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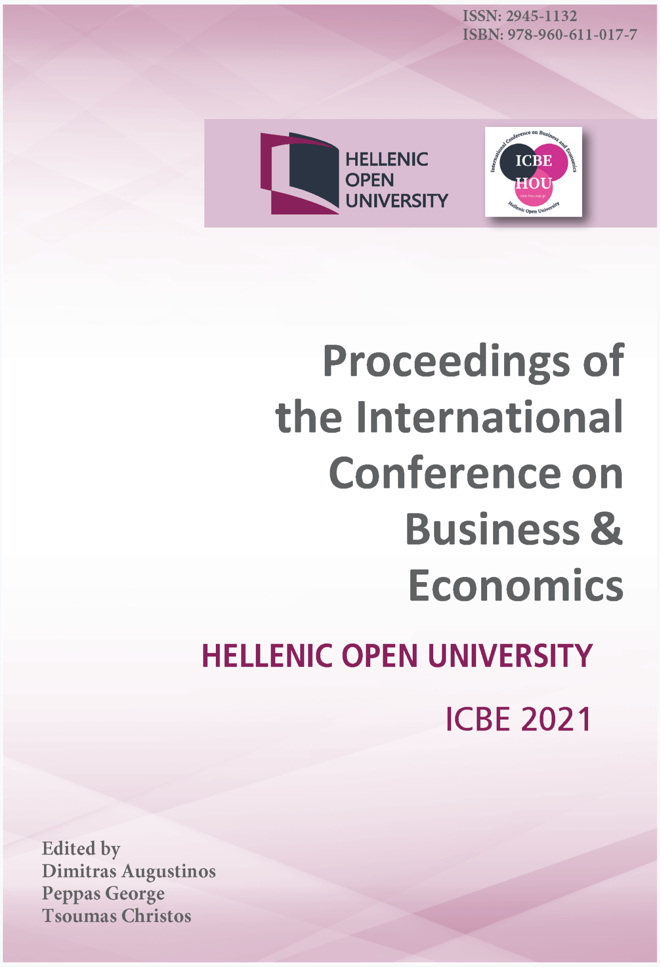

Financialisation, sustainable finance and innovative financing for development mechanisms: the greek case study for crowdfunding and green bonds

Paraskevi Boufounou, Konstantinos Dellis

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FINANCIALISATION, SUSTAINABLE FINANCE AND INNOVATIVE FINANCING FOR DEVELOPMENT MECHANISMS: THE GREEK CASE STUDY FOR CROWDFUNDING AND GREEN BONDS

Paraskevi Boufounou [1] and Konstantinos Dellis [2]

1 Ass. Professor of Development Finance, Department of Economics, National and Kapodistrian University of Athens and HOU, pboufounou@econ.uoa.gr , 32 Demokritou Str, 10673 Athens-GR (corresponding author)

2 Research Assistant, Department of Economics, National and Kapodistrian University of Athens, kdellis@gmail.com, 5, Achaias Str, 115 23 Athens-GR

Abstract

In this study we look at the potential of these novel financial instruments namely the Innovative Financing for Development Mechanisms (IFDMs). Bearing in mind the adverse financial conditions in many emerging and advanced economies, the high risk associated to innovative activities and intangible assets, the growing levels of private and public debt and the need to address sustainability on top of economic growth, these instruments are of pivotal importance. We consider the Greek economy as a case study and elaborating on the structure and functioning of crowdfunding and green bonds, we identify the potential given the current financial adversities, but also highlight the need for a comprehensive global governance and legislation built around those tools, concluding that these innovative forms of finance although currently at a premature level compared to regional averages, could play a considerable part in the rejuvenation of the domestic financial system in this time of need

EL Classifications: G20, G21, G23, O10, O16.

Key words: Financialization, Sustainable Development, Crowdfunding, Green Bonds

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1. Introduction

The disappointing level of business investment in the European Union (EU) was a salient cause for concern even before the outbreak of the COVID-19 pandemic (EIB, 2018). Poor financing conditions and the fragmentation within the EU are considered among the main culprits behind the regions lagging productivity growth record and the innovation gap vis-à-vis the other dominant economies like the US and China over the past 15 years. The link between financial system depth and investment in innovation is well established in the literature (Haskel & Westlake, 2017) and the availability of a plethora of financing tools is more than evident after the financial crisis in both advanced and emerging economies. Expenditures on Research and Development (R&D) are the dynamo of productivity growth and innovation (Aghion & Howitt, 1992) and create an intangible asset - the firm's knowledge base from which profits in future years are generated (Hall et al., 1986). The uncertainty that is concomitant to investment in intangibles and innovative ventures calls for a developed and efficient financial system to nurture innovation and productivity growth. Financial markets are responsible for the reduction in financing costs and the allocation of scarce resources with emphasis on innovative projects (King and Levine, 1993, Rajan and Zingales, 1998).

The surrounding uncertainty and the legacy of the financial crisis particularly in the EU periphery are, to a large extent, the decisive factors behind the low business investment rates despite the unprecedented expansionary monetary policy undertaken by the ECB after 2015 (de Guintos & Schnabel, 2020; Lane, 2020). This array of adverse conditions has resulted into a bottleneck for the financial conditions in corporation in the developed in the developing world, scarring SMEs the most. Despite the unprecedented wave of unconventional monetary policy measures by the major players (ECD, 2020), what is required is a paradigm shift in the functioning of global finance. The bank-contingent model that is prevalent in many developing economies (and in the EU periphery) is not appropriate to finance robust and sustainable development to meet economic, social and environmental goals for the 21st century. The process of innovation in finance, and the resulting innovative mechanisms for development finance can assist in addressing some of these challenging issues. Financial instruments such as venture capital, angel investors, crowdfunding, public-private partnerships, and green bonds ore some of the vessels promoted to this end and are in the development process. Furthermore, the changing landscape in global finance requires a much greater deal of international cooperation and an elevated role for international financial institutions (IFIs) like the IMF and the EIB. It has been widely accepted that the traditional financial mechanisms have failed to deliver the desired progress for the Millennium Development Goals and the

Sustainable Development Goals after 2015 (UN, 2002; ERD, 2015). It is, therefore, imperative to analyze the potential of Innovative Financing for Development Mechanisms (IFDMs) on the path to achieve sustainable development and resilience for both developing and developed economies. The penetration of most IFDMs is modest over the past decade, nonetheless it is increasing at a non-negligible pace. Financing mechanisms such as Green Bonds and Crowdfunding can assist in the deepening of the financial system and reach many more enterprises and individuals compared to standard financial instruments. In this paper, we examine the trends and opportunities of IFDMs as well as the pivotal role of international and national financial institutions in their spread and effective functioning. The rest of this paper is organized as follows: Section 2 addresses the notion of financialization and IFDMs and presents the case for crowdfunding and green bonds, while Section 3 discusses developments and challenges in the case of IFDMs in the context of the Greek economy and Section 4 concludes.

2. Theoretical Background

2.1 The Concept of Financialization

International finance has been going through fundamental changes in the years following the financial crisis of 2008 even before the eruption of the global pandemic of COVID-19. However, the need for Sustainable Development in Emerging Economies remains as crucial as ever. Following the increased interdependence of national economies in the latter wave of globalization, the world has witnessed an unprecedented surge of short-term capital flows towards Developing and Emerging Economies (DEEs). This development, along with the trends in global finance in the post-2008 era have led to the increased *financialization* of DEEs (Bonizzi, 2013; Fontana *et al.*, 2019). Epstein, (2005) defines financialization as "the increasing importance of financial markets, financial motives, financial institutions, and financial elites in the operation of the economy and its governing institutions, both at the national and international levels". The rapid process of financialization should be incorporated in the broader context of capital account and trade liberalization taking place over the last 30-40 years (Fontana *et al*., 2019). A salient trait of this new context is the increased participation of institutions such as central banks and multilateral organizations dominate the game of global finance, affecting cross-country credit and regulating the financial system in an ever-increasing fashion. Nonetheless, the process of financialization been far from uniform in the peripheral countries (Becker *et al,* 2010) resulting in the fragmentation of the global financial system. Focusing on DEEs, financialization has been initially embedded in the fight against inflation and has been a by-product of the globalization process. Dodig *et al*. (2016) distinguish between debt-led, export-led, and demand-led financialization, and build a theoretical model that explains the diverging paths of the countries affected by the financial crisis. It is, therefore, pivotal to elaborate on the nature of financialization in developing economies, especially in these turbulent times.

Although the process of financialization was associated with higher growth during the first period, the conclusions are not that straightforward moving towards the first quarter of the new century (Sawyer, 2017). Initially, it was synonymous to lifting restrictions and inefficiencies in the financial system in many DEEs. The changing forces in global finance have shifted the focus towards the emergence of new and complex financial products with all but unanimously positive effects on economic growth and development. The liberalization of the financial account which cane as part and parcel with trade liberalization was not governed by a multilateral set of rules as was the case with trade and the WTO. This resulted into short term capital flows flowing all over the world with countries liberated to treat them as they saw fit. A series of financial crises, from Mexico in 1994 to the East Asian collapse in 1997[1] and the crises in Russia and Brazil the following years questioned the infallibility of financialization and highlighted the need for a degree of financial constraints and controls in order to avoid adverse shocks from *sudden stops.* Nonetheless, the problems did not lie only within the developing world as the 2008 financial crisis and the subsequent EU crisis demonstrated. Lapavitsas *et al* (2010) underline the role of financialization in the indebtedness of the Euro-area peripheral economies. Businesses in many advanced economies are becoming more disconnected from the traditional financing (banking system) and participate in international debt and financial markets as do households to a certain extent. The volatility associated with financial flows combined with the dependence of banks and businesses on the global financial system make the case for a rethinking for the global financial system for a sustained and sustainable recovery.

2.2 Financing Sustainable Development

It is widely accepted among scholars and policymakers that a developed and functional financial system is an engine for economic growth and well-being (Rajan & Zingales, 2001; King & Levine, 2003; Barro & Sala-i-Martin, 2004; Beck *et al*., 2013). The efficacy and depth of the financial system is crucial for the financing of productive investment, ensuring viability and growth of SMEs and the efficient allocation of scarce capital. Understanding innovation and technological progress as the main driver of economic growth, one must also note the pivotal role played by finance for such activities. The uncertainty

[1] Indonesia, Malaysia, Philippines, South Korea and Thailand witnessed a $12 billion outflow in sharp contrast to the cumulative 93 billion inflow the previous year (Rodrik, 2011).

surrounding innovative efforts and the imperfect appropriability of the gains from new knowledge require deep and developed financial systems and instruments that complement the traditional sources of corporate or public finance (Hall & Lerner, 2010). The European Commission (EC, 2018) acknowledges the obstacles that firms face when they invest in Key Enabling Technologies (KETs)[2] and highlights the need for innovative thinking in the field of corporate finance as well with the promotion of -for example- Venture Capital and hybrid forms of financing to fight these bottlenecks. The past 3 decades have marked the easing of cross-border financial process and a process of incremental deregulation and capital account liberalization in developing economies. According to UNCTAD (2019) "Increased net capital flows to developing countries can be a valuable source of external financing. However, the volatility and procyclical nature of these flows complicates macroeconomic management and increases financial vulnerabilities". It is, therefore, imperative to accommodate the financial flows by strengthening governance and designing public policy so that the financial flows serve their developmental purpose.

The *European Report on Development* (ERD, 2015) underscores that it is imperative to define and implement a new approach for financing development. According to the report, the main issue to be addressed is the potential lack of liquidity, rather the ways through funds are mobilized in order to meet the needs of an ever-changing global financial landscape. The design and functioning of new, innovative tools within the fourth industrial revolution is of pivotal importance, coupled with the enhanced cooperation of global players from the private and the public sector. The COVID-19 pandemic has highlighted the need for governments and multilateral institutions (such as the EU) to act decisively and in a cooperative manner to mitigate the adverse effect of this global shock[3]. The effective allocation of financial capital requires policy coordination, monitoring and appropriate governance to bear the fruits of economic recovery and sustainable growth. The approach for DEEs requires a complete understanding of financial, recognition of the degree of complementarity among these finance vessels (for example private-public partnerships) and the placement of sustainability at the forefront of any development finance policy (ERD, 2015). The World Bank's IFC establishes four pillars, namely strengthening the involvement of the private sector, the creation of functional markets, the promotion of sustainability and the eradication of poverty (IFC, 2018). Moreover, the EU involvement in the process of development finance has shifted focus towards *blending* official development assistance and aid funds with private

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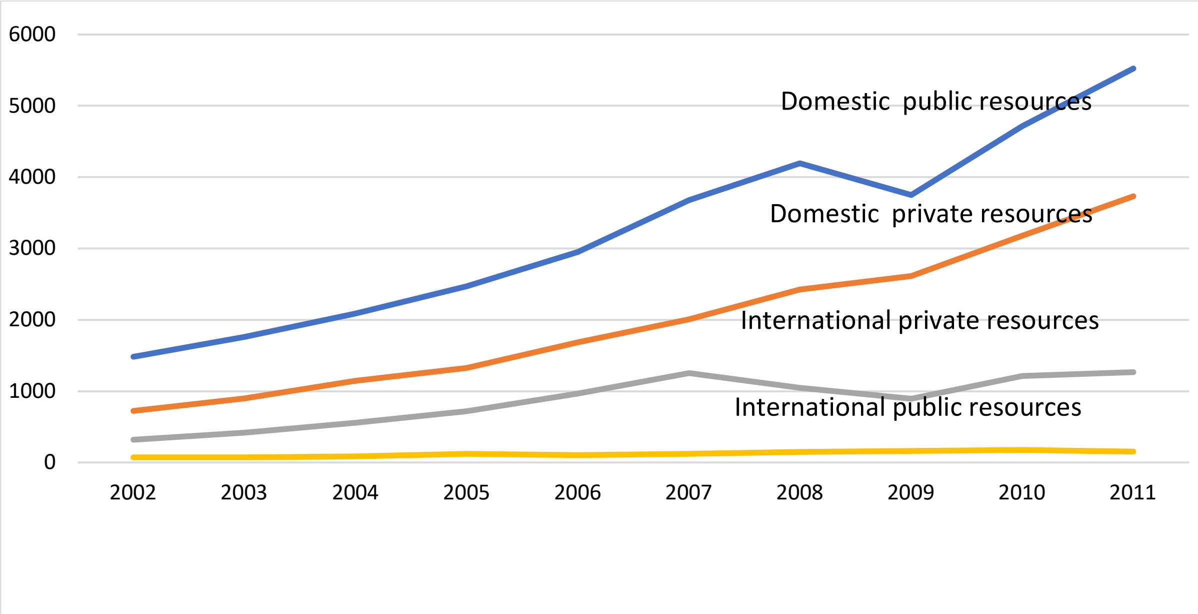
[2] These technologies include micro-electronics, nanotechnology, photonics, industrial biotechnology, advanced materials, and advanced manufacturing sectors form the basis of high-tech solutions.

[3] Five years before the COVID 19 outbreak the ECDPM noted that "Such efforts need to be complemented with improved national and international regulatory and policy frameworks, along with investments in absorptive capacity in order to make more effective use of [Finance for Development]".

stakeholders in the recipient developing economies (Alves and Toporowski, 2019). According to UNCTAD's *Trade and Development Report* (2015) "[Private Public Partnerships] may appear to be effective in terms of generating and implementing infrastructure projects when public budgets are constrained, and there are certainly some success stories in this regard. If effectively managed, they can also improve the efficiency of the public service through the technical expertise provided by the private sector". The shift in the global finance trends, the emergence of China as a dominant player and the changing geopolitical landscape are some of the obstacles that are expected. Hence, the initiatives by multilateral financial organizations (IMF, World Bank) and trade block (EU) will shape, to a large extent, the recovery and sustainability process.

Figure 1 clearly underscores the prevalence of domestic public and private finances in the financing in developing nations, despite the dip after the global financial crisis. The latter adversely impacted international private financial flows, as private investors from the advanced economies retreated to safer assets after 2008. Figure 2 illustrates how important international financial assistance in the form of aid is (ODA) for the poorest economies of the globe, whereas lower- and middle-income economies rely more on FDI and private finance from the interior. This is clearly a picture of a fragmented global financial system, which underscores the inability of developing economies to fuel investment projects through taxation and private savings. As discussed by (Alves et al 2016), European development assistance is excessively reliant upon joint ventures with private finance ('blended finance'), as evidenced by the growth of private capital flows to developing countries. They argue that the positive side of such private-public collaboration is that such collaboration can 'leverage-up' more modest public sector development commitments, while the negative aspect of such collaboration is that it also leverages up public sector liabilities when the emerging market crisis when private sector liabilities are added to the claims on foreign currency in the developing country or emerging market, while public sector development agencies come under pressure to support projects affected by private sector illiquidity.

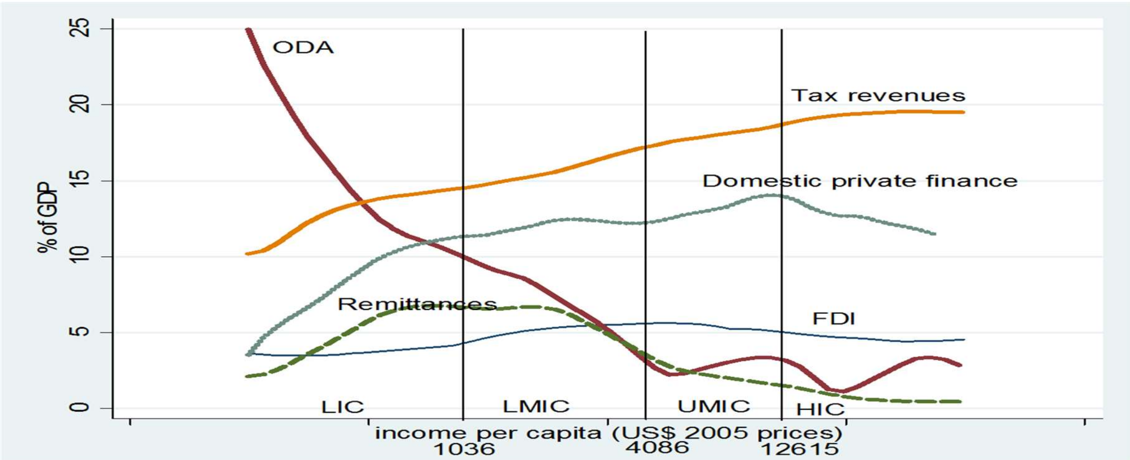
Figure 1: Trends in DEE Investment Sources (2011 USD bil.)



Source: ERD (2015)

According to the ODI (2013) the burden for funding in the most crucial sectors for developing economies (health, education, water and sanitation, sustainable energy and agriculture) is to be borne by the ODA and public sector. According to their estimates, the innovative financial instruments have a promising role to play in providing additional financial resources and also boosting the efficiency of existing tools. Shifting our focus to the EU, the recovery process after the 2009 financial crisis and its legacy has been hampered by the COVID-19 pandemic and its repercussions which are ongoing. Even before the pandemic, scholars and policy makers had acknowledged the salience of financing for the desired economic resurgence and the path towards sustained growth (EIB, 2018; EC, 2018). The poor record of economic recovery was most evident in private investment (EIB, 2016) and reached historically low levels in many member states. The combination of sub-optimal levels of private investment and tightening public finances had hampered the options for sustained productivity growth for the EU. In the light of such circumstances the ECB and the European Commission are in the process of taking substantial steps both with increased liquidity (ECB, 2020) as well as with novel monetary and investment tools. In addition, the promotion of the Banking Union (BU) and Capital Markets Union (CMU) are aiming to mend fragmentations in financing within the block and thus reinvigorate productive investment (Panetta & Schnabel, 2020).

Figure 2: Investment Sources and Level of Economic Development



Source: ERD (2015)

On top of these policy measures, European institutions stress the need for member states to move away from traditional bank lending as a source of finance and embrace equity financing through venture capital[4] as well as novel financial instruments. The objective of revitalizing growth and achieving sustainable development is contingent on the enhancement of the financial system with innovative tools on top of mending the fragilities of the current situation in the EU. The next section delves into these new instruments and their scope for the developed and developing world.

2.3 The Changing landscape in Development Finance: Innovative Development Finance Mechanisms

The changing global landscape in finance and economic relations has been accompanied by the emergence of new mechanisms for development finance, this shaping an inter-dynamic relationship between economic growth and financial innovation. Having said that, the evolution of ICT and the incremental decline of international barriers to trade and capital flows have diversified the financing options for enterprises all over the world, albeit in a manner that is far from uniform. The traditional dilemma of equity versus debt financing has been replaced by the creative task of choosing from a bevy of financing sources which involve the both the private and the public sector as well as the international institutional investors. In the developing and developed economies alike, the needs for innovative finance

[4] According to ECMI data for 2020 stock market capitalization was 56% in the EU27 compared to 163% in the United States and 149% in Japan.

have been pressing ever since the beginning of the 21st century and the Millennium Developmental Goals (MDGs) as underlined by OECD (2009). The lessons from the global financial crisis on the fragility of the banking system, the eruption of the global pandemic and the challenges that lie ahead have resulted in the implementation of innovative financial mechanisms being considered a key priority among stakeholders and policymakers. These developments are being documented and are shaping public policy in the field of financial regulation and intermediation (Bolton *et al*., 2019). The legacy of the global financial crisis and the recent emergence of the COVID-19 pandemic have strengthened the presence of international institutions and their collaboration with the public and private sector in most economies[5]. According to UNCTAD (2019), unregulated reliance to novel financial instruments and Private Public Partnerships will not suffice, and a "globally coordinated reflation strategy is needed instead, led by the public sector and with a focus on structural transformation and environmental recovery". Thus, the paradigm shift in global finance depends not only on the availability of innovative financing tools, but also on the design of regulation and monitoring that public authorities must implement with the assistance of the international multilateral institutions.

Building on the 2002 UN Assembly in Monterrey, a growing consensus has emerged for the need for Innovative Finance for Development (IFD) to foster sustainable growth and promote social and environmental goals. The organization clearly states that "first priority is to find pragmatic and innovative ways to further enhance the effective participation of developing countries and countries with economies in transition in international dialogues and decision-making processes" (UN, 2002) and underlines the role of the IFIs in the process with special reference to the IMF, the World Bank and the Bank of International Settlements (BIS). Looking back over the years after the assembly and its conclusions, Katseli & Boufounou (2020) argue that traditional forms of development finance have failed to fulfil their potential (see also ERD, 2015). Although there is considerable finance available for development at the global level, it does not follow that it is used appropriately (see Figures 1&2). FDI does not reach the most vulnerable and poorer segments of society; tax-to- GDP ratios have changed little in many developing countries; SMEs and infrastructure are starved of capital; And much international public finance does not go to the poorest countries. Indeed, there is a need to overcome a number of market distortion, governance, and coordination problems in order to mobilize and channel financial resources to their most effective use.

[5] In the EU, for example, the European Investment Bank (EIB) offers a set of financing opportunities in collaboration with banks in member states (for example the Investment Plan for Europe). Details can be found at https://ec.europa.eu/commission/strategy/priorities-2019-2024/jobs-growth-and-investment/investment-plan-europe_en.

However, appropriate actions can effectively overcome these challenges by addressing market, coordination, and governance failures. It is therefore, pressing to cast our interest and policies towards identifying and fostering Innovative Financing for Development Instruments (IFDIs), which will tap on additional resources to accommodate or even improve existing financing tools, increase efficiency of financial flows, and be governed by results-based evaluation to assure the financial flows meet the targets (World Bank, 2012). According to the OECD (2009) IFDIs transcend traditional spending approaches, by either official or private sectors, by pooling private and public resources to enhance or develop activities for the benefit of partner countries. In addition, they are the source of previously unavailable revenue streams (e.g. a new tax or bond raising, sale proceed or voluntary contribution scheme) earmarked long-term projects with a developmental impact and they provide new incentives to address market failure associated with traditional financing schemes[6].

The World Bank (2009) distinguishes four categories of innovative instruments for finance that shape the international landscape:

i. Private mechanisms, which represent private-to-private financial flows in the market.
ii. Solidarity mechanisms, which refer to transfers among sovereigns. These are the backbone of multilateral and bilateral ODA and other official flows (OOF).
iii. Public-private partnership (PPP) mechanisms, which aim to leverage funds from the private sector to support public service delivery and other public functions, such as sovereign risk management.
iv. Catalytic mechanisms, which involve public support for creating and fostering private markets by reducing risks for private investor and, in general, ensure competition.

Instruments ii-iv involve official funds directly or indirectly and are in the epicenter of the new global financial system. According to the UNDP (2012), a further sub-categorization can be documented based on the sourcing of these funds under the IFDMs (see Figure 3):

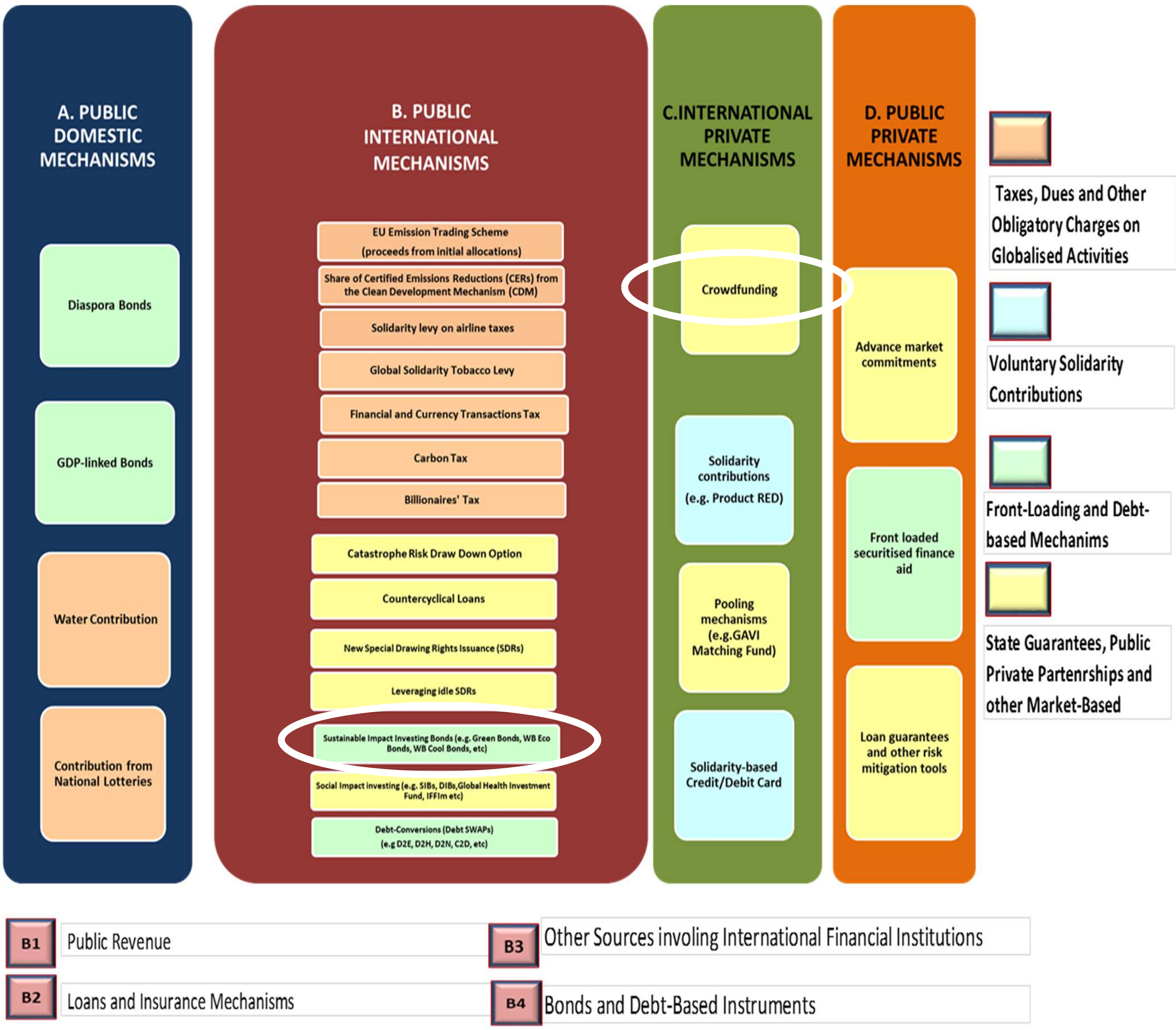
i. Taxes, dues, and other obligatory charges on globalized activities where the revenues are allocated to global development targets.
ii. Voluntary solidarity contributions, which include initiatives that give consumers the option to donate a small sum to international development at the point of product purchase.
iii. Front-Loading and Debt-based instruments, which front-load resources to fund development projects.

[6] Katseli & Boufounou (2020) provide an overview of definitions for IFDIs.

iv. State Guarantees, Public-Private-Partnerships, Insurance, and other Market-based Instruments, which leverage private funds to shape and reinforce investment incentives for the private sector,

v. Other mechanisms aim to reduce sovereign risk and other macroeconomic imbalances, mostly by enhancing streams of finance that are already in place.

Figure 3: Main IFDMs



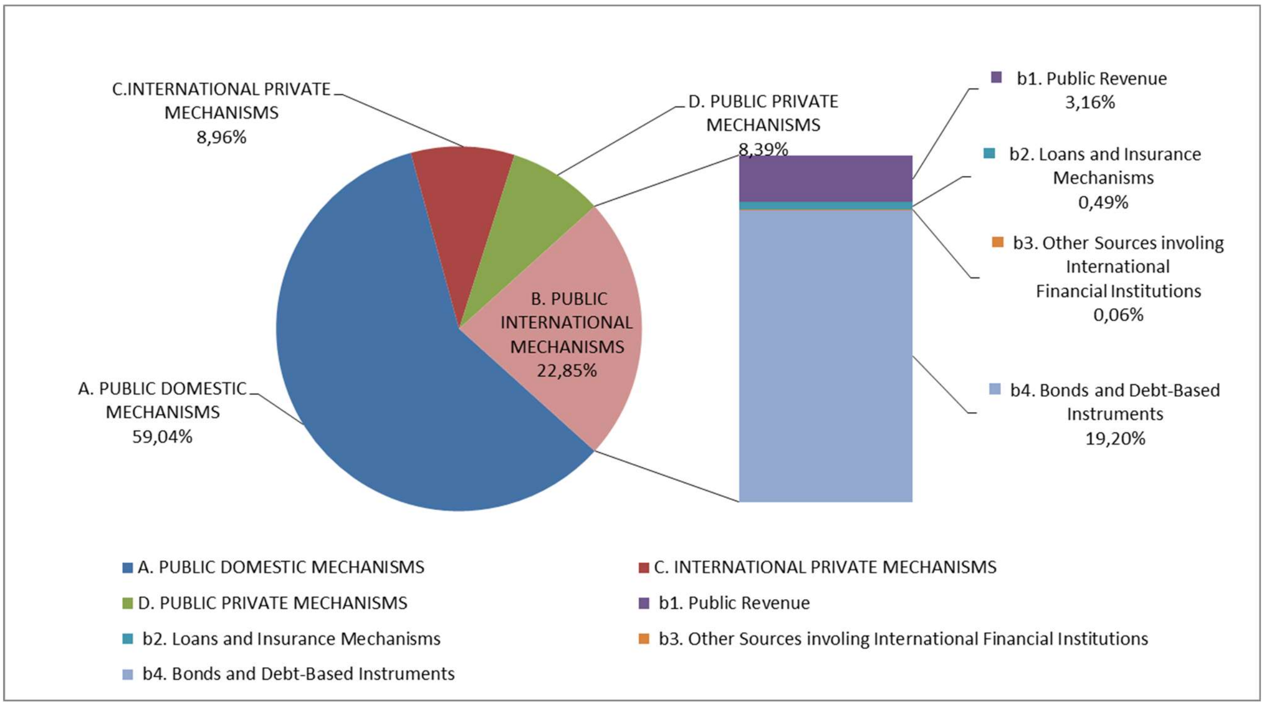
Source: Own processing

At the moment, we lack a systematic and comprehensive overall documentation of the financial data corresponding to the IFDMS for all countries and all years, mostly due to their small relative volume and complexity. Figure 4 summarizes the volumes associated with IFDMs by main category for 2015.

2.4 Crowdfunding

Crowdfunding is a simple, internationally recognized financing method, whereby every citizen, company, NGO and stakeholder in general can contribute, according to their capacity in money or in kind to the support of a range of initiatives. The latter include projects of social responsibility, solidarity, and entrepreneurship, emphasizing on wellbeing, environmental protection, and sustainable development. Belleflamme *et al*. (2013) state that "Crowdfunding involves an open call, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes"[7].

Figure 4: Structure of main IFDMs



Source: Own calculations based on IMF, OECD and WDI data.

[7] Hossain & Oparachoa (2017) outline a bevy of definitions on Crowdfunding.

The process has been facilitated by the ICT revolution and the prevalence of social media platforms (such as Facebook and Instagram) and has gained traction after its emergence during the first decade of the 21st century. Between 2006 and 2011 a substantial number of online platforms were founded and started running crowdfunding projects (the most notable include Profounder, Startup Addict, Believers, Fund, Indiegogo, and Kickstarter as depicted in Figure 5).

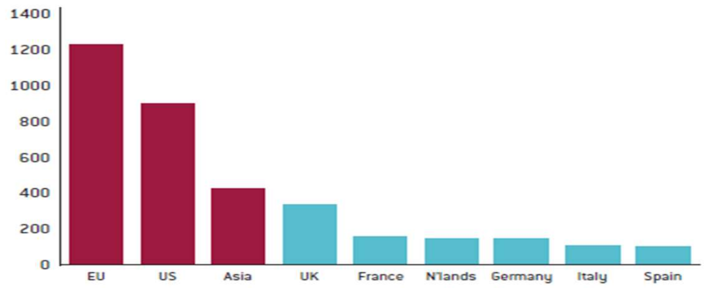
In the EU, the number of crowdfunding platforms surged from 44 in 2014 to 99 two years later, while 9.743 European SMEs (excluding the UK firms) raised 385 million euros from 2012 to 2014. Turning to the worldwide trends, the value of crowdfunding projects rose by 167% in 2014 compared to the previous year yielding a total of 16.2 billion USD in funds raised through these platforms. The most recent data for the UK (Zhang and Chen, 2018) show a 22% increase in the value of crowdfunding projects in 2018, with a rather segmented distribution of funds. For example, Real Estate crowdfunding projects increased by almost 200%, whereas Donation model projects recorded a mere 2.5% rise in value over 2018. As shown in Figure 5 the majority of platforms (2010-2017) is located in the EU (1231 platforms) with almost a quarter of these platforms operating in the UK (which was a member of the EU during that period). The activity of these platforms undertook a downturn in 2016 as depicted in Figure 6. Up to that point, the activities grew in all EU markets with the EU platforms providing an 85% increase each year (Bruegel, 2019). Figure 6 clearly describes these trends for the 10 top trading economies in the EU in terms of crowdfunding platforms.

The relative legislative procedure is governed since 2012 by the JOBS Act (Jumpstart Our Business Startups Act) in the USA, under which an enterprise can raise up to 1 million USD through crowdfunding from an unrestricted number of funders[8]. The consultation on a common legal framework is underway in the EU (AFME, 2020) and the European Commission presented a proposal for a regulation on crowdfunding service providers in 2018 under the aegis of the Fintech action plan. The new regulation will allow platforms to apply for an EU passport based on a single set of rules, thus enabling them to offer their services across the EU without obstacles. Nonetheless individual member-states have established the legal framework for crowdfunding activities. In France, a special type of entity is required for the equity model, namely the *conseiller en investissement participative* (crowdfunding investment advisor), which has no minimum capital requirements and can raise up to 1 million euros per project. The legislation covering the lending model also states that a separate legal entity (crowdfunding intermediary) be

[8] There are some limitations, for example a limit of 2000 USD per donator for funders with yearly income below 100000 USD.

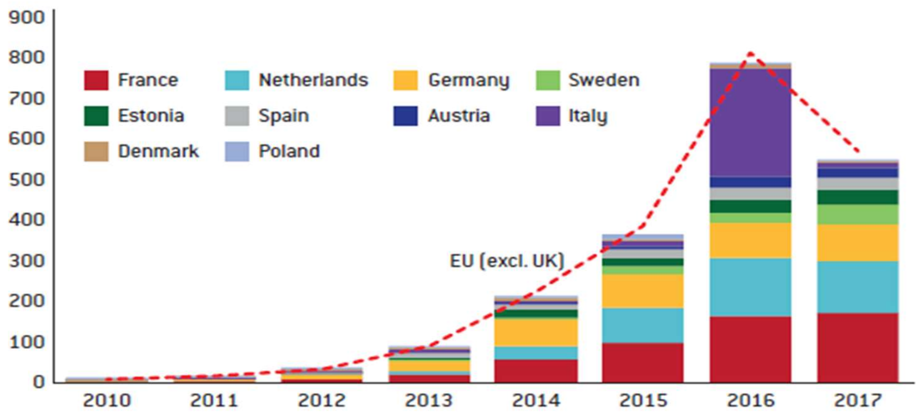
established (*intermédiaire en financement participative*) and sets a maximum value of 1000 euros per funder to be raised. The requirements of the law on lending model crowdfunding projects in Belgium are similar. The projects funded under this vessel are more diverse than other traditional and non-traditional forms of financing, ranging from small projects (less than 1000$) to raising entrepreneurial seed capital (Mollick, 2015). Crowdfunding offers a diverse source of finance for corporations, especially start-ups, which can be utilized in complimentary manner with traditional sources of finance. In addition, crowdfunding can be utilized to signal for potential demand for a proposed product or service, for which the entrepreneur can later turn to more traditional sources of finance (Mollick, 2015).

Figure 5: Number of Platforms 2017



Source: Bruegel (2019).

Figure 6: Total Amounts in EU (€ million)



Source: Bruegel (2019).

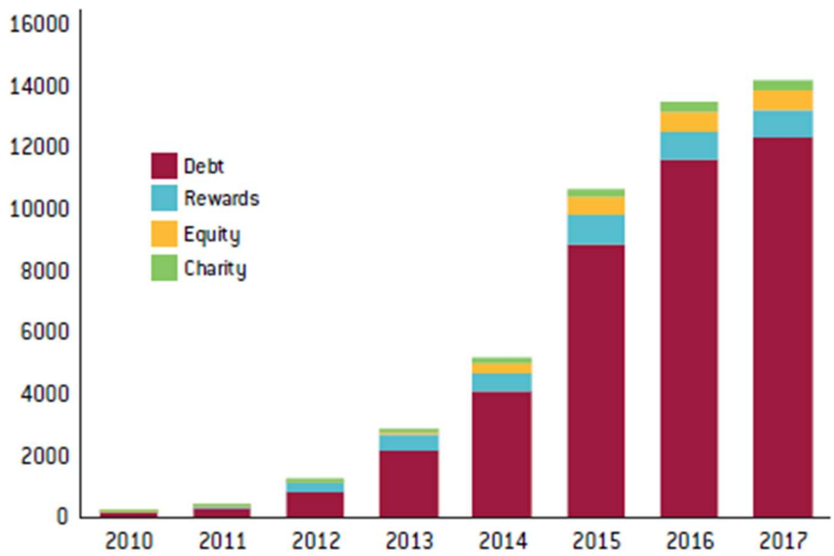
According to Schwienbacher & Larralde (2010) the salient factors behind a firms decision to consider crowdfunding are the following: (a) the lack of alternative resources, either due to the state of the regional financial system or the creditworthiness of the firm, (b) the degree of risk the entrepreneur is willing to undertake, (c) the information asymmetries and moral hazard in the regional or domestic credit market, and (d) the organizational form of the enterprise with non-profit organizations appearing as more prone to crowdfunding.

Turning to the investors, this tool provides them with the opportunity to contribute relatively small amounts to a variety of projects, thus allowing for portfolio diversification. It is a quick and frictionless procedure compared to traditional financing schemes and allows for the collaboration of multiple and diverse stakeholders. Mollick (2015) underlines four main drivers behind funders of crowdfunding projects. Firstly, in certain projects investors are portrayed as philanthropists who are backing a merit cause and are not expecting financial gains. Nonetheless, in many cases the capital that is invested offers a small return constituting the lenders as driven by profit combined with a wish to support important societal causes. The third reason is the reward associated with the participation in such a project, for example the inclusion in the credits of a firm or conference. Finally, funders can be reimbursed through the purchase of stocks in the company as a return for their investment through a crowdfunding platform. The latter process is defined as *crowd investing* and is most popular among startups that wish to attract seed capital and investors that have a long-term interest in their investment. There is also the option of debt crowdfunding, whereby the firm receives the funds in the form of loans from a platform of micro investors and not through the banking or insurance sector. Bradford (2012) categorizes crowdfunding into five major models according to the process and scope:

i. The donation model, under which funders act as philanthropists and do not expect any rewards for their donations.
ii. The reward model, whereby funders receive a small reward for backing a project such as being credited in a movie.
iii. The pre-purchase model, where funders receive “pre-selling” benefits to the products of the funded projects, including purchase on earlier date, better price, or with some other special benefit.
iv. The lending model (or debt model), according to which funders extend a loan, with the expectation of some rate of return on capital invested, depending on the platform
v. The equity model, according to which funders act as investors, receiving equity stakes in return for their funding.

Figure 7 casts focus on the distribution of funds in terms of the type of crowdfunding model followed at the EU context. Debt-led models represent more than 85% of the total value of crowdfunding projects in the EU. This trend is not unique for the region, as the dominance of debt-led endeavors is also present in the UK and Asia (Bruegel, 2019). The top 5 platforms for crowdfunding have diverted funds to a wide array of projects from 2014 until 2020. Kickstarter and Indiegogo represent the lion's share of the market in global terms, whereas the overall success rate of the projects stands at 23.1 % (36.9% for *Kickstarter*). Having said that, the credit and liquidity risks associated with this venture are non-negligible, while the nature of the process can provide with a platform for money laundering. There still lies a significant degree of doubt on the transparency of the crowdfunding process on top of the coordination and communication costs associated with the large number of stakeholders in such a venture. To this end, large systemic banks have emerged as functional intermediaries for crowdfunding activities, especially over the past decade, providing with the necessary know-how and emboldening trust in the process

Figure 7: Crowdfunding by Type



Source: Bruegel (2019).

The positioning of systemic bank in the financial system has helped increase transparency in the crowdfunding vehicle and encourages the creation of synergies which are necessary for the success of these endeavors. Considering the risks and limitations of crowdfunding, the legal framework plays an integral part in the process for enhancing this innovative financial tool for businesses.

The lack of a unique set of rules applicable to all EU member countries is the greatest impediment for the further commercialization of crowdfunding across the union. To this end the EU proposed the harmonization of the legislation for crowdfunding providers in November 2020 (active from November 2021) with the passing Regulation (EU) 2020/1503, which is directly applicable. The legislation allows for any crowdfunding platform (provider) that meets the requirements of its home country obtaining the relevant crowdfunding platform license, to operate in any other member country. The due process involves the provider's home authority to forward the relevant documentation to the corresponding authority of the other country[9]. The harmonization process for crowdfunding is an integral part of the Capital Markets Union (CMU) agenda (AFME, 2020). The completion of the CMU is expected to boost the value of crowdfunding projects across the Union, which remain subdued compared to more traditional sources of finance, primarily bank lending.

Figure 8: Financial Institutions and Crowdfunding

ABN·AMRO	ABN AMRO was the first bank to run a crowdfunding pilot platform in 2012.
SOCIETE GENERALE	Partnership with SPEAR; businesses or charities to successfully implement a responsible project and to obtain a more advantageous loan thanks to solidarity savers. In 2014 4 projects were financed with social and environmental value added for a total of 750,000 euros.
KBC	Launched in 2014 a crowdfunding website (Bolero) connecting entrepreneurs with investors. KBC sees crowdfinance as a valuable way for innovative startups & SMEs to obtain financing.
Basellandschaftliche Kantonalbank	The first Swiss bank to enter the crowd-lending business. It has joined forces with Swisscom to add crowd-lending to its range of services with the miteinander-erfolgreich.ch crowdfunding marketplace. .
RBS The Royal Bank of Scotland	Partnership with AssetZ Capital to finance SMEs and start-ups (P2P lending).
Santander	Partnership with Funding Circle to finance SMEs and start-ups (P2P lending).
Nordea	27-04-2016 The first Bank in Finland that to run an equity crowdfunding platform
NATIONAL BANK OF GREECE	28-01-2016 The first Bank in Greece that to run a donation-crowdfunding platform

Source: Katseli & Boufounou (2017)

[9] Details and template of the relevant documentation is expected to be issued by the European Securities and Markets Authorities (ESMA).

Moreover, the current conditions in corporate finance are deeply affected by the global pandemic. The unprecedented intervention of central banks in the bond markets has tilted financing towards fixed-income assets (AFME, 2020). However, the following years will be marked with a shift in both corporate and development finance and the record will be set on the importance of crowdfunding. Financial Institutions in Europe have started being involved with crowdfunding platforms since 2012 with a steady trend as Katseli and Boufounou 2017 argue and Figure 8 shows.

2.5 Green Bonds

Attention should also be drawn to the emergence and importance of Green Bonds as a novel means of development finance. According to the World Bank's IFC Green bonds are "fixed income, liquid financial instruments used to raise funds dedicated to climate mitigation, adaptation, and other environment-friendly projects. This provides investors with an attractive investment proposition and an opportunity to support environmentally and socially sound projects". The International Capital Market Association (ICMA) offers the following definition "[A green bond is] any type of bond instrument where proceeds are exclusively applied to finance or re-finance partially or completely on new and/or existing eligible Green Projects". The most common form has been "use-of-proceeds" bonds that raise capital to be allocated across a portfolio of green projects, although green bonds are also viewed as asset-backed securities tied to specific green infrastructure projects (Moid, 2017). In 2007 the EIB (European issued its first "climate awareness bonds" and a year later the World Bank followed with the issuance of a green bond. The market for green bonds including institutional, sovereign, and private stakeholders reached a value of $10 billion by mid-2012. Over the past decade, more countries and intermediaries have entered the market for green bonds (HSBC and Credit Agricole are more recent examples in the European economy). The most recent data for 2019 reveal a green bond value of more than 250 billion USD which translates into almost 3.5% of the global value of bonds issued (BIS, 2020). Figure 9 depicts the evolution in green bond finance by region, sector and currency of issuance. In the era of innovation in finance among all other sectors (FinTech), the emergence of green bonds addresses the issue of moral rewards on top of traditional yields associated with bond buying schemes. Following the importance of bond financing for infrastructure in the 20th century, the concept of green bonds highlights the importance of sustainable development and environmental preservation in the 21st century. According to Moid (2017) there are six types of green bonds:

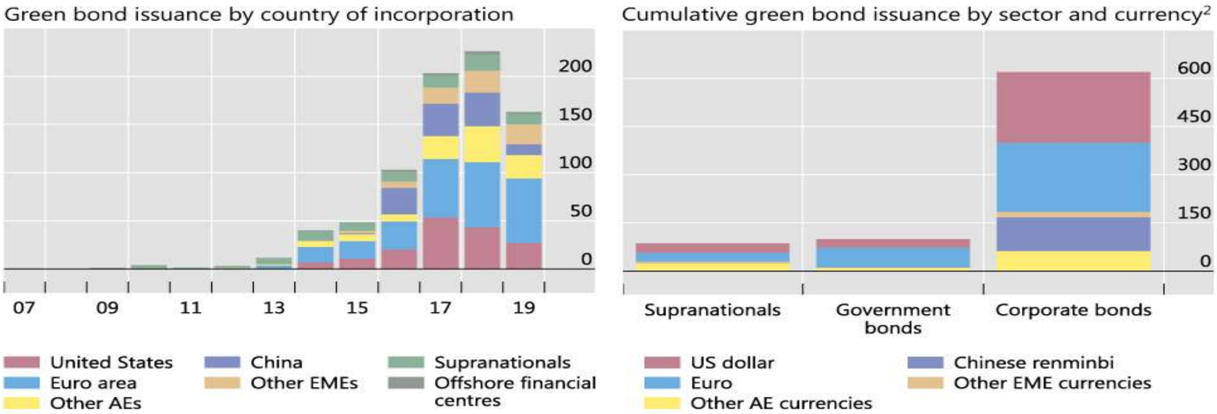
1. Corporate bond: A “use of proceeds” bond issued by corporate entities with an option applicable in case of default on interest payments or on return of principal.
2. Project bond: A bond backed by multiple projects (in most cases) with the investor bearing a proportion of the risk associated with these projects.
3. Asset-backed security: A bond collateralized by one or more specific projects.
4. Supranational, sub-sovereign and agency (SSA) bond: Issued by international financial institutions (IFIs) like the World Bank and the European Investment Bank, bearing similarities to the “use of proceeds” bonds.
5. Municipal bond: Issued by a local government or territory or municipal agency, regions or cities.
6. Financial sector bond: A special type of corporate bond issued by a financial institution (e.g. commercial banks) aimed at raising capital to finance green activities with a clear positive environmental effect.

The detrimental effects of climate change have elevated the need for environmental protection as a main policy goal. It is this notion that catalyzed the 2015 *Paris Agreement* among 189 economies according to which carbon use will be limited in order to bring down CO2 emissions around the globe. The policies to which governments have committed include priority in investment in renewable energy, energy efficiency, sustainable infrastructure, and climate-smart agriculture.

Figure 9: Green Bond Issuance

Rapid growth in green bond issuance since 2014[1]

In billions of US dollars — Graph A



[1] Up to June 2019. [2] Bonds with unspecified sector are excluded from the sample.

Sources: Climate Bonds Initiative; Dealogic; Environmental Finance Bond Database; authors’ calculations.

In the EU specifically, the sustainability of the growth strategy in the years to come is of pivotal importance as projected in the *European Green Deal* of December 2019. The member states have agreed to eliminating net emissions of greenhouse gases by 2050, decoupling economic growth from resource use and leaving no person or place behind in the process[10]. In this process, the European Commission has decided to introduce financing through Green Bonds for the first time (EC, 2019) through the formation of the EU Green Bond Standard (EU-GBS). According to the Technical Expert Group (TEG) that was created, this Green Bond Standard the proceeds from EU Green Bonds should be diverted to projects that contribute substantially to at least one of the six taxonomy Environmental Objectives as set by the EU. Moreover, the uses of these funds must not significantly harm any of the other EU objectives for sustainable development. The Report of the TEG (EC, 2019) also highlights the complementary role that can be played by the mandatory monitoring and reporting of the projects' dissemination, results, and environmental impact to enhance transparency.

It is, therefore, evident that recipient firms that have issued these Green Bonds will be obliged to report on the compliance of the funded projects with the environmental goals set from institutional stakeholders (as the EU). In addition, according to the TEG report, evaluations are also expected to be conducted by external parties (EC, 2019). In the current context of economic downturn and the need for infrastructure projects, sovereign can also benefit from the use of Green Bonds. Nonetheless, this desired source of finance is conditional on the spending on projects that are on par with environmental sustainability (and, in the case of the EU, the objectives set out by the EU Green Deal). According to the World Bank IFC "there is no single global framework which must be followed to label a bond as 'green'". Nevertheless, the International Capital Markets Association (ICMA) has established the Green Bond Principles (2018), a set of voluntary process guidelines intended for broad market use, developed by a range of investment and multilateral banks, including the World Bank and IFC. Before a country can issue a Green Bond, it needs to have tangibly explained how it will deploy the funding. If a sovereign chooses to apply the voluntary Green Bond Principles (GBP) they can apply the taxonomy set out by the ICMA. Within the EU, member states such as Germany, France and Sweden have utilized financing through green bonds during the past year. Furthermore, the European Commission is considering raising capital through green bonds under its *Next Generation EU* recovery scheme that will deploy 750 billion euros for the 2021-2027 period. The EC set the ambitious target of attracting 30% of total funding through the issuance of green bonds in an effort

[10] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en.

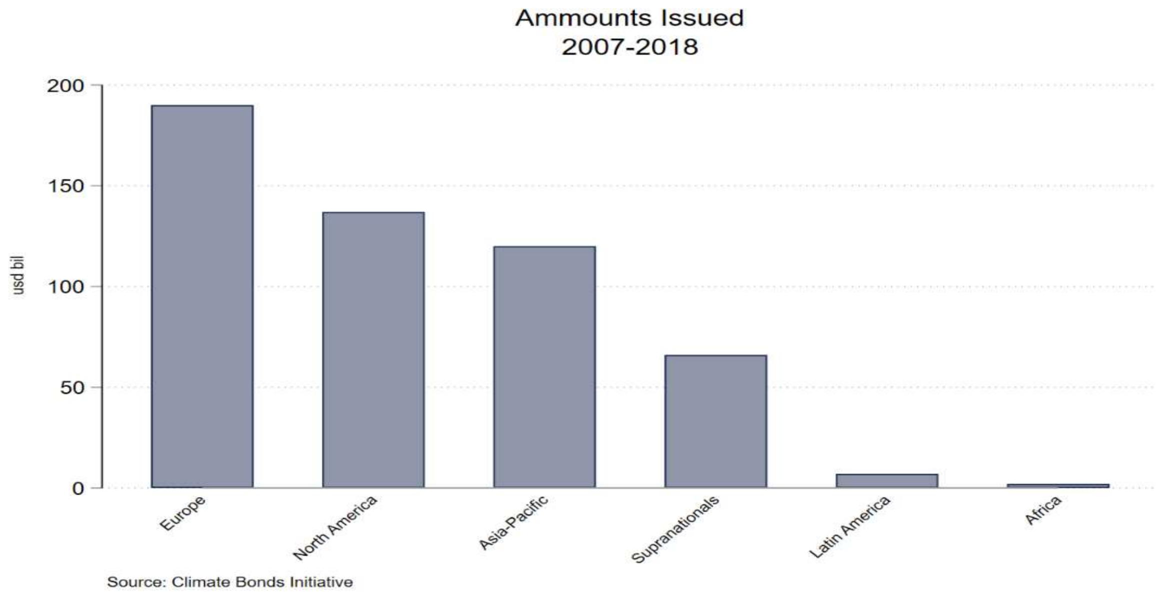
to prioritize sustainability along with economic recovery for the EU[11]. Should this initiative materialize, it would provide a significant boost to the green bond market apart from the direct fiscal stimulus effect. Guttenberg & Mack (2020) underscore that the additional liquidity the EU will provide is projected to stimulate private sector issuance and solidify the private stakeholders' trust in the market for green bonds and also lure additional investors from more "traditional" financial markets. The project-based approach described in the GBPs and the established EU standard enables a wide range of firms to issue green bonds and provides the incentive for environmentally sound projects. The recent data show that this set of guidelines has met the demand from investors and issuers and has succeeded in raising awareness of the role of finance for sustainable growth among all stakeholders, thus emboldening the concept of environmental-friendly financial instruments (BIS, 2020).

The share of such instruments in overall financing is still marginal compared to other advanced economies. Three EU economies, namely Germany, France and the Netherlands are among the top 5 places in issuance ranking according to the Climate Bonds Initiative (2018). Europe holds the first place in terms of issuance volume throughout the 2013-2018 period, however the East Asia-Pacific Region has exhibited the largest year to year increase in 2017 and 2018. According to the report, the vast majority of issuers are financial institutions, nonetheless other sources including regional and national authorities, non-financial corporations and government-backed entities are also increasing their participation in the market globally. The participation of commercial banks among the financial institutions is, as expected dominant, and European banks have emerged into major international players thus rendering the euro the dominant denominator currency of green bonds after 2018. The EIB was the first institution to issue a green bond in 2007, whereas other global first places for the EU include the first local government issuer (Ile de France in 2012), the first city issuer (Goethenburg in Sweden, 2012) and the first sovereign issuer (Poland in 2016) among others (CBI, 2018). As depicted in Figure 6, the region leads the global market in terms of outstanding amounts of green bonds and is in second place to the East Asia-Pacific region with 193 issuers in its 22 Green Bond markets. Table 1 illustrates the decomposition of these issuance in 2017 within the EU economies, concerning new issuers. According to the CIB (2018) practically all deals in the EU are externally validated by a third party (98%) and non-financial corporations account for almost a third of the issuances surpassing the banking sector. Nevertheless, there is a substantial degree of concentration among these private sector issuances as the top 10 issuers emerge from just twosectors:

[11] https://www.bruegel.org/2020/09/redefining-european-union-green-bonds-from-greening-projects-to-greening-policies/.

energy (Iberdrola, Engie, TenneT Holdings, Enel, Innogy, Nordex, Gas Natural Fenosa, Senvion) and property and real estate (Unibail-Rodamco, Vasakronan). The CBI report (2018) highlights some important stylized facts for the European markets for green bonds on top of the aforementioned trends, Firstly, the overwhelming majority (75%) of the issuance is denominated in euro (somewhat unsurprisingly) and the median project amount is 91 million. Moreover, the energy sector retains its dominant position in the market albeit with some notable increases in issuances targeted to the transport sector after 2016. The share of the energy sector peaked in 2014 at almost 60% and the private companies in the sector account for 60% of the issuances in the 2012-2017 period. Finally, within the government sector, local governments were the first to use such instruments; however, the sovereign share of government green bonds were close to 100% in 2018 with the proceeds being diverted to a bevy of sectors including transportation, energy, waste management and water.

Figure 10: Green Bond Issuance by Region



Despite the aforementioned merits of the green bond initiative, there are still drawback associated with this line of projects which hinder its more widespread use in global finance. Some issuances only refer to institutional investors thus not allowing for a crowding in of the private sector and the growth of the market. Furthermore, the investors' appetite for green bonds are in tandem with the fluctuations in the energy market. For example, high oil prices steer the market towards alternative sources of energy (renewables) and consequently overheat the green bonds market, whereas a global environment of low oil prices does not provide with the incentives to invest in such green bond schemes. Moreover, the data do not point to a substantial reduction in carbon emissions due to green-bond projects (BIS, 2020) questioning the current monitoring and evaluation process described above.

3 Financialization and IFDMs in Greece

3.1 The Greek Economic Environment

The adverse financial conditions in the EU after 2008 are even more pronounced in the Euro-area peripheral countries and Greece in particular (ECB, 2020; ESM, 2020). The ratio of Non-Performing Loans (NPLs) in Greece soared at more than 40% of total loans in 2017, substantially higher than the EU average (Bank of Greece, 2019). Under such dire circumstances the need for alternative and innovative sources of finance for SMEs in Greece is paramount. According to the World Economic Forum's *Global Competitiveness Report*, the Greek economy exhibits the lowest levels of venture capital, access to loans and stock market capitalization among OECD economies. The latter developments, combined with the marginal importance of the private bond market, the bottlenecks faced by commercial banks and the prevalence of small and very small (micro) firms in the economy shape a dismal environment for SME financing in the country. Hence, the introduction and fostering of innovative financial mechanisms could prove to be an ameliorating factor and could help boost investment and growth. The *Hellenic Development Bank (HDB)* was established in 2003 and serves the process of development and management of portfolio funds for targeted programs. During the 2020 COVID-19 pandemic, the bank has designed and implemented funding schemes for businesses impacted by the economic downturn in the form of loan guarantees, working capital loans and support for infrastructure programs. Moreover, the *Hellenic Development Bank of Investments* (ex TANEO) constitutes a form of a Sovereign Fund-of-Funds of Greece and is responsible for the monitoring and coordination of Venture Capital projects that are aimed at start-ups, areas of high technology and green projects. In cooperation with *Equifund*, which is part of the European Investment Fund, these two are the main institutional pillars of venture capital and alternative financing for Greek enterprises. The latter is a public private partnership co-funded by the European Commission, the European Investment Fund (EIF), the Hellenic Republic and private partners[12] which provides financing and expertise to complement venture capitalists in key areas of the Greek economy. One of the most prominent projects of equity funding has been the Marathon Fund, currently

[12] The European Investment Bank has also contributed to the Fund under the "*Juncker Plan*".

commencing its second phase, under which ten Greek high technology startups raised significant amounts of capital in the form of VC with very satisfying results[13]. Finally, a recent development has been the establishment of the *Elevate Greece* initiative, which aims to document all Greek startups and foster their growth towards a sustainable model of growth for the economy focusing on innovation. The two criteria for eligibility are the prevalence of innovation and scalability in the companies' products or processes, while the gains for entrepreneurs include access to funding (VC and angel investors), international visibility, networking opportunities and access to talented personnel through the platform.

3.2 Crowdfunding in Greece

In the realm of crowdfunding, the process is still nascent in the Greek economy. Equity crowdfunding is established since 2016 (Law 4416/2016) under the EU directive 2014/91/EE/L257 and allows for offers between 100000 – 500000 for each funder every 12 months. The process is monitored from the Hellenic Capital Market Commission (HCMC) following the clear set of rules adopted by the European Commission[14]. This form of financing presents tangible opportunities for SMEs in Greece and the economy as a whole since it can provide with rapid funding through the use of commercial platforms and social media outlets. Moreover, given the stress under which the domestic system has been during the last decade (BoG, 2019), this alternative source of finance can prove to be a useful alternative for SME finance. The aforementioned risks are prevalent in the case of the Greek economy as well, therefore the monitoring and enforcement legislations under scrutiny at the EU level are necessary for the platforms to start playing a decisive role in the domestic financial system.

The National Bank of Greece (NBG) has emerged as a major stakeholder through the introduction of the Act4Greece[15] platform in 2016 that aims to finance projects with a broader social and developmental impact. The project philosophy is embedded in Goal 17 of the United Nations' Sustainable Development Goals (Partnerships for the goals), which underlines the need to from partnerships among different stakeholders in the global level to promote sustainable development. Act4Greece serves as a value multiplier as it allows for the cooperation of many social groups that finance the projects. In order to plan and effectively manage the actions of the Act4Greece platform, the structure includes the following bodies:

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[13] For details see https://marathon.vc/.

[14] See https://ec.europa.eu/info/business-economy-euro/growth-and-investment/financing-investment/crowdfunding_en.

[15] NBG is the major stakeholder of the projects, however partners include the Onassis Foundation, the Latsis Foundation and UNESCO (see https://www.act4greece.gr/the-act4greece).

1. The Strategy Committee, which is composed of at least 7 members, individuals, and legal entities, which contribute and/or support by providing funds to act4Greece. The body runs two bi-annual evaluation rounds, to monitoring the progress of the program and approve the projects proposed in each key area
2. The Management Committee, which bears the task of coordinating, running, and managing the program. The proposals are submitted to the Strategy Committee through this body of the organization, which is also responsible for picking the implementing agencies for each action. The projects themselves are controlled by this committee, which overseas cooperation and communication among all parties involved in the projects.
3. The Supporters' Assembly, which consists of representatives of the participants in the program and, in general, the stakeholder in each project. It is held at least once a year with a view to exchanging opinions and ideas regarding the progress of the program and reviewing its results.

The main areas of interest for the ask4Greece program include Welfare, Health and Solidarity, Social Economy and Entrepreneurship, Culture and Cultural Entrepreneurship, Research, Education and Training, Young and Innovative Entrepreneurship and Environment and Sustainability. Among its most recent actions was the project *Social Plate*, which raised more than 30000 € (initial target) aimed at "making use of unsold fruit and vegetables which after sorting and repackaging is distributed to public welfare grocery stores, charities, church soup kitchens and other bodies, while at the same time providing work to long-term unemployed people".[16] The program's majority of funds is diverted to donation funding, with emphasis at the social impact of the projects such as compensating for victims of wildfires, supporting soup kitchens in Northern Greece and buying a modified school bus for students with cerebral palsy. The bank also wishes to expand its Equity Crowdfunding projects, providing business seeds for Greek enterprises through equity purchase or debt financing.

According to Katseli & Boufounou (2020) the Act4Greece platform and crowdfunding in general, can play a significant role in SME finance in Greece over the following years. Boufounou et al. (2017) undertook a SWOT Analysis of the equity crowdfunding potential in Greece arguing that it could indeed serve as an effective tool to broaden SMEs' financing and enhance financial inclusion. Equity crowdfunding has been regulated in Greece since September 2016; however, no such platform has been established as yet. Indicatively, the "Act4Greece" platform could easily expand to serve equity financing providing needed project finance to SMEs and startups that have been supported in the past by other programs such as the

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[16] https://www.act4greece.gr/actions/Action_socialplate.

"NBG Seeds" program. The main advent of the NBG platform is the participation of non-bank shareholders in the strategy committee, namely institutions like the Onassis Foundation and the Bodossakis Foundation. This bolsters the platforms' commitment to finance projects with deep societal impact catered to sustainable development, following the expertise of the committee members outside NBG. Given the developments in the domestic financial institution over the past decade, Katseli *et al* (2020) underscore the importance of financial institutions in the financing process of Greek SMEs, including the creation and functioning of crowdfunding platforms. Sheltered with the trust and know-how embedded in commercial banks, the process of crowdfunding has the potential to emerge as an alternative financial mechanism. Finally, the adoption of the "European Passport" by the end of 2021 will level the playing field for all platforms across the EU and will expand financing opportunities through crowdfunding platforms for SMEs across member countries. This development can prove pivotal especially for economies with adverse financing conditions as is the case with Greece.

3.3 Green Bonds in Greece

In the field of Green Bonds, the transactions are still at a nascent stage in the Greek economy as presented in Figure 10 that follows. The first issuance took place in 2018 in the form of a 500 million € corporate bond issued by TERNA with a duration of seven years and a 57.5 million € support from the EBRD[17]. A significant development was the issuance of a 500 € million by the National Bank of Greece in 2020, which was also supported by the EBRD (50 million €) targeted towards the energy sector and, more specifically, the renewable energy sources. The issuance was marked as a success whereby more than 80 (predominantly) international investors declared interest for the project. In addition, the bond with a maturity of six years and a 2.5% coupon signals also the first senior bond issued by a Greek financial institution since 2015. NBG wishes to dominate the energy finance market through the incremental financing that will reach 3 billion € over the coming years according to the NBG strategic goals[18]. The bank joined the United Nations Global Compact as a Participant member in June 2018 and integrates six priority[19] SDGs into its strategy and culture. In alignment with the broader sustainability strategy, NBG has established this Green Bond Framework to be able to issue Green Bonds and attract dedicated funding for this strategic part of the business according to the ICMA directives (NBG, 2020). Therefore, the Greek

[17] https://www.ebrd.com/news/2020/ebrd-invests-575-million-in-gek-ternas-bond-issuance-in-greece.html.
[18] See https://www.ebrd.com/news/2020/ebrd-invests-in-debut-issue-of-green-bonds-by-a-greek-bank-.html.
[19] These include Goals 3,4,7,11,12 and 13 of the SDG agenda (NBG, 2020).

Green Bond market development further supports the argument that financialization and the active involvement of domestic and international financial institutions supports the use of IFDMS for financing sustainable development. More recently, the PPC has attracted 650 million euros via a green bond, covered by international investors at a 70% ratio. The use of proceeds is mainly repayment of previous loans, and also completion of climate friendly targets. Failure to comply with these environmental standards. Despite the fact that the amounts raised through Green Bonds are still minimal, the unique traits of the Greek economy and the potential of augmenting the role of renewable energy (e.g., wind and solar power) can prove decisive in allowing for Green Bonds to cover a larger fraction of debt issuances in the near future.

Figure 10: Green Bond Issuances in Greece

Issuer	Amount (€ mil)	Environmental Effect	Coupon Rate
TERNA	500	Dedicate Funds to Renewable Energy Projects	2.6%
NBG	500	Dedicate Funds to Renewable Energy Projects	2.50%
PPC	650	Steady Decrease of CO2 Emissions	3.875%

Source: Own processing

4. Conclusions

The role of the financial system for economic development and improvements in well-being is indisputable. The financial turmoil following the 2008 global financial crisis and more recently the COVID-19 pandemic have reshuffled interest to the finance and development nexus. On top of that, the advances in ICT technology and the rapid globalization process has presented us with new means for international and regional finance and not only new challenges. In this global framework, the innovations in the financial system and the emergence of a bevy of innovative financial instruments that can shape the future in development finance. The creation and enhancement of innovative financial mechanisms can provide with fruitful policy lessons for both developing and advanced economies. Especially in the case of DEEs, under the growing concept of financialization that has accompanied the globalized economy, this new set of financing vessels and methods can emerge as solutions to many structural bottlenecks. In addition, the cooperative nature of some of these instruments can facilitate the break in fragmentation associated with financial conditions in the EU and the Eurozone.

Achieving Sustainable Development Goals (SDGS) requires a radical transformation of the global financial system. The process involves the enhanced role of IFIs, global and multilateral partnerships and the emergence of Innovative Financing for Development Mechanisms (IFDMs). In this study we look at the potential of these IFDMs and focus especially on the role of crowdfunding and green bonds. Bearing in mind the adverse financial conditions in many emerging and advanced economies, the high risk associated to innovative activities and intangible assets, the growing levels of private and public debt and the need to address sustainability on top of economic growth, these instruments are of pivotal importance. Elaborating on the structure and functioning of crowdfunding and green bonds, we identify the potential given the current financial adversities, but also highlight the need for a comprehensive global governance and legislation built around those mechanisms. Utmost importance is given to the role of financial institutions and commercial banks in providing with the trust embedded in the system in order to streamline the functioning of these two IFDMs. It comes as no surprise that banks in the EU (mostly) and the rest of the world lie in the epicenter of green bond issuances and crowdfunding platforms.

Finally, we consider the case of the Greek economy and find that the innovative forms of finance are at a premature level compared to regional averages although it is widely recognized that they could play a considerable part in the rejuvenation of the domestic financial system in this time of need. In the context of adverse financing conditions for Greek SMEs, the collaboration of domestic and international financial institutions and the gradual employment of IFDMs could provide viable solutions for recovery and resilience. The notion of financialization could prove to be fruitful for the Greek economy, through the deepening of the financial market with the use of IFDMs and the accompanying initiatives from the financial institutions.

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