regard, the European Sustainable Investment Forum (EUROSIF, 2012) offers a comprehensive classification scheme that covers the wide range of SRIs and other responsible investment strategies. EUROSIF developed a framework that identifies seven distinct processes, referred to as strategies, displayed in Table 4 below. In fact, these seven processes represent the strategies used by asset managers that incorporate sustainable development into their investment decisions or take into account ESG criteria in various shapes and forms.

Table 3: Overview of SRI investment strategies (EUROSIF, 2012)

Strategy	Definition
1. Sustainability Themed Investment	Investment in themes or assets linked to the development of sustainability. Thematic funds focus on specific or multiple issues related to ESG.
2. Best-in-Class Investment Selection	Approach where leading or best-performing investments within a universe, category, or class are selected or weighted based on ESG criteria.
3. Norms-based Screening	Screening of investments according to their compliance with international standards and norms
4. Exclusion of Holdings from Investment Universe	An approach that excludes specific investments or classes of investment from the investible universe, such as companies, sectors, or countries.
5. Integration of ESG Factors in Financial Analysis	The explicit inclusion by asset managers of ESG risks and opportunities into traditional financial analysis and investment decisions based on a systematic process and appropriate research sources.
6. Engagement and Voting on Sustainability Matters	Engagement activities and active ownership through voting of shares and engagement with companies on ESG matters. This is a long-term process, seeking to influence behaviour or increase disclosure.
7. Impact Investment	Impact investments are investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return. Impact investments can be made in both emerging and developed markets, and target a range of returns from below market-to-market rate, depending upon the circumstances.

Performance and trends of SRIs

According to the Global Alliance for Banking on Values (GABV, 2012), **the concept of sustainable finance and investment continues to grow**, especially in the wake of one of the most devastating financial crises in history. This includes responsibility from the corporate side (CSR) as well as the investor side (SRI) of the capital markets. In this respect, some of the key findings on a comparison of sustainable banks and Global Systemically Important Financial Institutes (GSIFIs)[35]by GABV (2012) showed that sustainable banks have:

- much higher levels of equity to total assets, with slightly higher levels of BIS 1 capital ratios (especially in recent years) than GSIFIs.
- generally better or comparable Return on Assets and Returns on Equity over the time period covered. The returns of Sustainable Banks are also less volatile than those of GSIFIs.
- significantly higher growth in loans and deposits leading to higher growth in assets and income than GSIFIs.

Most common SD related themes for investments

Among the **most common sustainable development related themes** for investment is **clean tech**, with investors making allocations to, for example, renewable energy, resource and energy efficiency, and waste technology. On the social side, **microfinance** remains popular with PRI signatories as well as other sectors such as global health, education, and social infrastructure. Regarding future trends of investment, while sustainable forestry has traditionally been an important asset class for many asset owners, sustainable agriculture is also gaining increasing attention[36] (UNEP, 2012).

Table 4: Aggregated market growth (€ billions) of 14 European countries (EUROSIF, 2012)

Investment strategy	009	201	Growth (CAGR)
SustainabilityThemed	€ 25,361	€ 48,090	37.7%
Best in Class/Positive Screening	€ 132,956	€ 23,206	45.9%
Norms-based screening	€988,76	€ 2,346,308	54.0%
Exclusions	€ 1,749,42	€ 3,829,287	47.9%
Engagement/Voting	€ 1,668,473	€ 1950,406	8.1%
Integration	€ 2,810,506	€ 3,204,107	6.8%

Future development trends

Concerning **future development trends** for SRIs, EUROSIF (2012) argued that continued and increasing focus on investors by national and EU legislators through regulations such as the European Social Entrepreneurship Funds Framework will be beneficial for the increase in SRIs, which according to the study, will be the second most important factor

[35] A study commissioned by GABV and funded by the Rockefeller Foundation and GABV compared the performance of 17 values-based banks with 29 of the world's largest and most influential banks including Bank of America, JP Morgan, Barclays, Citicorp and Deutsche Bank.

[36] This trend concerns only signatories of the United Nations-backed Principles for Responsible Investment (PRI)

for growth in SRIs. Further growth for SRIs will be expected also due to other factors such as: 1) demand from institutional investors; 2) international initiatives; 3) external pressure; and, 4) demand from retail investors.

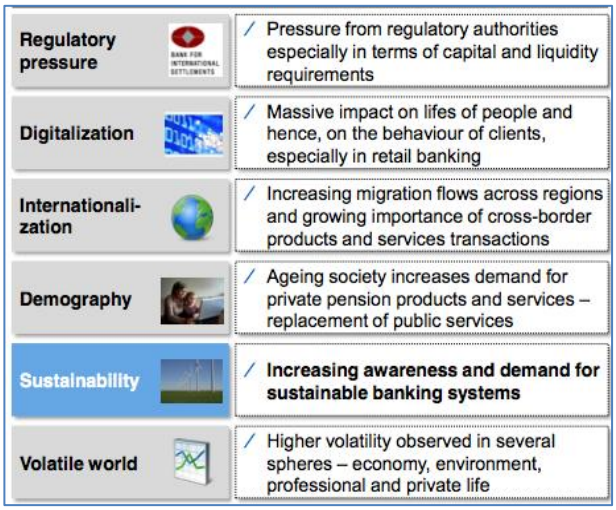
Banks developments megatrends

In this discourse, banks are developing differently from the past and are in search of new business models. As pointed out by Volker Abel[37], sustainability represents one of six megatrends[38] that need to be taken into consideration, as it is impacting banks business models (please see figure below).

Figure 5:

Six megatrends impacting banks business models

(adapted from Volker Abel)



In fact, in search of generating value, many banks are reshaping their business models towards more sustainable business practices and, therefore, distinguishing between two dimensions: (i) **Financial sustainability** (*Solid financial performance with risks well under control*); and, (ii) **Social/ ecological sustainability** (*Fair treatment of environment, all members of society and all generations*).

As the following figure shows, it is important to consider that, although the range of possibilities to incorporate sustainability aspects into core bank business is wide, some concepts are already being applied successfully.

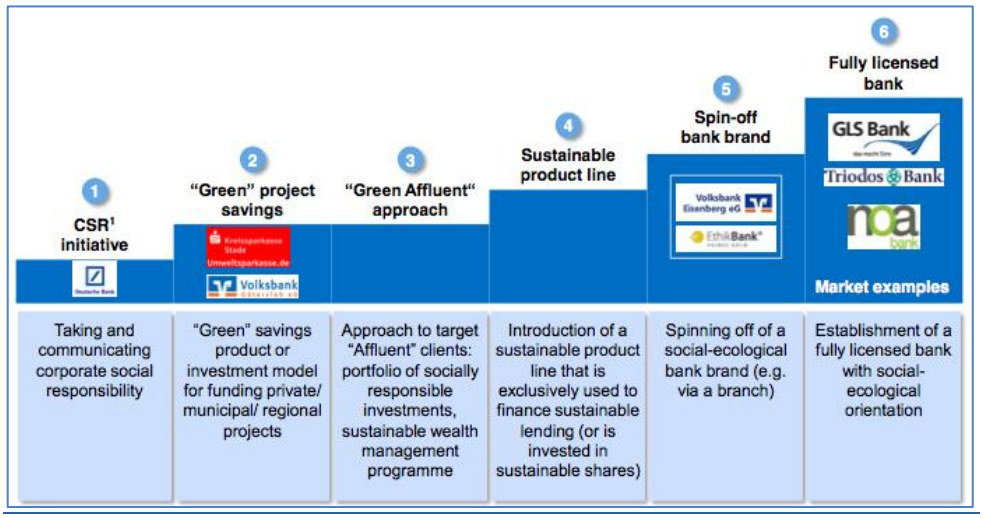
[37] Please refer to the 2012 ESDN Workshop presentation of Volker Abel available at: http://www.sd-network.eu/?k=ESDN%20workshops&s=workshop%20documentation&year=2012

[38] A megatrend is (1) valid for a period of minimum two decades, (2) observable in the relevant spheres of life, (3) an international phenomenon and (4) stable, able to survive setbacks

Figure 6:

Examples of approaches of social banking in the German banking industry

(adapted from Volker Abel)



Best practice of financial institutions and products in Europe

The financial market covers a myriad of different assets (such as investment funds, shares, bank deposits, pension funds, micro-credits etc) managed by different institutions and actors (e.g. asset managers, pension funds, insurance companies, development finance institutions etc.), for which various kinds of guidelines or frameworks of SRI exist. In this part, we will reflect upon some **best practice examples of assets and institutions in Europe in the area of SRI.**[39]

Obviam - independent investment advisor for impact investing

Obviam is an independent investment advisor that offers a broad range of investors access to impact investing in emerging and frontier markets. Obviam is a fund-of-funds manager: it invests in private equity fund managers operating on the ground in developing countries.

Currently, Obviam's senior partners have invested over US $400 million in more than 70 funds and 300 underlying small and medium sized enterprises (SMEs) on behalf of the Swiss Confederation since 1999. The Swiss Investment Fund for Emerging Markets (SIFEM; i.e. the Development Finance Institution of the Swiss Confederation, and Obviam's largest fund in management) tends to favour investment in SMEs as it believes this is where it can best support developing countries in terms of job creation, private sector development, and improving economic revenues. In this regard, all of Obviam's investments for SIFEM follow four critical development investment tenets:

- **Subsidiarity**: providing long-term financing in markets where it is scarce.
- **Leverage**: mobilising third-party capital by providing a 'signalling' effect to the market through investments.
- **Additionality**: taking an active approach to investing, Obviam aims to assist

[39] The best case practices have been taken from reports by EUROSIF and PRI

private equity funds it invests in (especially new investment teams and first-time funds) to develop and improve according to international best practice.

- **Sustainability**: ensuring investments made are both financially viable and follow ESG best practices.

European Social Entrepreneurship Funds Framework

In December 2011, the European Commission set out a proposal (European Commission, 2011) introducing a new EU-wide fund structure (European Social Entrepreneurship Fund – EuSEF) to provide support to the market for social businesses by improving the effectiveness of fundraising by investment funds that target these businesses. Essentially, this proposal aims to create a trusted EU label for Social Entrepreneurship funds, which would increase confidence in this market and overcome some of the barriers hindering its growth, in particular the uneven distribution of capital available for social investment across Europe.

EuSEFs are pooled funds that invest at least 70% of their capital in qualifying investments. The range of qualifying investments, including equity and debt instruments for instance, is related to eligible "social business" undertakings. These are defined as undertakings whose primary objective is the achievement of a positive social impact, rather than financial gain to shareholders or other stakeholders. They include undertakings that provide social services or goods to vulnerable or marginalized persons, and undertakings that employ a method of production of goods or services that embodies a social objective. An example relating to the first category would be access to housing or healthcare, while an example of the second one would be professional integration for disadvantaged segments of the population.

The Norwegian Government Pension Fund - Global

One of the best practice examples for SRI, and often called the 'Gold standard' in institutional responsible investing, is the Norwegian Government Pension Fund – Global. However, the Norwegian fund is not very different from many other large institutional investors in their responsible investing process - the differentiator is transparency. For many years, the Norwegian Ministry of Finance, the Ethical Council, and the Fund itself have been transparent about their screening process and their expectations of companies, and have been thorough in justifying their decisions. This quality of process and transparency has led many other investors to emulate their decisions.

Two examples in the financial world towards sustainable development

Triodos Bank

Triodos Bank is one of the world's leading sustainable banks with a mission to make money work for positive social, environmental and cultural change:

1. Help create a society that protects and promotes the quality of life of all its members
2. Enable individuals, organisations and businesses to use their money in ways that benefit people and the environment, and promote sustainable development
3. Provide our customers with innovative financial products and high quality service

Triodos Bank's approach is based on:

1. *A sustainable business model*: the bank only work in the real economy without investing in complex financial instruments (with the promise of high profits that bring greater risk), in order to remain solid and stable;
2. *Positively 100% sustainable:* only lend money to people and organisations working to make the world a better place, actively seeking out and promoting sustainable, entrepreneurial businesses driven by values and ideas;
3. *Total transparency:* publish details of every single organisation Triodos lends to, with the intention of making possible to savers and investors to see exactly how Triodos is using their money.

(Triodos Bank, 2012)[40]

sam sustainability investing

SAM is a global investment boutique focused exclusively on Sustainability Investing.

The firm's offering comprises asset management, indexes and clean tech private equity.

SAM partners with Dow Jones Indexes in the publication and development of the Dow Jones Sustainability Indexes (DJSI).

Founded in 1995, SAM today has more than 100 employees and belongs to Robeco, a subsidiary of the Dutch Rabobank Group.

SAM's mission is to drive sustainability thinking using financial markets as the most powerful transmission mechanism to promote sustainable business practices.

SAM uses an integrated sustainability research approach that integrates ESG factors into the financial analysis of companies. Their key idea is to research ESG factors that can impact the long term business success of a company. SAM's research approach wants to be objective and standardized and covers over 3000 large and mid-caps globally.

(SAM group, 2012) [41]

[40] Please refer also to the presentation by James Vaccaro at the 8th ESDN workshop, available at: http://www.sd-network.eu/?k=ESDN%20workshops&s=workshop%20documentation&year=2012

[41] Please refer also to the presentation by Guido Giese at the 8th ESDN workshop, available at: http://www.sd-network.eu/?k=ESDN%20workshops&s=workshop%20documentation&year=2012

Potential strategies for facilitating SRIs growth

SRIs are comparatively small

The reasons for lack of investment in sustainable development, or more specifically for SRI investment, are manifold. An investigation of a series of case studies on SRIs (EUROSIF, 2012) revealed that allocations to SRIs often remain small in comparison to investors entire *assets under management* (AuM) due to the following reasons: (i) deal size; (ii) lack of historical performance data; (iii) lack of knowledge about these investment areas; (iv) high real or perceived risk levels.

Potential strategies that could further spur the future growth of and removing barriers for investment on sustainable development can be summarised as follows:

1. Promoting and further developing innovative and successful products and services with positive environmental and social impact in order to attract clients;
2. Applying robust reporting and assessment, which are key for enhancing the credibility of sustainable investment;
3. Putting in place regulations in order to remove investment barriers to small-scale sustainable enterprises.

1. Promoting and further developing innovative and successful products and services with a positive environmental and social impact to attract clients

According to Weber (2011), two future challenges have to be met in the area of sustainable banking in order to introduce successful products and services contributing to sustainable development: firstly, capital must be guaranteed to flow into projects or businesses that have a positive impact on society, the environment and SD; secondly, financial mechanisms of products must be designed to meet the goals of sustainable banks (i.e. to make these products sufficiently profitable to be able to sustain and increase their outreach and impact). In this context, Weber (2011) concludes that the further development and widespread application of micro-finance products (e.g. small loans not relying on typical mechanisms of lending, collateral, and credit history but rather on mutual guarantees and the willingness of borrowers to be able to provide for their own costs of living) and SRI funds (see for example the EuSEF best practice case) are a major step for the growth of investment into sustainable development.

2. Applying robust reporting and assessment, which are key for enhancing the credibility of sustainable investment

Certainly one way to stimulate sustainable investment in the banking sector, and investment in general, is to further develop approaches to measuring impacts of investment (financial as well as non-financial ones), consequently leading to more informed stakeholders and clients. In terms of sustainable investment, the overall goal is to inform clients and investors about the impact of the institutions' products and services on society and the environment. According to a recent study by the Global Alliance for Banking on Values(2011), there is a lack of frameworks specifically available for

sustainable banks to measure and report their impact in a meaningful and relevant way. Therefore, further guidance[42] for developing a common framework for quantitative and qualitative reporting would be a supportive step, and essential given the limited resources available to develop reporting by smaller banks. EUROSIF (2012b) argued that as investors get to know these investment areas and their associated impacts better, many have found that the risks associated with these investments may not be as high as they were initially perceived to be, and that these investments can indeed generate healthy financial returns (see for example the Obviam and the Norwegian Pension Fund – Global best practice cases).

3. Putting in place regulations in order to remove investment barriers to small-scale sustainable enterprises

Concerning SRI, however, the issue of risk plays a crucial role: as most of the enterprises that have a positive impact on society and the environment are smaller innovative firms and, therefore, are not traded on stock exchanges, risk associated with these enterprises is often higher than it is for bigger enterprises. Furthermore, retail investment products are only allowed to invest in equities that meet certain regulatory standards for reporting financial issues, for which smaller enterprises do not have the capacity. In order to balance both the positive societal and environmental impacts, and the financial risk and return, further cooperation with regulatory bodies could prove successful (Weber, 2011). In this regard, EUROSIF (2012b) postulates that future national and EU legislation (i.e. the Europe 2020 Strategy's focus on green and sustainable growth) might be promising and one of the main drivers for SRI. One best practice example specifically designed to overcome barriers for the investment in sustainable SMEs is the creation of specialised funds, such as the European Social Entrepreneurship Funds Framework and the Swiss Investment Fund for Emerging Markets. Moreover, as the examples motioned below indicate, some European Member States are trying to put in place a legal framework to spur growth in SRI.

In the case of **Austria and France**, SRI practices and funds are governed by a legal framework for the certification of funds, in order to facilitate progress towards transparency. In **Germany,** for example, legal regulations basically consist of disclosure requirements. Such legal regulations include the obligation to report on ethical, social, and ecological criteria taken into account in the use of investments in saving plans. These were adopted in 2001 for pension funds (*Pensionsfonds*) and extended to pension institutions (*Pensionskassen*), as well as direct insurance (*Direktversicherer*) in 2005. The regulations apply to certified products and a broad range of occupational pension schemes (EUROSIF, 2012b).

Regarding accounting for positive societal and environmental impacts of companies, national governments can set certain **economic incentive structures or regulations** in

[42] Recent initiatives are undertaken by Global Impact Investors Network's Impact Reporting and Investment Standards (GIIN IRIS), European SRI Transparency Code by EUROSIF and ongoing academic work by BRAC Bank

order to spur investment in sustainable development oriented issues. One example in the area of renewable energy, for example, is so-called feed-in tariffs (enacted for example by the German government through the Renewable Energies Act in 2000), which account for the additional costs of generation compared to conventional energy sources. This policy mechanism allows for acceleration in the investment on renewable energy technologies.

Four major barriers against the fundamental investment shift towards SD

A more general analysis of the barriers that are hampering the needed substantial shift of investments towards sustainable development is also offered hereby. Of particular importance is the intervention of **Ariane de Dominicis** (DG Environment, European Commission)[43] at the 2012 ESDN workshop "Financial Markets, Institutions and Policies in the Context of Sustainable Development - Dimensions, Issues and Actors of an Emerging Arena" that was held in Brussels on the 22nd and 23rd of November. DG Environment analysed four major barriers against this investment shift:

1. ***Risks associated with environmental investments.*** Environmental investments are often seen as more risky especially because of technology maturity, policy uncertainty, price of resources and their volatility, and also high capital intensity. One example of what can be done to overcome this is to *produce public money as leverage and as de-risking financial instrument*.

2. ***Complexity.*** Investments in SD or resource efficiency appear to be more complex, especially in terms of novelty, smaller size of projects, and links among actors that are not used working together. One example to lessen this problem is through training of the financial sector and business schools to integrate the idea of SD and resource efficiency. Some instruments should be also developed to deal with this complexity; one example could be take in consideration: in Germany, resource efficiency audits to SMEs have been provided and then linked to the provision of financing to put in place resource efficiency actions. Another example: at the EU level, it has been developed an instrument called 'ELENA' for energy efficiency, which helps developing projects in urban areas and helping people working together.

3. ***Lack of transparency and information*** on environmental and resource efficiency aspects. There is a need for comparable data, financial reporting, accounting for ecosystem services, natural capital, etc., and leadership from the private sector.

4. ***Bias of the markets towards the short-term***, while sustainability is typically a long-term concept. One thing seems to be especially needed: the long-term engagement of institutional shareholders.

[43] Please refer to the 2012 ESDN Workshop intervention of Ariane de Dominicis available at: http://www.sd-network.eu/?k=ESDN%20workshops&s=workshop%20documentation&year=2012

Conclusion

The report is mainly based on the content and structure of the Discussion Paper written for the 8th ESDN Workshop which was held in Brussels in November 2012. The workshop intended to scope the mechanisms and operational design of financial markets, explore the functional and dysfunctional aspects from an SD perspective and, on this basis, develop concrete fields of action for SD policy related to financing, financial markets, and finance governance. In this perspective, the outcomes and discussions of the workshop have been included in this report. Very interestingly, five issues were the most vividly discussed themes during the workshop: firstly, a strong interest was shown towards the role of the rating agencies within the financial sector, but especially of their effects on the real economy. Secondly, high importance was recognised in the role of accountability, disclosure and transparency within the financial sector. In the same direction, thirdly, the need for more regulation and state intervention was pointed out. A fourth important aspect that came out in the workshop was the importance of a stronger focus on investment that supports sustainable projects as well as more investments in SD in general. Fifthly, a crucial role was recognized for raising awareness of sustainable development and sustainability themes towards and within the financial sector in order to help a better alignment and comprehension between the two arenas.

The main goal

In this ESDN Quarterly Report (QR), we had the goal of offering insight into the relationships, linkages, and differences between the financial sector and the sustainable development discourse. We started this task by providing a synthetic description of the financial sector trying to communicate the main financial notions in a language that aimed at being as simple as possible, with the intention of avoiding an overload of technicalities. Indeed, the report did not aim to be exhaustive, but aspired to uncover those links that are particularly relevant for sustainable development and SD governance.

Throughout this description, and especially in the first chapter, few important points have been highlighted with the intention of portraying the logic behind the financial sector. First of all, the logic of the financial sector is one-dimensional and it is mainly related to the maximization of financial profits and, especially, the return on investment. Nonetheless, it is also important to notice that an efficient financial sector is essential to a well-functioning economy because it helps to allocate capital and manage risks, and when this is done in an efficient way, the financial sector provides, therefore, a decisive service to the economy.

We described the financial sector as formed by the different financial markets and financial institutions. Financial markets are those in which financial assets (securities) can be purchased or sold, facilitating the flow of funds and, thereby, allow financing and investing. Five financial markets can be distinguished: commodity market, money market, capital market, currency market, and derivatives market. On the other hand, financial institutions provide financial services for their clients and can be differentiated into depository and non-depository institutions. Therefore, we tried to portray the links

with the 'real' economy where we touched upon those crucial issues that mainly relate to the understanding of how capital is allocated or invested, what reasons determine the decisions over an investment, and which investments are preferred.

In the second chapter, we mainly focused on the viewpoint of the sustainable development discourse. Firstly, we provided a brief explanation of the origins of the term since the description given by the Brundtland commission (1987), which defined sustainable development as the development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs'. Then, we explained sustainable development in six so-called "SD principles" to better clarify the concept: 1) Balancing different policy dimensions; 2) Long timeframes and intergenerational equity; 3) Ecosystems limits and planetary boundaries; 4) Equal opportunities and access; 5) Inclusion and participation; 6) Governance for sustainable development.

Through these principles, we have been able to affirm that a number of differences exist between the sustainable development concept and the financial markets. The crucial difference between the two arenas is that while sustainable development has a multidimensional and holistic perspective, in which a balance among environmental protection, social equity and economic development is pursued, the financial sector seeks the one-dimensional goal of the maximisation of financial profits. As an important result out of this confrontation, we developed a '**Framework for comparing Sustainable Development and the financial sector'** (please see page 27) that is useful for understanding the differences, but that also helps to unveil the possible contact points between these two arenas. Although the financial markets rationale and the sustainable development discourse seem far apart from each other, we aimed to provide an overview of possible interventions on the financial sector that could help in reducing the distances. In terms of regulations, among the interventions that could be implemented, we found that some were closer to the financial sector rationale and we therefore suggested few of them: 1) Transaction tax/Tobin tax; 2) Disclosure and Transparency; 3) Regulate speculation; 4) Bonuses regulation.

Moreover, several suggestions could be made to **include the SD perspective into finance**, and therefore we proposed four different ideas: (i) internalization of externalities in the calculation of an investment (i.e. in a company's present value); (ii) assigning a long-term horizon to investments, also as a necessity for maintaining the prospect of safeguarding financial capital for the future; (iii) progressive substitution of financial ratios with sustainability ratios; (iv) a changing perspective on the connotation of financial profits.

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Annex I Glossary

Term	Definition
Assets	Items of value to a business that can be converted into cash. They can be tangible items such as factories, machinery, or securities or intangible items such as goodwill, the title of a newspaper, or a product's brand name. They appear on the company's balance sheet.
Bonds	Legal contracts in which a borrower such as a government, company or institution issues a certificate by which it promises to pay a lender a specific rate of interest for a fixed duration and then redeem the contract at face value on maturity. In theory, corporate bonds are safer than stocks because they have a fixed maturity and are repaid before any payments are made to shareholders. But if a company fails, its bond holders may suffer just as much as its shareholders.
Capital	Capital refers in a general sense to financial resources such as cash or securities or, more specifically, to assets which can be liquidated and turned into cash.
Central banks	The major regulatory bank in a nation or group of nations' monetary system. Its role normally includes control of the credit system, the issuing of notes and coins, and supervision of commercial banks. It also manages its country's foreign exchange reserves and acts as its government's banker. Central banks in developed economies are also responsible for the conduct of monetary policy.
Commercial banks	Financial institutions that operate both in the wholesale banking and retail banking markets. Commercial banks attract customer deposits and offer cheque-clearing facilities and also handle the business of large companies and financial institutions. They are allowed to borrow from their respective central banks when they need short-term funds. Commercial banks contrast with investment or merchant banks, which specialize in raising funds for companies rather than concentrating on lending and the transmission of money.
Commodity	Raw materials used in the production of foodstuffs and in manufacturing industries. Commodities include metals, grains and cereals, soft commodities such as sugar, cocoa, coffee, and tea and vegetable oils such as palm oil, soya bean oil, and sunflower seed oil. Exchange-traded commodities are quoted in specific lots of a specific quality for specified delivery. Commodities are also traded in futures and options markets.
Credit rating	Credit ratings measure a borrower's creditworthiness and provide an international framework for comparing the credit quality of issuers and rated bonds. Rating agencies allocate three kinds of ratings: for issuers, for long-term debt, and for short-term debt. Of these, issuer credit ratings are the most widely watched. They measure the creditworthiness of the borrower including its capacity and willingness to meet its financial obligations. A top rating means there is thought to be almost no risk of the borrower failing to pay interest and principal. Ratings are derived from an examination of a company or a government's past financial history, its current assets and liabilities and its future prospects. The higher the rating the less the borrower will need to pay for funds.
Debt	An obligation to repay a sum of money. More specifically, it is funds passed from a creditor to a debtor in exchange for interest, and a commitment to repay the principal in full on a specified date. Bonds and other debt instruments have a defined life, a maturity date, and normally pay a fixed interest rate or coupon.
Derivatives	Securities or financial instruments whose value is derived from the value of another, underlying asset. They can be bought, sold, and traded in a similar way to shares or any other financial instrument. The underlying assets or instruments on which derivatives can be based include commodities, equities, residential mortgages, commercial real estate, loans, bonds, interest rates, exchange rates, stock market indices, consumer price indices, and weather conditions. The main types of derivatives are forward contracts, futures, options and swaps. Credit derivatives are based on loans, bonds or other forms of credit. The pricing and performance of derivatives is often based on that of the underlying asset, although the reverse may also be true. Derivatives can drive the underlying market and the volumes traded in certain futures and options contacts can exceed those in the underlying cash markets. Derivatives can be traded on an exchange or in an over-the-

	counter (OTC) market. Global derivatives traded market volume is in the hundreds of trillions of dollars annually.
Equity	The holding or stake that shareholders have in a company. Shareholders equity is calculated by subtracting total liabilities from total assets. Equity capital raised by the issue of shares is one of the two main sources of finance for a company - the other is debt.
Financial intermediation	Bringing together users of capital, such as businesses and governments, with suppliers of capital such as pension funds and private investors. The term is usually used to describe the activities of commercial and investment banks.
Financial markets	Markets in which funds are transferred from people who have a surplus of available funds to people who have a shortage of available funds
Inflation	A persistent rise in the prices of goods and services.
Investment bank	A financial institution that raises capital for clients, that trades in securities and financial instruments for clients and on its own account and advises on corporate mergers and acquisitions (M&A).
Interest rates	The charge or the return on an asset or debt expressed as a percentage of the price or size of the asset or debt. It is usually expressed on an annual basis.
Maturity	The length of time between the issue of a bond or other security and the date on which it becomes payable in full. Most bonds are issued with a fixed maturity date. Those without one are known as perpetuals.
Monetary policy	Government policy that deals with the availability and cost of money. It is changed by making adjustments to the money supply and the level of short-term official interest rates. Monetary policy has a direct effect on the overall level of economic activity and inflation. Governments often delegate the implementation of monetary policy to their country's central bank.
Money market	A wholesale market for the buying and selling of money. Money markets normally trade in short term debt instruments with maturities of 12 months or less. Most activity is by banks borrowing and lending to each other and interest rates are often set with reference to the London Interbank Offered Rate (LIBOR). Instruments traded on the money market include banker's acceptances, CDs, repurchase agreements, treasury bills, commercial paper, eurodollar deposits, municipal notes, and fed funds.
Over the counter (OTC)	Abbreviation for Over The Counter. An OTC market or trade is one conducted directly between dealers and principals via a telephone and computer network rather than via an exchange. In contrast to exchange trading, there is no automatic disclosure of the price of deals to other market participants and deals and traded instruments are not standardised. With a trade on an exchange, a clearing house steps in when a counterparty defaults, ensuring that the transaction is completed. But most OTC trades are not cleared, exposing firms – and the financial system – to counterparty risk. As of 2009, there is increasing political pressure for OTC trades to move to public exchanges and be handled by clearing houses.
Present value	The current value of future cash flows, discounted at an appropriate interest rate. Cash earned in the future is worth less than cash earned now because today's cash can be invested and can earn interest.
Speculation	The taking of relatively high risks and the acceptance of the possibility of losses in the hope of making large gains. It may involve the purchase or the short-selling of securities or assets in the hope of profiting from relatively short term price changes. Speculators normally, though not always, have no professional interest in the securities or assets they trade in. Speculation can be contrasted with investment, which is the long term purchase of assets or securities in the hope of income and capital appreciation. Speculation is sometimes referred to in a pejorative sense. However, speculative trading adds capital and liquidity to financial markets, and reduces price fluctuations in normal times. In periods of economic or political crisis, it is likely to exaggerate market movements.
Stock	The amount of money employed by a company in its work-in-progress, raw materials, and finished goods, also known as inventory. The word can also refer to a certificate that represents part ownership of a company and the right to receive a share in the profits of the company. Also called a share.

Annex II Interview with Stefania Rossi, University of Cagliari

Stefania Rossi *(Professor of Macroeconomics and Financial Markets, Department of Economics, University of Cagliari, Italy)*

1. What are the different logics in sustainable development and of financial markets?

In 1987, the **World Commission on Environment and Development** defined the concept of Sustainable Development as "the development that meets the needs of the present without compromising the ability of future generations to meet their own needs". This means that when we talk about Sustainable Development we need to take into consideration the long-run investment strategies and economic policy effects, including the negative externalities for agents, firms, environment, production factors and their availability. In other words, the long-term perspective of sustainable development, seeks to integrate investment objectives and strategies with social and environmental issues.

Conversely, financial sector responds to a different logic, which is not necessarily longsighted. We rather observe that financial markets are more centred on the short-term profit maximisation and return on investment. Albeit, financial markets create social value through the efficient allocation of capital to firms and households, concern on the external effects of financial strategies and investments decisions - such as environmental protection, welfare and social aspects, intergenerational and intra-generational equity issues – was and is not a priority.

2. What are the causes of these differences? (i.e. actors, regulations, history of the crises)

Finance is lifeblood for the economy. As such, it can also affect sustainability and social responsibility of the firm. For example, the World Business Council for Sustainable Development sees the financial industry as a main actor in promoting sustainability. We all know that from an ethical and normative point of view, socially responsible investors and shareholders shall promote socially and environmentally desirable economic activities. On the other side, we know that economic behaviors and economic agents respond to **incentives**.

Financial markets, as well, respond to economic/financial incentives: for instance, capital flows towards investments that give higher returns. In my view, the crucial and right point to investigate is about **the presence of incentives that promote more socially responsible investing**. In trivial words, did sustainable financial investments deliver lower or higher financial returns? So far, academic research finds that the theoretical arguments, as well as, the empirical evidence do not provide convergent outcomes. Financial performance seems only weakly linked to corporate social responsible behavior and socially responsible investments do not earn significantly higher returns than investments that do not take account of firm's behavior. In my opinion, this has been a reason to qualify the incentives of shareowners towards sustainable financial investment rather limited. Additionally as long as manager's performance is mainly judged on short-term Performance indicators, managers have no incentive to invest in sustainable investments. Finally, I would also underline that in presence of **market failure**, **policy** should play a role in **stimulating and promoting incentives** that are able to fulfil sustainable development goals.

3. What do you suggest to avoid crises at financial markets in the future and to implement sustainable development principles at financial markets?

Generally, financial markets deal with two kinds of information asymmetries: 1) **adverse selection** (lenders may not be able to properly evaluate investments and choose among them); and, 2) **moral hazard** (meaning that banks do not bear the full cost of their actions). In my view, a financial system that is better shaped to deal with these asymmetries would be required. Mainly, we need to face the problem of moral hazard, arising in presence of large financial institutions, so-called 'Too Big To Fail' (TBTF). The status of 'Too Big To Fail' confers an implicit guarantee that twists large banks to abandon prudential conducts in favor of excessive risk taking and opportunistic behaviors (more risky credit policies, low liquidity levels and shrinking of capital): in case of bank default the loss will be paid by tax payer and collectivity. Moreover, those large financial institutions are not only too big to fail, but also to big for being regulated. In order to avoid future financial crises and to implement SD principles at financial markets I would suggest the following recommendations.

Firstly, we should introduce a framework of **regulations for preventing the creation of the 'Too Big To Fail' banks or too large financial institutions**. Research shows that these 'too big to fail' financial institutions, in some case, are not even able to exploit economies of scale and scope, which should represent the economic rationale for their constitution and existence. On the contrary, their failures or defaults – because of their size – can create domino effects in the financial markets with detrimental effects on the real sector. Eventually, it is also shown that smaller banks are better capitalized and have better knowledge of firms, households and the local economy in which they are embedded.

Secondly, in some way related to the moral hazard problem ('Too Big To Fail'), there is also the issue of regulating speculation, particularly **big speculators**, with the intention of better preserving financial stability.

Thirdly, an additional recommendation, which is also discussed at the European level, is the **introduction of a transaction tax** that, penalizing short-horizon investment, will aim at reaching more stability in financial markets, introducing more fair rules (i.e. the financial markets did not fully pay the cost of the crisis), and harmonizing laws among Member States.

Finally, I would suggest introducing **more transparency and accountability,** not only on information, decision processes, and governance, but **also on financial products** and instruments to **avoid financial innovations that mask risk**.

4. Who should take action? What should be done first?

Indeed all the measures discussed above are dealing with markets that are highly and deeply interdependent; therefore a strong commitment that involves the responsible institutions and authorities at the European and International level is required. In my view, the first action would be to set up a framework of **regulations aiming at preventing market failure and introducing incentives able to promote market stability.**

5. Could you please describe how the financial crisis led to an economic crisis and to a crisis of the political system and to a social crisis?

As well known, the 2007-2009 financial crisis had its origin in the U.S. with the so-called *subprime* mortgage crisis, "where an asset price bubble interacted with new kinds of financial innovations that masked risk; with companies that failed to follow their own risk management procedures; and with regulators and supervisors that failed to restrain excessive risk taking" (Baily et al., 2008)[44]. The financial crisis was spread from the U.S. across the world and then **transmitted to the real sector through the following traditional mechanisms:**

- loss of confidence of banks (crisis of the inter-banking market: banks don't trust each other);
- loss of confidence of household and increased liquidity preferences;
- credit crunch, decrease of supply of credit, but also of demand of credit because of pessimistic expectations;
- decrease of investment and income;
- increase of unemployment rate;
- reduction of households financial wealth (stocks and bonds) and private saving;
- decrease in the world demand and exports, which for some countries are crucial for growth.

In the EU at beginning of 2010, the financial crisis turned into a second wave of crisis, known as the 'public debt crisis'. At that time appeared clear that the Greek Government, in order to satisfy the Maastricht parameters, had manipulated the public accounting data to hide the entity of public debt. The public deficit and public debt figures had to be revaluated. The contagion involved Ireland, Portugal, Spain, and then Italy. The entire Eurozone was under speculative attack. All the EU Member States (with some remarkable differences) committed to an extensive austerity program and fiscal consolidation plan. These simultaneous austerity policies in the EU have even amplified the financial and real crisis effects on all economies. In particular, due to the budgets constraint and the austerity policy, which in most cases produced cut on the welfare and social expenses, the crisis manifested its severity across the more vulnerable social classes. The real and the social crises had two important side effects, which are also not consistent with sustainable development: 1) **increase in income inequality** (income gap between the wealthy and the poor people); 2) **loss of inter- and intra-generational equity** (the young generations have less opportunities in terms of employment, income or pension and a lower prospect for better life conditions than the older generation).

6. How are Sustainable Development relevant issues affected by the financial crisis?

As discussed above, the financial crisis affected also the relevant issues in SD. The financial crisis of 2008 is just the latest and most dramatic proof that finance, which assumed a prominent role, acts and responds to a different and less socially-conscious meaning than other sectors. Nevertheless, we can argue that this financial crisis represented also an **opportunity** and an **obligation** for regulators, policy makers, financial agents, researchers to practice finance differently. This is the reason why, nowadays, policy makers, financial actors and authorities discuss about "sustainable finance", which is the practice

[44] Baily, M.N., R.E. Litan and M.S. Johnson (2008) The Origins of the Financial Crisis. Brookings Institution, Fixing Finance Series, Paper No. 3.

of creating economic and social value through financial models, products and markets that are sustainable over time.

In this post-crisis contest, also the role of banks needs to be revised in order to modelling financial institutions that are more suited to enhance social, environmental and sustainable development goals. A Sustainable banking sector, according the principle of the Global Alliance for Banking on Values (GABV), should therefore be more focused on the real economy, offer resiliency through strong capital positions, deliver stable and solid financial returns (i.e. importance of incentives), and should also boost economic growth. In addition, we can argue that sustainable banks should be not 'too big', and better managed for reducing information asymmetries and monitor their own risk management procedures.

7. In what ways is the financial sector linked with the real world economy?

Firstly, financial markets and intermediaries add value to the real sector by offering a number of services to savers and investors: for instance, payment services, asset management, risk management, borrowers monitoring and so on. Secondly, the financial sector is also linked to economic growth through several transmission channels: (i) a fraction of saving goes to investment in the real sector (i.e. regulators can have an impact on this fraction for instance through reducing the losses in the information processes); (ii) marginal productivity of capital (i.e. the financial sector can improve this productivity); (iii) impact on the saving rate (i.e. higher financial development can insure against shocks and give families the chance to diversify wealth). In addition, screening, monitoring and enforcement are very important aspects of the financial sector to improve the efficiency of the real economy.

8. Do you see possible actions towards a financial sector that is more oriented and aligned with sustainable development?

These two questions are very much linked together. The global scenario changed vastly after the recent financial and economic crises with a larger interest towards sustainability showed by capital markets. For instance, sustainable investments have increased substantially, registering a 36% of annual growth rate (as shown by EUROSIF) and their market is expected to grow even more. Additionally, these trends in financial markets are also supported by new empirical studies, which show a greater focus towards sustainable development by financial markets and by business practices.

Furthermore, the big change occurring in financial and real sectors towards sustainable development are not only driven by ethical provisions but they are also forced by the scarcity of natural resources, for instance the limited availability of crude oil coupled with steadily increasing energy demand.

Albeit financial and real markets are moving towards a more sustainable development oriented paradigm, we still witness some paradoxes. For instance, while, on the one hand, financial markets investors seem to be more aware about sustainable investing and environmental issues, and the real sector is investing in the green economy, on the other hand, current global carbon emissions are increasing more than global GDP growth rate, and are the main responsible for global warming.

Annex III Interview with Alexander G. Welzl, Economica

Alexander G. Welzl[45] *(senior researcher with Economica, Vienna/Austria)*

1. What are the different logics in sustainable development and of financial markets?

In my comments I just want to cover some of the characteristics in a field, which is rather complex and addresses a multitude of different aspects. Being a natural scientist by education and now an economic researcher by profession – with professional experiences in the financial industry, public financial administration, private industry as well as non-profit organizations dealing with environmental issues – I had the opportunity to look on the phenomena of sustainable development as well as financial markets with an insight view in the respective communities throughout the last 25 years. Let me therefore be not too theoretical but providing my answers based on a mixture of methodological know-how and practical experience. Many of the things I point out have repeatedly been addressed in public by experts from both realms in the recent years following the global crisis. They are by far not new or unique with regard to the analysis. However the sense of urgency still seems to be not strong enough to go for a fundamental re-launch especially of the global financial system and markets.

From my perspective there are a few basic differences. First of all we have to understand that each of the communities have their own language sometimes even using the same words or phrases however with a totally different connotation. In general knowledge about and practical insight in rules, procedures and institutional context of 'the other side' is scarce within each of the communities.

A major and fundamental difference between a sustainability approach and the rationale of financial markets is the ***contradiction between a necessary long-term perspective when it comes to sustainable forms of living on the one hand and the intrinsic short-termism in the financial markets*** on the other hand.

Secondly sustainability as a concept of living and doing business includes a focus on the value and development of public goods as well as the continuous strengthening of community well-being. ***In the financial industry the paradigm of individualization of gains versus socialization of losses create framework conditions, which quite logically lead to a totally different development and nurture completely other forms of lifestyles and ways of doing business.*** This has also been addressed quite frankly in the 79th Annual Report (2009) of the Basel based Bank of International Settlements (BIS) which is kind of an umbrella organization of all National Banks worldwide.

Sustainability is also linked to an awareness of the necessity of negative feedback-loops with regard to growth and use of limited resources. In turn continuous growth is a basic paradigm in financial markets. This contradiction is linked to another one: the quest for a valuation framework of human development guided by ecosystemic limits and framework conditions (as far as we understand them) versus the artificial anthropogeneous system of financial markets.

Another point of different logic is the definition of success and successful developments. In sustainability context attempts are made to understand linkages of individual activities and potential harmful impacts in societal and ecological context. The logic of financial markets tends to decouple of individual action and responsibility for potential harmful outcome in economic and societal context and in daily business

[45] The opinions expressed in this interview are those of the author and do not necessarily reflect the position or views of Economica.

ecological aspects don't play a role so far. Attempts to create incentives for responsible and long-term oriented behavior with regard to sustainable business practices stand against real market practice of incentives geared towards short-term, individualized and maximum gains. These characteristics are linked to an interest of the informed sustainability community in the development of an enlarged set of performance measures including quantitative (monetary) and qualitative elements (metrics) and new accounting approaches. Financial market professionals on the contrary support accounting and valuation practices based on monetary valuation alone and are in general reluctant to seriously integrate new accounting approaches and metrics on a broader and compulsory basis.

2. **What are the causes of these differences? (i.e. actors, regulations, history of the crises)?**

One major reason is educational background and missing knowledge of financial professionals regarding ecosystemic framework conditions and historic context of former crises. Another reason is the difference in socialization and psychological framework conditions of the two communities. For instance, financial professionals tend to impose their rules and cycles onto corporations even if they do not fit into the reality of real economies logic and production cycles (see for instance the book of Karen Ho 'Liquidated – An Ethnography of Wall Street') whereas the rationale in the sustainability community is to try to implement more holistic and integrative approaches.

Regarding SEC in the US the way how regulation is performed works in a political context and under framework conditions provided by the dominating economic paradigm. If there is a paradigm that too much transparency and monitoring of risk might lead to inefficiency and hinders the markets than regulators would act in this context. The difference to the sustainability context is that no comparable regulatory institution of the same power like SEC and others has been established so far and until today the discussions still go on between those in favor of strict and transparent regulations and those who are strictly in favor of non-regulated voluntary reporting and valuation practices. This shows the complicated situation after a public debate regarding sustainability of roughly 40 years.

3. **What do you suggest to avoid crises at financial markets in the future and to implement sustainable development principles at financial markets?**

First of all, ***it is important to set realistic goals and adjust expectations to the real learning capacity of individuals working in the financial markets***. Observations of financial market professionals in the recent 30 years and again in the aftermath of the global financial crisis show that the general learning curve is not very steep when it comes to understand basic principles of sustainable development in general and the consequences for the financial industry in specific.

Secondly, one has to take into account that financial professionals tend not to accept logics, framework conditions or metrics that are suggested to them by other expert communities. This again is characteristic for the way how financial industry has embraced the notion of sustainability up to now. Instead of learning about the principles of ecosystemic sustainability representatives of the financial industry simply take phrases and words like 'sustainability' and reframe them in the context of their industry. In this process the words are used but they are used based on an understanding and definition that stems from a financial industry context. For instance driving forces for the global implementation of XBRL – which is the ultimate instrument for short-term information retrieval of corporate performance – at the same time want to include sustainability metrics in the online XBRL-information retrieval system. Although this is a very obvious and basic contradiction in the context of financial industry sustainability with regard to metrics evolves to just another set of data representing information from the realm of so-called extra-financials. Therefore further initiatives, development and implementation of procedures,

methods and electronic platforms aiming at an even stronger acceleration of information exchange between financial institutions, professionals and listed corporations should be stopped. As a consequence XBRL and comparable approaches should be forbidden by regulators.

Finally, a change of incentive structures in corporations and financial industry is crucial. This means in a first major step renewal of executive compensation schemes geared towards inclusion of performance metrics focusing on mid- to long-term corporate development and value creation.

4. **Who should take action? What should be done first?**

Regarding a long-term cultural change first of all the curricula at business schools have to be renewed substantially. New curricula elements amongst others have to include obligatory courses and training in economic history in general with a particular focus on former crises, psychology of financial markets, responsibility of the financial industry and markets for development of corporations and societal development as well as new accounting approaches including all types of intangible assets. Extensive thoughts about a new conceptional approach to economic education and development of curricula at universities of economy and business administration are continuously published amongst others by the Institute of New Economic Thinking founded by George Soros and leading academics and professionals in economy and finance. Another important first step would be the ***introduction of a more serious form of risk assessment*** (including societal and environmental impact of investment decisions).

5. **In which ways Sustainable development principles differ from the principles of financial markets? Where do you see basic contradictions between them?**

Financial market circles aiming at short-termism or at expectations of exceptional returns - even if this does not have to do anything with reality in growth capacity of corporations - create harmful pressure on boards and employees. Transparency of business processes with regard to risk potential for society and environment is a basic claim or principle of sustainable.

6. **In terms of valuation and key principles of valuation (i.e. strict lowest-value principle, market-value principle, present-value principle), what consequences do these valuation principles have for financial markets, for the real economy and for sustainable development?**

In general, valorization approaches covering quantitative metrics that are based on monetizing values, only fail to be useful in the context of sustainable development. In a global business landscape where knowledge and innovation have to be seen as assets and framework conditions of the biosphere as natural opportunities and limits at the same time the language of the financial industry - i.e. corporate accounting, accounting standards as well as financial analysis and due diligence processes – has to be fundamentally changed.

7. **How can you valuate intangible assets? And, which aspects of intangible assets valuation are mainly linked to sustainable development?**

There are several approaches to the valuation of intangibles. Basically two major solutions can be distinguished: a) monetarisation of intangibles; or, b) the attempt to develop a new system of metrics, reporting language and use of this information based on qualitative and quantitative data. In the latter case scoring systems, quality measurements as well as comparison of an achieved progress against mid- and long-term goals would be used. However this requires investment professionals, analysts, financial

service firms and corporate managements to use these metrics and integrated information. There are experiences with specific intangible assets like patents to be used as loan collateral by banks. This includes valuation procedures accepted and implemented by corporations as well as by the financial professionals. Current examples of this maybe found in China and they are part of the implementation of a strategic government plan to foster domestic innovation capacity.

8. In what ways is the financial sector linked with the real world economy?

As the BIS described it to the point the financial industry is the economy's plumbing system' (BIS Annual Report 2009). Let me therefore quote some parts of this historic Annual Report of the Bank of International settlements[46]:

"The financial system is the economy's plumbing. And like the plumbing in a house, it is taken for granted when it works, but when it doesn't, watch out. In the same way that modern living depends on a reliable flow of water running through pipes, the modern economic system depends on a reliable flow of financing through intermediaries. What a difference two years make. Since August 2007, the financial system has experienced a sequence of critical failures. **How could this happen? No one thought that the financial system could collapse.**

A financial crisis bears striking similarities to medical illness. In both cases, finding a cure requires identifying and then treating the causes of the disease. Looking at the past few years, **we can divide the causes of the current crisis into two broad categories: macroeconomic and microeconomic.** The macroeconomic causes fall into two groups: problems associated with the build-up of imbalances in international claims and difficulties created by the long period of low real interest rates. The microeconomic causes fall into three areas: incentives, risk measurement and regulation.

The financial stress that began in the summer of 2007 has revealed a myriad of limitations in microeconomic financial arrangements. The crisis has revealed **distorted incentives** for consumers, for financial sector employees and for rating agencies. Few people have any knowledge of the balance sheets of the banks where they do business (…). And the **overall level of financial literacy among the general population is low**. This lack of knowledge combined with the existence of financial oversight structures made people all too willing to **mistake the complexity of the system for sophistication**. And it made them all too willing to assume that their investments were safe. After all, someone else was watching – be it a trusted manager, an equity analyst, a credit rating agency or a government official. But none of them were. **The system that consumers so readily assumed was sophisticated and safe was, in fact, recklessly complex and opaque. Compensation schemes further encouraged managers to forsake longrun prospects for short-run return.** In some cases, **profits calculated with complex mathematical models** were used to determine rewards even when **markets for the assets underlying the calculations did not exist** and so they could not be sold. Equity holders (because of limited liability) and asset managers (because of their compensation system) were **unduly rewarded for risk-taking: they received a portion of the upside, but the downside belonged to the creditors (or the government!).** In the end, the overall difficulty in distinguishing luck from skill in the performance of asset managers, combined with compensation based at least in part on the volume of business, encouraged managers and traders to accumulate huge amounts of risk.

[46] See also my lecture at the University of Oxford in 2009: http://www.esce.at/economica/index.php?mact=News,cntnt01,detail,0&cntnt01articleid=23&cntnt01returnid=15

Added to failures in monitoring by individuals and flawed compensation schemes were the **skewed incentives of the rating agencies**. There are a number of problems with this system."

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