Department of Economics and Finance – Chair of Money and Banking

INNOVATIVE FINANCE FOR SUSTAINABLE DEVELOPMENT

SUPERVISOR

Prof. Paolo Paesani

CANDIDATE

Marco Cavarocchi Zavatta

Matr. 184351

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INTRODUCTION:

This work discusses financial instruments that can be used to promote sustainable development, environmental protection, and economic growth. Firstly there will be an analysis on how green investments are spread around the world and an overview of all the different means to raise funds through Innovative finance that can vary according to the country in which we operate or if are used for raising funds from the Private or Public sector. I will analyze the main aim of Innovative Finance, which is the Sustainable Development focalizing on environmental protection and economic growth.

In relation to the innovative financial instruments used to raise funds for Environmental Protection, I will take in consideration and stress the Green Bonds which are new instruments whose importance and usage is rising year by year. At the beginning there will be an explanation of what they actually are and what make them different from usual bonds, subsequently e an analysis of the Green Bonds market will be made and a research of good and bad aspects behind these instruments elaborating on the possible opportunities to improve them. In the second chapter instead, I will focus on the objective of reaching Economic Growth that can also be reached through the support of SMEs Development and for this reason I decided to analyze the Mini-bonds. In this case, first a definition of these instruments will be given and how their issuance works, after there will be an overview of the Mini-bonds markets and an explanation of the rating process, in the end, after analyzing the pros and cons, there will be a study of the possible actions that can rend these instruments more desirable. The main conclusion of this work reaches, is that these instruments have ample scope for development if provided governments support them with adequate regulatory measures and policy directives.

CHAPTER 1 :

FINANCING SUSTAINABLE DEVELOPMENT

Obtaining a development in which the needs of the present are satisfied without compromising the needs of future generations can be the best way to define Sustainable Development. It aims at operating for the World development and progression taking in consideration that future people will be allowed to benefit from it without being penalized.

On 1 January 2016 United Nations enacted 17 Sustainable Development Goals(SDGs)[1] of the 2030 Agenda for Sustainable Development that will be applied to all World Countries for the next 15 years. The 17 Sustainable Development goals are: No poverty; Zero hunger; Good Health and Well-being; Quality Education; Gender Equality; Clean Water and Sanitation; Affordable and Clean Energy; Decent Work and Economic Growth; Industry, Innovation and Infrastructure, Reduced Inequalities; Sustainable Cities and Communities; Responsible Consumption and

[1] Source: United Nations,http://www.un.org/sustainabledevelopment/

Production; Climate Action; Life Below Water; Peace, Justice and Strong Institutions; Partnerships for the Goals. In order to reach these goals all Governments, Companies and People are involved and expected to take ownership of them even if they are not legally binding.

1.1 FINANCE FOR ENVIRONMENT PROTECTION AND ECONOMIC GROWTH:

Giving a look at Sustainable Development Goals there are 2 areas that can use finance as a mean in order to be well implemented and developed. These areas are the Environment Protection and the Economic Growth, the former refer to all the actions, practices, directives aimed at preserving the environment and its natural functioning from degradation; while the latter consists in the ability of a country to increase the sale of its products and services during a time frame. Is really important to increase the volume of investments for these two Sustainable Development areas. The usual investments for environment protection concern expenditure by public sector, by the private sector and by industries (such as mining, manufacturing and electricity/water supply) and more than the 50% of investment come from the private sector as stated by Eurostat[2]. In order to benefit the environment and to realize green projects the actual benefit for a private investor will be not so high, due to the high realization costs, and so investors have no incentive to spend their funds on these projects. Therefore there is a lack of usual finance ,and so in the use of classical finance instruments to finance green projects(which consist mainly in donations by governments and private companies). The volume of money collected

[2] Source:Eurostat,http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_protection_expenditure

will be always at a low level and so is really important to look for some financial instrument that can benefit the environment but at the same time diversify risks and provide an interest to investors.

Focusing on a country economic growth there are several investments that could be done, such as infrastructure spending, tax cuts, deregulation, exc.. , in order to reach economic growth, but a really big investment opportunity is to sustain the Small and medium-sized enterprises(SMEs). According to the World Bank, they play a really important role for the economy and give a contribution of almost 45 percent of total employment and 33 percent of national income for emerging countries[3].

However the access to finance for the SMEs is really limited since they basically refer to the bank channel but are less likely to be granted a loan respect to big companies ,due to the fact they can not provide enough guarantees, and so they mostly rely on internal own financial resources, for this reason, the SMEs growth is curbed. So, it is possible to state that classical finance misses also in providing some instruments for granting SMEs development.

For these reasons in order to reach a Sustainable Development, we can notice that classical finance instruments are not so effective and so is interesting to look for innovative financial instruments that could provide a solution. Innovative finance embraces all those financial instruments that has been invented and developed in recent period or which are still in progress. In 2011 there was a communication by the European Commission which stated the construction of “a new framework for the next generation of innovative financial instruments” whose instruments will aim at achieving the Europe 2020 Strategy’s objectives of smart, sustainable and

[3] Source: worldbank.org

inclusive growth[4]. So by the adoption and the use of innovative finance and that involve the creation of new markets, institutions, and securities could be a really big opportunity to raise funds for projects that aim at the environment protection and economic growth and consequently at achieving a sustainable development.

1.2 DEFINING INNOVATIVE FINANCE:

Today talking about Innovative Finance can refer to so many topics that can vary a lot from one to the other. Innovative Finance can mean different things to different people. We can include under this heading any approach that helps to generate additional development funds by tapping new funding sources that can help small investors to run their business and making an investment that will bear not only the investors but the environment too. We can include under Innovative Finance the concept of Sustainable Development: the basic concept is to grant the "future capacity", namely the rational use of resources in a way that enables them to continue producing value in the future. So we can define Sustainable Finance as a branch of Innovative Finance and it is fundamental aim consist in generating value in the long period, addressing funds towards business that do not produce just an economic surplus but benefit at the same time the society and the environment[5]. We talk about new products and new financing methods whose goal is to engage the private sector to go investing in areas they would not go because maybe they are a suboptimal

[4] Source: European Commision,ec.europa.eu
[5] Source: Innovative Finance For Renewable Energy Solution by SNV

investment or they don't have enough information about these areas and they do not have experience so decide to do not invest. The main goal is to attract the investors that are a bit hesitant not for the riskiness of this investment but because there is a lack of information concerning these fields. Consequently, two solutions can be giving more clarification about these investments(and also they should be well regulated) and give them public funds in order to make these investments more desirable. We can consider innovative financing as the mechanisms of raising funds or stimulating actions in support of international development that go beyond the traditional spending approach of the public and private sectors. Some examples can be: pooling private and public revenue streams to develop activities for the benefit of partner countries, new revenue streams earmarked to developmental activities on a multi-year basis, incentives to address market failures or scale up ongoing developmental activities. There are other views about innovative finance, for example, someone thinks that it is simply representative of the important shift in the way development partners do business, someone else thinks that is a natural and pragmatic response to the consistent failure of most donors to devote sufficient funds to international development. Hence there is not an internationally agreed definition of 'innovative financing for development'. Innovative Finance does not refer only to innovation in fundraising, but also in spending. It concerns also the investments in renewable energies, for example from a study done by the Green Investment Report[6] the investments required for renewable energy and power is approximately 5 trillion us dollars until 2020, it enlightened that at least USD 0.7 trillion dollars are needed to meet the sustainability climate challenge.

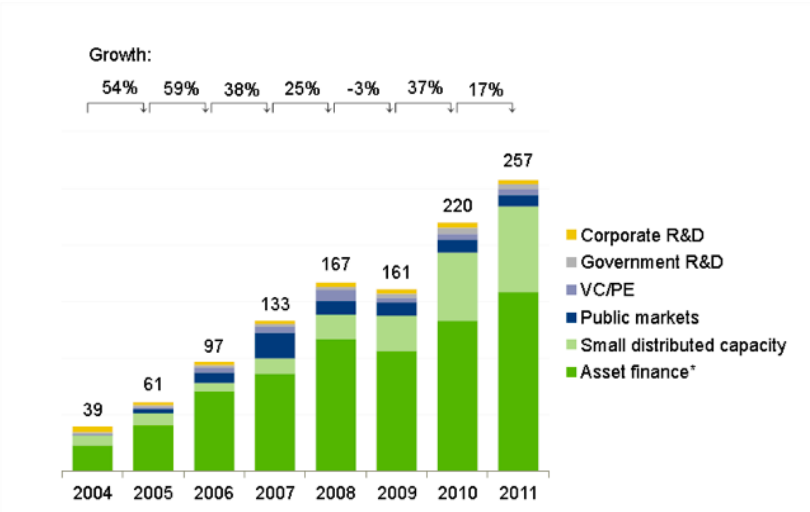
[6] Source: The Green Investment Report

Another study from the Frankfurt School of Finance&Management revealed that the investments in renewable energy are falling year by year, for example in 2013 it reached USD 214 billion which is 14% lower than in 2012 and 23% lower than 2011. This study showed that there is a gap between financing need and the existing financing. Also for what concern renewable power and fuels as a global status report revealed that there is a decline in investment from 214.4 billion in 2013 to 184,4 in 2012, the cause could be found in the uncertainty over incentive policies in Europe and USA but also in a substantial reduction in technology costs. The two following representations can give an idea of how investment for sustainable development but especially for renewable energy are spread in the main regions of the world and how resources are used in innovative finance by the different asset class.

The next figure (Figure 1) is a representation on how investments in renewable energy are spread around the world from 2004 to 2013. We can notice that the bigger contribution comes from USA, EU, and China, but we have to underline that during this period US investments volume has remained more or less constant, while in China there were a substantial increase and in EU there were also an important increase of investment even if in the last years they started to go down. In table 1 instead the contributions to Renewable Energies by different asset categories are showed, we first notice that from 2004 to 2013 the volume of investments had an important growth and the main contribution to this investment is given by asset finance.

Figure 1-New Investment in Renewable Energy Around The World[7]

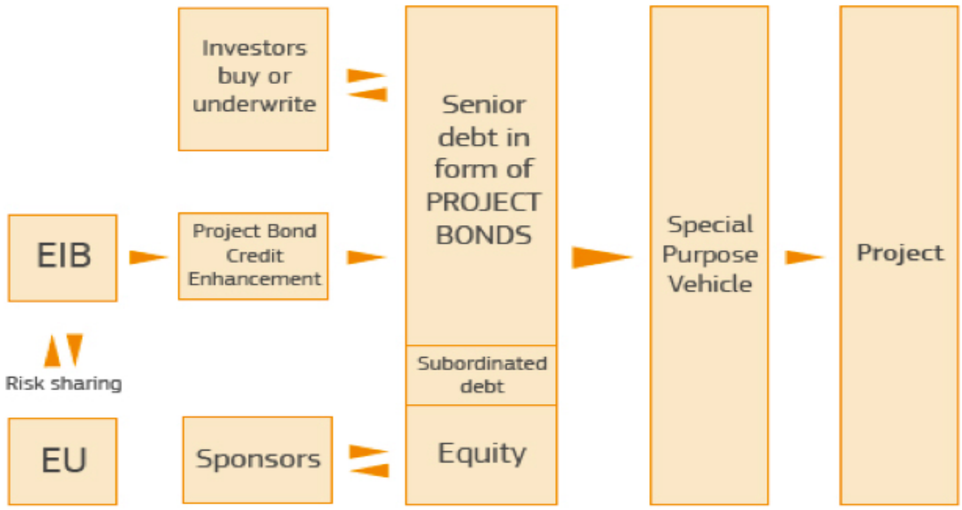
Table 1- Investment in Renewable Energy by Asset Categories[8]



[7] Source: UNEP, Bloomberg new Energy Finance
[8] Source: Bloomberg new Energy Finance

Looking this topics by a government and political point of view, as stated by the European Council in October 2011 which gave a communication to the European Parliament and council to include the use of innovative financial instruments (in the equity and debt platform) in EU budget spending to achieve the objectives of smart, sustainable and inclusive growth. Financial instruments cover a really vast range of interventions such as us participations in equity funds, guarantees to banks which are lending money, for example, small and medium size enterprises (SME) or risk-sharing with financial institutions for investment in large infrastructure projects. Another example of innovative finance intervention was the Europe 2020 Bond Initiative which has the aim of reviving capital markets to finance large infrastructure project in the field of transportation. A pilot phase was carried out to test the project on the multiannual financial framework which goes from 2007 to 2013. More precisely the objectives of the pilot phase were: stimulating investment in EU infrastructure, energy, and broadband and establishing Debt Capital Market as a further source of financing these projects. A necessary condition in order to achieve these objectives are attracting institutional investors to the Capital Market which can be done only by enhancing the credit quality of bonds issued by private companies. In the table 2 is illustrated the Project Bond analysis where the financing for the Project is obtained partially from the capital markets looking for some sponsor companies and then by the Project Bond by the European Investment bank, which shares risks with the European Union, these bonds can be bought or underwritten by the investor in the debt market. Big importance should be focused on the Special Purpose Vehicle which specifies the nature of the project for which we are raising funding.

Table 2- Project Bond Initiative[9]



Innovative financial instruments are really important for EU growth since they can attract investors in investment which are perceived risky. The support of EU investing risk capital in a fund or covering part of the risk associated with a project gives more assurance to the investors to put their money in a project. Furthermore, innovative financial instruments have other good effects such as the promotion of best practices.

[9] Source: European Commission

1.3 INNOVATIVE FINANCIAL INSTRUMENTS :

We have already stated some of the instruments that can represent innovative finance but they are not the only ones. For example from a study made by the United Nations Development Programme (UNDP) in 2012 in the categories of innovative finance mechanisms and so the instruments that can represent it, the instruments that we can find are[10]:

1. Taxes or charges on globalized activities, such as carbon taxes or tax on fuel that have the aim to discourage the use of any pollutants materials.
2. The voluntary contribution which is essentially donations by consumers, which obviously are not so frequent, it works at the time of purchase they decide to donate a certain amount of money.
3. Frontloading which financially is the amount of money that some financial products charge new investors at the beginning of the contract. This financial instrument can be used to make funds available earlier and so can be easily invested for development (it is usually done through the issuance of bonds on international capital markets).
4. Debt based instruments, which are debt conversion, diaspora bonds, and green bonds. Debt bonds or also called debt swaps is the exchange of debt for equity or counter part domestic currency funds that can be used to finance a certain project. In substance, the amount of debt is reduced thereby freeing-up additional resources for investments. Diaspora bonds are a debt instrument that arise due to the progress in transportation, communication, and

[10] Source:UNDP,www.undp.org

globalization which contributed to the growth of an interconnected economy and society between countries. A country, which is usually a not developed country, try to sell this kind of bond to investors who emigrated in another country and want to help their home country. Green bonds which are tax-exempt bonds issued by some organizations with the aim of requalifying and developing brownfield areas or simply want to invest in environment initiatives.

5. State guarantees, public-private incentives, insurance, and other market-based mechanisms. These are activities which raise public funds to create investment incentives for the private sector, the aim of these activities is to correct market failures; other mechanisms are used to reduce risk, so the aim is to improve the effectiveness of finance rather than create new revenue streams for development.

All the innovative financial instruments listed before have in common the objective to collect funds to be invested in projects aimed at reaching Sustainable Development. However, it is really crucial to make a distinction between how innovative sources of finance are found, namely how to raise fund and the ways resources are delivered.

Giving a deeper analysis to all innovative finance instruments that can be used in order to raise fund we first should say these instruments are not equal around all the world countries.

Usually is common to think that more industrialized countries should give an help in financing the development of poorer countries, but sometimes is not possible for them since they are put under big pressure due to fiscal programs and structural problems to which they are submitted because of the global crisis and they can not always borrow money on the international capital market. For this reasons innovative finance is becoming really important, and since we can identify under this concept different ways to raise funding, that can be divided three categories:

1- funding from the Public Sector

2- funding from the Private Sector

3- funding obtained freeing up funds that are employed, which can occur through debt conversion or increased efficiency.

1.3.1- **Funding from Public Sector**

In order to collect public funds for development industrialized nations can raise new taxes or raise the level of existing taxes, but from a tax system perspective it can generate some problems, so in order to facilitate their foundation and implementation they should deal with issues of global importance (such as taxation on CO2 emissions, levies on airline tickets, exc…). The absolute advantage of this instrument is that it provides a certain high revenue, but on the other hand, can easily arise tax evasion attempts. Another bad aspect is that the allocation of tax revenues can be changed on the basis of political expediency. Another way to raise public funds is through government sale or auction of rights to use since every country owns some rights of use that can be sold to raise funds such as emissions allowances to business subjected to the European emissions trading scheme. The auction of emission allowance has generated in the last three years more than half a billion from just Germany. A disadvantage with this instrument is that the selling price suffers a big influence on the market. Finally, public funds can also be raised through Specifical

Drawing Rights(SDRs),[11] these are claims to currency on International Monetary Fund member countries and are distributed among countries according to their quotas. For example, it could be decided to issue new SDRs or transferring existing ones to developing countries, which subsequently can exchange these SDRs into convertible currency at the Central bank of member countries and use them for development. The advantage of this instrument is that consists in a simple mechanism, but on the other hand is not possible to create SDRs as much as desired since it will hoist global pressure on inflation and these developing countries after the exchange into convertible currency need to create a value equal to those SDRs, so it is really difficult to obtain a majority in the IMF (International Market Fund).

1.3.2- **Funding from Private Sector**

We have a really vast quantity of instruments to raise private funds and Public-private partnerships (PPPs) is an example. It consists of a partnership between the state and a private company in which the latter takes over the planning, the construction and the operation of a public infrastructure receiving a payment from the state. The advantage of this partnership could come from the efficiency in the investment management coming from private specialized companies and their speed of execution. The disadvantage about it is that it requires really complex contracts

[11] SDRs: The SDR was created by the International Monetary Fund(IMF) in 1969 as a supplementary international reserve asset, in the context of the Bretton Woods fixed exchange rate system. A country participating in this system needed official reserves—government or central bank holdings of gold and widely accepted foreign currencies—that could be used to purchase its domestic currency in foreign exchange markets, as required to maintain its exchange rate. Source: International Monetary Fund.

that are not in the capacity of the state structure, for example, it costs a lot to monitor the private partner's performance.

Other instruments are the Loans or Bonds with Repayment terms depending on the economic performance of the debtor country since today for a developing country the access to the international market is not only limited but it is also really expensive, this mechanism could help to avoid debt spirals and low the risk of credit default. These instruments can only be used in a country that is creditworthy and they have a really big potential to mobilize funds.

Another instrument consists of Government guarantees by which the Government takes part of the risks and costs of a given investment or blending[12] which are concessionary loans combining public and private funding, for example, funds from development aid budget are provided by the Government as non-repayable grants; the main objective of blending is to balance funding between projects in a way to avoid a situation with underfunding projects and overfunding projects. A widespread form of blending is the interest rate reduction where a bank takes a loan at market rate on the capital markets and uses these state grants to lower the interest burden along the entire life of the loan. Blending has a high potential to raise effectiveness and efficiency in the use of funds.

Some other instruments are the ethical funds or ethical bonds which consist of investments with a positive return but their main aim is to reach ethical goals such as "Green bonds" or "Cool bonds" whose objective is to raise money to finance projects which have the objective to take care of the environment and climate condition of the earth.

[12] Source: European Commission and "Innovative Finance for Development Solutions"

[13]Also, securities and structured funds are instruments used to raise private funds. For the former loan repayments are secured against the assignment of future cash flows. The latter work in the same way but in addition, they structure the risk too, which is divided into tranches with different degrees of risk. This instrument is used to refinance financial institutions in partner countries, it means that the loan issued by the local institution is used to secure the international loan granted to the financial institution; the international loan is divided into three tranches: the “first loss” tranche, the “mezzanine tranche” and the ”senior” tranche. All defaulting amounts are borne first by the “first loss” tranche, once it has been totally consumed the “mezzanine” and subsequently the ”senior” trances are used. The “first loss” tranche covers all the loans which are expected to default, it consists usually of the 5% of the total loan, it still have a safety margin but it can not be sold on the capital market so it remains in the hands of aid donor or the lending institution. The “mezzanine” tranche, which is the 15% of the loan, can be in the hands of the financial institution or it can be placed on the capital market at a good level of discount, while the “senior” tranche, that represents the 80% of the total amount of the loan, can be sold in the market at a really profitable rate. In the end, the 95% of the financing is in the market and can be raised by private investors. This kind of instrument can be implemented in partner countries with a developed financial market and for products with a secure income.

Also lotteries are used for fund mobilization but this instrument moves a low volume of funds and it is really volatile.

[13] Source: Focus on Development-Development Research,Kfw Bank

1.3.3- **Funding obtained freeing up funds that are employed**

The third group of instruments includes those one which raise up funds through debt conversion or efficiency improvements.

Conditional debt forgiveness, debt buy-back, and debt-for-development swaps are some example of debt conversion instruments[14]. The conditional debt forgiveness could lighten a company from repaying a loan in the case it respects certain agreed conditions, while in debt buy-back there is a third party which repays the loan if certain conditions are respected. On the contrary in the debt-for-development swaps a company can decide to array a sum equal to all or part of the debt, which is canceled, in exchange of developmental measures such as health initiatives or nature conservation. The common characteristics of these tools are that they do not generate new money for investment but they reduce repayment obligations on loans and so they make those funds free for new investment.

Weather insurance and catastrophe insurance can also be considered as instruments to raise funds through debt conversion; the really good advantage of these instruments is that the average risk of a claim can be reduced sharing the risk widely. The disadvantage with this instrument is that the funds freed are not a big volume. Finally, Result-based financing and Output-based aid are two instruments for raising funds that is not done to realize a development initiative but rather to obtain improvements in the efficiency of certain investments. The former works in a way such that the investor who provides the funding pays the agent who implement the projects upon achieving predetermined outcomes, while the latter consist in a linkage of the aid payment with the delivery of a service or product, for examples

[14] Source: Development Research- Kfw Bank

poor households connection with water supply[15]. These instruments are really good because they could enable a developing country to achieve results in the short term, but the negative aspect is that they are target only for really advanced developing countries because they have planning and implementation possibilities, but are also able to pre-finance the initiatives made to obtain wanted effects. The problem with these instruments is that the effects are really difficult to be attributed and measured but however it has a huge potential combined with an improved system of measurement.

In conclusion there are really vast quantity of instruments that can be implemented to raise funds for innovative finance but the criteria that we can recognize to choose an instrument rather than another are the conditions under which an instrument can be implemented to mobilize fund, then it depends on the situation in which we are operating and also in the country where we are, basically in a developed country we have more instrument respect if we were in a poor one. Talking about financial instruments is really important to mention the equity and debt platforms where there are simply common rules and guidance which have the aim to regulate financial instruments that make use of equity or debt such as loans, guarantees, risk sharing. These are fundamental to ensure that these instruments sound financially good. The European Commission has set a paragraph in the financial regulation where are included all the principles for budgetary management for these instruments.

[15] Source: GPOBA,www.gpoba.org

CHAPTER 2:

GREEN BONDS AS A MEAN OF FUNDING FOR ENVIRONMENTAL PROTECTION

In the previous chapter were described a lot of innovative financial instruments that can be used in order to raise fund to reach Sustainable Development. However I want to focus now on the Environment Protection aspects included in Sustainable Development and in particular to the use of Green Bonds, which I think have a really big potentiality to raise funds for Green Projects aimed at Environment Protection, since they are an important tool to support companies in the realization of these Projects having the possibilities to dispose of a greater quantity of funding, and so companies are not obliged to employ all of their own resources for the project having also a substantial decrease in the risk component of the green investment. For this reason increasing the use of Green Bonds, I think that companies will be more incentivized in investing on Green Projects for Environment Protection. With the introduction of Green Bonds it was filled up the lack of a debt-market for Green Projects, which did not exist before and will make issuer bear with a lower risks and they will have the possibility to collect greater quantity of funds respect to Classical bonds which are not labeled green and so investors are not sure that their money will be actually used for the realization of green projects.

2.1 GREEN BONDS FEATURES:

If we should give a definition to the word “Green bond” we can say we refer to any kind of financial instrument with the aim of financing or re-financing in part or totally a new or an existing Project. Is the nature of the Project which actually labels these bond as “green” since their revenues are not used for general corporate purposes but are exclusively employed for projects, assets or business activities that have a positive impact on the environment.

Green bonds are actually bonds so they are fixed income financial instruments for raising fund in the debt capital market, and ,as a usual bond, the issuer raises a fixed amount of capital over its maturity, paying coupons(interests) along the way and at the maturity time he repays the principal. The investment areas in which Green bonds are usually employed are climate change adaptation, renewable energy, sustainable waste management, energy efficiency, sustainable land use and furthermore. The “greenness” in the bond objective is a really big requisite in order to differentiate it from Vanilla bond, which instead of a bond with the most basic and standard features.

According to the ICMA, The International Capital Market Association there are four types of green bonds and these are[16]:

- Green Use of Proceeds Bond: “a standard recourse-to-the-issuer debt obligation for which the proceeds shall be moved to a sub-portfolio or otherwise tracked by the issuer and attested to by a formal internal process that will be linked to the issuer’s lending and investment operations for projects. Pending such investment, it is recommended that the issuer make

[16] ICMA: is a membership association, committed to serving the needs of its wide range of members representing both the buy side and sell side of the industry. Among its members there are issuers, intermediaries, investors and capital market infrastructure providers. The objective this association is to promote resilient and well functioning international debt capital markets, necessary for economic growth.

known to investors the intended types of eligible investments for the balance of unallocated proceeds";

- Green Use of Proceeds Revenue Bond: "a non-recourse-to-the-issuer debt obligation in which the credit exposure in the bond is to the pledged cash flows of the revenue streams, fees, taxes etc., and the Use of Proceeds of the bond goes to related or unrelated Green Project(s). The proceeds shall be moved to a sub-portfolio or otherwise tracked by the issuer and attested to by a formal internal process that will be linked to the issuer's lending and investment operations for projects. Pending such investment, it is recommended that the issuer make known to investors the intended types of eligible investments for the balance of unallocated proceeds";
- Green Project Bond: "a project bond for a single or multiple Green Project(s) for which the investor has direct exposure to the risk of the project(s) with or without potential recourse to the issuer";
- Green Securitized Bond: "a bond collateralized by one or more specific projects, including but not limited to covered bonds, ABS, and other structures. The first source of repayment is generally the cash flows of the assets. This type of bond covers, for example, asset-backed securitizations of rooftop solar PV and/or energy efficiency assets". The next table (Table 3) will show a comparison among these 4 types of bonds making an analysis on how proceeds from each bond are raised and what debt re-course concerns, in addition, there are some examples of each type of bond.

Table 3- Types OF Green Bond(for ICMA)[17]

Type	Proceeds raised by bond sale are	Debt re-course	Example
Green "Use of Proceeds" Bond	Earmarked for green projects.	Standard/full re-course to the issuer; therefore same credit rating applies as to issuers other bonds.	EIB "Climate Awareness Bond" (backed by EIB)
Green "Use of Proceeds" Revenue Bond	Earmarked for green projects.	Revenue streams from the issuers though fees, taxes etc are the collateral for the debt.	Hawaii State (backed by fee on electricity bills of the state utilities)
Green Project Bond	Ring-fenced for the specific underlying green project(s).	Re-course is only to the project's assets and balance sheet.	Alta Wind Holdings LLC (backed by the Alta Wind project)
Green Securitized Bond	Either 1) earmarked for green project or 2) go directly into the underlying green projects.	Re-course is to a group of projects that have been grouped together (i.e. covered bond or other structures).	1) Northland Power (backed by solar farms) or 2) Solar City (backed by residential solar leases)

2.2 GREEN BONDS MARKET:

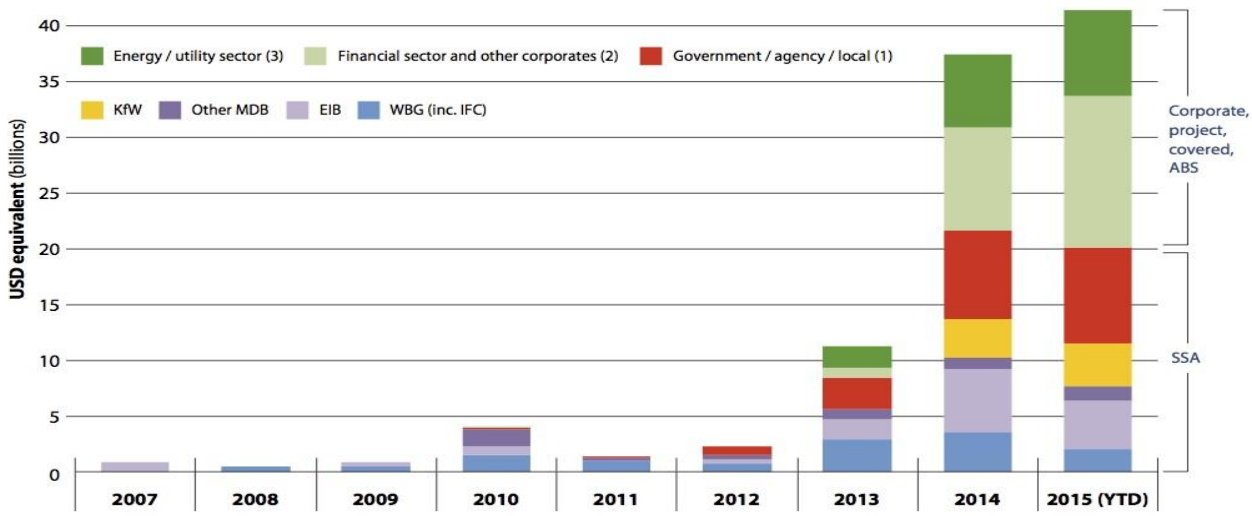
The market for Green Bonds is still evolving if we give a look in the past we can notice that there was a substantial increase at global level in the issuance of this instrument from 2013 to 2014 when it almost tripled. The first green bond was issued by European Investment Bank in 2007, and today EIB is still the largest issuer with more than EU 10 billion worth[18].

There are positive sensations and excitements around this market, in the past, the multilateral development banks(MDBs) and the international financial

[17] Source: www.climatebonds.net
[18] Source: OECD,www.oecd.org

institutions(IFIs) had a big role in the development of this market, while today is totally sustained by the private sector. If we analyze the supply we can say it comes mostly from corporate issuers, MDBs and IFIs and in less grade from banks, while demand depends just on investors. So when they set to meet some environmentally sustainable goals as for example the decrease in global temperature, these goals could be met just through climate finance, that is raised in most from the private sector and used to support projects designed to reach goals. Geographically the Green Bonds market is expanding and diversifying, this kind of bonds have been issued in 23 currencies and in 14 markets of G20. They have been issued under 23 jurisdiction, by which 3 for foreign investors only and 20 for domestic and foreign investors[19]. The next figure shows the composition of the Green Bonds market (as of November 2015)

Figure 2- The Growth in Green Bonds Market[20]



Note: SSA: Sub-sovereign, Supranational and Agency, Muni: Municipal; ABS: Asset Backed Securities. (1) includes national development banks, sub-sovereign jurisdictions including municipalities, agencies, and local funding authorities. (2) includes financial sector bonds and all other corporates that are not energy/utility sector, as well as covered, project and ABS not energy/utility related. (3) includes corporate bonds issued by energy/utility companies as well as covered, project and ABS related to energy/utility companies

[19] Source: Green Bonds, Mobilizing the debt capital markets for a low-carbon transition
[20] Source: OECD analysis based on Bloomberg and World Bank Data

From the figure, we can notice that during the period 2007-2015 the substantial increase in the market for Green Bonds started to grow up in 2013, and from 2014 it has grown furthermore. The greater contribution to this market is given by the financial sector bonds and all corporates which do not operate in the energy sector, then is also substantial the contribution by national development banks, municipalities, agencies and local funding authorities in the same volume of the contribution coming from the corporate bonds issued by energy companies and covered, projects and ABS related to energy companies.

In USA from 2012 to 2014 there was a substantial increase in the so-called ' sustainable investment assets', in which Green Bonds are included, that increased by the 60% approaching USD 2.4 trillion, the 50% of these assets were allocated to bonds as stated in the Global Sustainable Investment review from GSIA(Global Sustainable Investment alliance) in 2014. We can state that there is an increasing amount of Socially Responsible Investors', who screen for the environment, social and governance factors, demanding green bonds. Consequently different financial institutions have started to increase their Green Bonds holding and also the number of Green Bonds funds is increasing. Due to the fact Green Bonds market is a growing market some investors with USD 2.6 trillion of assets under management released 2 statements of investors in order to support a durable and consistent framework for green bonds market, regarding especially clean energy financing and solutions to climate change[21]. The investor group was convened by Ceres (advocate for sustainability leadership). The first statement (2014) was a publication of Green

[21] Source: CERES,www.ceres.org

Bonds Principles that suggest process for designating, disclosing, managing and reporting on the proceeds of a Green Bonds, while the second statement (2015) referred to eligibility of green projects, disclosure in the bond offering statement, expectation of annual impact reporting and the need for independent assurance.

From an analysis of Climate Bond Initiative[22]by HSBC[23] in 2015 Green Bonds result to be issued in a market of $600 billion in outstanding securities, which include $532 billion of 'unlabeled climate-aligned' Bonds and 66 billion of labeled Green Bonds. The 'unlabeled climate-aligned' Bonds are bonds used to finance low consistency refining industries and sectors but they are not labeled 'Green' yet.

Within the unlabeled market there is a small quantity of bonds whose cash flows depend on the underlying projects and not on the issuer, according to the Climate bond initiative by HSBC the amount of ABS and Green bonds in 2014 was in total USD 15 billion. Green Bonds can be issued by any organization with bonding authority, some examples are the World Bank, the Environmental Defense Fund ,etc.., and they can be underwritten by investment banks, such as Bank of America, Deutsche Bank, JP Morgan, etc..

In the past there was a really big uncertainty on what can constitute a Green Bond since there were not systematic rules and standardization of 'Green' definitions, but issuers could face with reputational risk and could also be indicted of "green washing" that is a form of swing by which companies deceptively promote their products, aims, and policies as environmentally friendly or if these companies are not able to prove the positive and additional impact of their projects. Even if this market

[22] The Climate Bond Initiative: is an investor-focused not-for-profit working to mobilize bond markets for climate change solutions

[23] HSBC: is a British-based multinational banking and financial services company

so far keeps its high integrality there is always a bit of worry among stakeholders and market participants. However, the stringent requirements and standards that market participants can ask for a bond to be labeled as ‘Green’, can really inhibit or slow down the process of raising capital for the realization of ‘Low consistency refining’ projects. In response to these conflicts, a really big amount of effort has gone to develop a better-defined market with assurances for the environmental integrity and to keep ‘green transactions costs’ low. At the beginning the process consisted in determining which instruments should be considered as ‘Green’, facilitating the transparency in the Green Bonds issuance and in the proceeds management. Consequently, this process leading to standardization and definition in the Green Bond market has generated a sort of regulation which consists of the Climate Bonds Standards, the Green Bonds Principles and some other guidelines recognized by the official sector.

2.3 THE ROLE OF GREEN BONDS PRINCIPLES:

The Green Bonds Principles are voluntary guidelines, which are set by ICMA, that recommend transparency and disclosure, they promote integrity in the Green Bonds market making clear the process for the issuance of a Green Bonds. Basically, they provide issuers with the key components that can make a Green Bond desirable and credible and they help investors to evaluate a Green Bond and the environmental impact of their investments. They help underwriters too, since they enhance disclosure in the market and so facilitate transactions.

The latest publication of Green Bonds Principles was on the 16th of June 2016[24], it the outcome of the consultation of the members and observers of the GBPs - a community of near 200 institutions representing both participants and stakeholders in the Green Bond market. Differently from the previous publications in the last one lots of effort was made to recommend best practice on information sharing and external reviews including through proposed templates. This update recognizes the application of the "use of proceeds" to topics beyond the environment, such as bonds issued to raise funds for social objectives.

The Green Bond Principles emphasize integrity, transparency, and accuracy of information which will be reported to the stakeholders by the issuers. These Principles have 4 core components which are: Use of Proceeds; Process for Project Evaluation and Selection; Management of Proceeds; Reporting.

For what concern the 'Use of Proceeds' we know that the adhibition of proceeds for green projects should be written in the legal documentation for the security and that all the Green Project categories should provide evident environmental benefits that will be assessed by the issuers.

If the proceeds are used for refinancing, it is recommended that the issuer provides an estimate of the financing/re-financing share and specify the investments to be refinanced. The categories which are recognized eligible for Green Projects concern areas such as climate change, pollution control, resources depletion. These categories usually are renewable energy, energy efficiency, pollution prevention and control, sustainable management of living natural resources, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water management,

[24] Source: Green Bond Principles 2016 by ICMA

climate change adaptation and eco-efficient products, production technologies and processes. However these Principles do not actually take a position on which green technologies or claims are environmentally optimal but there are many institutions which publish analysis on the quality of the green investment opportunities.

In the Process for Project Evaluation and Selection the issuer needs to show: a process to determine the way by which the project is included in the eligible Green Projects categories; the eligibility criteria and the environmental sustainability objectives for the project. In addition to this process, the GBPs recommend an external review in order to help investors.

In the Management of Proceeds, the process consists in accrediting the proceeds to a sub-account or moving them to a sub-portfolio. So long as the Green Bonds are outstanding the balance of the tracked proceeds should be periodically adjusted to match allocations to eligible green projects. The GBPs recommend that an issuer's management of proceeds be integrated by the use of an external auditor in order to verify the tracking method and the allocation of funds.

The final component is Reporting by which issuers should publish information and make them up to date on the use of proceeds to be renewed annually until full allocation. This has to include all the Projects which benefit from the Green Bonds proceeds, including the amounts allocated for each one. It is also recommended that the information is presented in generic terms or on an aggregate portfolio basis, the use of qualitative performance indicators and quantitative performance measures.

Finally, the Green Bond Principles require the inclusion of an External Review in order to verify the alignment of the Green Bonds with the requirements of the GBPs. There are different ways of giving a review that can be provided to the market which are: Consultant review, Verification, Certification, and Rating. The GBPs recommend a public disclosure of external reviews and external review providers to disclose their credentials and expertise.

However is important to remember that GBPs are voluntary process guidelines that do not constitute an offer to trade securities, nor constitute specific advice; GBPs do not create any rights or liability to any entity or person and issuers adopt GBPs voluntarily and independently and are responsible for the issuance of the Green Bonds. If there is a conflict between some laws or regulations and the guidelines of the GBP, the former will prevail.

2.4 PROS AND CONS OF GREEN BONDS AND HOW TO IMPROVE THEM:

Being Green Bonds an innovative financial instrument, they are still in development and so could be found some aspects that can be improved in order to maximize its potentiality.

If we do an analysis of this instrument we can make a report of all the good aspects and those which need to be amended and improved.

As first, we can give an analysis of Green Bonds by an investor point of view. Looking at the bad aspects we can say that the most common disadvantages an investor can face are: first of all the size of the market since even if we are talking about a fast growing market, it contains the limits of a nascent market which are the small bonds' size and as a consequence the low volume of liquidity. Then another limit could be found in the lack of unified standards, for example on what constitutes a bond, because although the presence of Green Bond Principles, these are just guidelines and they can not always be applied. For instance, in the case they are in contrast with certain regulations which are different country by country, the state regulations will prevail. So confusion and reputational risk can raise if the green bond integrity is questioned. Other disadvantages with Green Bonds include low yields, mispricing (that can also be considered a benefit) and the lack of sufficient complex research available in order to make a well-mannered investment decision[25].

A further bad aspect can be found in the absence of standardization which leads to face with complexities in the trade of Green Bonds and a need for extra due diligence which can not always be realized. Finally, the last disadvantage for an investor regards transparency and reporting since they are weak and the Green Bond market now relies on voluntary reporting, and being a growing market transparency will become an increasingly important issue.

On the other side analyzing the most common advantages for an investor we have to mention the gain from balancing risk-adjusted financial returns with environmental benefits; the satisfaction of ESG (environment, social and governance) requirements; the improvement in risk assessment in fixed income market through the use of proceeds reporting. Furthermore, the increase in transparency in the use of proceeds and reporting requirements provides informational advantages otherwise unachievable. Green Bonds can help investors since can be used to actively protect against climate policy risk in a portfolio with emissions-intensive assets. Another advantage is that Green Bonds can have a big influence in raising awareness and experience among investors on ‘Green’ issues. In the end also, the private

[25] Source: Green Bonds:The benefits and risks, Investopedia

communication with issuers on ESG topics related to Green Bond issuance results in information that enhances credit analysis could constitute an advantage.

While analyzing the issuer point of view the main disadvantages that they can meet consist in the costs in which they incur that derive from labeling and all the requirements to which they are submitted which regard monitoring, reporting, verification, certification, and administration. They also face with reputational risk if the bond's 'Green' label is challenged. In addition, issuers can be penalized from a limited retail investment since Green Bonds are not well integrated into mainstream funds, so the costs of issuance could be lower in the future. An uncommon disadvantage could also arise if investors look for penalties for a 'Green' default for which a bond is totally paid, but the issuer breaches the 'Green' provisions agreed.

On the contrast, the most common advantages an issuer may obtain from Green bonds are several. First of all, a strong investors demand can lead to increase the number of issuances and so issuers will be provided with more funding, then the demonstration and implementation of issuer's approach to ESG issues can also benefit the issuers making them more credible. The presence of more 'buy and hold' investors which lead to low volatility of the bond in the second market can be also an advantage for the issuers. Some other advantages can come from the reputational benefits when the 'Green' credentials of an issuer are well known in the market, or from the access to the so-called 'economies of scale' since the majority of the costs stand in the setting of the processes and a high volume of issuance can reduce these costs. Furthermore, adopting a sustainable strategy which is well articulated and credible or also improving the diversification of bond issuer investor base, it is possible to attract more investors. In the end, as the financial risks and return are the same as for classic bonds, they can benefit from a lower interest rate and the possibility of raising much more capital and more freedom to employ it.

However, we know that Green Bonds are able to raise larges amount of funding to support projects that benefit the environment, which otherwise could not be achievable or not convenient since we should depend on a more expensive funding. Green Bonds can also promote the private-public partnerships that can make the processes for ‘Green’ investments faster and lead to the adoption of new technologies.

Today the growth of Green Bonds market is fundamental to increase funding for promoting projects which have as main goal the environment sustainability. If we think of the ways that can boost this market we can say that the first amendment could be done through the establishment of a worldwide effective regulation for the Green Bonds which includes a definitive statement of what Green Bonds are and all the features that they should own in order to be labeled as ‘Green’, it also has to include mandatory transparency requirements and directives that issuers have to follow. Mandatory regulation for reporting have to be implemented too and in particular publishing of information and the verification of information by third parties need to be binding. In this way, Green Bonds will be graduated in a more recognizable product.

Afterward, we know that the influence of Green Bonds on the environment sustainability directly depends on the performance of the projects for which green bonds proceeds are employed. For this reason is really important that sustainable projects have to be well designated and also well publicly reported, for example, multilateral development banks established a harmonized framework to impress reporting on renewable energy and energy efficiency projects that will allow in the future to measure more strictly this impression.

But also by integrating in a deeper way the environmental and climate factors in the project design will enhance the quality of these projects.

Finally a further way to ameliorate Green Bonds is to make the final product successful, in the sense that if investors see that ‘Green’ projects are really well realized and they actually have brought a substantial benefit, they will be more induced to invest and put their money in other environmental projects financed through Green Bonds.

I think that Green Bonds can really give their contribution for the realization of Green projects aiming at preserving the environment, however, a key role is represented by the governments which have a responsibility to grant that these projects are carried out in the best way for the environment welfare.

CHAPTER 3:

MINI-BONDS AND GROWTH

In the last chapter we analyzed Innovative Finance and, more precisely, the financial instrument of Green Bond, that if well employed can give an important aid in developing Green Projects for the Environment Protection, and consequently to reach a Sustainable Development. But the other aspect of Sustainable Development which, in my opinion, requires lots of attention consists in the fostering of Economic Growth that can be stimulated through several actions, which can vary from infrastructure spending, where government make efforts in building facilities for business, to the tax cuts where governments act in reducing fiscal pressure on population in order to make consumers richer and more induced in spending money. However, I think, that it would be a good idea to increase the economic growth through the support of Small and Medium Enterprises which give a substantial contribution to the reduction of unemployment (about 50%) and in the increase of national income (more than 30%)[26]. In order to achieve development SMEs do not have many sources of finance, because the only way to raise funds to invest for an SME in the debt market consists of the bank channel, but usually banks are not well-disposed in lending their money to SMEs or at least they levy some guarantees that are unsustainable for SMEs and make them really afraid to invest.

So they meet lots of difficulties to raise capital to run and enlarge their businesses. For this reason, I wanted to analyze a new developing financial instrument that could be really a bid opportunity for SMEs that consists in the Mini-Bonds.

3.1 WHAT ARE MINI-BONDS AND HOW ARE THEY ISSUED:

Mini-bonds, as already said, are financial instruments that can be used in order to raise funds by Small and Medium Enterprises(SME). They actually are debts issued by non-public companies of small and medium size apart from banks. But what are, specifically, SMEs? According to the European commission these are ‘enterprise which employs less than 250 people; has an annual turnover of less than EU 50 million and/or balance sheet assets of less than EU 43million; and has no more than

[26] Source: Analysis from the World Bank

25% of its capital or voting rights owned by a large firm or public body'[27]. They are called small since they have a limited working capital and assets, the general turnover of the company is not big and they have a limited number of employees which is ten (while medium-sized companies can have a maximum of 200 employees), however, it can vary country by country. SMEs are differentiated from a normal company also because they can be defined 'Local' since their market is usually limited to the area where they are situated. The Mini-bonds structure can vary country by country and their length can usually vary from 3 to 7 years and the repayment can occur or in full at the expiring date or at different times according to the amortization. Interests can be paid using a fixed cash flow or in a variable way linking the interest rate to a reference rate(i.e. LIBOR). Even if Mini-bonds issuance consists of an unsecured debt, investors can ask for covenants whose aim is to protect their credit on the issuer as for example preserving solvability of the company that is issuing. Some examples of these covenants are: Safeguard covenants (where the issuing company is forbidden to release pledges or mortgages on physical assets); Use of Proceeds (collected funds are used for pre-established purposes); Dividends(limits in the dividends distribution); Information(six months middle balance sheet and updating are required) ; Delegation (Investors can ask for a representation in Board of Directors). If we give a look on how Mini-bonds are treated in Italy we discover that in the past and in particular in 2012 there were 2 development decrees, Law decree June 22,n.83 and Law decree October 18,2012, whose main objective was to remove all the fiscal obstacles that stand in issuing a Mini-bond in order to offer an alternative to the usual bank funding channel. In 2013 was issued another decree aiming at reinforcing the

[27] Source: European Commission, ec.europa.eu

use of Mini-bonds, in particular, they facilitate the issuance of secured bonds making the access of collateral cheaper and with the objective of foster the capital market growth they established specific funds and securitization companies to support Mini-bonds portfolios. Further improvements were done with the Growth and Competitiveness Decree. However, the main rules for Mini-bonds issuance in Italy include: The limitation in the number of bonds issued that can not double the share capital; The bond maturity has to be equal or greater than 36 months; Bonds can be traded on regulated markets; and that Bonds diffusion can be done just by professional investors. From the 11 of February 2013 is available a new segment of Extramot market, called Extramot Pro market, with the aim of negotiating bonds and other debt instruments, issued by a corporation. This new segment was instituted to offer an economic, flexible and efficient market to SMEs, deleting the main normative ties for the access to Capital Market by non-listed companies.

In the next table, there are some examples of Mini-bonds listed on 'Borsa Italiana's ExtraMOT PRO'. We can notice that this Mini-Bonds refer to different types of industries from the Consulting for Technology Services to the Manufacturing or Cosmetics industry. It includes the Volume of bonds that each SME decided to issue, the length of the contract, the rating evaluation, the repayment option, which states if the bond payment is amortized over the bond life or if it occurs at maturity and in the end the value of the coupon rate for each Mini-Bond.

Table 4- Examples of Mini-bonds issued on ExtraMOT PRO[28]

Issuer	Industry	EUR M	Issue Date	Maturity Date	Rating	Repayment	Coupon
TBS Group SpA	Consulting (Technology Services)	15	10.31.2014	10.31.2019	BBB+	At maturity	6.50%
Sipcam SpA	Food & Beverage	15	09.30.2014	09.30.2019	BBB+	At maturity	6.50%
Iacobucci SpA	Manufacturing	5	12.20.2013	12.20.2017	BB+	Amortizing	8.00%
Coswell SpA	Cosmetics	15	07.21.2014	07.21.2019	BBB+	At maturity	6.80%
Rigoni di Asiago Srl	Food & Beverage	7	07.18.2014	07.18.2019	A-	At maturity	6.25%
Estra SpA	Utilities	50	07.14.2014	07.14.2019	BBB+	At maturity	5.00%

3.2 MINI-BONDS MARKET IN EU AND HOW RATING WORKS:

The first state which introduced Mini-bonds as a financial instrument was Norway[29] in 2005 in a nonregulated financial market called Nordic ABM[30] which was divided into two submarkets one for retail investors and the other for institutional investors depending on the value of the issuance.

This market obtained lots of success due to low costs of issuance and for the low timing necessary to realize it. The main characteristics are that transparency requirements are needed, where the last three balance sheets should be presented, and the bonds with a maturity between 3 and 7 years can be subscribed entirely and are directed to both institutional and retail investors. Is also really important the role of the advisor, for example, a bank, which helps the company in the Mini-bonds

[28] Source:EPIC ,Private Investment Community
[29] Source: I Mini-Bonds, istruzioni per l'uso by Consorzio Camerale per il Credito e la Finanza
[30] Source: OSLO BØRS, www.oslobors.no

issuance. In the Norwegian market a really huge volume of issuance has to be attributed to Banks and Insurance Companies, the issuances from non-financial companies, which are directed usually to the institutional investors, include mostly companies working in the energetic and maritime sectors.

Due to the success in the Norwegian market, this system was replicated in France with the introduction of the Initial Bond Offer(IBO)[31] specifically devoted to SMEs, which is admitted on three markets: the EURONEXT sections B and C, which is a regulated market and the ALTERNEXT, which is a multilateral market. The volume of issuance of the IBO should be at least of EU 5 million for ALTERNEXT and EU 10 million for EURONEXT, with a maturity between 5 and 10 years. The fulfillments required to the issuance companies are really simple but each SME needs to emit a rating by an official agency admitted by ESMA[32](European Security and Market Authority). For the transactions developed on ALTERNEXT is also needed a listing sponsor, a financial advisor, and a lawyer. These market sections are devoted to retail investors, with the intermediation of a bank or broker, and to institutional ones. Subsequently, these bond can be also traded in a secondary market. The use of Mini-bond had really much success in Germany with the introduction of the Bondm which was issued for the first time on the Stuttgart Stock Exchange. It is really innovative since it offers an electronic channel to sell the bond, that is called 'Bondm Subscription Box'[33], where investors can directly buy. In addition, the bondm give the possibility to subscribe the bond in the first market and sell them on the secondary

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[31] Source: EURONEXT,www.euronext.com

[32] ESMA: is an independent EU Authority that contributes to safeguarding the stability of the European Union's financial system by enhancing the protection of investors and promoting stable and orderly financial markets

[33] Source:Boerse Stuttgart,www.boerse-stuttgart.de

market, where the Bondm sales are encouraged also through the introduction of the QLP(Quality Liquidity Provider) with the aim of ensuring liquidity. Looking to Mini-bonds market in Spain we discover that they are traded in the MARF(Mercato Alternativo del Renta Fija)[34] that is a submarket of the AIAF(The Spanish corporate debt market). This market was constituted in 2013 and the main features are a high level of transparency and low admission requirements. The fulfillment for the issuing companies refer to the transparency of the company and to the solvability proof that should be emitted by an institute registered by ESMA. There are no requirements for liquidity provider to grant liquidity on the secondary market and rating assessment is not compulsory. While is really important the advisory role which follows the company for the total length of the issuing proceed.

Furthermore, the bonds issued on the MARF have to be at least a capacity of 100.000 euros and only institutional investors have the power to subscribe them. The Spanish Mini-bonds market results to be the most similar to the Italian one.

Talking about rating we saw that is not a strict requirement in each European Country, but it is fundamental to increase and not to doubt about the credibility and the efficiency of the Mini-bonds quality. Usually, rating agencies in order make their evaluation require the balance sheets of the last 3-5 years plus the business plan details. The rating evaluation will be used to negotiate the return on the bond with the issuing company. More specifically the evaluation affects the element of return that depends on the risk of default that should be taken into consideration to compute the return. According to the European regulation CE 1060 of September 2009[35] all the rating agencies need to be recorded as Credit Rating Agencies(CRA), and they also

[34] Source: BME Renta Fija,www.bmerf.es
[35] Source: European Commission,ec.europa.eu

need to be monitored by the ESMA(European Securities and Market Authorities), the European organization with the aim to guarantee an efficient and transparent functioning of the market. The rating can also be divided into two categories: which are the Rating Unsolicited, that are directed to the customers who subscribe this service and to the companies under control which can check for possible mistakes and communicate them. The outcome of the rating unsolicited is composed by a report with the outcomes of the different aspects of evaluation and an assessment of the financial, industrial components; and a dossier with information used to achieve the final rating assessment. Then we have the Rating Solicited which is required by the company under evaluation or third parties. The rating assessment is the outcome of the interaction between the rating analysts and the related company management. The assessment is produced after all the information provided by the issuing companies are acquired and verified, regarding in particular business risk aspects, financial risk, and corporate governance.

3.3 PROS AND CONS OF MINI-BONDS:

Mini-bonds can be an important instrument to improve the financial aspects of a company since risks are reduced due to the debt differentiation. The first pro of Mini-bonds is that they enable the company to pay just the interests during the bond life preventing from huge cash outflows when the projects have not produced sufficient liquidity yet, differently banks loans do not allow this opportunity, where the capital is repaid on different times for all the length of the loan.

Another advantage arises from the long maturity of the Mini-bond since can generate greater consistency between the average maturity of the assets and the average duration of liabilities, with an overall improvement of financial ratios that measure the consistency between the liquidity of the investments and the degree of the collectability of funding sources. A better financial balance can lead to better assessment of the creditworthiness of a company. The use of Mini-bonds can also allow being more consistent in front of the bank sector, due to a good rating evaluation and so the access to the banks could be easier and especially cheaper.

Furthermore, each Government is stimulating the use of Mini-bonds giving some tax advantages, for example issuing a deductibility of the interests expenses of a certain percentage, considering Italy there were some legislative interventions such as Growth Decree or Growth Decree Bis by which is possible to deduct entirely the business income from the interests expenses. Other costs that can be deducted are the issuing costs but just for the financial period they incurred, moreover from a tax perspective the indirect taxation, when mortgage guarantees are offered to cover a bond, was rendered homogeneous to the hypothesis of recourse at the banking channel. In such a way it makes less expensive to grant a mortgage guarantee in case of Mini-bonds issuance, and so securities with a lower risk-return profile are issued, it means lower costs for the issuer[36]. Finally, another advantage that this time is for the investors is that there are provisions aimed at creating an effective Mini-bonds

[36] Source: I Mini-Bonds, istruzioni per l'uso by Consorzio Camerale per il Credito e la Finanza

demand and so making them more desirable to investors, for example, making them exempt from withholding taxes on interests and other proceeds.

On the contrary analyzing the cons behind the Mini-bonds for an issuing company we can find the high transparency requirements on the balance sheets, but also on the projects to be realized.

While for investors the presence of short liquidity in the Mini-bonds market represent an obstacles since they are obliged to perform a sort of investigation on the SMEs, called Due Diligence, to be financed or they are financing on all the aspects such as strategies, capital structure, corporate governance and so on; Another disadvantage could arise from the operation feasibility and issue management, since there are many charges to pay to all the actors of the operation, such as advisors, consultants, arranger, or costs which come from quotations in regulated market. Furthermore a disadvantage can be found in the inability of the company to make comparisons between the interest rate on the bank loans and the interest on the Mini-bonds since the influence of this instrument on the company financial management can be estimated just with the use of complex models for financial assessment which take under consideration different financing opportunities. Bad aspects could be found in the long potential times necessary to realize the operation since the recourse to the capital market lengthens the time to collect funds respect to the loans obtained through the banking channel.

Finally, an additional obstacle for an SME is that in some State, such as Italy, Mini-bonds can be issued just with a size of several million in order to be attractive for the market and international investors, as a consequence really small company could face with high risks and costs to issue bonds.

3.4 MINI-BONDS RISKS AND POSSIBLE SOLUTIONS TO MAKE THEM MORE DESIRABLE:

The main risks with Mini-bonds is the default risk since rating the reliability of an SME is not really simple as for listed companies which are assessed by really trusted rating agencies, such as Moody's or Standard&Poor's. And in addition regular bonds are subjected to strict regulations, and also investors are better informed about the risks they incur when they buy these bonds respect to Mini-bonds. For these reasons the first step to improve the reliability of Mini-bonds is to make regulations stricter, but however, this action could make SMEs more worried and less disposed in using this financial instrument. While a better action could be found in performing a better oversight to ensure risks are appropriately outlined to investors.

However, there are some specific actions that could be made in order to improve the market for Mini-bonds. First of all the barriers to the enter, the market should be lowered, for example the prospectus, that is a document which contains all the company information, terms, and risks of an investment, has to be rendered simpler making the information inside plainer or the approval process faster. Then there should be a wider investor base for SMEs since usually information are held by banks and so SMEs meet difficulties to reach the broader investor base of non-banks investors that could provide them funding. In order to build an efficient capital market is fundamental to improve credit information which can be done by setting a minimum series of comparable information for the assessment and to report credit. Credit scoring is really important because tell the investors about the creditworthiness of an SME(A standardized credit quality information can encourage the development of a financial instrument to refinance SMEs loans). Another improvement could be reached through securitization, this process consists in pulling together different types of contractual debts such as loans, mortgages and sell their cash flows to third parties as securities[37]. This could be a good solution to transfer the risks and increase banks lending capacity and a good securitization market with reliable and transparent instruments could be an important connection between banks and the capital markets. A framework represented by high standards, legal certainty, and comparability among securitization instrument can improve transparency, consistency and availability of fundamental information and so facilitating issuances and investments. Another good approach can be found in spurring long-term investments, so there should be interventions by governments in incentivizing the use of these investments, an existing example is the ELTIF, European Long-Term Investment Funds, that has the aim to put investors funds in projects and companies with long-term maturity. However these investments in order to be appealing need to have a long term capital growth or constant income streams.

In the end developing a Private placement market can constitute an advantage for Mini-bonds market, this kind of market is not public and is composed of private investors to which a company can sell its securities. This process can optimize costs to collect funds and enlarge the finance disposability for SMEs. However, in order to create a private placement market is basically important a market guide which includes principles, common practices, standardized documentation which comply with legal frameworks.

[37] Source: I Mini-Bonds, istruzioni per l'uso by Consorzio Camerale per il Credito e la Finanza

In the end is basic to underline that Mini-bonds are not a financial instrument that suits all SMEs differently from bank loans since it depends on their actual dimension, the tendency to risk and business plans. However there is an opportunity to overcome this limit and consists in allowing the issuance of a Mini-bond that could pool together several SMEs, but we are still far from this possibility. Today a lot of instruments or directives can be employed to sustain SMEs and Mini-bonds, which are just an example, if well employed have a big potentiality and can really give a substantial support to small and medium enterprises and help them to develop and enlarge their business, in this way it could be easier to stimulate the Economic Growth of a country. However, in order achieve this goal Governments should help small companies with politic and regulative reforms which provide them funds but at the same time, governments must guarantee control on how funds are managed.

CONCLUSIONS:

The aim of this work was to show the reader the opportunities that we can found and so the financial instruments that can be used today in order to raise funds for projects with the aim to reach Sustainable Development, and more in deep the aspects of Environment Protection and Economic Growth. For what concern Environment Protection, the use of Green Bonds could represent an optimal solution to raise funds and in order to be their use, I think there should more effort from governments on one side spurring the realization of green project, inducing investors to put their money on these projects and on the other side they should be able to guarantee the control and the monitoring of these projects in order to achieve the best results. It would be also of primary importance to make the population more conscious of the Environment Protection needs in order to reach a Sustainable Development.

I think that the same reasoning can be applied for the other purpose of this thesis, namely the achievement of Economic Growth through the development of Small and Medium Enterprises that can be reached enlarging their funds availability by for example the use of Mini-Bonds, where in substance only governments have the possibility to stimulate the development of small and medium size enterprises which today are oppressed by the competitions of the big enterprises. Here governments have a much more responsible and hard role since from one hand they should stimulate the development of small and medium companies through policies and directives that enable SMEs to obtain more funding and simplify the processes required to make effective their projects and on the other hand they need to be able to monitor and regulate in the best way their operations and functioning. These considerations are really hard to be realized , but, in my opinion, this is how each government need to think and to operate in order to achieve Sustainable Development.

REFERENCES:

BIBLIOGRAPHY:

Arlotta C., Bertoletti F , Calvani C. , (2014) , La crescita delle PMI attraverso gli strumenti di finanza innovativa,

Bencini s. e Tabellini G., L'alternativa dei mini bond, Sole24Ore, (9 marzo 2014)

Calugi R., Morelli V., Paglietti G.,(2013), I Mini-bond, Istruzioni per l'uso, Consorzio Camerale per il Credito e la Finanza, Ministero dello Sviluppo Economico

Cravero R., Carnero P., (2014), Minibond ,strumenti di debito alternativi, Commissione Studio Diritto e Pratica Societaria Ordine dei Dottori Commercialisti e degli Esperti Contabili di Biella

D'Auria C., Allen & Overy, *Il sistema delle garanzie a supporto dell'emissione di minibond*, Diritto Bancario approfondimenti (Marzo 2014).

European Commission,(2015), Building a capital market union, Green Paper, Brussels
ICMA,(2016), Green Bond Principles

Keshav C., Vinay D., Shuva S. and Deepika S.(2015), Innovative Finance for Renewable Energy

Solutions',SNV

KPMG, *Finanza per la crescita: corporate bond e strumenti alternativi,* (2013)

OECD,(2016), Green Bonds: Mobilising the debt capital markets for a low-carbon transition

OECD.(2015), New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments,

Ragnoni A.,(2014) *Nuovi strumenti di finanziamento per le imprese,* materiale convegno Paradigma*,* Milano

Testo normativo D.L. 22 giugno 2012, n. 83, *Decreto Sviluppo* (2012).

Testo normativo D.L. 18 ottobre 2012, n. 179, *Decreto Sviluppo bis* (2012).

Testo normativo D.L. 23 dicembre 2013, n. 145, *Piano Destinazione Italia*,(2013).

The World Bank,(2013), INNOVATIVE FINANCE: For Development Solutions

The World Bank, PPIAF,(2015), What are Green Bonds?

The World Economic Forum,(2013), The Green Investment Report

SITOGRAPHY:

http://www.un.org/sustainabledevelopment/

http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html

http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/

https://next.ft.com/content/18aeb9fc-7933-11e3-b381-00144feabdc0

https://www.climatebonds.net/market/explaining-green-bonds

http://www.economist.com/node/21534810

https://next.ft.com/content/b82f0c94-11dd-11e1-9d4d-00144feabdc0#axzz1eRIc90ZQ

http://www.ilsole24ore.com/art/finanza-e-mercati/2014-06-19/hera-lancia-primo-green-bond-italia-093214.shtml

http://www.gruppohera.it/gruppo/investor_relations/politica_finanziaria/green_bond/

http://ec.europa.eu/economy_finance/financial_operations/investment/innovative_financial_instruments/index_en.htm

http://ec.europa.eu/economy_finance/financial_operations/investment/europe_2020/index_en.htm

http://www.theenergycollective.com/edfenergyex/1665141/global-clean-energy-investment-tipping-point

http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html

http://www.cei-bois.org/en/roadmap-2010/wood-in-sustainable-development

https://www.climatebonds.net/market/explaining-green-bonds

https://www.ceres.org/press/press-releases/investors-encourage-further-transparency-standardization-to-spur-green-bond-market-growth

http://www.undp.org/content/sdfinance/en/home/solutions/green-bonds.html

http://knowledge.insead.edu/economics-finance/smes-embrace-the-bond-markets-2409

http://minibond.it/

http://www.telegraph.co.uk/finance/personalfinance/investing/10615429/Retail-bonds-and-mini-bonds-the-risks-and-rewards.html

http://www.consob.it

https://next.ft.com/content/1b87069a-47ed-11e5-af2f-4d6e0e5eda22

http://minibonditaly.it/approfondimento/minibond-scorecard-main-indicators-as-of-december-31st-2014.html

http://www.investopedia.com/

http://www.dirittobancario.it/approfondimenti/capital-markets/i-nuovi-strumenti-di-finanziamento-le-imprese-i-cd-mini-bonds

https://www.syndicateroom.com/crowd-investing/mini-bonds

http://www.oslobors.no/

http://epic.it/en/what-are-minibonds

http://ec.europa.eu/eurostat/statistics-explained/index.php/Environmental_protection_expenditure

https://www.euronext.com/

http://www.bloomberg.com/europe

http://www.unep.org/

http://www.oecd.org/

https://www.kfw.de/kfw.de.html

https://www.gpoba.org/

https://www.boerse-stuttgart.de/

http://www.bmerf.es/ing/aspx/Portadas/HomeMARF.aspx