CIVITTA

“Innovative Financial Instruments for SDG Acceleration”

Conducting a feasibility study on innovative financial instruments and provision of targeted recommendations on feasible SDG-aligned financing tools/mechanisms for Armenia

FINAL REPORT

EV Consulting (currently CIVITTA Armenia)
E-mail address: info.am@civitta.com,
info@evconsulting.com
Telephone no.: +37410546434

10/06/2022

CONTENTS

1. INTRODUCTION

1.1. Overview

The study has found that there is considerable potential for the introduction of innovative finance instruments in Armenia, drawing on the recent experience with these in other countries, and in particular the peer-country experiences in Moldova and Georgia, as set out in Section 5.

Nevertheless, to achieve the successful introduction of these instruments, it will be necessary to consider policy changes and improvements across sectors and more generally in the field of financial regulation. These range from macro- to micro-recommendations, including for example training on SDGs for financial regulators and officials, or detailed changes to the way peer-to-peer lending is being regulated.

The study clustered the SDGs in four more generic areas, agriculture, energy/climate, gender/inclusion and infrastructure. The reason for this approach was that many SDGs cross specific sectoral boundaries, and therefore a sector-focused instrument could address several SDGs at the same time.

1.2. Recommended Instruments

The study recommends for Armenia to focus on the following innovative instruments to help the country progress in achieving the SDGs. The recommended instruments can broadly be clustered in two groups – bonds and funds, with only one of them being outside these two clusters.

Focusing on two clusters enables the government to focus in amending and developing regulations and training to apply across instruments.

Agriculture instruments

- "Guarantee fund" – 4.3.1.1.
- "PPP and structural funds" – 4.3.1.2. and
- "Warehouse Receipt Financing" – 4.3.1.3.

Energy/Climate/Environment instrument (also covering infrastructure)

- "Sovereign Green bonds" – 4.2.1.5
- "Municipal Green bonds" – 4.2.1.6. and
- "Corporate Green bonds" – 4.2.1.8.

Gender/Inclusion instrument

- "Women's livelihood bonds" – 4.3.3.2.
- "The career impact bond" – 4.3.3.3. and
- "The Fund for Gender equality" – 4.3.3.4.

2. PUTTING SDG FINANCE INTO CONTEXT

2.1. Background

In September 2015, world leaders adopted the Sustainable Development Goals (SDGs), with the purpose of addressing 17 identified global issues by 2030. This initiative provides an international framework to move by 2030 toward more equitable, peaceful and prosperous societies. Since then, financing for development of projects and ideas that target these issues has become a major goal in the agenda of governments and global NGOs.

Meeting the 2030 Agenda requires substantial and unprecedented investments into the SDGs. Governments need to effectively support this sustainable development and ensure that the funds raised for this purpose are used efficiently and, in particular, reach the communities and people furthest behind. The adoption of the SDGs has significantly transformed how the private and public sectors function to achieve inclusive and sustainable development. Following their adoption, in 2016 UN Secretary-General Ban Ki-moon announced the launch of the new Financial Innovation Platform targeting at developing, identifying and piloting Innovative Finance Instruments (IFIs) that can support SDG goals.

The OECD considers innovative financing new mechanisms of raising funds or stimulating actions in support of international development that go beyond traditional spending approaches by public or private sector. These include, but are not limited to:

- Taxes, dues or other obligatory charges on globalized activities (i.e. airline ticket tax, carbon taxes, etc.)
- Voluntary solidarity contributions (i.e. small sum donations, RED, the Global Solidarity Fund, etc.)
- Frontloading and debt-based instruments (i.e. diaspora bonds, green bonds, debt conversions, etc.)
- State guarantees, public-private incentives, insurance and other market-based mechanisms (i.e. state subsidies or commitments to purchase)[1].

The World Bank in turn defines *Innovative Finance* as any financing approach that helps to "generate additional development funds by tapping new funding sources; enhance the efficiency of financial flows, by reducing delivery time and / or costs; make financial flows more result-oriented, by explicitly linking funding flows to measurable performance on the ground"[2].

[1] Innovative Financing for Development: A New Model for Development Finance?, UNDP, 2012, Link
[2] Innovative Finance for Development Solutions, WB, Link

The European Union defines Innovative Financial Instruments more narrowly as tools whose aim is to "boost real economy growth through increasing the access to finance for enterprises and industry producing goods and services. Spending through as a range of activities such as:

- Participation in equity (risk capital) funds
- Guarantees to local banks lending to a large number of final beneficiaries, for instance small and medium-sized enterprises (SMEs)
- Risk-sharing with financial institutions to boost investment in large infrastructure projects (e.g. the Europe 2020 project bonds initiative or the connecting Europe facility financial instruments)"

2.2. The international context

Financing of 2030 agenda has become a global issue since world leaders adopted Sustainable Development Goals (SDGs) in 2015. To meet SDG goals governments will require unprecedented investments in areas such as healthcare, education, environmental protection, infrastructure, food safety, clean energy, innovation, public / private institutions and other sectors.

Financing is already being used in more sophisticated and innovative ways to achieve the SDGs. Estimating the amount that needs to be raised each year to meet the SDGs is an ambiguous exercise because the estimates are based on a wide range of different assumptions, including the macroeconomic and policy environment, the shape of national and international trade policies, technological and innovation advances, the effects of shocks, climate change, spillover effects, and so on. Regardless, the required finance volume will be substantial, and innovative instruments are required to ensure that it can be achieved at acceptable cost.

According to UNDP, annual infrastructure investment requirements in all economies range between USD5 and USD7 trillion, with around USD4 trillion going to emerging economies. According to UNCTAD's 2014 forecasts, developing nations are only meeting roughly USD1.4 trillion, leaving a shortfall of USD2.5 trillion. Given the scale of the gross world output and worldwide gross financial assets - USD85 trillion and USD200 trillion, respectively – the provision of full financing for the SDGs is theoretically achievable. Nevertheless, despite the fact that the world has never been richer than it is now, money flows and wealth do not always reach those who need it the most.

The COVID-19 pandemic has however had a major hit on achieving development goals. It has exacerbated the SDG investment gap, particularly hitting Least Developed Countries (LDCs) and other structurally weak economies, and investment decline in developing economies in much larger than in developed ones. SDG related greenfield investment was 33% lower in 2020 than in pre-pandemic period, and international project finance is down by 42%[3]. This is not an even distribution – while renewable energy investments continued to grow, investment in education, power and water decreased in 2020[4].

Box 1: The Importance of Flexibility – Tirana's Orbital Forest[5]

There is no single "silver bullet" in terms of the most appropriate financial instrument for the delivery of SDGs. In fact, novelty often comes from the combination of various financial instruments matching the specific needs of each project, country and sector. SDGs are also very much interlinked and therefore making progress will always imply a mixed and complex approach. A good example in this regard is Tirana's Orbital Forest project, which supports a number of SDGs, including infrastructure, liveable cities, life on land, water, climate, and almost certainly will have knock-on effects on gender and inclusion.

There are numerous examples of successful mixed approach interventions delivering significant sustainable development and transformational change. The solution to most problems that SDGs aim to address must be approached from a holistic and panoramic perspective, rather than in silos, to ensure that synergies are reached between distinct interventions. This requires a great capacity within the development professions of Armenia, and a public administration dedicated to pursuing the overall development of the country.

One example that may serve as a model to Armenia is the use of taxes, voluntary action and crowdfunding for Tirana's Orbital Forest. The municipality has invested in a project to build a wall of trees to oxygenate the city. The first strategic objective in the Mayor's General Local Plan 2030 proposed an Orbital Forest of 2 million trees, encircling Tirana, acting as a green belt to prevent urban sprawl. The forest – a proposed ring around the urban perimeter of the city with a mix of forests, shrubland, agricultural land and recreational areas – is a nature-based solution that is intended to put a brake on urban sprawl, reconnect the citizens with nature, clean the air, address urban heat effects, and is just one part of a wider plan for the city's future.

Tirana has worked to build both the economic and technical case for the Tirana Orbital Forest, bringing landscape architects, ecologists, climate change specialists and economists together to assess the whole value case for the project which may be supported by an EBRD loan. The main challenge, as with most climate change adaptation projects, is to quantify the wider environmental and economic benefits that the forest will bring such as improved resilience to floods, human health benefits from improved air quality to increased local economic activity and tax revenues stimulated by the provision of new recreational facilities.

The project is a follow-on investment from Tirana's Green City Action Plan (GCAP), developed through the city's participation in the EBRD Green Cities programme. Tirana was one of the first cities to join the programme. The GCAP identified the Orbital Forest as a critical investment for Tirana to address its challenges relating to climate resilience, mitigation, urban sprawl and access to green space.

Tirana Orbital Forest is also an important milestone in the EBRD's mission to support investments in nature-based solutions. The Bank recognises the economic benefits green infrastructure can have in comparison to traditional, grey interventions. As a part of EBRD Green Cities, and as acknowledgement of these benefits, the project will receive support from the Green Climate Fund's concessional resources made available to Green Cities like Tirana.

[3] World Investment Report 2021, UNCTAD, Link
[4] ibid
[5] https://www.arup.com/perspectives/planting-an-idea-tiranas-radical-orbital-green-vision

The project employs various financial measures[6]:

- **Crowdfunding**: the city set up a goal of 100,000 trees to be financed by Tirana residents and any other individual business. Several fundraising campaigns focused on kids' "birthday trees", planted by families, and on celebrity and influencers' appeal to donate trees to celebrate occasions such as Valentine's Day, birthdays, anniversaries, and for people to create lasting memories of their beloved ones.
- **Tax incentives**: the municipality introduced incentives so investors could have a higher construction density and more floors in exchange for more public and green spaces to the lower levels.
- **Tax collection**: the municipality introduced a temporary tax to make the city greener, where families paid a small tax equal to a cappuccino per month and all the revenues went to trees and green spaces.

The project has been very successful surpassing its initial indicators (122,136 trees were planted in the first year). The project has also delivered on various SDGs such as sustainable economic development, increases in health, city infrastructures, and of course biodiversity and greening spaces. The green belt of 2 million trees will eventually connect 14,671 hectares of parks, agricultural fields, forests and other forms of vegetation around the city in both public and private property, generating an economic and territorial revitalisation of the area. It will contain a variation of tree species, and allow for recreational parks, and orchards. Other important benefits are related to air pollution control, CO_2 production, soil erosion control, soil fertility growth, flora and fauna improvement, etc.

2.3. SDG Finance Roadmaps

In order to systematically address SDG finance, SDG Finance Roadmaps are a key tool[7]. They were introduced as part of the 2030 Agenda and the Addis Ababa Action Agenda, to help make sense of the widening array of financial instruments available, linking them to the equally widening range of new initiatives, which often propose a potential funding solution. These include various forms of blended finance, green bonds, social impact bonds, crowdsourcing options, while development finance institutions such as the World Bank and other MDBs have created sector-specific funding initiatives.

The roadmaps consist of a systematic overview of SDG finance provided by SDG, as well as needs, and consequently identify the shortfall in funding to achieve the SDGs. They aim to facilitate cooperation between investors, country decision-makers, delivery entities and donors to identify and provide for financing opportunities at scale. This is expected to generate and accelerate also regional opportunities for sustainable investments, and a country SDG finance roadmap can serve as a blueprint to replicate and scale finance for the SDGs across regions where countries face similar challenges.

Increasing the understanding of national financing needs and gaps is expected to help channel finance towards sectors that can help achieving the SDGs, supporting vulnerable groups, including women and promote sustainable development, including but not limited to infrastructure, energy, inclusion and health.

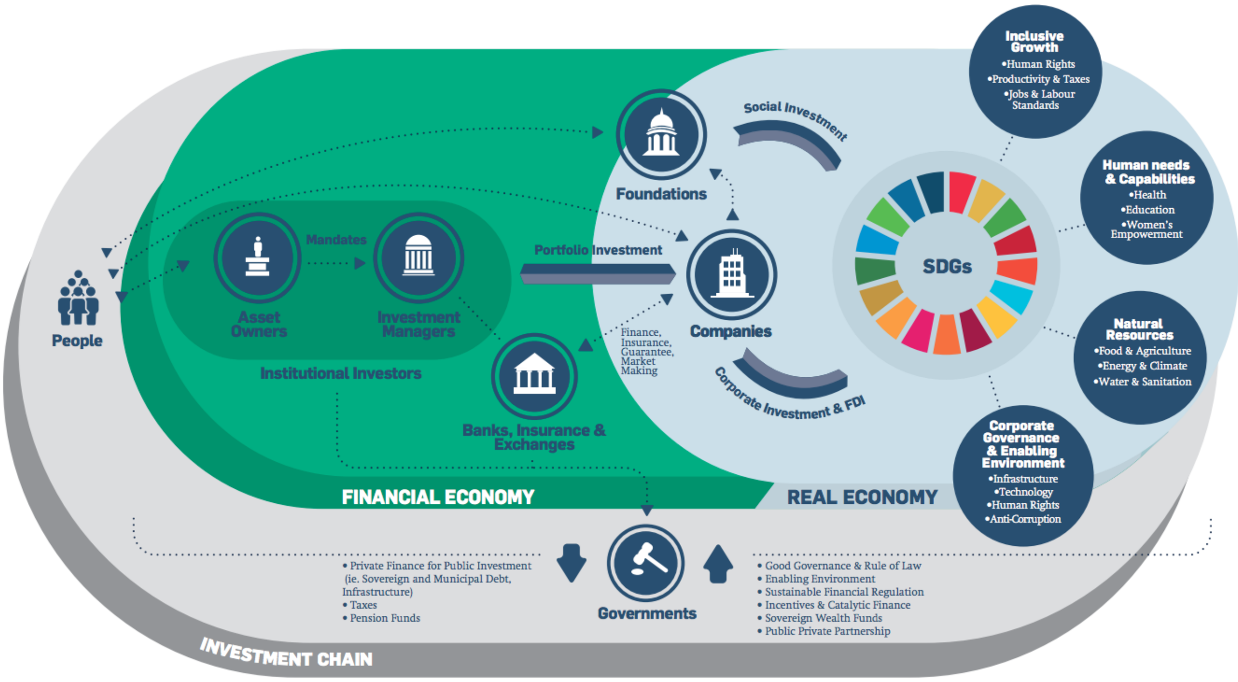
[6] https://sustainablecities.eu/transformative-actions-database/?c=search&action_id=eu2ii6rw
[7] See e.g. WEF 2021 *Country Financing Roadmap for the SDGs: Ghana* *https://www.weforum.org/reports/country-financing-roadmap-for-the-sdgs-ghana*

The expectation is that investments in these sectors will have a knock-on effect on other sectors, thus promoting sustainable development across all dimensions of the 2030 Agenda.

Achieving the SDGs through finance is a complex endeavour, as figure 1 below shows. There are a wide

FIGURE 1: The Complexity of Finance for the SDGs[1]

range of actors, substantial variety of actions that are required, and many considerations that need to be taken to successfully chart the way towards a future in which finance can support the SDGs systematically. Developing project pipelines, amending legislation, reforming regulations, capacity-building and training, are all required.



This shows that developing, let alone successfully implementing such a roadmap is dependent on inclusive planning, integrated thinking and a clear understanding of both the needs of the country and those implementing the agenda, as well as the objectives of the SDG agenda, at sector and sub-sector level.

The development and application of financial innovation needs to be sector-, country-specific and time-bound in order to work. This needs to be done at the time that the underlying projects and sector strategies are planned.

Recommendations |

- The Government of Armenia should analyse its sustainable development priorities through a holistic approach and prepare the various sectors to help them adopt the best financial instruments that create the highest impact potential through a synergistic approach.

- In order to generate such innovative mixed approaches, the Government should invest significantly in the capacities of its public employees, and ensure they are trained at the highest international levels to fully understand how to achieve impact for the SDGs.
- The Government should also facilitate strong relations between the public administrations, private enterprises and civil society, as none of them can claim monopoly on the best solutions for the country's development.
- Development of an SDG-focused national strategy to fully integrate delivery of the SDGs with Armenia's overall development strategy, under which specific actions should include:
    - Systematic identification of barriers and opportunities for achieving all SDGs, in particular where these apply across sector boundaries;
    - For the specific instruments identified as focus under 1.2, identify clearly barriers and opportunities, also in the context of the parallel GCF-funded Readiness project on sustainable finance, and how to address them.
    - Development of training programs to fully integrate SDG delivery and understanding in the civil service at all levels;
    - Development of a funding roadmap for SDGs; and
    - Development of an MRV system for SDGs that connects project-delivery with national strategy by defining appropriate KPIs and developing tracking methodologies.

2.4. The National Context

AS UNCTAD notes, „[...]*governments of countries receiving investment have also put in place investment policies and measures to attract inward FDI to their economies*.“ [8]

2.4.1. OVERALL FRAMEWORK

Armenia is recognized as one of the most climate vulnerable countries in the region of Europe and Central Asia. Such vulnerability creates clear risks for the country's economic and social development. This is well reflected in the ambitious climate agenda and the Nationally Determined Contribution (NDC) of Armenia under its commitment to the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.

In this context, the Armenian government considers a further enhancement of the NDC by defining a more ambitious set of targets and by making them more actionable. In particular, this aims at strengthening the existing institutional capacity, and more importantly, enhancing the financial mechanisms available in Armenia. The government of Armenia already plans to significantly scale up the availability and volume of green finance instruments in Armenia and to secure a more pro-active participation of the private sector

[8] UNCTAD SDG Pulse 2021. Link

in implementing interventions in climate adaptation and mitigation domains, as set out in the GCF Readiness Program implemented since 2020.[9]

Few sectoral strategies have been adopted to visualize policy targets and define proposed instruments. Among them, “Energy Sector Development Strategic Programme to 2040”, “2022-2030 Energy Saving and Renewable Energy Programme” along with its “Action Plan on Implementation of the First Phase – 2022-2024” (investments in the wind/solar projects, energy efficiency of public buildings, e-mobility), as well as “Strategy of the main directions ensuring economic development in agricultural sector of the Republic of Armenia for 2020-2030” (introduction of modern technologies, increase of exportation volumes, growth of profitability of all entities engaged in the entire value chain of agriculture through provision of government subsidies for enhancement of high value/adaptive agriculture).

As cross-sectoral strategy aimed at advancement availability of green finance instruments, the “Armenia Green Finance Roadmap” should be mentioned. This document is being developed under the GCF financed project “Scaling up green finance practices in Armenia” implemented by ARMSWISSBANK CJSC as delivery partner[10]. Final draft will be submitted to the review by the Government and Central Bank in late June 2022. The document suggests definition of Green Finance Taxonomy, discusses potential instruments (fiscal and regulatory) for promoting green finance practices, accesses amount of financing required to meet Armenia’s NDC ambitions, as well as analyses demand and supply sides of the financing.

The Armenian government has already taken decisive steps towards the establishment of green finance infrastructure in the country with the assistance of international partners. For instance, in 2019 the European Union’s new regional EU4Climate Initiative and the EBRD’s Green Economy Financing Facility (GEFF) programme, developed and co-financed with the Green Climate Fund (GCF), were launched in Armenia, with a volume of USD37 million[11]. Thanks to these initiatives and those of other DFIs, a number of financial institutions in Armenia have become beneficiaries of international green credit lines and have been providing green financial products to businesses and households, locally. Government promotion, increasing awareness and available green financing have also been enabled growing presence of green product vendors.

As a key element of the Armenian government’s strategy to promote an enabling framework for introducing environment resilient practices, green finance has been gaining weight as a core element of an innovative and sustainable financing toolset to move Armenia onto a more sustainable development path. In recent years, in line with the international trends and the commitments undertaken for example in Paris in 2015, the Armenian government has increasingly focused on providing support for investment in clean and resource-efficient products.

Armenia has already developed a range of legal and policy frameworks on addressing issues concerning climate change and a wider set of sustainable development agenda, most importantly the *Strategic*

[9] https://www.greenclimate.fund/document/strategic-frameworks-support-armenia-through-armswissbank

[10] See section 2.4.3 below

[11] Experience shows that in case of successful entry into the market, EBRD tends to increase initial funding volumes through follow-up operations.

Development Programme of the Republic of Armenia for 2012-2025. During the period 2013-14, nearly USD 200 million per year of climate-related development finance was committed to support mitigation and adaptation actions in Armenia. The level of the committed amount was lower than the average among the countries of Eastern Europe, the Caucasus and Central Asia (EECCA) (i.e. USD 303 million per year). The allocation of funds between mitigation, adaptation and multifocal (i.e. both mitigation and adaptation) projects were relatively well balanced (29%, 38% and 33% respectively) during the period. The energy, agriculture and water-related sectors got the largest committed amounts of climate-related development finance in 2013 and 2014 (approximately USD 162 million per year, or 67.8%) in the country.

Both bilateral and multilateral providers committed significant amounts of climate-related development finance. The largest contributor was Germany, as well as the World Bank Group, the Asian Development Bank, and the European Bank for Reconstruction and Development. A diverse set of financial instruments are used to deliver climate-related development finance to Armenia, including grants, concessional and non-concessional loans and equity, while loans are an instrument most widely used in terms of the absolute amount. Loan financing dominates as an instrument to deliver climate-related finance both in bilateral and multilateral channels. The Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) provide non-concessional equity financing for mitigation projects (e.g. energy and financial sectors).

International organizations, donor agencies and multilateral development banks were also active in the provision of “green financing” to Armenian private sector and households through specifically designed on-lending facilities. During last 5 years approximately 100 mln USD were channelled through Armenian commercial banks and universal credit organizations in the form of loans to the SMEs and households aimed at increasing energy efficiency and introducing of renewable energy solutions (key donors: EBRD, GGF, French Development Agency, WB and KfW). However, Armenia’s banking sector significantly under-utilizes potential of green financing, primarily due to lack of expertise (e.g. E&S Safeguards) and respective methodologies, addressing of which is the over-arching goal of this proposal. In accordance with the “2019 Joint Report on Multilateral Development Banks’ Climate Finance” Armenia has received 107 mln USD in 2019, compared with 45 and 132 mln USD in 2018 and 2017 respectively.

2.4.2. FUNDING PROVIDERS

As there is wide-spread interest in financial innovation for the SDGs, which also align well with investor considerations or according to ESG principles for enhanced investments in Environmental and Social Governance (ESG), a range of potential funding providers are available.

In the public sector, these include multilateral climate funds such as the Adaptation Fund, the Climate Investment Funds, the Global Environment Facility, and the Green Climate Fund, which are normally working through either Development Finance Institutions or bilateral and UN aid organisations; the multilateral and bilateral development banks, such as the Asian Development Bank, Agence Française de Développement, the European Bank for Reconstruction, the European Investment Bank, the German GIZ, KfW, Swedish SIDA, FMO Dutch development bank, Proparko and the World Bank Group amongst others. In the UN system, FAO, IFAD and UNDAP are of high importance.

In the private sector, issuing bonds can raise finance for both public and private entities in Armenia, while attracting private sector investors on a project or sectoral basis will be important to provide a continued inflow of funds. For highly visible investments, crowdfunding and private equity can be considered.

The potential of innovative financing frameworks is currently overlooked element at Armenia's landscape of financiers. Venture capital/equity funds, business angel networks and crowdfunding platforms has significant appetite to crowd into the sector and offer competitive alternatives. Thus, during the seminar consultation with representatives of Armenia's financial sector organized on 29 September 2021 within the framework of UNDP supported "The role of private sector in the implementation of Armenia's NDC Partnership Plan", some of participants (representatives of Formula VC, Shtigen Ventures private equity fund and Business Angel Network of Armenia) has communicated their approaches and vision about attracting investments into the green finance projects.

More specifically, Shtigen Ventures (established by one of the leading companies in the sector of green energy – Shtigen LLC) is first private equity fund that will be providing equity funding to the green energy projects, aimed at building of new energy ecosystem.

2.4.3. THE GCF READINESS PROJECT FOR GREEN FINANCE

One of the first bold steps of the Government of Armenia in assessing the current status and utilization level of green finance instruments and encouraging more pro-active participation of the financial and private sectors in designing and implementing investment projects in climate adaptation and mitigation domains was the implementation of the "Scaling up Green Finance Practices in the Republic of Armenia"[12] Project. Funded by Green Climate Fund and administered by Ministry of Environment and the Central Bank of the Armenia and implemented by "ARMSWISSBANK" CJSC, this important project is in the final stage of implementation. It is at present the only systemic approach operational in Armenia that can outline the roadmap towards achieving the SDG agenda through finance at the level of a specific sector, in this case energy.

The intervention framework of the Project was designed in the manner to implement comprehensive assessment of the constraints for further expansion of "green finance" practices, mapping of available instruments and developing a comprehensive set of methodological, awareness raising and capacity building interventions. One of the main deliverables of the Project is designing a Green Taxonomy Framework and a Green Finance Roadmap as key political documents outlining the current state, existing impediments for green finance development, and based on this establishing a comprehensive vision and action plan for green finance strategy contributing to implementation of Armenia's NDCs and the Paris Agreement.

The main objective of the Readiness Project is to achieve a paradigm shift in the design and utilization of "Green finance" instruments through incorporating them into policies, operational modalities of national banks and non-banking financial institutions the climate-resilient approaches and guidelines, as well as

[12] https://www.greenclimate.fund/document/strategic-frameworks-support-armenia-through-armswissbank

regulatory simplification and the introduction of policy incentives for designing on-lending facilities and financial instruments.

Based on the comprehensive review of international best practices (country case studies and EU Green Taxonomy) the outline of the proposed Green Finance Taxonomy has been designed, discussed with the stakeholders and submitted for consideration by the Central Bank of Armenia.

Currently, the process of designing a Green Finance Roadmap for Armenia is in the implementation stage (expected to be completed by the end of July 2022) and this is aimed at provision of the strategic framework to mainstream green finance in the architecture and practice of financial markets and thus, in medium to long term shall contribute to mobilizing private and public capital for green projects in RA.

Being the most active and engaged part within the overall framework of the SDGs in Armenia, the green finance programme should serve both as leading example for advancing of SDG financing targets and testing (with the purpose of further scale up and replication) the applicability of potential policy, regulatory and implementation related solutions.

Through this perspective, it is critically important to consider the following observations and lessons learned from the Readiness Project for the benefit of advancing the SDG agenda in other parts of the Armenian economy. There is good evidence that the project has an impact. For example, the EBRD Resident Office in Yerevan has recently launched the GCF co-financed "*High Impact Programme for Armenia's Corporate Sector*" Programme in Armenia. This provides interest rate discounts to borrowers against the achievement of initially agreed climate-resilience linked KPIs. One of the Armenian commercial banks has a similar product available as well. Their experience both, positive and negative, is critical to consider for informing the further policy and regulatory decisions that will be aimed at advancement and replication of SDG-linked funding.

The prerequisites for the green finance taxonomy and initial stimulus have already been delivered by MDBs within the framework of on-lending facilities implemented through partner local banks. Armenia is however still lacking an urgently needed Green Finance Taxonomy (based on the best international practices) that sets conditions and eligibility requirements of the financing instruments mentioned above actually serve as outline for the potential national taxonomy. Based on the needs assessment carried out within the framework of the Readiness Project, followed by review of international best practices and validation of initial assumptions it was recommended to design a national Green Finance Taxonomy and propose administrative, regulatory and policy incentives to ensure accelerated development of the green finance practices in Armenia including the issuance of green bonds. For that purpose, the GCF Readiness project will finance the implementation of two demonstration projects that will help national banks to issue and place green bonds.

Furthermore, there is high appetite from private sector entities to structure, partner around and implement medium- and large-scale investment projects both in mitigation and adaptation domains. Throughout several surveys, focus group meetings and consultations with private sector representatives it is now understood a that number of entities are exploring opportunities for direct partnership with climate funds and MDBs. It has also been noted that there are high quality investment projects available in the "informal" national pipeline. These efforts should further be reinvigorated through Government support in negotiations, engagement of qualified partners and provision of ad-hoc regulatory and fiscal incentives. In this regard, the role of consulting companies and sectoral business associations has also been noted to be critical. The survey results provide good insight into the current situation of the sector. For example, out of around 20 commercial banks and non-banking financial institutions (leasing companies and UCOs) surveyed, only very few reported that they have dedicated and well-trained lending and ESG personal that provides with targeting, appraisal and servicing of the green finance products. Most of them have also reported the need for capable staff members that should be responsible for negotiations and attracting green finance products from international markets. Last but not least the capacity constraints were reported, e.g., absence of internal expertise for execution of initial ESG screening of the investment projects and provision of further guidance and servicing. It is worth to mention in this regard that capacity enhancement of national financiers regulated, led and encouraged by the regulator are among the most critical components necessary for advancement of green finance infrastructure in the Country.

Throughout the review of international best practices, desk research and consultations with different stakeholders it has been noted that good preconditions are available for the establishment, advancement and further encouragement of innovative financial models that could potentially be more flexible and aggressive in channelling green finance to the respective projects. More specifically, closed-end investment funds (with favourable tax regime and simplified reporting requirements), equity crowdfunding platforms and business angel network has tremendous appetite and, thus, potential for leveraging financial resources towards climate resilient projects in mitigation and adaptation domains.

In green finance the key function for climate funds is currently carried out by the Ministry of Environment of Armenia and mainly limited to ensuring overall coordination framework of country engagement and communicating requests to donors as they occur. Broadening involvement of other state bodies and entities responsible for implementation of sectoral strategies would be necessary when pursuing wider SDGs and enable more proactive design and communicating capacity enhancement and investment projects to potential donors.

Recommendations |

For Armenia's balanced future development, it will now be critical to apply the lessons learned in green finance and to broaden them to a wide range of SDGs. This can be achieved by:

- Ensuring that institutional champions are well-positioned and empowered to deliver the SDG finance advancement agenda by putting it the level of national policy making and advocacy, as well as donor engagement and coordination.
- The Central Bank of Armenia should pay more attention towards creating enabling policy framework by providing beneficial condition, SDG financing enabling regulations and promoting ESG principles in decision making of financial institutions and the Ministry of Economy could become more proactive in mobilization of the private sector participation and building of PPPs.

- Enhanced enabling policy environment should be established and streamlined through sectoral/sub-sectoral policies, regulations and strategies, e.g. the introduction of favourable tax treatment of investments that deliver SDG outcomes,
- The government should consider the development of policies that support access-to-finance and encourage the utilization of proceeds from green and other sustainability-linked bonds, while encouraging structuring and direct issuance of green and other social impact bonds for large scale national projects by private sector issuers.
- Capacities of national actors/financiers should be further strengthened to ensure better and wider engagement, in particular by providing further training in the area of SDG finance and MRV of SDG investments to support ESG and green/sustainable finance including structuring and issuance of Green Bonds.
- The potential of new innovative financial frameworks for crowding in retail finance into the SDG finance scene should be investigated and regulations shaped to enable it.
- Consider the introduction of Pay for Success (PfS) approaches in budgeting to shift from input-based budgeting to result based budgeting modality .

3. OVERVIEW OF CURRENT STATUS OF SDG FINANCE IN ARMENIA

The systemic delivery of SDG finance approaches is mostly at an early stage of development, not just in Armenia but in many countries. The exception is climate- and energy-related finance. Many financial instruments are applicable across some or even all clusters, even though they may work best for specific clusters. This is reflected by the use of a cross-cluster category where such instruments have more universal applicability. The current paper has therefore adopted a focus on selected SDG clusters to enable a better understanding of what constitutes best practice and provide best practice finance examples for each of these. Table 1 below sets out the composition of these clusters, and the remainder of the section will follow this structure.

TABLE 1. CLUSTER DESCRIPTION

CLUSTER	DESCRIPTION
Agriculture	Primary agriculture, forestry, fishing and value chains, including insurance. Closely linked to Climate/Environment.
Energy/Climate/Environment	Energy efficiency in buildings and industry, clean transport, renewables, power grids, biodiversity and protection/restoration of the natural habitat. Closely linked to Agriculture and Infrastructure.
Gender/Inclusion	Promoting equality of women, integration of minorities, improved access to finance for marginalised groups. Closely linked to all three clusters.
Infrastructure	Non-energy infrastructure projects at all levels, such as roads, railways, public buildings. Closely linked to Energy/Climate/Environment.

3.1. REGULATORY GAPS

The following regulatory gaps are to be addressed by the government of Armenia to accelerate funding into the SDGs:

- Adoption of a clear strategy for incentivizing SDG investments through policy, regulatory and fiscal incentives;
- Defining a SDG Taxonomy based on the international best practices and introduction;
- Advancing requirements for SDG-supportive procurement system;

- Promoting ESG principles and impact management and measurement practices in private and public sectors

Beyond these, consultations with stakeholders brought up specific requirements, primarily related to energy and infrastructure (Annex X). It should be noted that these form probably only part of the overall gaps:

- **Early-stage development level of liberalized wholesale market for electricity trade**
  In the first quarter of 2022, following commitments of Armenian Government to abolish the monopoly of ENA in power distribution and to move towards the liberalization of the market, six companies received licenses that enabled them to purchase electricity directly from producers and sell to end consumers, corporate consumers at this stage. Despite the observed market barriers in the form of the domination of ENA and the existence of its affiliated companies, this critical reform effort is aimed at a gradual decrease of the electricity tariff and the development of competition among key market players. The lack of competitive practices and the current low level of engagement of existing electricity producers is considered as a market gap that should be addressed through further policy and regulatory support.
- **Tariff reform for renewables and storage**
  Introduction of flexible and competitive tariff system for utilization of energy storage facilities (at household, MSME level and small-scale producers), as well as special approach towards tariff structure for large-scale energy storage facility that could potentially have an impact on entire distribution system
- **Market solutions for balancing of unstable energy supply from solar PV stations**
  With the current increase of electricity generation capacity from solar and other renewable sources, availability of a wide range of storage facilities is a critical prerequisite for further market development. Small-scale solutions in the form of batteries for single households or generation facilities and large-scale storage, in the form of batteries and pumped storage that could potentially help in balancing the energy distribution network are critically missing components on the market. Advanced support packages, technical assistance for market design and operation and an expanded PPP framework will be necessary to close this market gap.
- **Absence of infrastructure for the development of e-mobility.**
  The promotion of electric mobility is among the recently emerging priorities of the Armenian Government. There is now reduced VAT on EVs and agreement within the Eurasian Economic Union to exempt EVs from custom duties with an annual quota for next two years at the level of 7,000 and 8,000 in 2022 and 2023. With GEF financing, the Government also plans to implement a demonstration project to replace parts of the government vehicle fleet by EVs. During the first quarter of 2022 however, only 414 EVs were imported to Armenia from China, Europe and USA. The accelerated transformation towards electric mobility is expected to be boosted by increasing prices for gasoline and CNG, but there is currently a lack of charging infrastructure in Armenia, with no country-wide fast charging network, an absence of servicing centers, etc. Drivers are therefore not able to switch easily. Addressing this market gap will require Government provision of

regulatory and fiscal incentives, as well as developing a partnership with climate funds and MDBs aimed at the development of infrastructure for the e-mobility market.

- **Regulatory infrastructure for buildings energy efficiency**.
  While the residential construction sector in Armenia is currently booming, the potential for energy efficient residential buildings is currently underutilized. This is not only due to lack of application of higher performance standards, but also due to the absence of reliable and low-cost validation frameworks. Launching the planned institute of certified energy efficiency auditors could potentially close this market gap.

3.2. SDG financing in the agriculture sector in Armenia

Agriculture is one of the largest sectors of Armenia's economy. However, its contribution to the value-added of the country has been declining during the last seven years (2014-2020) due to decreasing trend in the production of agricultural produce and the higher growth rate of other sectors (e.g., mining, IT, manufacturing). The nine-month data from 2021 recorded a slight increase (1.4%) in agricultural output compared to the same period in 2020.

FIGURE 2: AGRICULTURAL VALUE-ADDED TREND IN ARMENIA, VALUE ADDED IN CURRENT PRICES[13]

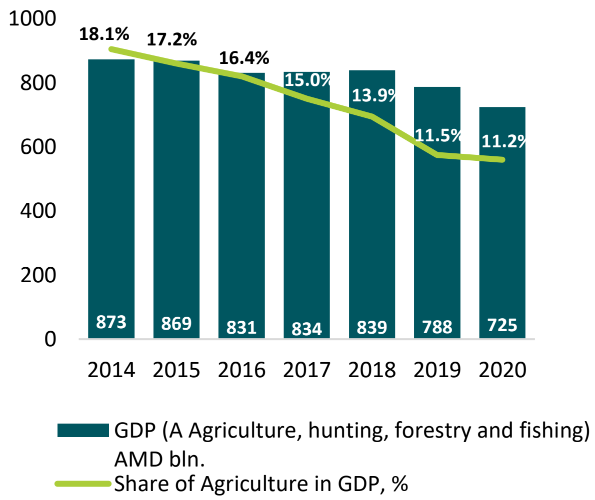
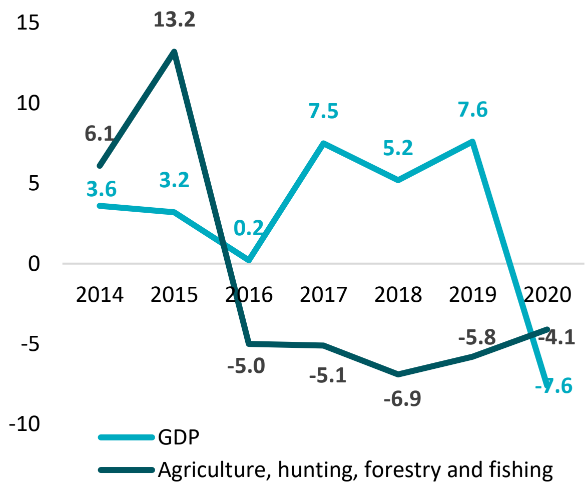


FIGURE 3: GROWTH RATES OF GDP AND AGRICULTURE, IN % TO THE PREVIOUS YEAR[14]



Armenia has a negative foreign trade balance in agro-food products. However, agricultural exports have been constantly growing since 2015. The sector has promising export potential, the value of exports in 2020 increased by 67% compared to 2014 with CAGR of 9%[15]. The exports of agricultural products and

[13] SC RA, Socio- Economic Situation of RA, 2014-2020
[14] SC RA, Socio- Economic Situation of RA 2014-2020
[15] UN Comtrade International Trade Statistics Database

processed food are dominated by tobacco, brandy, fresh fish, tomatoes, apricots, cherries, wine, and fruit vodka.

The slow development trend in the sector can be explained by the chain effect of deep systemic issues, such as low level of productivity and efficiency, low level of cultivated land, poorly developed infrastructure, application of traditional methods (mostly outdated), lack of development of modern agriculture information systems, etc. The mentioned challenges entail consistent commitment to record improve and impact for the economy, although the government with the cooperation of the international organizations is on the way to address the issues.

Micro, small and medium size enterprises (MSMEs) (including agricultural entities) are the most vulnerable sector of the economy, generally being more constrained financially both in Armenia and worldwide. Certain share of MSMEs lack financing necessary for growth, while the financial institutions miss out the opportunity to tap into this sector.

The assets of financial institutions in Armenia have been consistently climbing up for the recent decade. Banks dominate the financial system of Armenia, 83.8% in 2020 share in total financial sector assets. There are 17 commercial banks in Armenia. The number of UCOs (Universal Credit Organizations) in Armenia is 46, however they account for a tiny share in country's financial assets. In developing markets up to 68% of SMEs are either unserved or underserved by the financial institutions. The credit gap estimate globally is approximately $1 trillion[16]. The SME financing gap in Armenia is 10.84%[17] of GDP, which is relatively lower than in other countries in the region.

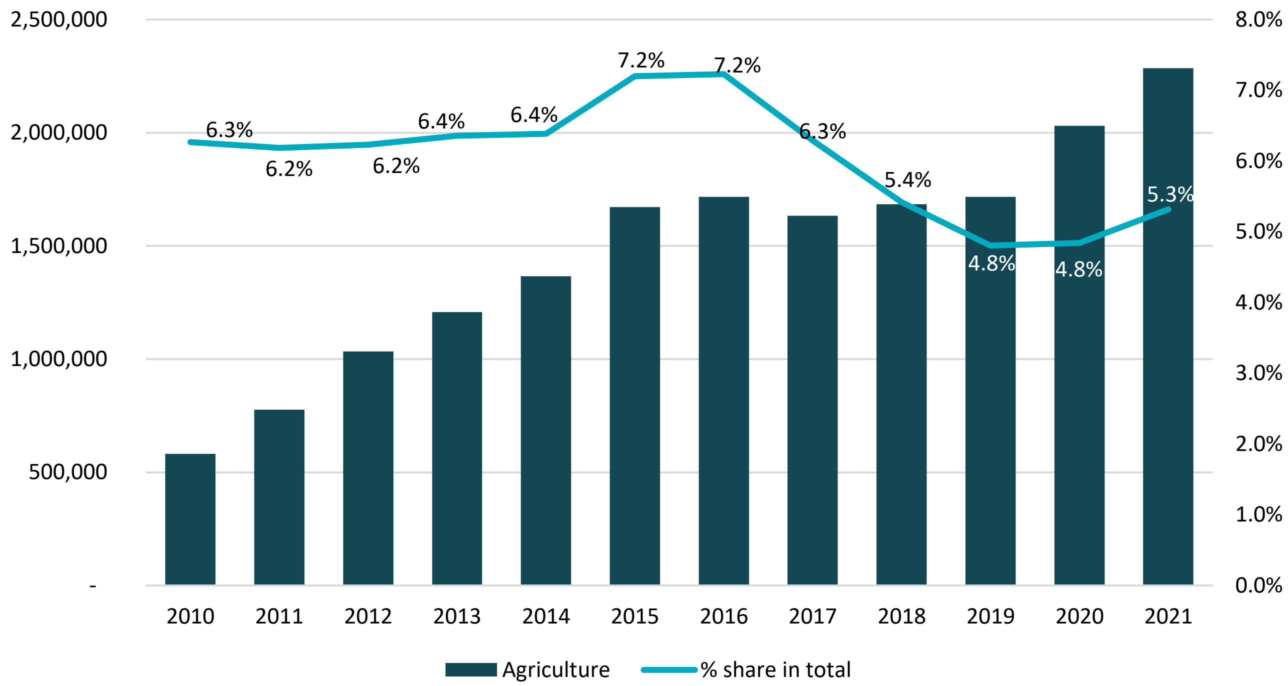
The financial institutions face certain obstacles and challenges that currently hinder the further growth and expansion towards rural MSMEs. Such as the requirement of the collateral, lack of good credit history, the lack of accumulated data on entities operating in certain sectors and non-purpose use of provided loans (large amount of evidence exists that agriculture sector small loans are largely used for personal consumption purposes rather than for business purposes).

Although in recent years, financial institutions started exploring new financial instruments or new forms of financing mechanism to engage consumers and reduce financing gap of SMEs, the commercial banks are conservative and rather stick to standard loan products such as consumer loan, business loan and mortgage tools. Moreover, the trend of total loans provided by the commercial banks in agriculture demonstrate the sector financing potential and need for innovative mechanism to fully utilize the possible development. The sector is rather overleveraged and new equity and quasi equity type tools are necessary for closing the gap.

---

16 Principles for Public Credit Guarantee Schemes (CGSs) for SMEs, WB, Link
[17] The Inclusive Development Index 2018, WEF, Link

FIGURE 4: TOTAL LOANS PROVIDED TO RESIDENTS BY COMMERCIAL BANKS OF THE REPUBLIC OF ARMENIA IN AGRICULTURE IN 2010-2021, MLN AMD[18]



STATE SUPPORT IN AGRICULTURE | "The Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of the Republic of Armenia for 2020-2030"[19] defined the priorities, objectives, and measures to overcome the key challenges and gaps in the sector. Even though the agricultural support programs are currently centred around the identified challenges and gaps, the implementation mechanisms are not yet systemic and sustainable. Given this, the current state support toolkit may not lead to sectoral transformation. In the aftermath of the 2020 war and COVID-19-imposed restrictions, agricultural support toolkits should be shaped by more targeted and efficient approaches allowing for intra and inter-sectoral synergies and structural changes.

The government mostly provides support through debt financing mechanisms, which limits the participation of farmers in those programs. State support programs were mostly executed via commercial banks, therefore a good credit history, detailed documentation, and cost justifications for credit applications were required while over-indebtedness, poor credit history, and limited financial skills and capacities of family farmers were key roadblocks for access to these programs. The monitoring of these state support programs was also executed by the commercial banks, which raises potential issues about conflict of interest. The majority of farmers are already heavily indebted and blacklisted by financial institutions, also raising issues about their access to these programmes.

The problems faced by farms are however not only due to the shortcomings of support mechanisms, lack of access and variety of financial products in the market. A low financial and entrepreneurial literacy rate is also a major challenge facing rural households. The "Scoping study report: Supporting rural finance in

18 CBA
[19] Link TBI

Armenia 2021-2024"[20] identifies poor agro-business and financial literacy knowledge as primary challenges for sustainable socio-economic advancement in rural regions. There are awareness and understanding gaps in alternative financing options/toolsets, loan applications development, accounting and financial reporting, cash flow management, product cost, and business plan development.

Recommendations:

- Build and improve financial, entrepreneurial and technical capacities (including climate change adaptation and mitigation practices applicable to agriculture sector) of rural households through short-term training courses and long-term coaching/mentorship mechanisms.
- Pool resources and make joint efforts to develop complex intervention initiatives to deliver more resilient and sustainable value chains.
- All players in the agriculture sector, the Government, donor organizations, NGOs, and service providers should apply system-based approaches to the intervention models, utilising comprehensive logic models and theories of change to include all layers of agricultural value chains.
- "Wider use of financial and other Incentives in SDG related financial facilities to stimulate social and environmental outcomes generated in agricultural sector "

3.3. SDG financing in the energy/climate/environment sector in Armenia

The energy sector is of strategic importance for Armenia in terms of achieving its national development goals, ensuring security, as well as providing reliability and access to energy services for the population. "Republic of Armenia Energy Sector Development Strategic Programme to 2040" concerning the Energy Balance for the year 2018 informs that agriculture sector consumes 1.6% of total volume of energy, while industry sector consumes about 15.2% of energy. Households and transport sectors consume 33.21% and 33.81%, respectively. Armenia's NDC for 2022-2030 with the reference to the "Republic of Armenia Energy Sector Development Strategic Programme to 2040" prioritizes generation of energy from renewable sources and increasing energy efficiency among key priorities for the country's energy security and key drivers of low carbon development. The Government aims to have 12 TWh of generation by 2030, an increase of almost 60% over 2019, of which about 5.0 billion kWh will be destined for export. At present, electricity is mainly generated by nuclear, hydro and thermal plants. Of this, 39% is generated by the nuclear power plant while the remaining 60% is almost generated equally by the hydro and thermal plants.

The capacity of two plants already tendered will comprise 200 MW each. In the retail sector, according to the data from Electric Networks of Armenia, on 1 January 2022 6,940 autonomous solar energy producers were connected to the grid with average installed capacity equivalent to 136 MW. Taking into account the

[20] Savings Banks Foundation for International Cooperation (DSIK) 2020

currently favourable regulatory regime (net-metering for installations up to 150 KW) and the availability of attractive financing schemes it is expected that this figure will be doubled during the next 2-3 years.

TABLE 2. POWER USE IN ARMENIA, 2016 TO 2019

Year	Consumption	Export	Own Use	Total
	TWh			
2016	5.57	1.2	1.03	7.3
2017	5.38	1.4	1.02	7.8
2018	5.24	1.6	0.96	7.8
2019	5.47	1.25	0.88	7.6

The Republic of Armenia Government aims to increase the share of solar power generation at least to 15% of the total generation or 1.8 TWh by 2030. For that purpose, solar power plants with total installed capacity of 1000 MW including autonomous plants will be constructed. In the near future new tenders for construction of seven solar photovoltaic power plants with total installed capacity of about 520 MW will be conducted. Public-Private Partnership (PPP) agreements are the chosen model for these, with the Government planning to conclude such agreements for the utility scale generation units construction by means of attracting investors exclusively on a competitive basis, where their access to the electricity market cannot be granted without additional guarantees from the state.

Beyond solar, in the coming years the prospective changes in the renewable power world markets can enable not also renewable energy power plants with integrated storages to compete with traditional base plants. The fact that the solar and wind technologies are considered as part of the least cost solution for new generation under all scenarios stresses the importance to Armenia of ensuring a policy and institutional environment that supports the development of these technologies to the maximum extent possible, not only to ensure the lowest cost generation but also to minimize reliance on other imported energy sources and to strengthen Armenia's energy security and competitiveness.

Increasing energy efficiency is another important layer of the Government's policy to boost clean energy potential of the country. The average energy efficiency potential for current technologies amounts to 30% - 40% for buildings. The average cost per unit of energy conserved in buildings is 1 to 4 US cents per kWh meanwhile the average cost of energy generated by the Armenian power system is about 5 US cents, which makes energy efficiency upgrades by means of effective thermal insulation (per KW) 2-3 time cheaper than the construction of production capacities covering this demand. Along with the improving energy efficiency through insulation, upgrade of heating and cooling systems, and incentivising efficient consumer behaviour in this sector will further extend the saving potential to about 60%. Appropriate financial instruments are in place for all of these measures. The recently adopted Government Decree (from 15 April 2022) "On approval of State support programme for energy-efficient renovation of apartment and dwelling houses" established that citizens that take loans of up to 10 mln AMD (around 22,000 USD) are eligible to receive subsidies on the interest rates, depending on their location[21].

Recommendations:

- Ensure the continued growth of finance for small- and large-scale renewable energy installations.
- Continue to monitor the provision of finance for energy efficiency.
- As the share of RES is increasing share as part of the total energy mix (expected to reach around 15% in 2030) a new tariff structure should be introduced to promote consumption of energy during day time (currently night tariff is cheaper) and also to create a preferential tariff scheme for storage facilities.

3.4. SDG finance for gender and inclusion in Armenia

Armenia is a constitutional, democratic country committed to accelerating its economic progress and developing a competitive and inclusive economy based on utilising modern digital technology and continued investment in human development. The key challenges are resolving territorial conflict, addressing rising socioeconomic inequality, and narrowing the differences in economic opportunities between urban and rural areas.

Women and men have equal rights fixed under the country's constitution. Armenia's Law on Equal Rights and Equal Opportunities for Men and Women established the basis for gender policy and new laws. Armenia has ratified international treaties on gender equality, which oblige it to continue improving its legal and policy framework on gender equality. The government has established the Gender Equality Strategy 2019–2023, which outlines the country's plans for mainstreaming gender over several sectors. Gender equality objectives have been stated in recent national development programs, but further gender mainstreaming in economic and sector initiatives is desired.

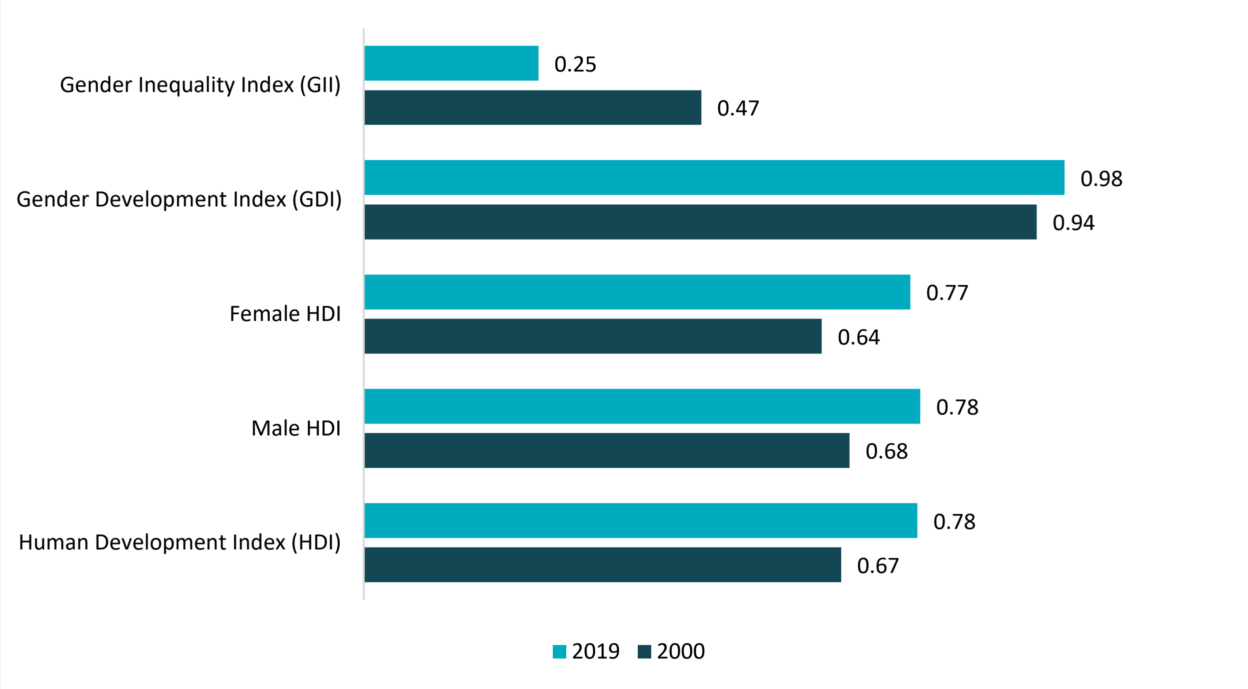
According to global measures used to assess and compare outcomes across nations, Armenia is gradually growing in human development. Such advancement benefits both men and women. However, based on global comparisons of gender equality it is possible to note that differences in human development continue to persist. For example, the labor force participation rate of women is lower than that of men, with 49.4% of women compared with 69.3% of men[22] in 2020. In 2020 gender gap in labor force participate rate stood at 28.7%, which is explained by the 25-34 age group women engaged in family responsibilities

[21] effective rate should be 0 in border and highly mountainous rural communities, 2 in non-border rural communities, 3 in non-border urban settlements and 5 in Yerevan

[22] Women and men in Armenia, The Statistical Committee of the RA, 2021, Link

(childbirth, childcare, etc.). Addressing these disparities will make a significant contribution to Armenia reaching SDG 5 on gender equality, as well as the other SDGs. [23]

FIGURE 5: COMPARISON OF HUMAN DEVELOPMENT REPORT VALUES FOR 2000 AND 2019[24]



Recommendations:

- Improve access to gender-disaggregated data and gender indicators. Conduct workshops to assess gender indicators and sex-disaggregated data required to track gender equality policy results, and assist the Statistical Committee in developing appropriate toolkits. Moreover, putting in place methods to gather additional gender-disaggregated data and gender-sensitive indicators.
- Based on the above, develop policy measures to support women entrepreneurship, capacity building on advancing relevant employment skills to enable the overall business investment climate with highlighted inclusion and lead women to carry out activities in growth potential sectors.
- Develop and deliver financial literacy, entrepreneurship skill development comprehensive programs for women entrepreneurs such as accelerators with further financing opportunity.
- Create dedicated financing instruments, such as revolving donor financed funds, to support women entrepreneurship, by providing soft financing tools, such as repayable grants.

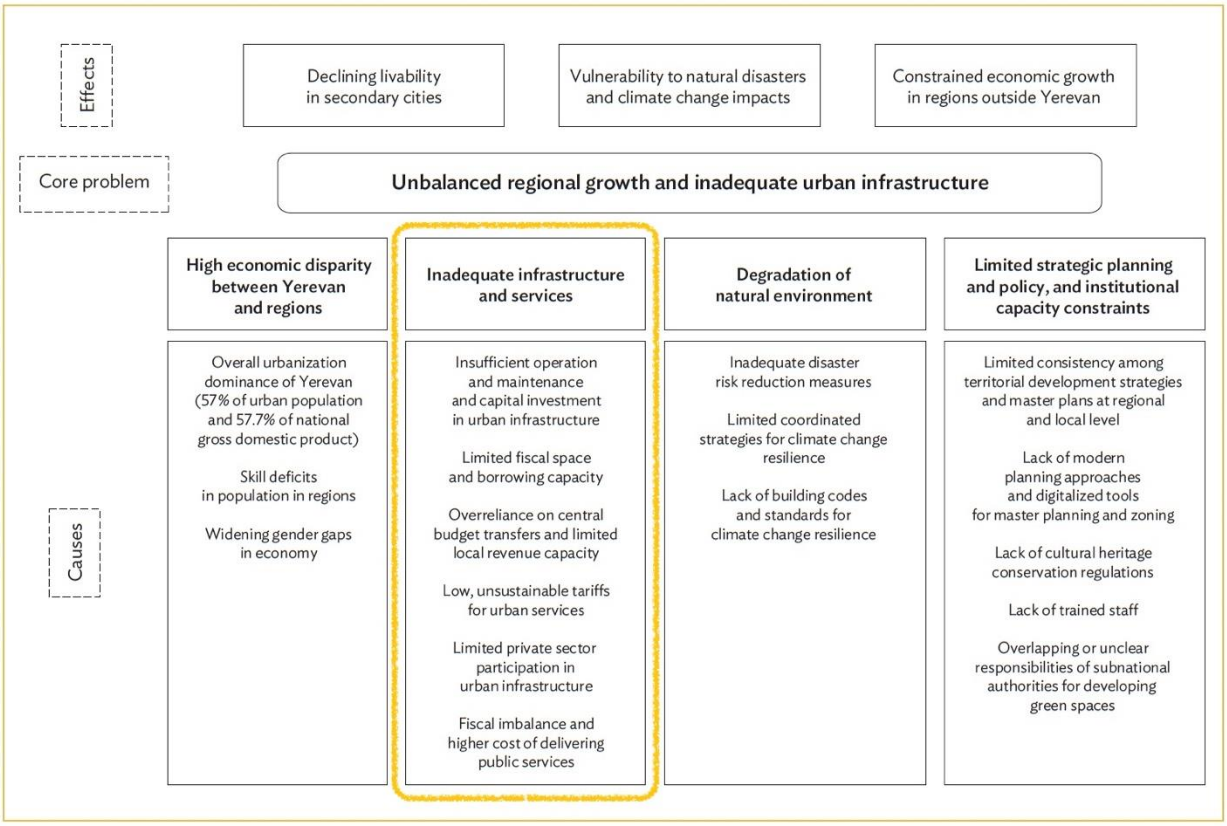
[23] Armenia Country Gender Assessment, ADB, 2019, Link
[24] United Nations Development Programme. Human Development Reports. Human Development Data Center, UNDP, Link

3.5. SDG financing in the infrastructure sector in Armenia

Infrastructure investment is increasingly recognized as one of the key factors behind long-run economic growth, as well as enabler of more equal regional growth, higher mobility of resources between and within regions can build equitable growth and spread economic gains more widely across growth centres and regions. All of these are particular challenges in highly centralized small countries such as Armenia.

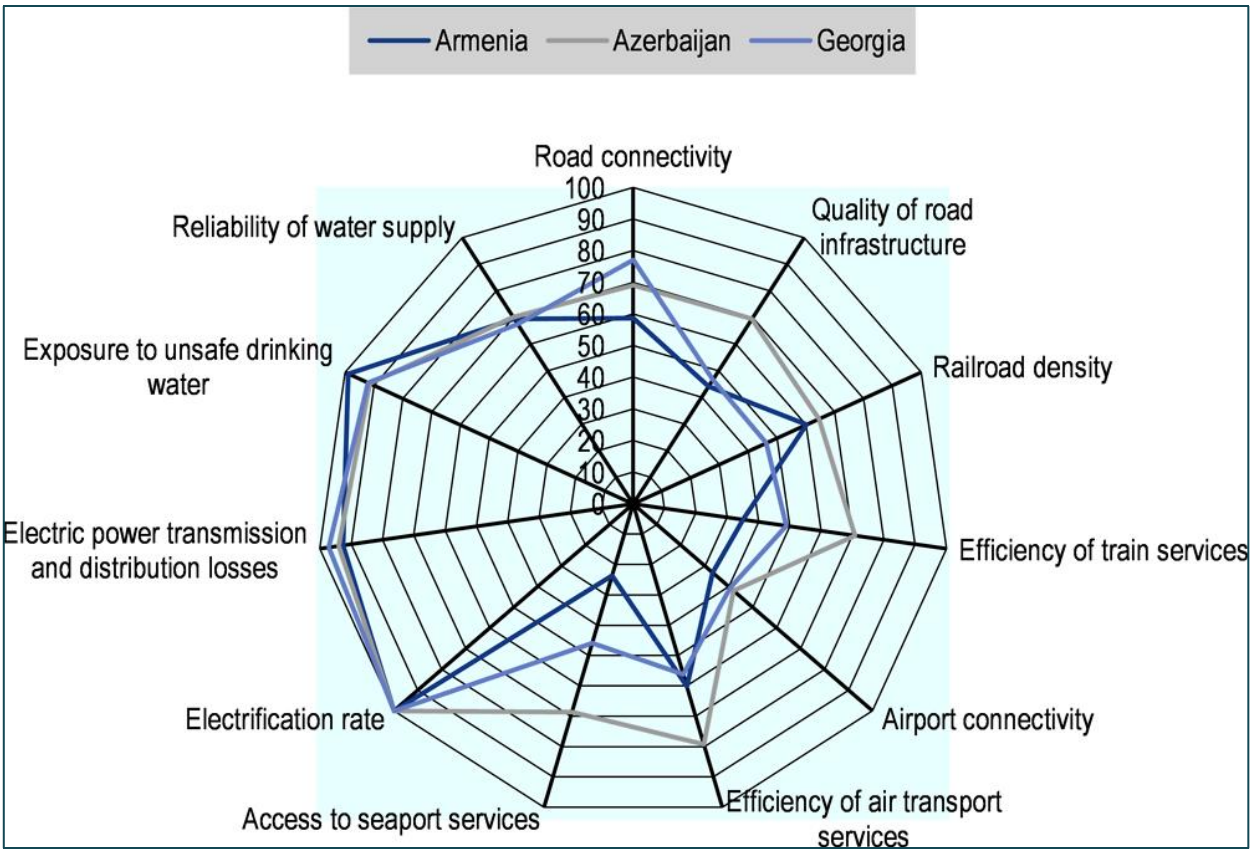
During the last decades, supported by its development partners, Armenia has made a sizeable improvement in hard infrastructure renovation and building, leading to better access to education, healthcare and other critical services, delivering the SDGs in Armenia. Nevertheless, significant gaps in the implementation of large-scale infrastructure projects remain and Armenia's infrastructure sector continues to be highly in need of investment, to address shortcomings in the availability of modern, green infrastructure that works in support of the SDGs.

FIGURE 6: INFRASTRUCTURE CHALLENGES IN ARMENIA[25]



25 ADB 2019 *Armenia's Transformative Urban Future*, Appendix II

FIGURE 7: QUALITY OF INFRASTRUCTURE IN ARMENIA[26]



At national level, Armenia is facing continued shortages of access to infrastructure almost across the whole breadth of infrastructure, with the exception of power supply and access to safe drinking water supplies. Connectivity, quality and performance of transport infrastructure is generally weak[27]. This is reflected also in the portfolio of development partners such as the MDBs, which heavily invested in infrastructure projects and connectivity, including roads, border crossings and air navigation[28]. Armenia's geopolitics and geographical location present particular transport challenges as it depends heavily on road transport and cross-border access. The challenges of Armenia's transport sector result in a high cost, especially for traded goods, and expensive infrastructure maintenance and development. There is significant financial and technical assistance support to develop transit routes across Armenia to provide shorter links and faster service.[29]

Besides national infrastructure, urban infrastructure is also a challenge in Armenia, with many services in urgent need of repair and modernisation. Recent projects in this field include the modernisation of urban transport and waste by EBRD, as well as streetlighting[30]. As many of these projects are financed by

---

[26] WEF 2019 https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[27] OECD 2020: https://www.oecd-ilibrary.org/sites/50079b68-en/index.html?itemId=/content/component/50079b68-en
[28] See e.g. for EBRD https://www.ebrd.com/work-with-us/project-finance/project-summary-documents.html?1=1&filterCountry=Armenia
[29] ADB, 2019, *Armenia's Transformative Urban Future*
[30] https://pipeline.gihub.org/Project/Search?search=true&country=Armenia

development partners, rather than through private capital, the projects reduce the sovereign borrowing capacity of Armenia.

Given the high level of importance of Yerevan in the urban landscape of Armenia, it is also hard to delineate clearly between national and urban infrastructure. For example, the identified issues in urban transport affect overall economic productivity.

Recommendations:

- Building on its existing strategies and policies, the Government of Armenia should create a cross-sectoral, comprehensive infrastructure development plan in order to identify the most pressing investment needs, the potential for private-sector delivery of such projects, and other financing opportunities.
- The Government of Armenia should address the issue of tariff cost reflectivity in infrastructure to enable enhanced private sector participation in infrastructure development, thereby reducing pressure on public finance.
- Enhance the borrowing capacity of local authorities to increase financing capacity for infrastructure.
- Promote private sector participation in infrastructure finance and project development.
- Reduce such barriers as provision of Bank guarantee equal to the budget of infrastructure contracts.

4. INSTRUMENTS TO ACHIEVE THE POTENTIAL FOR SDG FINANCE

4.1. Overview

The key innovative instruments to achieve the SDGs in Armenia are described below. It is important to note at the outset that there is not a 'magic' innovative instrument that will resolve the challenge of financing the SDGs, and all the instruments have been tested in various countries and sectors. It is known that the instruments can work, and there is a good understanding of their basics. Where innovation comes in is when there is a consideration of different structures, sectoral differentiation, and adaptation to specific country needs. Innovation may also be required in the shaping of the regulatory and legislative framework for the instruments. Some instruments will require an adjustment of the way certain systems are run, in e.g. financial regulation or taxation. This will be sector-specific and needs to be considered by financing specialists when the needs of the underlying projects are understood. For example, key regulatory constraints for the development of crowdfunding as an innovative instrument are:

- absence of a suitable legal status for a company willing to attract investments through crowdfunding (all existing types requires specifications of the shareholders/partners and the volume of their interest at the moment of incorporation); and
- the current version of the regulatory acts discussed with the Central Bank of Armenia proposes limits on the number of participants (maximum 50) and volume of investment (maximum 2,000 USD).

The following tables set out the range of instruments by type, sector and instrument. The sector-specific instruments amount to a total of 21 identified innovative financial instruments relevant for the financing of SDGs in Armenia.

TABLE 3. INSTRUMENT OVERVIEW BY TYPE

CLASSIFICATION OF INSTRUMENT	INSTRUMENTS WITHIN THE CLASSIFICATION
Revenue-raising	Bonds, taxes, carbon finance, guarantees.
Equity	Private sector funds
Lending	Sovereign and private sector loans from MDBs, public and private sector banks
Blended and donor finance	Publicly supplied finance including grants, concessional lending and investment, climate finance, impact finance, any provision of finance below market rates. Tax rebates and tax-based incentive systems.
Philanthropic/Diaspora, Impact finance	Private finance driven by non-economic objectives which can be provided in different forms and by different actors.

TABLE 4. INSTRUMENT OVERVIEW BY SECTOR

	CROSS-CUTTING INSTRUMENT	BRIEF DESCRIPTION
1.	Taxes and tax rebates	Utilisation of the tax system to achieve SDG outcomes
2.	Diaspora Finance	Finance raised by a country's diaspora to support impacts and SDGs in their former home.
3.	Crowdfunding	Finance provided by smaller investors in small tickets for specific cases.
4.	Technical Assistance	Technical assistance is an important element in enabling finance recipients to apply finance in a way that furthers the SDGs.
	AGRICULTURE INSTRUMENT	**BRIEF DESCRIPTION**
1.	Guarantee Fund	A guarantee fund provides a loan or credit guarantee, i.e. it enables a borrower to approach a bank for a loan. Guarantees are particularly useful for borrowers who do not have sufficient collateral, such as land or other assets. Small borrowers almost always lack (sufficient) collateral. Therefore, the purpose of loan guarantee schemes is to share the credit risk with the bank.
2.	Incentive grants (linked to loans)	This instrument is different from regular grant schemes as the incentive grants are not given directly to SMEs as a "pure grant". The SME signs a loan contract from one of the credit lines of the IFIs via the PFIs. After the loan is disbursed, there is verification process to check if the loan was used for the purpose listed in the business plan or feasibility study and of the other pre-conditions for the loan disbursement. Once the verification report confirms compliance, a part of the loan is transformed into a grant, so that the total "cost" of financing is lowered. The most common incentive grants are between 10% and 15% of the loan value (EU funded).
3.	National taxes	For instance, the tax on financial transaction, supported by several European countries, could be partly used for financing food security in developing countries; a tax on fats and sugar products, already existing in some countries (USA) could be partially used to finance nutrition actions in developing countries and a tax on fertilizers in developed and emerging countries has also been proposed by NEPAD as a mean to develop fertilizer consumption in Africa through smart subsidies.
4.	Index-based weather insurance	Index-based weather insurance (index insurance) is a financial adaptation option that pays out benefits based on a predetermined level of a weather variable e.g. rainfall level, temperature, floods or droughts.
5.	Development Bonds or Social Impact Bonds	Bonds guaranteed by developing countries and/or donors sold on financial market for financing outcome-based service delivery. A social impact bond (SIB) is a contract with the public sector or governing authority, it pays for better social outcomes in certain areas and passes on the part of the savings achieved to investors.
6.	Private-Public Partnership and structural funds	Public-private partnerships involve collaboration between a government agency and a private-sector company that can be used to finance, build, and operate projects, such as public transportation networks, parks, and convention centers

7.	Warehouse Receipt Financing	Warehouse receipt financing is the use of securely stored goods as loan collateral. These programs allow producers to deposit a finished good or agricultural product in a secure warehouse where the producer receives a receipt certifying the deposit of goods of a particular quantity, quality, and grade.
	Energy/ climate/ Environment Instrument	**Brief Description**
1.	Sovereign Green Bonds	Global guidance on "green bonds" comes from the International Capital Markets Association which produced the Green Bond Principles, 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. The Green Bond Principles set the foundations for the elements to be incorporated within a Green Bond Policy Framework—a critical document to give credibility to a green bond.
2.	Corporate Green Bonds	The International Capital Markets Association (ICMA) has a well-defined framework for issuing green bonds, known as the Green Bond Principles (GBP). ICMA also oversees the Social Bond Principles and Sustainability Bond Guidelines, which provide for their respective areas. Introduced in 2014, the GBP are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond market by clarifying the approach for issuance of a green bond.
4	Municipal Green Bonds	Sovereign green issuances in emerging markets account for around 12% of issuances, whilst government agencies and municipalities respectively represent around 17% of the total green bond volumes in emerging markets. In emerging markets, the municipal bond market is only nascent, and so far, only cities with deeper financial resources have issued municipal bonds. Cities access flows from green bonds both directly and indirectly. Cities in developing countries rely almost entirely on development finance institutions to raise finance for their projects (94%). Urban mass transit systems, district heating and water distribution networks are the most common type of city-based infrastructure projects in developing countries that are linked to green bonds.
5	Investment Trust	Investment trusts are closed-end funds that can hold a variety of asset classes, according to their specific, individual investment objectives and risk profile and the assets held can be global. Investment trusts have an unlimited life and can issue new equity or borrow to finance their activities. The attributes of investment trusts have made them an important vehicle for investing into the green economy.
6.	Green Procurement principles	Green Public Procurement (GPP) is a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured.
	Gender/ inclusion Instrument	**Brief Description**
1.	Gender responsive budgeting resulting financing	A gender-responsive budget is a budget that works for everyone (women and men, girls and boys) by ensuring gender-equitable distribution of resources and by contributing to equal opportunities.
2.	Corporate partnerships	NGOs are experimenting with for-profit ventures to finance their work

3.	Loans with alternative credit risk assessment	Fintech organizations are developing alternative risk assessment mechanisms that allow financial institutions to assess the credit worthiness of women who lack sufficient credit history. These mechanisms allow women to get access to credit for business or emerging personal needs. The organizations leverage advanced data analytics tools as well as emerging artificial intelligence based technologies like machine learning and natural language processing to establish credit scores for underserved women. Credit scores are determined by capturing consumer data from mobile phone records, utility bills, loan applications, and social media. This enables women to immediately gain access to credit, also enabling them to build their credit history by beginning with borrowing a small amount, and over time, borrowing a sizable amount.
4.	Marketplace lending platforms including peer-to-peer and crowdfunding	P2P platforms bring lenders and borrowers in direct contact with each other through the internet. Since women do not need to visit a branch, P2P platforms allow women to overcome the mobility barriers they may face while accessing loans. While P2P platforms charge higher interest rates than banks, they reduce the time it takes to complete the borrowing process and also allow borrowers with very little credit history to borrow.
5.	The career impact bond	The Career Impact Bond (CIB) is a financing model that expands access to quality, industry-recognized career training to people who face barriers to education and employment like low income, criminal justice involvement, and immigration status. It's based on a student-centered income share agreement (ISA) that allows students to enroll in training with no upfront costs.
6.	Women's Livelihood Bonds	These are innovative financial instruments that bring together multi-sector ecosystem actors to mobilize large-scale private investment to drive women's economic empowerment across multiple Sustainable Development Goals (SDGs) – including SDG 1, 2, 5, 8, 13 and 17.
7.	The Fund for Gender Equality (FGE)	An instrument for feminist philanthropy based on principles of accessibility, trust, and women's ownership, the Fund is a unique global grant-making model. It transforms financing from diverse donors into high-impact initiatives by women-led organizations, investing in their ideas and abilities to pursue interventions closely attuned to women and girls left furthest behind—97 per cent of its projects working with at least one category of vulnerable groups, and 70 per cent involving two or more.
8.	Gender Bonds	To finance projects that promote gender equality and women's empowerment, such as ADB's support for financial inclusion for women.
9.	Credit lines and TA	Combination of credit lines and technical assistance to provide finance to women-led enterprises.
	Infrastructure Instrument	**Brief Description**
1.	Infrastructure Funds	Public or private funds dedicated to the financing of infrastructure.
2.	Public Private Partnerships	Agreements under which private sector entities deliver public services.
3.	Guarantee funds	Funds which provide guarantees for infrastructure projects, reducing the risk and financing cost for these projects.
4.	Yieldcos	Yieldcos are a particular type of listed closed-end fund that have been used in the energy sector for some time. They are now proving a popular route to raise and recycle capital from renewable energy and related technologies and infrastructure.

5..	Mixed approaches	Taxes, voluntary action and crowdfunding – Tirana's Orbital Forest

TABLE 5. INSTRUMENT OVERVIEW BY INSTRUMENT

INSTRUMENT	MAIN SECTORS OF APPLICABILITY
Taxes and tax rebates	across
Diaspora Finance	across
Crowdfunding	across
Technical Assistance	across
Guarantee Fund	agriculture; infrastructure
Incentive grants (linked to loans)	agriculture
Index-based weather insurance	agriculture
Private-Public Partnership and structural funds	agriculture; infrastructure
Warehouse Receipt Financing	agriculture
Sovereign Green Bonds (including Development Bonds or Social Impact Bonds)	energy/climate; agriculture
Corporate Green Bonds (including Gender Bonds; The career impact bond; Women's Livelihood Bonds)	energy/climate; gender/inclusion
Investment Trust	energy/climate
Green Procurement principles	energy/climate
Gender responsive budgeting resulting financing	gender/inclusion
NGO Corporate partnerships	gender/inclusion
Loans with alternative credit risk assessment	gender/inclusion
Marketplace lending platforms including peer-to-peer	gender/inclusion
Credit lines and TA	gender/inclusion
Yieldcos	infrastructure
Mixed approaches	infrastructure
Special purpose funds (such as Infrastructure Funds; The Fund for Gender Equality (FGE))	infrastructure; gender/inclusion

4.2. Innovative Instruments for Armenia

4.2.1. CROSS-CUTTING INSTRUMENTS

4.2.1.1.PEER-TO-PEER (P2P) AND CROWDFUNDING LENDING PLATFORMS

P2P Platforms |The P2P financing model is an innovative variation of the traditional commercial bank financing model, typically utilising an online platform and digital tools. The P2P platforms do not make loans themselves, instead match investors to borrowers willing to invest. P2P is normally recommended only for investors with a better understanding of the market and risks involved, restricting their reach. While P2P platforms often charge higher interest rates than banks, they can help reduce the time it takes to complete the borrowing process and also allow borrowers with very little credit history to borrow.

The online platform on which they are based is normally proprietary and enables them to act as intermediary to match borrowers with the "investors" who purchased securities backed by the P2P platforms. P2P platforms are generating revenues through origination (establishment fees) from borrowers, servicing fees, as well as charging for late payments. It is expected that traditional commercial banks or credit organizations do not have many diverse options for future development, and that they rather will have to position themselves to either work in different markets from, instead of directly competing with P2P platforms, or collaborate with them and diversify their credit portfolio, forming alliances. [31]

The peer–to–peer lending platforms deliver services fully online and have low overheads, enabling them to provide the lending services cheaper compared to the traditional commercial banks. In this model, lenders earn higher investment returns than savings products offered by the commercial banks, at the same time borrowers borrow money at a lower interest rate, even after considering the p2p platform service fees (matchmaking, credit checking). The loans provided by the p2p platform can be secured or unsecured and are not protected by Government-backed insurance. The peer-to-peer platform is a crosscutting instrument and is applicable in all sectors with no limitation including gender and inclusion area (supporting women-led SMEs) or the agriculture sector (smallholder or non-stallholder farms).

P2P and crowdfunding raises important regulatory questions about financial literacy, access to finance and inclusion, in particular for marginalised groups, and investor protection. To harness the possible benefits of P2P lending, enhanced financial literacy is needed, such as through targeted training. Moreover, essential infrastructure, such as broadband, is required. Policy makers need to consider these two dimensions as otherwise those most in need could be left behind. A high density of new businesses is required for promoting the penetration of P2P lending services. Case studies for Moldova and Georgia in Section 5 elaborate on their progress in developing the P2P market and other innovative financial mechanisms.

[31] How peer-to-peer lending platforms are transforming the consumer lending industry, PWC, 2015, Link

Box 2: Crowdfunding in Armenia

On February 8, 2022, the Central Bank approved a package of by-laws[32] regulating investment-based crowdfunding services[33]. Under the regulations, investment services providers that are licensed by the Central Bank will be able to offer crowdfunding platform operator services to the public.

Start-ups and SMEs will be able to raise up to AMD 2.5 billion via crowdfunding platforms with simplified procedures (without substantial transparency requirements). On the other hand, investors will have alternative opportunities to make online, fast, small-scale investments.

The Central Bank highlights that unlike other securities offering, documents published on crowdfunding platforms are not subject to the registration by the Central Bank, rather are subject to the due diligence process by the crowdfunding operator. Moreover, the Central Bank highlights that is not responsible for the correctness and reliability of the documents provided to the crowdfunding platform, as well as for the safety and return of the investments of these platforms.

Armenian National Interest Fund initiated ARFI crowdfunding platform[34] which is planned to be launched in 2022. The platform will allow public from all over the world invest in private entities, startups. Companies will sell securities in the form of equity, debt, revenue share, convertible note etc.

The key players in the P2P lending are:

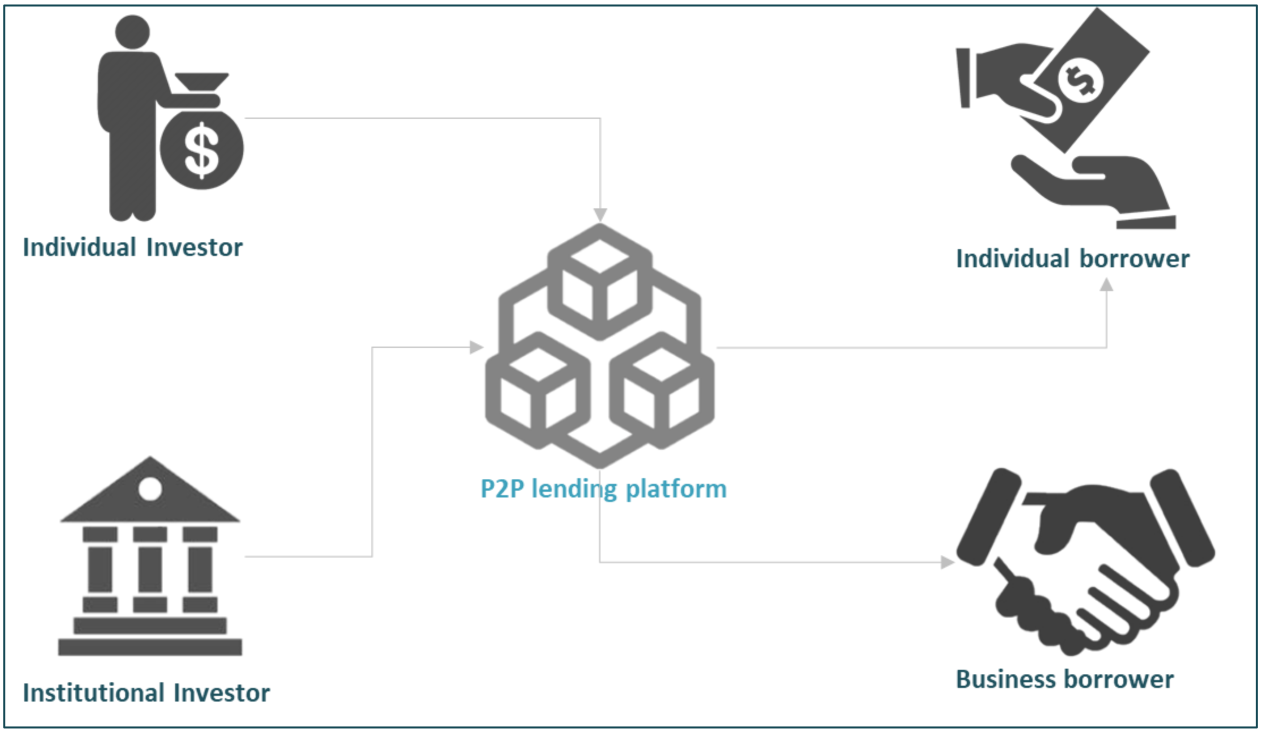
- **CBA**
  Sets the overall regulatory framework for P2P lending in Armenia and issues licenses to market participants.
- **P2P platforms**
  The crucial players of the p2p lending markets which are/ not engaged in directly lending money, but match lenders and borrowers.
- **Banks**
  In some cases p2p platforms partner with banks to help accumulate funds for lending. The funding is disbursed via banking sales channels to the p2p platforms.
- **Institutional investors**
  Institutional investors are the banks, hedge funds, other business entities that enable P2P platforms to function, and act as lenders. Commonly the vast majority (80%) of funding comes from institutional investors.
- **Borrowers**

[32] Additions to the Decision N113 of April 8, 2008, Link
[33] Press release On investment Crowdfunding, CBA, 2022, Link
[34] ARFI Crowdfunding, Link

Project developers, individuals and organisations requiring access to funding but unwilling or unable to use traditional funding streams.

- **Lenders**
  Individual investors are people who lend their own money through the P2P platforms.

Figure 8: Structure of P2P Platforms



ADB investigated the factors determining the expansion of P2P lending across economies using data on P2P loan volumes per capita for 2015–2017 for 62 economies[35]. The study used a set of financial development indicators – financial access, efficiency, depth, and financial literacy. The ADB findings provide important policy insights for Armenia, specifically regarding the need to understand how the degree of financial institution development and levels of financial knowledge can explain differences across economies in P2P loan activities.

The main finding was that formal financial institutions' access and efficiency, as well as financial literacy, best explained the observed expansion in P2P lending per capita. In particular, the effect of **financial access** is stronger in emerging economies, while the effect of **financial efficiency** is stronger in advanced economies. P2P lending expands in economies where barriers exist to access to formal financial services and in economies with higher financial literacy. Moreover, information technology infrastructure and new business density seem to drive expansion of P2P lending. In other words, P2P lending expands in economies with more businesses and start-ups and better infrastructure. In contrast to findings in the literature, GDP

[35] ADB Economics Working Paper Series No. 613, March 2020, Determinants of Peer-to-Peer Lending Expansion: The Roles of Financial Development and Financial Literacy Eun Young Oh and Peter Rosenkranz, available at https://www.adb.org/sites/default/files/publication/575061/ewp-613-peer-peer-lending-expansion.pdf

per capita and regulatory score have no statistically significant explanatory power in the model. The study also showed that P2P lending reaches regions otherwise underserved by traditional financial institutions underlined this great potential for promoting financial inclusion.

Crowdfunding | Crowdfunding is another form of marketplace lending, allowing borrowers to use the internet to raise capital – typically to finance a new venture or project – from multiple lenders. It is finance provided by smaller investors in small tickets which can be channelled for specific causes including the achievement of SDGs[36]. The success of any crowdfunding initiative depends on the business idea or proposition. As more people become mindful of environmental issues, they tend to show more interest in supporting green businesses.

There are currently around 500 online crowdfunding platforms or websites that investors can use for crowdfunding, many of them well suited for funding SDG-related businesses. Out of this amount, around 30 platforms globally offer equity crowdfunding specifically for renewable energy projects.

Box 3: P2P and Gender & Inclusion

Since the global financial crisis of 2007–2008, direct finance via P2P lending has emerged and rapidly grown as a new vehicle for borrowers without high credit ratings, especially among households and small- and mid-sized enterprises. The growth of P2P lending may have two countervailing effects on banking. One is that banks are less exposed to risky loans and interim liquidity needs, which tend to be better served by P2P lending platforms and their associated aftermarkets. The other is that banks must compete against P2P lending platforms, reducing the liquidity buffers that they need to maintain solvency[37].

Peer-to-peer (P2P) lending and crowdfunding platforms are helpful in allowing women to gain access to vital funding without going through in-person processing at a financial institution or financial intermediary. P2P platforms bring lenders and borrowers in direct contact with each other through the internet. Since women do not need to visit a branch, P2P platforms allow women to overcome the access barriers they may otherwise face while accessing loans. Marketplace platforms are also allowing to target excluded women[38]. The Empowering Migrant Women as Entrepreneurs in China project has engaged Ren Ren Dai, an online P2P lending group to provide loans worth USD 25,000 without collateral at interest rates that affordable for women entrepreneurs. Technology is thus enabling migrant women to establish and run businesses[39].

---

[36] See e.g. https://ecoligo.com/en/

[37] Yeo, E.; Jun, J. Peer-to-Peer Lending and Bank Risks: A Closer Look. Sustainability 2020, 12, 6107. https://doi.org/10.3390/su12156107

[38] ADB Sustainable Development Working Paper Series No. 67, April 2020, Innovative Financial Products and Services for Women in Asia and the Pacific Arisha Salman and Keiko Nowacka, available at https://www.adb.org/sites/default/files/publication/576086/sdwp-67-financial-products-services-women-asia-pacific.pdf

[39] K. Bollinger and C. Tingting. 2014. Leveling the Playing Field for China's Migrant Women Entrepreneurs. The Asia Foundation. 3 December.

For example, Kiva's crowdfunding platform[40] allows women to take loans to start businesses as well as for personal expenses like sending their children to school in Cambodia, the Philippines, Samoa, Tonga, and Vietnam. For instance, in the Philippines, women have used Kiva's "Women Platform" to raise capital for buying inventory to run their own convenience stores. While platforms like Kiva could significantly bridge the access to finance gap across Asia and the Pacific, the take up rates are currently low.

Recommendations|

- In order to enable the expansion of P2P, policy makers should assure the creation of an enabling ecosystem for innovators and entrepreneurs, that will also help scale up the usage of new technologies.
- Policy makers must adequately balance financial innovation (e.g., P2P loan expansion) with financial stability and pay careful attention to rapid and unregulated expansion of financial technologies, such as P2P platforms, as these could undermine financial stability.

4.2.1.2.GUARANTEES

Guarantee funds provide guarantees for project financing, reducing the risk and financing cost for these projects. A guarantee fund enables a borrower to approach a bank for a loan, that would otherwise be prohibitive. Guarantees are particularly useful for borrowers who do not have sufficient collateral, such as land or other assets, or in the case of large infrastructure projects. Small borrowers almost always lack (sufficient) collateral, while large infrastructure projects concentrate risk. Therefore, the purpose of loan guarantee schemes is to share the credit risk with lenders. This financial instrument can be used in support of multiple SDGs including those related to infrastructure, agriculture, MSMEs, climate.

In developing countries, loan guarantee funds have been used extensively in different market segments and with varying levels of success for more than seven decades. IFAD has particularly focused on using this instrument to increase the financial access of low-income microentrepreneurs such as farmers[41]. Despite their long history, in the SDG space, public guarantee funds are still in the process of development and haven't reached their full potential. There is an emerging need for their existence, across a wide range of sectors.

In order to operationalise these funds, fund management should be established to develop and manage fund activities, ensuring the fund's alignment with sector-specific strategies and targets. This should be composed of a professional team to analyse project-based granted guarantees. For the successful setup and operations of the guarantee fund, there needs to be political willingness to allocate public budget for

[40] https://www.kiva.org/
[41] https://www.ifad.org/documents/38714170/40185546/Loan+guarantee+funds.pdf/ef9500ef-f892-479d-8d8f-50ebfb767a5c

its operations, which would be leveraged by private finance. Climate funds could be utilised in some sectors to kick-start the guarantee funds.[42]

Recommendations|

- The Government of Armenia should establish the proper legislative environment to enable the creation of guarantee funds, which can be used for various SDGs.
- The Government should set up a guarantee fund for large infrastructure projects and work with its international partners, especially the World Bank, EBRD and ADB to set up guarantee funds for projects potentially funded by these institutions, as in the case of IIGF.
- The Government should also establish guarantee funds for SMEs whether in agriculture or other industries, according to its priorities and in support of the SDGs.

4.2.1.3. CREDIT LINES AND TECHNICAL ASSISTANCE

Technical assistance is an important element in enabling finance recipients to apply finance in a way that furthers the SDGs. It applies across all 17 SDGs. Technical assistance is a versatile, widely applicable tool that can offer substantial benefits to projects, investees, and investors by addressing the risks they are exposed to in new, uncertain, or fragmented markets. Grant-funded technical assistance, most commonly provided by public and philanthropic funders, mobilizes additional financing for the SDGs from commercial investors by lowering the risks and reducing high transaction costs associated with investments in nascent markets, technical uncertainty, and the consequent inability to build a robust pipeline of projects that could deliver the SDGs.

Technical assistance has been commonly deployed on its own, but now often is deployed alongside other blending approaches, for instance alongside commercial investment, where a technical assistance facility is defined as a dedicated pool of resources that is complementary to SDG investments. Technical assistance facilities are now most commonly deployed alongside commercial or development finance institution investments targeting the agriculture and financial services sectors. Here, technical assistance is often deployed to bridge the gap between the lack of access to finance and the lack of an investment-ready pipeline that is in line with the investor's desired ticket size and risk return expectations. Approximately half of general debt and equity funds, which often provide direct financing to SMEs, have an associated technical assistance facility. This does not include independent project preparation facilities, which are not typically linked directly to commercial investment, but rather support projects in reaching bankability (i.e., attracting commercial investment).

Technical assistance is one tool for accelerating commercial sustainability and deepening development impact for projects and social enterprises aligned to the SDGs in developing countries. Technical assistance can be as effective as concessional capital in managing risks and supporting returns in blended finance transactions to mobilise additional commercial capital. As the pool of blended capital available for higher impact sectors (e.g., health, education) and lower income countries (e.g., least developed countries) grows,

[42] See e.g. https://www.worldbank.org/en/news/press-release/2021/03/08/wb-gcf-provide-vietnam-with-us863-million-to-spur-energy-efficiency-investments

there will likely be a need for more pre-investment technical assistance to build the pipeline of investment-ready projects.

It is of particular importance in blended finance, where one-third of operations includes technical assistance funds. These blended finance vehicles have leveraged technical assistance facilities primarily to:

- develop pipelines (pre-investment)
- bolster impact (post-investment)
- subsidize project/investment costs and/or
- support the enabling environment.

The majority (53%) of technical assistance facilities have included post-investment support, often for the purposes of integrating environmental, social, and governance (ESG) principles (or other reporting frameworks) or for providing capacity building and training for operational efficiency[43]. Pre-investment technical assistance has accounted for only 28% of facilities to date, yet it is critical for building the pipeline of investment-ready projects, especially in higher-risk segments (e.g. least developed countries, healthcare). A smaller but not insignificant portion, 17%, has been used to subsidize project and investment costs to make them feasible and commercially viable, this includes feasibility studies, project preparation and management, and legal fees.

Technical assistance alone has successfully mobilized additional commercial investment; for more than half (54%) of blended finance vehicles with associated technical assistance facilities, technical assistance is the only form of concessional capital. The remaining 46% of blended finance transactions with an associated technical assistance facility have leveraged either two or three blended finance approaches. The combination of concessional capital and technical assistance has accounted for nearly 30 percent of deals with an associated technical assistance facility.

Box 4: Technical Assistance and Inclusion

Technical assistance has also been used in combination with credit lines finance to women-led enterprises, for example, or to ensure the adoption of green technologies by SMEs and residential consumers. This further exemplifies the versatility of technical assistance as financial instrument in support of SDGs.

For example, the EBRD's Women in Business Programme[44] provides women entrepreneurs with the finance and know-how to grow their business. It is based on the assumption that women's entrepreneurship plays a key role in creating jobs and driving economic growth and is therefore an economic priority. However, the EBRD does not simply lend money to SMEs through local banks. The

[43] Convergence Data Brief February 2019, Blending with Technical Assistance, available at https://assets.ctfassets.net/4cgqlwde6qy0/3RZClckJliqSyQVy5zkxaT/d3154bf0a55836bd3ec26fb07258a913/Technical_Assistance_Brief_vFinal.pdf

[44] https://www.ebrd.com/women-in-business/finance-and-advice-for-women-in-business.html

technical assistance component of the programme is just as important as the actual financing provided. The programme offers seminars with business leaders in each field, networking opportunities with other entrepreneurs, various business associations, Chambers of Commerce, women's associations and more, and business advice and coaching. These activities ensure that beneficiaries use the proceeds of their loans in the most effective way and sustainably deliver results, based on the industry expertise, entrepreneurial skills courses, and mentoring.

Recommendations|

- Armenia has been a recipient of technical assistance for many years and continues to benefit from this financial instrument as well as credit lines associated with technical assistance in order to make sustainable changes and achieve its SDGs.
- The Government should continue to work with its international partners, MDBs and donor agencies to ensure that technical assistance flows continue towards the country as it works towards implementing SDGs, and that these become available for a wider range of operations.

4.2.1.4. INCENTIVE GRANTS (LINKED TO LOANS)

Incentive grants are financial instruments that are conceptually close to advantageous loans, often issued to SMEs or individual borrowers, generally through a credit fund. This credit fund aims to counteract negative market effects and offset some of the risks associated with financial instruments previously unavailable on the market, such as investments in green energy etc. This instrument is different from regular grant schemes as the incentive grants are not given directly to SMEs as a "pure grant". Incentive grants are usually available through support given to a local bank (participating financial institution – PFI) as part of a DFI scheme.

Incentive grants are usually released upon completion of the project, thus ensuring that beneficiary satisfies the conditions of the loan disbursement. As their name suggests, the grant represents an incentive for the use of the loan for the intended purposes. The availability of the grant helps to de-risk the borrower in the view of the PFI, thus also helping inclusion, and/or reducing the borrowing cost for the beneficiary.

In terms of process, the beneficiary will sign a loan contract from one of the credit lines of the DFI, issued via the PFIs. After the loan is disbursed, there is verification process to check if the loan was used for the purpose listed in the business plan or feasibility study and of the other pre-conditions for the loan disbursement. Once the verification report confirms compliance, a part of the loan is transformed into a grant, so that the total "cost" of financing is lowered. The most common incentive grants are between 10% and 15% of the loan value (EU funded) although there is considerable variety.

Incentive grants contribute to several SDGs, because in addition to facilitating the private sector's transition to more sustainable, low-carbon and climate-resilient practices in developing countries, they also develop the know-how of local financial institutions and the capacity of state regulators. The credit funds are run through local banks, that otherwise would not support such investments due to their novelty on the market, associated risks, and lack of capacities. The investments and associated grants facilitate upgrading technologies and services to international standards while promoting the use of green technologies. They increase their competitiveness at home and abroad by upgrading their production facilities and processes to international standards.

Incentive grants are not effective only for new technologies and green investments. They have been used successfully to fill market gaps in developed countries as well in the wake of the 2008 Global Recession and can be applied to agriculture enterprises and various other sectors. In many cases, the grants are provided by multilateral funds such as the GCF.

***Box 5: Incentive Grants in Green Operations*[45]**

This financial instrument is already used in Armenia. The most important distributor of incentive grants in Armenia is the EBRD, which through its Green Economy Financing Facility (GEFF) channels grant resources from the Climate Investment Funds, the European Union (EU4Business), and the Green Climate Fund. These donor resources are disbursed in addition to EBRD capital used for loans for SMEs.

In the framework of this grants programme, borrowers of GEFF partner financial institutions can receive an investment incentive amount upon successful completion and verification of small-scale renewable energy projects. The following technologies are eligible for an Investment Incentive of 20 percent, only in case the borrowers implementing the below technologies are not applying for the feed-in tariff: commercial rooftop or building integrated photovoltaic power generation, solar thermal heating installations, biogas installations, and geothermal heat pump installations.

Recommendations|

- Incentive grants are already used in Armenia and their track record shows their successful implementation. Therefore, there are no major legislative needs that the Government must address.
- The Government may consider establishing its very own grant programmes to accompany credit funds established by local and international banks.
- The Government could also facilitate greater interaction between local banks, regulators, and international donors to establish further credit funds with incentive grants supporting the specific SDGs it prioritises.
- Incentive grants for positive social and environmental outcomes

4.2.1.5.SOVEREIGN GREEN BONDS

The green bond market has deepened and expanded in recent years, with diversified investors such as various corporate entities and local governments. Increased investor demand includes large sovereign

[4545] https://ebrdgeff.com/armenia/

wealth funds and pension funds committed to responsible investment and to the integration of Environmental, Social and Governance (ESG) factors.

Nineteen sovereigns have now issued green bonds to finance green projects in governments' budgets, exceeding USD 130 billion[46]. Amid the COVID-19 pandemic, sovereign green-bond issuers have kept the issuance momentum in 2020 with 40% of all the outstanding sovereign green bonds in 2020 consisting of first time issuances by countries including Germany, Hungary and Thailand. In 2020 emerging market economies issued sovereign green bonds accounted for USD 10 billion. This growth continued into 2021 where the issuances in only the first 3 months of the year already account for over 20% of all outstanding sovereign green bonds. Despite its rapid growth, the size of the sovereign green bond market is quite small compared to traditional bonds. For example, in the OECD area, sovereign green bonds account for around 0.2% of all government debt securities.

Although still nascent, this momentum is expected to continue throughout 2021 with prospective issuers including Brazil, Canada, Colombia, Mexico, Slovenia, Spain and the United Kingdom. The sovereign green bond market is also expected to keep growing over the longer horizon, as an increasing number of governments assess green bond issuance as a valuable tool to display moral leadership on climate change and sustainability, and to fund commitments under the Paris Agreement.

Global guidance on "green bonds" comes from the International Capital Markets Association which produced the Green Bond Principles (GBP)[47], 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. The Green Bond Principles set the foundations for the elements to be incorporated within a Green Bond Policy Framework—a critical document to give credibility to a green bond.

The Green Bond Principles (GBP), together with the Social Bond Principles (SBP), the Sustainability Bond Guidelines (SBG) and the Sustainability-Linked Bond Principles (SLBP) outline best practices when issuing bonds serving social and/or environmental purposes through global guidelines and recommendations that promote transparency and disclosure, thereby underpinning the integrity of the market[48]. The principles also raise awareness of the importance of environmental and social impact among financial market participants, which ultimately aims to attract more capital to support sustainable development.

The GBP seek to support issuers in financing environmentally sound and sustainable projects that foster a net-zero emissions economy and protect the environment. GBP aligned issuance should provide transparent green credentials alongside an investment opportunity. By recommending that issuers report on the use of Green Bond proceeds, the GBP promote a step change in transparency that facilitates the

[46] OECD (2022), *OECD Sovereign Borrowing Outlook 2022*, OECD Publishing, Paris, available at https://doi.org/10.1787/b2d85ea7-en.

[47] https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/

[48] Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds, June 2021, available at https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf

tracking of funds to environmental projects, while simultaneously aiming to improve insight into their estimated impact.

The GBP provide high level categories for eligible Green Projects in recognition of the diversity of current views and of the ongoing development in the understanding of environmental issues and consequences, while referring when needed to other parties that provide complementary definitions, standards and taxonomies for determining the environmental sustainability of projects. The GBP encourage all participants in the market to use this foundation to develop their own robust practices, referencing a broad set of complementary criteria as relevant.

Green Bonds are any type of bond instrument where the proceeds or an equivalent amount will be exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects (see Use of Proceeds section below) and which are aligned with the four core components of the GBP.

It is understood that certain eligible Green Projects may have social co-benefits, and that the classification of a use of proceeds bond as a Green Bond should be determined by the issuer based on its primary objectives for the underlying projects. Bonds that intentionally mix eligible Green and Social Projects are referred to as Sustainability Bonds, and have specific guidance.

It is important to note that Green Bonds should not be considered fungible with bonds that are not aligned with the four core components of the GBP. Bonds issued under earlier Green Bond Guidance released prior to this version are deemed consistent with the GBP.

Armenia has not issued any green bonds yet. Armenia has however recently been active in issuing Eurobonds (4th Eurobonds for 750 mln EURO was issued in Feb 2021 to finance public debt and budget deficit). Possible reasons for reservations about issuing green bonds could be a further increased ratio of external debt to GDP, or a lack of awareness or hesitation about adopting the necessary procedures and standards. Fiji's case below provides an example on how to approach this issue.

Box 6: Fiji's Green Bond[49]

In April 2018, Fiji became the first emerging market sovereign to list a green bond on London's International Securities Market, raising capital that will support more than 80 domestic climate mitigation and adaptation projects.

Fiji has significant exposure to climate change; therefore, this represents a vital investment in the country's future, which will support renewable energy development, avoiding deforestation projects and upgrading infrastructure for climate resilience. Proceeds from the landmark green bond will be used

[49] London Stock Exchange Group, 2019. Navigating the Green Finance Landscape: Exploring the market drivers and financial instruments enabling the global transition to a sustainable, low carbon economy. A comprehensive guide. Available at
https://docs.londonstockexchange.com/sites/default/files/documents/lseg_green_finance_issuer_guide.pdf

to finance the sustainable management of natural resources, renewable energy, water and energy efficiency, as well as clean and resilient transport and waste-water management.

As a pioneer issuer, Fiji sought to set high standards for other nations to follow suit and was particularly supportive of the establishment of a robust and transparent process. This transparency has provided future sovereign countries with a roadmap they can follow when issuing their own green bond.

The IFC and the World Bank supported Fiji's effort. The first tranche, which floated 40 million Fijian dollars (about $20 million), drew unprecedented demand from investors and was oversubscribed by more than double that amount[50]. The bond helped Fiji create a new way to mobilize finance for development—and a market for private sector capital seeking investment opportunities that support climate resilience and adaptation.

Fiji's sovereign green bond aims to raise a total of USD 50 million (a small fraction of the over $4 billion estimated to be necessary in the next ten years to reduce the country's vulnerability to climate change) to support climate change mitigation and adaption. Likely projects to be financed with proceeds from the green bond include investments in crop resilience, flood management in sugarcane fields, reforestation, and rebuilding schools to better withstand violent weather. They will all follow the internationally developed Green Bond Principles. Fiji will also use bond proceeds for projects supporting its commitment to achieve 100 percent renewable energy and reduce its carbon emissions in the energy sector by 30 percent by 2030.

4.2.1.6. MUNICIPAL GREEN BONDS

Municipal green bonds are like other bonds in every way except that the funds generated are specifically earmarked to finance sustainable infrastructure and services, such as renewable energy and public transport. Green bonds offer a way to tap debt markets for crucial capital, and cities play a key role in issuing green debt. City and state green bond issuers have found that they can provide benefits such as increased and diversified investor base, better economic terms, as well as improved branding, media attention and enhanced citizen engagement. Most green bond issuances have been oversubscribed, demonstrating strong demand. Pioneering issuers include the City of Stockholm, the City of Gothenburg, Transport for London, City of Johannesburg, San Francisco Public Utilities Corporation, the City of Ashville and others.

Sovereign green issuances in emerging markets account for around 12% of issuances, whilst government agencies and municipalities respectively represent around 17% of the total green bond volumes in emerging markets[51]. In emerging markets, the municipal bond market is only nascent, and so far, only cities

[50] https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/cm-stories/fiji-green-bond-for-a-greener-future

[51] OECD, Dembele, Horrocks, Schwartz *Scaling up Green, Social, Sustainability and Sustainability-linked Bond Issuances in Developing Countries*, October 2021 available at https://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DCD(2021)20&docLanguage=En

with deeper financial resources have issued municipal bonds (e.g. Johannesburg, São Paulo, Rio de Janeiro, and Mumbai). Until 2017, the USD 137 million bond from Johannesburg in South Africa was the only municipal green bond issued by a developing country city[52]. The Municipal level is in many countries as well placed to issue bonds as are the government actors developing, for example, transport and water projects and have the fiscal capacity to support the projects.

Developing country cities' own creditworthiness is the key constraint limiting their ability to issue bonds themselves. Most finance that flowed to developing country city-based projects did so indirectly. 94% from green bonds issued by DFIs such as the World Bank and Asian Development Bank. Nevertheless, bonds are the only financing mechanism that cuts across a broad set of actors involved in the 46pprox.46ion of the SDGs, including corporates, governments, municipalities or development banks providing breadth of actors as well as the scale and liquidity necessary for investors.

Cities access flows from green bonds both directly and indirectly. Cities in developing countries rely almost entirely on development finance institutions to raise finance for their projects (94%). Urban mass transit systems, district heating and water distribution networks are the most common type of city-based infrastructure projects in developing countries that are linked to green bonds. The World Bank links the most projects with its green bonds. However, the USD 2.1 billion of flows to city-based projects in developing countries amounts to less than 10% of the total USD 21 billion of development finance institutions' flows to developing countries, revealing the high proportion of large renewable energy and industrial energy efficiency projects linked to green bonds.

There are a number of ways that cities in developing countries can address their creditworthiness in order to access the green bond markets directly. There are also opportunities for cities to access the green bond markets indirectly regardless of their creditworthiness.

Cities or affiliated entities able to issue green bonds can explore options to enhance their creditworthiness through structuring, guarantee instruments or securing a cornerstone buyer such as a multilateral development banks and other development financial institutions. Cities or affiliated entities unable to issue green bonds can align their investment plans with the green bond performance and reporting criteria of other issuers that participate in city infrastructure projects such as national or multilateral finance institutions, private sector corporations or commercial banks.

Both approaches can increase the visibility of cities' green infrastructure plans and policies among international and domestic investor communities helping to make it easier to raise finance in the longer term. They can also make investment more attractive through improved reporting on green performance metrics. For investors seeking additional environmental and social impacts, bonds linked to sustainable

[52] Climate Policy Initiative, Padraig Oliver *Green Bonds for Cities: A Strategic Guide for City-level Policymakers in Developing Countries*, December 2016, available at https://climatepolicyinitiative.org/wp-content/uploads/2016/12/Green-Bonds-for-Cities-A-Strategic-Guide-for-City-level-Policymakers-in-Developing-Countries.pdf

urbanization plans have significant co-benefits in the form of improved health, air quality and social conditions that may fit with their investment mandates.

As well as raising finance, developing a bond market strategy can provide additional benefits:

- Linking green projects to loans or bonds can help support transparency and build internal administration procedures as part of efforts to improve overall sound financial management.
- Aligning city-based projects with the green bond frameworks of issuers can ensure urban infrastructure follows national or international green performance requirements.

Many lessons can be learned from the first city in a developing country to issue a municipal green bond – Johannesburg. The city pioneered the instrument to raise funds to help respond comprehensively to climate change and to ensure the sustainable management of resources. The green bond issued by the city in June 2014 is worth ZAR1.5bn (Approx. US$143m) and is funding projects across a range of sectors including 150 new dual fuel buses and converting 30 buses to biogas. The bond allowed the city to show its commitment to environmental stewardship, while receiving a market-related financial return. It has provided the city with a new funding source to improve and expedite the implementation of its climate change mitigation strategy and move Johannesburg towards low carbon infrastructure.

Johannesburg had political leadership that was supportive of exploring innovative mechanisms to finance upcoming “green” projects. In addition, the city’s investment-grade credit rating helped them take the bond to market and for it to receive a very positive response. Johannesburg also benefited from international guidance, such as from the Green City Bonds Coalition.[53]

The use of green bonds to finance low carbon buses (and green projects more broadly) offers the opportunity for creditworthy cities to access large-scale, debt finance to introduce clean buses into their bus rapid transit (and other city) fleets. The cost of finance will depend on the structure of the bond and the creditworthiness of the project or the issuer, but is generally a competitively priced source of long-term finance. It also offers cities the opportunity to grow and diversify their investor base, increase collaboration between city environment and finance departments, and publicly highlight a city’s long-term commitment to sustainable development.

Recommendations |

- Armenia has not yet issued any sovereign green bonds despite their obvious potential to raise dedicated finance for the country. Therefore, it should quickly invest in developing its capacity in adopting this instrument.
- The Government should join the International Capital Markets Association as full-fledged member and adopt the principles and taxonomy of green sovereign bonds, sustainable and sustainability bonds. This implies adopting a green bond policy framework that reflects international guidelines for use of proceeds, disclosure, and reporting.

[53] C40 Good Practice Guides: Johannesburg - Green Bond, available at https://www.c40.org/case-studies/c40-good-practice-guides-johannesburg-green-bond/

- As in the case of Fiji, Armenia is eligible to receive support from the IFC and the World Bank, who can provide technical assistance to the government to develop the sovereign green bond.
- Pending the outcomes of the UNDP-EBRD social bond, Armenia should learn the lessons of that pilot project and invest in additional development bonds through partnerships with international organisations.
- In order to enable municipalities/sub-sovereigns to issue green bonds, changes to the legislation/regulation maybe required. A separate study should be undertaken to identify these and propose a roadmap for government and regulatory action.

4.2.1.7. DIASPORA BONDS

Armenia needs significant financial resources to overcome war crisis challenges. In such conditions, Armenia must put outstanding efforts and employ non-traditional toolset. Diaspora bonds can become a relatively affordable source of such resources in addition to other traditional sources.

A sharp increase in public debt during wars is generally an acceptable policy. In many cases, the ability to borrow was one of the key contributors to wining wars. From this point of view, Armenia, having a large and deeply engaged Diaspora, has a unique opportunity.

A Diaspora bond is a debt financing instrument issued by a country as a way to attract financing from the diaspora living outside the country. These bonds are unique, non-traditional financial instruments. Unlike foreign currency bonds also known as Eurobonds, the primary market of which are large international financial institutions, in this case, the primary buyers are individuals and organizations from the Diaspora. This is a non-traditional market for attracting foreign debt, and both the terms and placement approaches differ considerably from the traditional debt instruments. The key advantages for the issuers are:

- Diversification of external financing sources during unfavourable external market conditions and critical situations for the country. In general, the availability of an additional source of financing might have a positive impact on the country’s sovereign credit rating.
- The opportunity to pay lower than market rate, reflecting the so-called “patriotic” discount (this is commonly applied, but not in all cases). The issuance of low-yield bonds provides an opportunity to use emotional attachment as an important decision making factor, translating it into a significant capital inflow.
- Possibility of relatively long maturities.
- Investigate opportunities to use alternative guarantee mechanisms (other than sovereign guarantee) for issuance of Diaspora Bonds

From the investors’ point of view, the main motivation to obtain such bonds is the opportunity to invest in the development of their home country, at the same time expecting a certain return on financial allocations. For investors in developed countries, this is an opportunity to have high risk / high return assets in their portfolio.

Diaspora Bonds issued by Israel, India, and Nigeria are successful cases of the use of such financing instruments. Moreover, the issue of bonds in Israel recorded a significant upraise during the wars in 1967 and 1973.

Box 7: Armenia's Diaspora Potential[54]

The Office of the High Commissioner for Diaspora Affairs and partner organizations - the Central Bank of the Republic of Armenia, the Ministry of Economy, the Ministry of Finance, the Financial Market Member Association (FINARM), Ameriabank, and Diaspora partners conducted a survey to assess the interest of the Armenian Diaspora in Diaspora Bonds. This mechanism could be to simplify the acquirement of the Government Treasury Securities, to the extent that citizens and diaspora Armenians could obtain it without complications (for example in Israel).

Currently, the Diaspora's financial involvement with Armenia is divided into three categories:

- starting a business in Armenia
- donating to charity, and
- transferring money to family and friends.

More than three-quarters (77%) of respondents believe that the Armenian Diaspora requires a new pathway of financial participation in order to participate in Armenia's economic growth. Over half of those polled (57%) believe they will certainly or very likely engage in a new financial tool that will boost Armenia's growth.

Additionally, almost half of respondents (47%) say they will certainly or very likely invest in Diaspora Bonds, while just over a quarter say they are not likely to do so or do not respond at all (26%). The remaining respondents (27%) believe they are quite likely to invest.

Recommendations|

- Further investigate the potential for diaspora finance, either through a dedicated bond or through other mechanisms, such as P2P. This should cover existing legal limitations which can hinder the issuance/purchase of diaspora bonds. Based on this, recommendations should be provided to the government on how to improve the legislation, regulation and what infrastructures are necessary for diaspora bonds.
- For the successful placement of Diaspora bonds, the government must work with maximum transparency with the Armenian Diaspora, presenting the purpose of the engagement, the urgency and the main directions and mechanisms of the use of proceeds.

[54] Survey Conducted by the Office of the High Commissioner for Diaspora Affairs, 2022

- Innovative marketing policies are vital for the success in disseminating information and generating interest.
- It will be necessary to establish working groups in the largest and most prosperous Diaspora Armenian communities, which will work directly with the representatives of the Diaspora, strengthening the links in the best way, as well as understanding their preferences.
- Develop accessible digital tools to support trading the bonds as a key enabling instrument.

4.2.1.8. DEDICATED BONDS

Corporate Green bonds, along with their close cousins, social and sustainability bonds, are one of the most visible market-based initiatives in green finance and their origins can be traced back to issues from the European Investment Bank (EIB) in 2007 and the World Bank in 2008. Their 2007 Climate Awareness Bond was an innovative structured-note, linked to the equity performance of the FTSE4Good Environmental European Leaders Index and raised over half a billion euros from retail investors. Since that time the International Capital Markets Association (ICMA) has established and overseen the Green Bond Principles, and later the Social Bond Principles and Sustainability Bond Guidelines, which provide for their respective areas. Becoming an established asset class with institutional investors, these instruments have significant potential. Issuance increased by an average of 50 percent per year to 2017, exceeded USD 200 billion in 2018 and continues to grow[55]. A green, sustainability or social bond ensures the use of proceeds for specific activities, that in turn reflect an issuer's broader green, sustainability or social framework. More than 130 green, social and sustainability bonds have raised over USD 33 billion in 13 currencies from 49 issuers in 18 countries, since 2015 (data up to 2019)[56].

These financial instruments have the potential to attract project finance into private sector entities (other than banks issuing Green Bonds) in certain sectors/sub-sectors. For issuers, green, social and sustainability bonds are a way to tap into fixed income investors that wish to achieve green financing impact through the bonds that they invest in. There is a pool of approximately US$100 trillion of patient private capital managed by global institutional fixed-income investors. And there is a desire by many to integrate climate and sustainable investment approaches into their portfolios.

Development or Social Impact Bonds. As of October 2019, London Stock Exchange was home to 120 green, social and sustainability bonds which had raised over $32 billion, predominantly in green bonds. The Sustainable Bond Market comprises:

- Three separate, dedicated segments for Social, Sustainable and Green bonds – this allows investors to distinguish between different types of bonds based on their framework and use of proceeds.

[55] London Stock Exchange roundtable https://www.lseg.com/sites/default/files/content/documents/LSEG%20Green%20Bond%20Roundtable%20April%202019.pdf

[56] London Stock Exchange https://www.lseg.com/markets-products-and-services/our-markets/london-stock-exchange/equities-markets/raising-equity-finance/market-open-ceremony/welcome-stories/london-stock-exchange-welcomed-yorkshire-water-finance-plc's-first-sustainability-bond

Issuers admitted to the Sustainable Bond Market must commit to annual post-issuance reporting, which will then be published on the London Stock Exchange website.

- A segment for "Issuer-level classification" instruments – reflecting the growth in sustainable business models, this allows issuers with 90%+ Green Revenues or those who obtain an independent, company-level certification to admit their bonds to a specific and separate segment. This increases visibility to investors, whilst maintaining a distinction from bonds with asset-level certification.

UNDP announced plans in 2021 to pilot a social impact bond in the country. Development or social impact bonds are guaranteed by developing countries and/or donors and sold on financial markets for financing outcome-based service delivery. A social impact bond (SIB) is a contract with the public sector or governing authority, it pays for better social outcomes in certain areas and passes on the part of the savings achieved to investors. Social bonds provide investment to address social problems by funding preventive measures. When the social outcomes improve, investors are repaid their initial investment plus a return for the financial risk that they took.

The goal of the UNDP-EBRD social impact bond in Armenia is to improve the lives of smallholder farmers in the Shirak region in the north-western of the country. This will be the first social impact bond introduced in Armenia and it will be dedicated to supporting the development of the local agribusiness sector. The Slovak Republic is providing financial support for technical assistance to build on the findings of a feasibility study prepared by the UNDP. It is currently unclear whether this project will enable the Government of Armenia to adopt and turn into law the International Capital Markets Association (ICMA) Social Bond Principles.

Gender Bonds. Gender bonds finance projects that promote gender equality and women's empowerment, such as ADB's support for financial inclusion for women.

Aside from the benefits to women and the economies in which they live, the business case for investors to invest in firms that strive toward gender equality is clear. With these significant benefits associated with investing in gender equality, gender bonds provide a clear mechanism to match investors with investment opportunities in these firms that have shown heightened levels of success.

Getting a sense of the size of the bond market that impacts gender equality can be difficult. For example, while most bonds specifically targeted toward gender equality would be classified as social bonds, sustainability bonds, such as those issued by the World Bank, do specifically mention empowering women. Data shows that both the social bond and sustainability bond market have grown substantially since 2018, with social bond issuances increasing sevenfold in 2020 alone.

With this growth in mind, it is also important to recognize that, to this point, the number of investors in gender bonds has been quite limited. Gender bonds have been typically offered to a limited number of large institutional investors and allow for customization to meet the financial and impact-related needs of both the issuer and investor. Prominent examples of these private placements include an ADB ¥10 billion gender bond, issued in 2017, and purchased in its entirety by Dai-ichi Life Insurance Company, Limited of

Japan; an IFC and Deutsche Investitionsund Entwicklungsgesellschaft's (DEG) USD 220 million subscription of Bank of Ayudhya's Gender Bond issuance in 2019, and the IFC's 2020 commitment to fully support Indonesia bank OCBC NISP's gender bond[57].

Despite the modest size of the gender bond market globally, there is reason for optimism regarding its expansion given the example of the trajectory of the green bond market. As investors have become more sensitive to issues of sustainability, demand for green bonds seems to outstrip supply, issuer premiums have increased, and issuers are enjoying lower costs of capital. Even as the green bond market continues to mature and the issuances increase, there remains plenty of capital ready to invest. Gender bonds will likely follow a similar path as greater acknowledgement by investors will induce demand for more bonds and induce more capital from a more diverse set of investors. A key catalyst to this acknowledgment will be a deeper understanding of the impact that gender bonds can deliver alongside the financial returns they can generate.

Gender bonds offer a way for investors to address some of issues related to gender inequalities, mostly economic inequality, but may also offer other forms of auxiliary impact. Women who are economically empowered as business leaders and entrepreneurs may also become empowered to take on leadership positions in political and public life, resulting in increased agency and influence to shape public policies that address gender inequality.

Although there may be these longer term, indirect benefits of gender bonds, it is important that gender bonds are precise regarding how the eligible investments from the bond proceeds will impact gender equality. These bonds, for the most part, are focused on women's full and effective participation and equal opportunities for leadership in economic life, which is only a narrow focus on one subgoal of SDG 5, potentially leading to "pink-washing." Gender bonds, however, by investing in the full and effective participation of women in economic life, also have the potential to support efforts on poverty eradication (SDG 1), full and productive employment and decent work (SDG 8 and 9), peaceful and inclusive societies (SDG 16) and the promotion of sustainable industrial development (SDG 9)

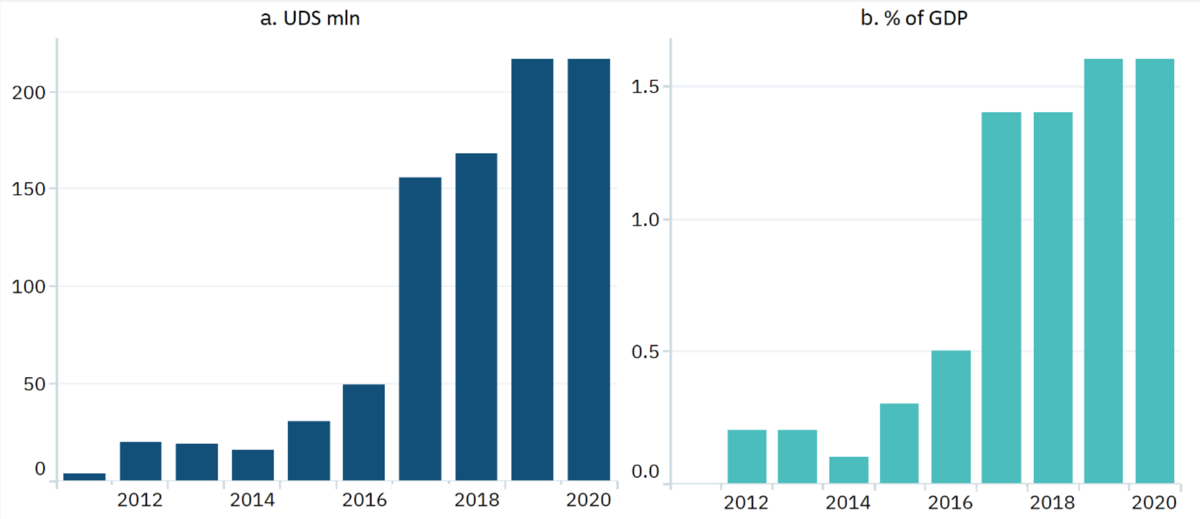
Box 8: Armenia's Green Bonds

While Armenia has no experience with sovereign green bonds, that is not the case for commercial green bonds. In 2020 Ameriabank issued a Green Bond in EUR for the equivalent of USD 50 million, marking a milestone in the local financial market as the first ever Green Bond project in Armenia. The Green Bond was structured in accordance with internationally recognized ICMA Green Bond Principles. In February 2022 Ameriabank also announced the public placement of nominal, coupon, book-entry bonds with the total volume of USD 8 million and AMD 3 billion during the period from February 14 to April 22, 2022. It represents the first ever placement of green bonds via public offering in Armenia. The bonds' maturity

[57] International Institute for Sustainable Development, Matthew Gouett, March 2021, Furthering Gender Equality Through Gender Bonds, available at https://www.iisd.org/system/files/2021-03/equality-gender-bonds.pdf

was 27 months, with the coupon rate of 3.5% for USD bonds, and - 9.5% for AMD bonds. The par value of the bonds is USD 100 and AMD 100,000. The coupon periodicity is 3 months.

Figure 9: Dynamics of the corporate bond market[58]



Overall, however, the entire corporate bonds market in Armenia is still small despite the favorable regulatory framework and several reforms in the field. The largest issuer of the corporate bond market is the financial sector who prefers to attract funds via bonds versus deposits due to more favourable tax and reservation policies. As a result, the secondary market of corporate bonds is characterized by low liquidity, as shown in the figure below.

Despite remaining areas in need of reform, the Armenian Government developed a well-founded regulatory and supervisory system which has been improving over the years. The Central Bank of Armenia (CBA) is the centralizing regulator responsible for banking and non-banking supervision, financial stability, protection of consumer rights, and market conduct of the financial system. The financial sector was tested due to the global financial crisis and the Russian crisis of 2014 and is considered resilient. An IMF assessment from 2019 states that "*The CBA has made significant progress in its approach to banking supervision with the adoption of the RBS framework and addressing gaps in the regulatory framework identified in the 2012 Basel Core Principles (BCP) assessment*"[59].

Recommendations |

- All of the commercial bonds described in this section have extensive impact potential for Armenia's SDGs. With the exception of the commercial green bonds, which have only been issued by one

[58] *Ministry of Finance of Armenia*
[59] IMF (2019)

bank in Armenia, none of the others have been used within the country and hold major potential for the accomplishment of strategic goals.

- Pending the outcomes of the UNDP-EBRD social bond, Armenia should learn the lessons of that pilot project and invest in additional development bonds through partnerships with international organisations.
- The Government of Armenia should incentivise local banks as well as international investors to participate in programmes related to gender, women's livelihoods, and career impact bonds. Armenia's strong partnerships with multilateral development banks (World Bank, ADB, EBRD) would allow the country to develop such bond programmes.
- Based on Armenia's extensive and influential diaspora (see diaspora finance above), there is great scope for Armenia to mobilise impact investors in all of these social and sustainability bonds. Therefore, the Government should work with civil society to unleash this potential.

4.2.1.9. VENTURE CAPITAL COOPERATION WITH THE GOVERNMENT

Venture capital (VC) has the potential to deliver a range of SDGs, e.g. related to environment, new technology or inclusion. While there is substantial activity in VC markets, developing countries and emerging economies do not see as much activity, for a variety of reasons, including risk, absorption capacity, and lack of opportunity or connections. Government intervention could address this by preparing both the pipeline for investments and establishing a more conducive framework for investors.

Government policy has a critical role in fostering an environment favourable to venture capital and innovation. Government programs facilitated the growth of countries associated with innovation and venture capital across the world, such as Silicon Valley, Israel, and Singapore. Investors in VC are also looking for reliable data on the economy and specific sectors. This could be supported by setting up a local venture capital body that gathers industry data and can promote for the investment market. A government program that assists in the formation of such an organization can level-up the VC ecosystem development.

The government typically intervenes in the VC market in two ways. The first form is government-managed Venture Capital funds, whereas the second category is government-sponsored Venture Capital funds. In the VC market, both forms of government involvement are typically backed from two perspectives.

The first is related to the presence of the "equity gap" in capital markets as a result of information asymmetries. Many early-stage investments in young innovative firms require extensive pre-project investigation and project preparation, but such efforts are hampered by information gaps between founders and venture capitalists, resulting in a gap in equity financing that is difficult to fill with private venture capital. Interventions are thus primarily intended to prevent supply-side market failures by bridging the equity capital gap in new enterprises.

The second rationale is connected to externalities. Government action is typically influenced by larger policy aims rather than only by financial ones. As a result, it is necessary to explore VC projects that may be less financially feasible in terms of return on risk if the venture might yield considerably beneficial externalities, such as job creation or the exploitation of investment possibilities in disadvantaged areas.

There are five innovative forms of governmental fund allocations into Private Venture Capitals: [60]

- **Fund-of-Fund**
  The government assists in the form of a fund-of-funds, investing in PVC funds rather than directly in enterprises. This type of support is getting increasingly widespread. In one sense, it allows the VCGF to use its equity capital commitment as a lever to encourage the establishment of more PVC funds, so increasing the effect of public venture capital on the supply of VC to innovative and high-tech firms. In other words, this mechanism can be associated with the first loss facility of de-risking the attracted private capital. Furthermore, it enables the VCGF to diversify its holdings by investing in a portfolio of PVC funds.
- **Co-Investment**
  This is a modified type of direct public investment via government-managed venture capital funds. It means that the VCGF and the PVC business are both investing in early-stage SMEs. The primary goal of this strategy is to bring current, mid-sized PVC enterprises on board to engage in high-tech start-ups and share investment risk with PVC investors.
- **VC Investment Subsidy**
  This form of support is very similar to co-investment except that the VCGF subsidizes the PVC firm's investment costs through a non-repayable grant and holds no share in the venture-backed company. The support is to help the PVC firm withstand risks arising from its investments in early stage ventures. Subsidy is open to all PVC firms who invest in early stage firms.
- **Investment Guarantee**
  The goal of this mechanism is to encourage PVC businesses to analyze investment prospects and support early-stage high-tech firms. After a PVC business discovers and begins assisting a good early stage high-tech startup, the PVC is able to apply for a VCGF grant on behalf of the firm under its supervision. A business of this type may be eligible for a grant from the VCGF to support its R&D expenditures. As a contractual condition, the PVC firm is supposed to give free mentoring services to the candidate company for a maximum of two years before investing in the company after the supervision term expires.
- **VC Loan Guarantee**
  This aims to assist venture capital businesses in borrowing from the money market. The loan guarantee would serve to decrease creditors' risk and encourage small investors and banks to engage in high-growth enterprises via the PVC fund platform. Because loan creditors will only get relatively modest fixed-rate interest, VC funds can enhance their financial performance. Using credit rating agency information, VCGFs can give loan guarantees to VC funds with strong credit histories and assist them in consolidating their financial resources.

[60] Government-Backed Venture Capital, Korea Science, Linkhttps://www.koreascience.or.kr/article/JAKO201654447931174.pdf

Box 9: Granatus Ventures

> Granatus Ventures is the first venture capital firm established in 2013 providing investment, expertise and networks to startups worldwide leverages Armenia's potential as an emerging technology hub.
>
> Since 2013 the Armenian tech ecosystem made a huge leap. From a handful of startups to diverse players, a few on path to unicorn status. The support infrastructure advanced significantly – from incubators, accelerators to events, angel and institutional investors.
>
> Tech4SDG fund launched with a vision to support deep tech startups tackling the world's fundamental problems. The next frontier is to nurture, grow and attract deep tech startups that tackle globally significant complex problems. The fund's priority areas are healthtech, resource efficiency, agri/food tech, edutech. The fund aims to utilize development potential in Armenia via establishing experience sharing excellence centers.
>
> There is a potential perspective of mutual collaboration between the Government and the Venture Capital firms in the above mentioned mechanisms.

Recommendations|

- Further investigate the potential for government support to VC, in particular in relation to pipeline building and identifying priority sectors.
- Create a robust eco-system for VC with a clear focus on delivering the SDGs as foundation for government engagement in the sector.
- Aim to raise donor co-finance to support the VC sector for SDGs, e.g. for the creation of incubator hubs.
- Establish tax policies that promote long-term capital investment, encourages entrepreneurs to take the risk of launching a business.
- Link Armenia's diaspora contribution more closely to venture capital ecosystem while being engaged as investors, mentors and coaches for locally developing start-ups or advisors for policy makers.

4.3. Cluster-Specific Instruments

4.3.1. AGRICULTURE SECTOR

INVESTMENT FUNDS | In 2009, within the scope of the "Farmer Market Access Program in Armenia" The Fund for Rural Economic Development in Armenia (FREDA) was established[61]. The fund was established in

[61] Link TBI

cooperation between the Government of Armenia and the International Fund for Agricultural Development (IFAD). FREDA is Armenia's first rural-focused investment fund, making investments in rural SMEs by providing innovative financing mechanism, such as equity investments, quasi-equity investments and subordinated debt, and combining this with management support, allowing the firms to advance their competitiveness and thereby contribute to accelerating rural development.

INSURANCE | The agricultural insurance program was piloted in 2019. There is still large room for improvement in the terms and coverage of insurance packages (expanding risks, crops and conducing feasibility on livestock insurance). The insurance coverage and compensation are not proportional to the losses of farmers. According to the Agricultural Insurers “National Agency” NGO, covered risks are limited to hail, fire, frostbite, and only the following crops are covered: apricots, grapes, peaches, apples, plums, watermelons and melons, autumn wheat / barley, spring wheat / barley, early potatoes, and mature potatoes.

LEASING | Leasing is considered to be the most effective instrument to enable the agricultural sector to modernise its equipment. Over recent years the leasing market has grown by almost 28%, but 90% of the growth depends on state subsidy programs[62]. Due to the high levels of demand, suppliers have supplemented their products in cooperation with state support programs. This is expected to grow in the upcoming years due to the legislative changes made in 2020 in terms of launching sub-leasing, reverse leasing, secondary leasing in Armenia. Currently the taxonomy is being developed, to clearly classify green leasing, energy-efficient and energy-saving equipment definitions.

4.3.1.1.GUARANTEE FUND| AGRICULTURE

BACKGROUND | One of the mechanisms that can be integrated to expand SME financing is credit guarantee. The Investment Support Center (ISC)[63] (formerly SME DNC) established in 2002 has such experience. Within the scope of the state initiatives the ISC provided financial support to SMEs in the form of a credit guarantee through partner financial organizations. Although, the institution is currently engaged in COVID-19 impact response measures (19th credit guarantee measure), the instrument with long term functioning does not exist, due to the absence of state support programs with a guarantee component. The experience of employing the instrument and benefits sequenced are good basis for retrieving the financing mechanism.

The use of guarantee funds in agriculture is widespread and is common also within developed countries. For example, the European Commission has established a guarantee scheme for farmers which provides security for firms that are unable to obtain financing by other means, repaying the remaining bank loan if the farmer defaults. The guarantee can be provided to SMEs up to 70 percent of the requested loan. In case of a young farmer under 40 years old, the guarantee can be increased to up to 80% of the loan.

[62] Interview with the Director of Armenian Leasing Company
[63] Regulation on financial support for start-ups, ISC, 2015, Link

Nevertheless, the guarantee cannot exceed the limit of EUR 1 million for micro and small enterprises and EUR 2 million for medium enterprises[64].

To successfully establish and operate a guarantee fund it is critical to develop targeted state support programs including the guarantee component. This is critical to be present as the guarantee will be financed by mixed financial sources such as state budget, international donor organizations, thus without a specific state incentive the guarantee mechanism will fail to pool capital, and be unable to achieve market impact.

CREDIT GUARANTEE FACILITIES | The credit guarantee facilities were first introduced in early 20th century in Europe as governments were seeking to enable the access to finance of SMEs. Currently there are more than 2,250 credit guarantee facilities operating in almost 100 countries. Credit guarantee schemes provide guarantees to borrowers by covering a portion of the default risk of the loan. The credit guarantee schemes can be initiated by public or private sectors. Three main types of guarantee facilities are presented below[65].

TABLE 6. GUARANTEE FORMS

PROGRAM FORM OF GUARANTEE	PRIVATE FORM OF GUARANTEE	MUTUAL FORM OF GUARANTEE
Public guarantee mechanism established by the public sector or international entity which supposes state subsidy inclusion. The facility is administered by the government unit. In case of the loan default the guarantee is paid out from the government budget. Though, while assessing its operational functionality, the political influence should be considered.	Corporate guarantee facilities are financed and administered by the private sector players such as banks, chambers, public-private partnerships. Due to the direct participation of the private sector, this mechanism benefits from being managed by the professionals applying solid experience of the sector. Being fully financed by the private financial sources the facility has factional "independence" from public sources, simultaneously challenging the funding stability of the facility.	The mutual guarantee funds are formed by the private and independent organizations and managed by the borrowers within the specific sector having limited access to traditional loans. These mechanisms are funded by the substantial membership fees, with limited support from government.

THE PROPOSED MODEL| The proposed facility for credit guarantee mechanism is to retrieve the functioning of the credit guarantee facility administered by the Investment Support Center with capital raising from mixed funding sources such as public, private and international entities. The mixed model of credit guarantee facility will ensure strong cooperation and commitment between different actors of the

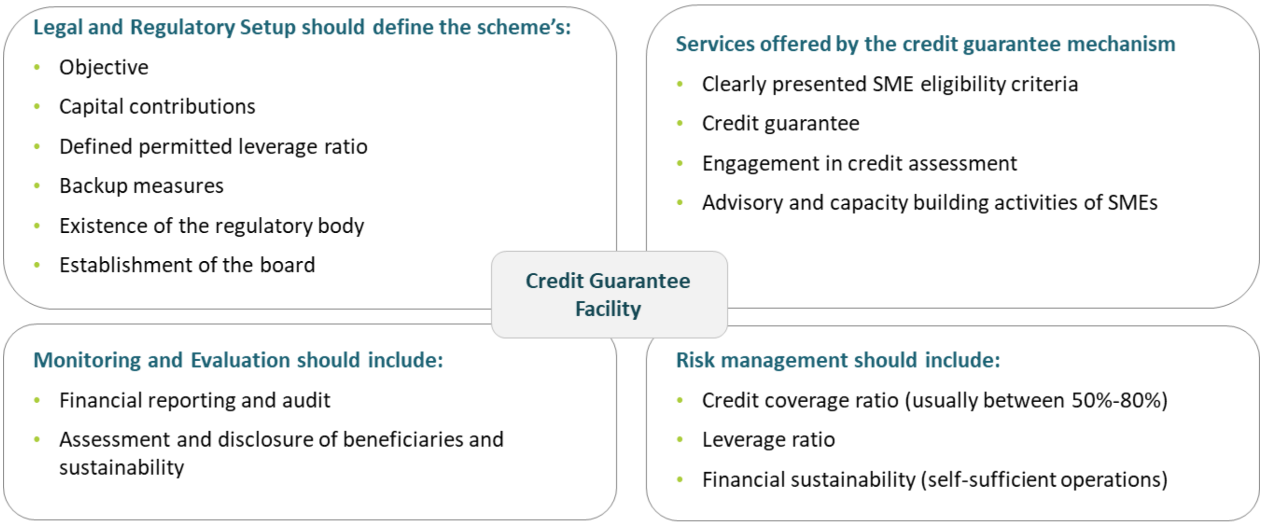
[64] https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/586677/EPRS_BRI(2016)586677_EN.pdf
[65] Kosovo Credit Guarantee Facility Feasibility Study, USAID, 2012, Link

economy around the shared development goal. Moreover, the diversified source of financing will secure the adequate level of guarantee capital to secure SMEs.

Considering the effective operations of the guarantee facility implemented by the Investment Support Center, and the importance of enabling SME access to finance are profound basis for considering to retrieve the credit guarantee mechanism.

Moreover, the priority action of the “SME Entrepreneurship Development Strategy 2020-2024” (adopted in August 27, 2020, decision N 1443-L), highlights the importance of expansion of the efficiency and coverage of the SME state support toolkit, using all possible cooperation opportunities. The government plans to increase the existing capital of credit guarantees. At the same time, based on the cooperation experience with financial entities, it is planned to develop risk sharing schemes, as a result it is expected that the bank will provide four units of credit for one unit of guarantee, instead of the current 1:1 ratio. Thus, the volumes of capital funds of credit guarantees are planned to increase.

FIGURE 10: ELEMENTS OF GUARANTEE FUND[66]



MAIN PRINCIPLES[67]	DESCRIPTION
Ensure adequate funding to achieve goals	To enable successful execution of guarantee scheme activities and meaningful outreach, as well as financial sustainability, the CGS should have appropriate capital and public financial backing. Setting up a CGS with insufficient financial resources might result in a constrained economic effect and a lack of financial sustainability. This will affect substantially weakening lenders' trust and jeopardizing the CGS's policy objectives. The sufficiency of funding should be defined by the CGS's policy objectives by maintaining long-term financial viability.

[66] Policies to Optimize the Performance of Credit Guarantee Schemes During Financial Crises, ADB, 2021
[67] Principles for Public credit guarantee scheme for SMEs, WB, Link

Defined mandate, supported strategy and operational goals	For establishing accountability, specifying the spectrum of CGS activities, and creating the foundation for identifying precise goals for CGS operations must be stated and communicated clearly. The objective should be included in the regulating document that specifies, at the minimum, the targeted SMEs and the CGS's primary lines of activity. Aside from credit guarantees, the mandate might include additional services including technical support, communication, training, and guidance. The mandate should also include a desired degree of efficiency for the CGS, which ensures financial sustainability targets and identifies limitations. The scope should be wide enough to ensure adoption and to account for cyclical changes in the target SME sectors.
Internal control framework	Internal controls should be robust and proportionate to the scale and complexity of the CGS. Internal controls enable CGS to keep track of what's going on in the company and if directions are being fulfilled. Internal control processes should be designed by CGS to protect assets from illegal use or disposal, to keep accurate accounting records, and to assure the accuracy of financial and non-financial data. Control procedures should guarantee that business processes and other activities are carried out correctly, the risk of misbehaviour is minimized, and any misconduct occurred is detected.

Recommendations|

Public

- Raise donor support for guarantee funds in specific sectors.
- The Government should unite potential beneficiaries of the credit guarantee facility and conduct in-depth studies to identify farmers needs and support areas. Based on the baseline study and previous experience the Government should design targeted support programs composing the guarantee component. The targeted programs will enable the finance attraction from the international organizations.
- Solely the guarantee component in state support programs will be one-way support with risky credit portfolio, thus the comprehensive approach applied such as developing capacities of beneficiaries (training, mentorship, advisory, etc.) will result in more knowledge based business processes ensuring stable cash flows and resulting successful guarantee contracts, which can be executed via national development bank.
- Most significantly, the government should establish a controlled environment in order to properly operate the credit guarantee facility, confirming the institution's adherence to integrity principles. Control actions that contribute in risk minimization and enable the institution to function efficiently (e.g. conducting audits)

International

- Previously the International organization contributed in credit guarantee scheme (within the scope of the COVID-19 program), it is recommended to assess the program impact and consider proceeding further in contributing support programs.
- The international organizations might provide technical assistant in establishing the national development bank (composed of guarantee fund) (operating, model, professional training, establishing monitoring and evaluation system of the guarantee facility).

4.3.1.2. WAREHOUSE RECEIPT FINANCING | AGRICULTURE

DESCRIPTION | The usage of securely deposited products as loan collateral is known as warehouse receipt financing[68]. This instrument allows farmers to deposit a finished good or agricultural product in a specially controlled warehouse and get a receipt validating the deposit of products of a specific category, volume and quality. The receipt can be used as deployable collateral by the farmer when seeking funding from a financial institution.

Warehouse receipt financing generally involves three parties: the bank, the farmer / processor, and the warehouse. The processor transports goods to the warehouse for deposit. The warehouse operator grades and classifies the products and provides the entity with a receipt for storage of those items. The processor then presents the receipt to the financial institutions, which gives lending based on estimations of the market worth of the products fixed in the receipt.

Warehouses can be accessible to the farmer, allowing him to withdraw goods anytime, or sealed, preventing him from accessing goods until a specified date. If the product is removed, the farmer must repay the loan to the bank (principal and interest) as well as any storage costs charged by the warehouse operator. Alternatively, the farmer may sell the goods through the warehouse (via trading warehouses), in which case the items are delivered to the buyer, the loan and costs are subtracted from the selling price, and any residual profits are paid to the farmer. The latter is a favourable mechanism for farmers challenged by reaching sales markets.

Warehouse receipts are backed by a performance guarantee before they can be accepted by parties engaged. This guarantee offers guarantee if the deposited products do not match what is described in the receipt, even where warehouses are engaged in fraud. Processors will be hesitant to deposit goods without such assurances, and banks will be hesitant to accept receipts as collateral. Typically, performance guarantees are in a form of insurance bonds or letters of credit. These are occasionally supplemented by an insurance fund, which is generated from private warehouse contributions and collected as part of the cost offered to processors. By sharing the risks, such funds lower the cost of insurance bonds or letters of credit and make guarantees available to smaller warehouses.

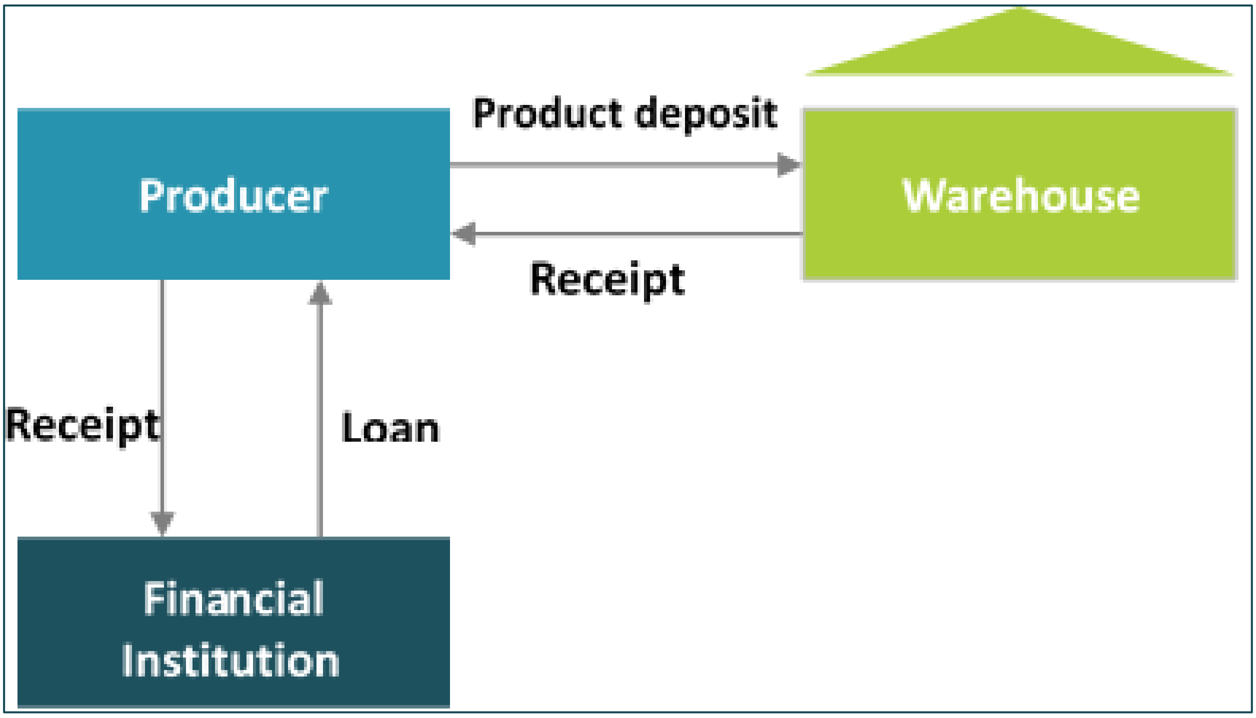
TABLE 7: TYPES OF WAREHOUSES

DESCRIPTION

[68] Warehouse Receipt: Financing Agricultural Producers, USAID, Link

Public warehouses	Anyone who imports agricultural items into the country may keep them in a public warehouse with a non-assessment basis.
At field warehouses	An operator runs a warehouse on the property of another company in a field warehouse. This happens when the company finances the supply of raw materials while other company manages the stock for the bank.
Dual-key warehouses	Warehouses ensure secure storage since they are controlled by both the financial institution and the depositor. Both parties have credentials to the storage facility, and both credentials must be provided to get access to the deposited goods.
Self-managed or single-key warehouses	Depositors have total control over their products while they are stored in a warehouse. Typically, some control is undertaken by a financial institution.
At trading warehouses	The warehouse operator trades the stored goods on behalf of the processor. These facilities are common practice in North America.

FIGURE 11: MECHANISM OF WAREHOUSE RECEIPT FINANCE



Success factors[69]

[69] Warehouse Receipts: facilitating credit and commodity markets, WB, Link

IMPROVED STATISTICS | The availability of relevant information on product pricing, market projections, and analysis is critical for the proper integration and execution of the instrument. Furthermore, it is critical to upgrade and improve national statistics, as the Agricultural Census was conducted in 2014, and no up-to-date agricultural statistics are available. Forecasts are needed, especially in sectors where output varies around surplus and deficit and forecast dynamics picture price fluctuations. Farmers may apply the information to identify the optimal time to sell or the worth of obtaining inputs, on the other side financial institutions can evaluate the market value of the security. As a result, data and information solutions that regularly report the prices of products are critical.

PROPER REGULATION | Warehouse receipts define the volume and quality of products held, though all aspects should be sufficiently regulated to ensure harmonized functioning. It is essential that each party involved (farmer, financial institution, warehouse) have rights, obligations, and duties clearly specified. If the warehouse defaults or farm is liquidated, holders of receipts must have the right to receive stored items or exchangeable equivalent. Before approving the loan, the lender should be able to ascertain if there is a conflicting claim.

TRUSTWORTHY LICENSING AND INSPECTION SYSTEM | Government needs to establish a warehouse licensing and inspecting system to make sure that warehouse facilities satisfy financial and physical criteria. Trustworthy entities, such as trade associations, may be able to perform this duty. Without such availability, warehouse receipts lack credibility and will not be treated as a trustworthy liquid asset.

Governments should also certify inspections through a competent authority. Commonly, the private sector inspects warehouses and stored products under license provided by the relevant ministry. Quality assessment, classification, and independent verification of stored goods can be performed by trustworthy local or international companies. Increased confidence in the system will accommodate to establish the trust and well-functioning warehousing financing mechanism.

Lenders must be involved in the scheme's design to assure that they are confident with the enforcement of the receipts in case of failure. To account for such risks, banks only lend a proportion of the goods current market worth, for example in case of countries where scheme is mature 80-90%, in early-stage schemes 50-60% of the stored good value.

The inspection needs to ensure that:

- Financial institutions trust the warehouse valuation and inspections
- Warehouses maintain technical and quality standards

- Warehouse valuation is conducted according to properly set classification specifications

FIGURE 12: THE ROLES OF PARTIES ENGAGED

Role of the public authorities

- Institutional framework to regulate product prices
- Develop and adopt legislation to execute warehouse receipt financing
- Establishing licensing and inspection system of the warehouse
- Cooperation with private sector to set feasible product standards

Role of the farmers

- Active engagement in assessing the needs and constraints
- Being proactive and giving feedback
- The mechanism should be developed with active consultations with farmers and processors

Role of the financial institutions

- Setting internal procedures
- Setting assessing and monitoring standard
- Setting appropriate risk management procedures
- Training staff on the newly proposed mechanism

Role of the international organization

- Assistance in providing technical assistance
- Trainings to warehouse operators and inspection entities
- Assistance in developing the corresponding legislation

Recommendations|

General

- Build trust by launching awareness raising campaigns regarding the establishment of warehouse system institution, parities engaged (e.g. reputational international organizations). When the warehouse operator or engaged stakeholders are trustworthy, financial institutions may rely on the receipt as loan collateral with confidence. The sense of security that the warehouse offers the entrepreneur is likewise based on trust. Regulatory monitoring is vital in this regard to the success of warehouse receipts, and the government must be committed to finding the right balance of minimum but sufficient regulation.

Public

- It is recommended that public authorities develop well-functioning institutional framework for warehouse operations and regulate sensitive product price fluctuations.
- Improve national statistics, specifically product classification, prices, as a base for conducting market analysis and forecasting.
- Establish trust worthy licensing and inspection system of warehouses to build reputation among commercial banks. Utilise licensing and inspection regimes to ensure that the warehouse facilities meet financial and physical criteria set by the government.
- Registration of secured rights to movable property register is a good basis for the warehouse system digitization. Integration of the property registration with the asset management systems will be enabling all engaged parties to follow the asset flows.

International

- The process will benefit the most when international organizations become actively engaged in a set-up process of the warehouse system establishment (technical assistance, funding) sharing accumulated knowledge and experience base for the successful establishment of the warehouse system.

- Assistance in developing the corresponding legislation regarding the set-up of operational legislation of the warehouse institution.

4.3.1.3. AGRI PUBLIC-PRIVATE PARTNERSHIPS (PPP)| AGRICULTURE

High levels of investments are required to unleash the potential of agriculture for sustainable development and poverty reduction in developing countries, but low public budgetary allocations to the sector have slowed growth. To address this problem, innovative partnerships that bring together business, government and civil society actors are increasingly promoted as a mechanism for pooling much-needed financing while mitigating some of the risks of doing business in the agriculture sector. Commonly referred to as public–private partnerships (PPPs), these initiatives are expected to contribute to the pursuit of sustainable agricultural development that is inclusive of smallholder farmers.

PPPs are a mechanism for improving the delivery of public goods and services by partnering with the private sector while retaining an active role for government to ensure that national socio-economic objectives can be achieved. Therefore, PPPs are a framework – that while engaging the private sector – acknowledge and structure the role for government in ensuring that social obligations are met, and successful sector reforms and public sector investment achieved.

PPPs are common in such sectors as infrastructure, health and education, but their application in the agriculture sector is relatively new. Agri-PPPs are broadly promoted as having the potential to help modernize the agriculture sector and deliver multiple benefits that can contribute towards the pursuit of sustainable agricultural development that is inclusive of smallholder farmers.

PPPs are not a new concept in Armenia. The 2019 program of the Government emphasized the importance of the PPPs policy development. “The Public-Private Partnership Policy of the Republic of Armenia" was approved on November 9, 2017[70]. The Government also adopted the “On the Public-Private Partnership” law in 2019[71], which further defines the PPP relations, implementation criteria, procedures, the institutional framework of governance, and applicable principles.

Armenia’s PPP legislation has been drafted with technical assistance from the EBRD as well as other partners. Further thinking may be required in the context of private partners’ selection procedures, the institutional framework set-up, and other aspects influencing PPP project structures. The bankability, effectiveness and efficiency of PPP projects should be at the core of such thinking. This can unlock new PPP opportunities. Successful and well-structured flagship projects create a positive momentum for a broader rollout of PPP schemes. The EBRD reportedly continues to work with the authorities to explore PPP opportunities. Structured properly and with due regard to management of long-term contingent liabilities and risks, these might alleviate pressure on the budget and help to crowd in international investor interest, thus providing positive multipliers[72].

[70] https://mineconomy.am/en/page/1414
[71] https://mineconomy.am/media/12960/PPP%20LAw%20english_official_2019_HO-113-N_en.pdf
[72] https://www.ebrd.com/documents/ogc/law-in-transition-2021-ppps.pdf?blobnocache=true

According to the PPP Knowledge Lab[73] Armenia has already implemented 17 PPP projects which have reached financial closure since 1990 for an aggregate amount of over USD 2.6 billion dollars. These projects targeted sectors like electricity, water and wastewater, railways, ICT, and airports. Therefore, it is clear that Armenia has developed both the legislative environment and the internal capacity to execute large PPP projects in infrastructure. Nevertheless, Armenia has not yet engaged in any agricultural PPPs.

The emergence of PPPs in agriculture responds to the failed delivery of a public good, such as food security, environmental protection and the viability of rural areas[74]. In these cases, by combining the resources and complementary capacities of both public and private partners under a well-defined legal and regulatory framework, governments can obtain economic and social benefits from public investments that they would have been unable to achieve alone because of limited technical expertise and management skills and/or a lack of resources. At the same time, the PPP framework can be used to design a set of market incentives to encourage private-sector participation in activities that would otherwise be considered of marginal commercial value and/or high risk.

Four common project types are identified:

- partnerships that aim to develop agricultural value chains;
- partnerships for joint agricultural research, innovation and technology transfer;
- partnerships for building and upgrading market infrastructure; and
- partnerships for the delivery of business development services to farmers and small and medium enterprises.

More concretely, PPPs appeal to policy-makers and practitioners of agricultural development for four main reasons:

- potential to leverage financing
- risk sharing,
- innovation and market access, and
- food security and inclusion.

However, to achieve this objective, an enabling environment needs to exist with adequate structures in place for both the governance and management of agri-PPPs. These must be based on a set of principles, which include:

- promoting sound institutional frameworks that support agri-PPPs;
- ensuring that good legislative and regulatory frameworks – rule of law – are in place and enforced;
- fostering prudent and transparent selection and budgetary processes;

[73] https://pppknowledgelab.org/countries/armenia
[74] FAO. 2016. Public–private partnerships for agribusiness development – A review of international experiences, by Rankin, M., Gálvez Nogales, E., Santacoloma, P., Mhlanga, N. & Rizzo, C. Rome, Italy, available at https://www.fao.org/3/i5699e/i5699e.pdf

- guaranteeing the affordability and value for money of PPPs as the best option for achieving stated public-sector objectives;
- designing adequate exit and adjustment strategies.

Having an adequate institutional set-up for engaging in agribusiness PPPs entails having a legitimate, clear and predictable institutional framework that is supported by well-resourced and competent public organisations.

Several case studies of best international practice suggest that optimal institutional framework is far from being realized. In broad terms, while some developing country governments may have gained experience in applying the PPP mechanism to infrastructure, mining, health and education, its application to agriculture is quite new. This novelty is reflected in the relatively weaker public institutional arrangements for agribusiness PPPs and the significant gaps in public-sector resourcing and capacity. The introduction and popularization of the PPP concept in agriculture has forced a reconceptualization of approaches to engaging with the private sector, which is reflected in the institutional changes at country level.

Agri-PPPs often do not fit easily into the overall existing public institutional framework for PPPs. This difficulty in fitting agri-PPPs into the existing institutional framework for standard PPPs is partly explained by the inherent traits of agri-PPPs, including their lower scale of investment, their multi-stakeholder involvement and their greater emphasis on social objectives such as food security and poverty reduction. The processes for feasibility assessment and partner selection are also much more flexible and simpler for agri-PPPs. The prevailing institutional set ups for PPPs are often biased in favour of infrastructure projects, whose characteristics in terms of scale of capital investments, commercial risk and contractual arrangements are completely different from those of the most common types of agri-PPP.

The table below provides a summary of the differences between agribusiness and traditional PPPs. Understanding these differences is essential for ensuring:

- adequate design of individual agribusiness PPPs and PPP programmes;
- alignment of the definition of PPPs in the agriculture sector with existing legislation designed primarily to support infrastructure PPPs;
- development of a specific legal and regulatory framework for the agribusiness sector, if needed.

TABLE 8: The differences between traditional PPPs and agricultural based PPPs[75]

Feature	Traditional PPPs	Agri-PPPs

[75] FAO. 2016. Public–private partnerships for agribusiness development – A review of international experiences, by Rankin, M., Gálvez Nogales, E., Santacoloma, P., Mhlanga, N. & Rizzo, C. Rome, Italy, available at https://www.fao.org/3/i5699e/i5699e.pdf

Scale of investment, cost and risk sharing and estimation of revenues	Investments of 8–9 figures are common The public partner must make in-kind or monetary contributions The private partner must contribute equity The private partner receives ROI from the revenue/user fees associated with the project The private partner generally bears all of the commercial risk	Lower scale of investments (minimum mobilized investment of US$100 000 stipulated for this study) No requirement for financial equity investments in the partnership – in-kind contributions (often unvalued) may be sufficient Private revenues are not necessarily estimated Risks may or may not be shared between private and public partners
Partners	A government entity and 1 or more private companies	May also feature SMEs, farmer organisations and other community groups working on joint initiatives with particular government agencies (donors and/or international technical agencies) and agribusiness firms 4Ps and multi-stakeholder partnerships are common
Formalization of arrangements	Formal contractual agreement between 1 core public and at least 1 core private partner More advanced contract modalities are favoured	May involve informal or formal arrangements Simpler modalities are used e.g. MOU Use of supporting contracts such as contract farming agreements common
Governance and management processes involved	Pre-feasibility and feasibility studies conducted prior to partner selection and contract negotiation Transparent bidding process applied to select private-sector partners Unsolicited bids discouraged	Feasibility studies conducted to assess potential for economic, social and environmental impact, usually involving value chain analysis Open bidding encouraged, but unsolicited bids from the private sector are possible, particularly in relation to innovation projects

FAO identifies eight main takeaways:

- To be successful, agribusiness partnerships need to align the partners' disparate interests and visions and reach consensus, particularly on public-sector objectives and priorities for promoting PPPs.
- The role of each partner should be clearly defined according to the unique skills and expertise that each can bring to the agri-PPP, with appropriate incentives designed to reward these roles.
- Effective agri-PPPs share risks fairly among partners and include risk management mechanisms to protect the most vulnerable.
- There is ample scope for the involvement of financial institutions as an additional core partner in agri-PPPs.
- While agri-PPPs can promote the inclusion of smallholders and SMEs, they are unlikely to have an impact on the poorest of the poor.

- Collective action is an essential feature of all agri-PPPs and helps both to promote inclusion and to reduce transaction costs.
- Sound institutional and regulatory frameworks are essential factors in the design of well-performing PPPs.
- There is a pressing need to improve the monitoring and evaluation (M&E) of agri-PPPs.

Recommendations|

- While PPPs have been used in Armenia for several years, and the Government has established the legislative environment for them, they have never been used for agriculture. The Government must therefore study and collect data for the specific situation of each region identified for pilot projects.
- The Government must adapt the existing legislation in order to accommodate the specifics of agri-PPPs, and ensure the development of the necessary economic actors, and local authorities.
- The Government may work with international partners in establishing pilot projects for the regions most likely to qualify for pilot projects.

4.3.1.4. DEVELOPMENT IMPACT BONDS| AGRICULTURE

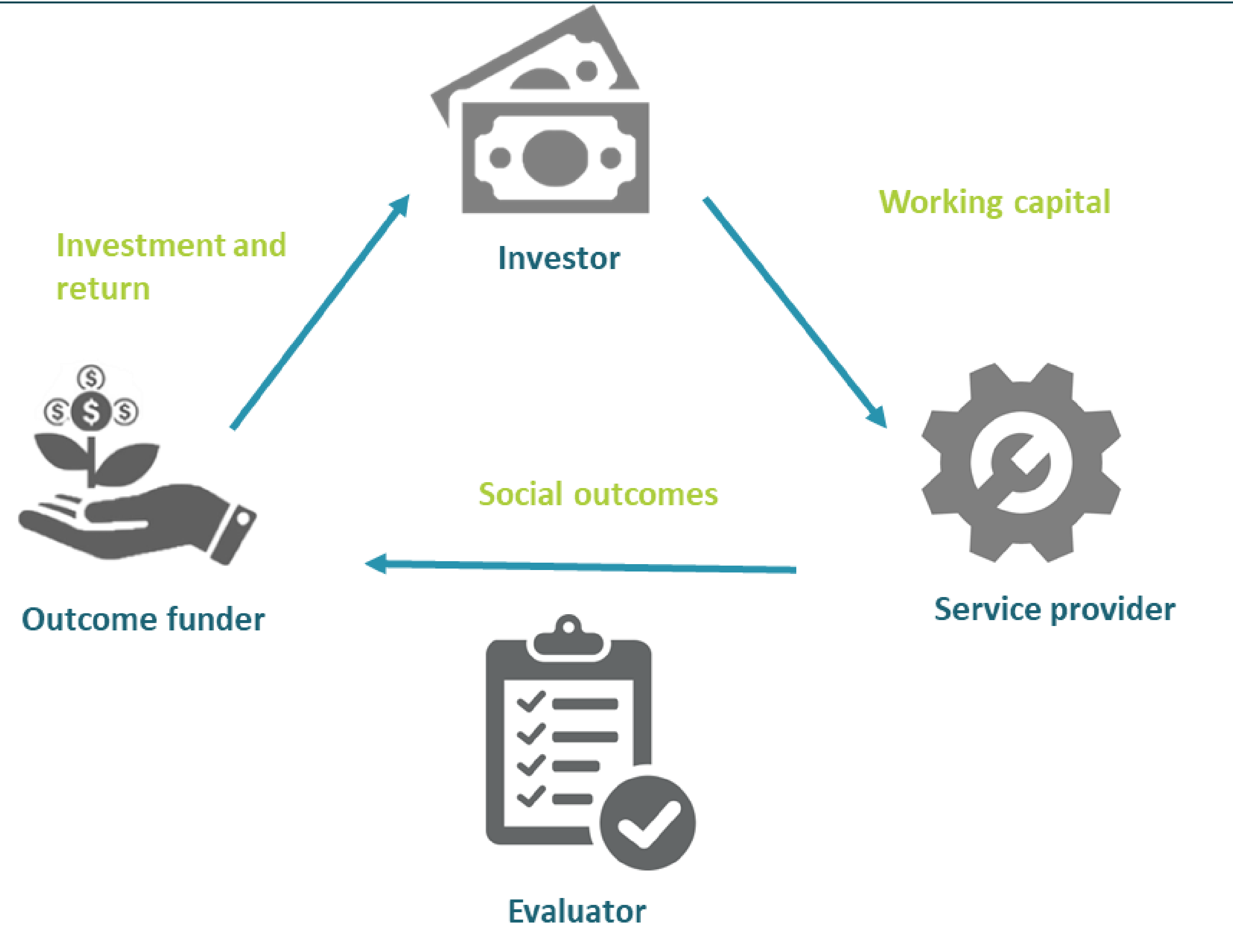
The impact bond is a mechanism in which investors contribute "upfront" financing for the implementation of public projects with determined social impact. In a common approach, the government hires an intermediary (or project sponsor) to carry out a social project in exchange for a payment based on the project's social effects.

The intermediary will raise project funding from commercial or charitable investors. It will next hire a service provider to carry out the project's objectives. If the project fails to meet set outcomes, the government or the project administer will not pay, and the investors will lose some or all investment depending from the contract terms. The objective of the scheme is to:

- Link impact investment with measurable social outcomes
- Allow affordable access to capital to impactful projects
- Increase revenue assurance for the implementation of public projects by up fronting the needed resources
- Implement stringent approaches to performance management by closely linking payments to performance by focusing on outcomes and ensuring that resources are effectively spent.

The scheme above exhibits the typical impact bond process; although, models vary per case and can have several modifications, with various stakeholders engaged or one stakeholder taking on many functions. Despite minor differences, all models share the same motivations of achieving outcomes and operating with up-front private funding.

FIGURE 13: THE STRUCTURE OF IMPACT BONDS[76]



APPLICATION TO AGRICULTURE | Agriculture's poor productivity is especially severe in the dairy sector, which is linked to poor input activity, resulting in consistently high levels of smallholder poverty, indebtedness, and external migration. Dairy farming is one of the most popular occupations among the rural general public, and it is perceived as more profitable than for example horticulture. The majority of middle-aged and young men migrate to Russia for seasonal work (mostly women take the responsibility and engage in this activity), which can generate an income equivalent to raising ten cows in Shirak[77].

Low cattle productivity caused by poor genetic factors, poor pasture management techniques, low-quality feed (mostly due to exorbitantly high prices), and inappropriate animal care, including poor housing and poor access to veterinarian services, are the most crucial factors in dairy farming for small and medium-sized farms.

UNDP piloted social impact bond in Armenia. This is Armenia's first social impact bond, and it will be assisting the growth of the local agriculture industry, specifically dairy value chain.

[76]Development Impact Bonds, Link
[77] Armenia Dairy Development Impact Bond: Summary of design proposals, EV Consulting

DESCRIPTION | A financial instrument allows impact investors to give upfront cash for specific projects that meet social goals. If the initiative is a success, the investors will be compensated with cash plus interest by the government (Social Impact Bonds), agency, or other philanthropic donor (Development Impact Bonds). If the project fails, both the interest and the money are lost. The instrument offers investors to fund social projects and make profit when the defined goals are achieved. The mechanism is known as pay-for-success in the United States, and social benefit bond in Australia.

Recommendations|

- If the predetermined outcomes are met, the government or any other outcome funder(s) is responsible for repaying the principal and premium. Thus, the government should design and budget a financial allocation in case of outcomes are met, to avoid bureaucratic delays and lengthy procedures.
- As most of the cases the government is the process initiator of defining the impact bond outcomes, it is vital to deeply study the potential and feasibility of areas for impact investment.
- As SIB/DIB engages several stakeholders, the government role is to ensure effective cooperation environment for all stakeholders, addressing implementation challenges that parities face.
- SIBs are complicated instruments that need technical expertise and resources to set up. As a result, policymakers should carefully consider whether a SIB or another mechanism is preferable for an intervention.
- Allow SIB mechanism to be incorporated in medium and long term budgeting to allow intermediate and final outcomes payments
- Design legal and financial tools allowing application of PFS in PPP structures
- Provide reliable guarantee mechanism acceptable from the private investors

4.3.1.5. INDEX-BASED WEATHER INSURANCE| AGRICULTURE

Armenian producers face several challenges to secure their household's income, while generating food provisions and an important economic contribution for the country. The impact of poor harvests reverberates differently throughout the economy and may cripple certain communities whose livelihoods are agriculture based. Hail, frost, and drought are the main risks identified by Armenian producers, affecting all regions and crops of the country[78]. While these risks are not the only ones experienced, their financial impact may be partially addressed through risk transfer mechanisms, as part of a wider initiative to improve the resilience of farmers and sustainability of the agricultural activities. This would directly support the achievement of several SDGs, primarily related to hunger, sustainable agriculture, and reduced inequalities.

DESCRIPTION | Index-based weather insurance (index insurance) is a financial adaptation option that pays out benefits based on a predetermined level of a weather variable, for example rainfall level, temperature,

[78] A Needs Assessment for Introducing Agricultural Insurance in Armenia in the Context of Climate Risk Mitigation, Clémence Tatin-Jaleran, 2014, available at https://info.undp.org/docs/pdc/Documents/ARM/Agriculture%20Insurance%20Report.pdf

floods or droughts. There are several types of index insurance, as the financial instrument can be tailored around the needs of each country or region. The World Bank Group managed Global Index Insurance Facility (GIIF) identifies three main types of index insurance[79]:

- **Area-yield index insurance**
  Area-yield index insurance was first developed in Sweden in the early 1950s and has been implemented in India since 1979 and in the United States since 1993. With this type of insurance, the indemnity is based on the realised (harvested) average yield of an area such as a county or district. The insured yield is established as a percentage of the average yield for the area (typically 50–90 percent of the area average yield). An indemnity is paid if the realized average yield for the area is less than the insured yield, regardless of the actual yield on a policyholder's farm. This type of index insurance requires historical area yield data on which the normal average yield and insured yield can be established.
- **Crop Weather index insurance**
  With this type of insurance, the indemnity is based on realisations of a specific weather parameter measured over a pre-specified period of time at a particular weather station or for a given satellite grid. The insurance can be structured to protect against index deviations that are expected to cause crop losses. An indemnity is paid whenever the realized value of the index exceeds or falls short of a pre-specified threshold. The indemnity is calculated based on a pre-agreed sum insured per unit of the index (for example, dollars/millimeter of rainfall). It has been commercially underwritten since 2002.
- **Normalized difference vegetation index (NDVI)/satellite index insurance**
  With this type of insurance, indices are constructed using time-series remote sensing imagery. For example, there are applications of false color infrared waveband to pasture index insurance, where the payout is based on a normalised difference vegetation index, which relates moisture deficit to pasture degradation. It has been applied to pasture in a few countries.

An initial review of the information available in Armenia, of the stakeholders in both the agricultural, financial, and public sectors and of the context of the agricultural production indicates that it may be possible to design insurance solutions for some of the risks faced by producers. The products' and programmes' designs may differ for each risk type in order to take into account the specificities of the risk, the data available and the financial sustainability of each potential model.

As a first step to offer insurance cover to Armenian producers, two products may be considered:

- An index-based product against frost using an extrapolation method for the temperatures at different elevations around the weather stations.
- A traditional cover for hail, pooling risks across areas and including innovative processes to reduce operational costs.

---

[79] www.indexinsuranceforum.org/faq/what-are-different-types-%E2%80%9Ccrop%E2%80%9D-index-insurance

Both of these may be offered through Public-Private Partnerships to optimise the public financial funds allocation required when offering agricultural insurance. Different levels of risk transfer may be envisioned and the financial structure may include communities, private insurers and reinsurers as well as national and local governments. Armenia should leverage the available historical weather data and valuable knowledge available and invest in its capacity to provide such data in the future. Availability of weather data and expertise should help Armenia start an agricultural insurance programme.

However, further analysis is required to determine the optimal processes, insurance cover details and how to address several remaining challenges. Currently available weather and agricultural data constitutes a starting point but remains incomplete. Mountainous terrain and small landholding suggest that substantial differences between regions will be necessary with implications for operational implementation: basis risk and operational expenses should remain limited to ensure attractiveness and sustainability of an agricultural insurance programme. Projections and insurance models will also have to account for the expected impacts of climate change.

Furthermore, in addition to weather-related risks Armenian producers also suffer from technical and market constraints. These last two points must be addressed by a broader policy framework to support farmers through adaptation mechanisms, training, and market development, although in part they can be addressed through insurance protection. Finally, distribution challenges to reach a critical mass of farmers also must be addressed. Finding various channels to extend the insurance cover to the largest number of farmers will make the insurance programme more inclusive and more sustainable as it reaches scale.

Iterative processes will be required to design successful programmes but the initial information and partners are available for the development of agriculture insurance in the country. It may be envisioned that a mix of traditional and index-based insurance products could be designed in a staged process, for hail, frost and drought risks and for an initially limited cover.

Developing a national insurance programme will require coordination among stakeholders from both the public and private sector and different stages in the expansion of the insurance programme. Distribution and risk retention, under a sound allocation of public support, will require the cooperation of the Government of Armenia, the potential distribution channels, private insurers and reinsurers as well as other national and international agencies. Both ADB and EBRD could be potential partners for the government in establishing index insurance, given their experience in this field in various countries of operations.

Recommendations|

- Index-based weather insurance has not yet been introduced in Armenia. The Government could consider to create the legislative environment to allow the development of the economic actors necessary.
- The Government may work with international partners such as ADB and EBRD to create the market conditions and launch pilot index-based weather insurance programmes.

- The necessary data collection should be organized as well as efficient data management systems should be designed and created for the implementation of index-based insurance.
- The existing agricultural insurance scheme should be analysed for defining the need of the implementation of the index-based insurance.

4.3.2. ENERGY AND ENVIRONMENT

4.3.2.1. OVERVIEW | ENERGY AND ENVRIONMENT

To address the market gaps in this cluster, the following instruments should be designed/launched:

- Concessional financing facility for financing construction of EV infrastructures (country-wide fast charging stations);
- Innovative financial instruments that could targeted increasing energy efficiency in agricultural processing companies and installation of Agrivoltaic solutions;
- Financial frameworks for utilization of individual storage facilities (by households and MSMEs or small producers), as well as large scale (battery or water pumped) storage facility that could potentially balance entire distribution network;

4.3.2.2. GREEN PUBLIC PROCUREMENT | ENERGY AND ENVRIONMENT

Green public procurement (GPP) is a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their whole life cycle when compared to goods, services and works with the same primary function that would otherwise be procured. Green Public Procurement is an important tool to achieve environmental policy goals relating to climate change, resource use and sustainable consumption and production – especially given the importance of public sector spending on goods and services.

The basic concept of Green public procurement relies on having clear, verifiable, justifiable and ambitious environmental criteria for products and services in the public procurement process, based on a life-cycle approach and scientific evidence base. The European Commission and a number of EU member states have developed guidance in this area, in the form of national GPP criteria. These are based on data from an evidence base, on existing ecolabel criteria and on information collected from stakeholders of industry, civil society and member states.

Green public procurement requires an adequate legal framework, such as in the case the EU, the provisions of the Treaty on the Functioning of the European Union and the EU Procurement Directives. Armenia, much like EU member states, is bound by the conditions of the Government Procurement Agreement (GPA) of the World Trade Organisation (WTO), and by bilateral trade agreements.

Sector-specific legislation must impose mandatory obligations for the procurement of certain goods and services, for example by setting minimum energy-efficiency standards which must be applied. Within the

EU, mandatory obligations currently apply to office IT equipment, road transport vehicles, buildings80, etc. This implies that Armenia may start with only one or two sectors that constitute the lowest hanging fruit as defined by their environmental impact, their budgetary importance, the potential to influence the market, as well as the availability of green alternatives. In most countries' cases this means construction, transport, food and energy-depended products. To assist contracting authorities in identifying and procuring greener products, services and works, the Armenian Government would also have to develop environmental procurement criteria which could then easily and directly be inserted into tender documents.

Green public procurement implementation requires significant planning: determining the scope at which it may be appropriate for each specific organisation, setting priorities and targets for activities, organising appropriate training for staff and monitoring performance. All of these elements may form part of a green public procurement policy[81].

The procurement preparatory stage is crucial for green public procurement. Thorough analysis and planning are essential before launching a tender to achieve any environmental goals. They also ensure that procedures run efficiently and lead to best value for money over the entire life cycle. Different procedures may be used to implement green public procurement, depending on the subject-matter of a contract and the information gathered during the pre-procurement stage.

Additional regulatory measures are necessary to ensure the application of technical standards, with which companies can prove their ability to perform the environmental management measures associated with a contract. This implies that the Government may adopt environmental management systems for proof of technical capacity. The principle of competition, however, must prevail ensuring that greening contracts does not lead to monopolies restricting the freedom of choice of contracting authorities. This may prove delicate for a small developing country like Armenia.

The OECD has launched the EaP GREEN programme for the eastern partnership (EaP) countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) to move towards a green economy by decoupling economic growth from environmental degradation and resource depletion. More specifically, the programme aims to:

- to mainstream sustainable consumption and production (SCP) into national development plans, legislation and regulatory framework with a view to provide a sound legal basis for future policy development, in line with the regional and international agreements and processes and consistently with existing EU acquis in the relevant policy areas;
- to promote the use of the Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) as essential planning tools for an environmentally sustainable economic development;

[80] European Commission 2016, Buying green! A handbook on green public procurement 3rd Edition, available at https://ec.europa.eu/environment/gpp/pdf/Buying-Green-Handbook-3rd-Edition.pdf

[81] OECD 2015, Going Green: Best Practices for Sustainable Procurement, available at https://www.oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf

- to achieve a shift to green economy through the adaptation and adoption of sustainable consumption and production practices and techniques in selected economic sectors (manufacturing, agriculture, food production and processing, construction).

Within this EaP GREEN, OECD places great focus on sustainable public procurement (SPP). It estimates that governments in the eastern partnership record expenditures of around 20% of GDP. Through sustainable public procurement, governments can lead by example and deliver greener economies. SPP can successfully harness the power of governments to stimulate a better environmental and social performance of products. Market-driven product information tools such as ecolabelling help define the sustainability of products and communicate this information to guide purchasing choices of individuals, businesses and public authorities towards more sustainable products.

The combined approaches of voluntary labelling and sustainable public procurement are important elements to create a dynamic framework for improving the performance of products throughout their lifecycle, stimulating demand and supply of better products, and helping consumers to make better choices. In the transition to a green economy, these tools are playing an important enabling role in the overall market transformation that is needed to put in place an economic model, which enhances natural capital, saves resources, and lowers environmental as well as social risks.

The EaP GREEN aims to[82]:

- Assist countries in the development and implementation of sustainable public procurement policies by increasing awareness and building the capacities of policy makers and procurement managers in the EaP region;
- Effectively implement sustainable public procurement in targeted countries;
- Raise awareness of public authorities, producers and consumers about the potential of eco-labels;
- To increase understanding and skills of policy-makers in applying eco-labelling.

The programme includes activities such as

- **Regional awareness raising and capacity building** workshops on sustainable public procurement. The training sessions will target relevant policy-makers and heads of procurement in the region to increase their awareness and capacity for sustainable public procurement policy development and implementation. The training sessions will aim at highlighting the potential benefits that could be derived from sustainable public procurement, the challenges as well as the opportunities of sustainable public procurement implementation based on existing experiences.
- **Development and implementation of sustainable public procurement policies** in three countries. Technical support will be provided to pilot countries for the implementation of SPP, as well as awareness raising and capacity development to enhance synergies between eco-labelling and sustainable public procurement, targeting policy makers. Following the UNEP's sustainable

[82] https://www.oecd.org/env/outreach/eapgreen-public-procurement.htm

public procurement Approach, National sustainable public procurement Action Plans will be developed.

UNEP is the lead partner that OECD has engaged for this element of the programme.

Recommendations|

- The Armenian Government should work closely with the OECD and UNEP on the sustainable public procurement component of the EaP GREEN programme. While this programme falls short of the EU and OECD rules and principles for green public procurement, it may be more appropriate for Armenia to wait before adopting green procurement.
- The Government should analyse the applicability of green public procurement for the country's development stage.

4.3.2.3. AGRI-RENEWABLES| ENERGY AND ENVIRONMENT

Innovative products for green energy utilization in agricultural sector. Utilization of the net metering approach that allows MSMEs and households to install rooftop solar PVs with an installed capacity up to 150 KW and thereby substitute energy supplied by Electric Networks of Armenia (ENA) has been growing in the corporate and household sectors. The agricultural sector currently is lagging behind these two client sectors due to a number of other challenges, such as the need to replace outdated processing equipment. The sector is also held back by substantial support offered in the form of low interest rates and cashbacks by the Government to a number of specific subsectors, which negatively affects the sector's readiness to borrow under commercially available conditions.

Furthermore, the concept of Agrivoltaics, where solar PV modules are installed on agricultural land in a way that allows continued agricultural use, and which is successfully piloted in a number of other countries, has not penetrated to Armenia yet.[83] To address this market gap Government subsidies and other concessional funding from climate funds and MDBs are required to finance a number of demonstration installations across regions.

Recommendations|

- The Armenian Government should develop rules for Agri-renewables combinations and raise funding from donors and the private sector to support this concept.

4.3.3. GENDER AND INCLUSION.

4.3.3.1. GENDER RESPONSIVE BUDGETING| GENDER AND INCLUSION

The GRB process links gender equality policy and public finance management to ensure a fairer and efficient distribution of available resources to women, men, and their sub-groups disaggregated by a variety of backgrounds (disability, age, social status, etc.). Gender responsive budgeting is an effective

[83] https://www.sciencedirect.com/science/article/pii/S030626192030249X

approach, as it considers the experience and specific needs of women and men when allocating the budget. As a result, the targeted resources can be distributed in a manner to ensure the strengthening of gender equality. This process is continuously assessed so that new, higher targets in reaching gender equality can be set and the ways in achieving them can be outlined.[84]

In brief, Gender Responsive Budgeting[85]:

- Acknowledges that budgets are not necessarily neutral. Policies, activities, and how they are supported have diverse and uneven effects on men and women, as well as various groups of men and women (young, old, urban, rural, and so on). Budgets impact men and women differently since they have various roles and responsibilities, notably in the economy.
- Promotes gender equality and gender mainstreaming by examining how program resources are distributed and spent - who benefits the most and who benefits the least.
- Does not imply a distinct budget for men and women, nor does it necessarily aim to raise the amount of money spent on women — rather, it involves raising expenditure in specific areas that empower women and girls and eliminate inequality.

GRB may manifest in a variety of ways[86]. It can be carried out at the municipal or national level by governments. Elected politicians or government personnel can arrange it. It can examine the entire budget or just a few areas of it. Parliamentarians and civil society organizations may impose a significant pressure on the government to implement gender-responsive budgeting by asking the relevant questions or conducting their own analyses.

Recommendations|

GRB can engage a variety of parties, including the government, civic society, academia, and non-governmental organizations (NGOs). GRB works best in the following cases:

- Ensuring that a framework for converting gender analysis into policy change is in place.
- Support actions are adjusted to the economic and political situation.
- There is political commitment and leadership making budgets work for promoting gender equality.
- Government involves civil society groups, notably women's rights organizations in the gender responsive budgeting initiatives.
- Key players: ministries, officials, parliamentarians and civil society have sufficient awareness and capacity to execute gender responsive budgeting.
- Government ensures that there are gender-disaggregated statistics and other data available.

[84] L. Hovhannisyan and Sh. Ghahriyan, "How to work on gender responsive budgeting in Armenia," 2019
[85] Gender Responsive Budgeting, Link
[86] A Guide to Gender-Responsive Budgeting, OXFAM, Link

4.3.3.2. WOMEN'S LIVELIHOOD BONDS| GENDER AND INCLUSION

These are innovative financial instruments that bring together multi-sector ecosystem actors to mobilize large-scale private investment to drive women's economic empowerment across multiple Sustainable Development Goals (SDGs) – including SDG 1, 2, 5, 8, 13 and 17. These bonds were issued by Impact Investment Exchange (IIX), which defines itself as a pioneer in impact investing and the global leader in sustainability.

Impact Investment Exchange is unlocking over USD 150 million in capital through Women's Livelihood Bond Series (WLB Series), which will empower over two million women in South and Southeast Asia. The WLB Series helps women access affordable credit, micro savings and insurance, agricultural inputs, as well as clean and affordable energy. Capital is provided up-front, allowing women to fund income-generating assets and skills to transition from subsistence to sustainable livelihoods. The WLB Series is well aligned with 12 of the United Nations' Sustainable Development Goals (SDG), particularly SDG 5: Gender Equality and SDG 13: Climate Action.

The project recognises that empowering women through sustainable livelihoods in turn helps their community adapt to a changing climate. The Women's Livelihood Bond 2 (WLB2) builds on the success of the Women's Livelihood Bond 1 (WLB1), an USD 8 million debt security closed in July 2017 which creates sustainable livelihoods for over 385,000 women across Southeast Asia. The WLB2 was listed on the Singapore Stock Exchange. The WLB2 is an innovative financial instrument that mobilizes private sector capital for positive social and environmental impact, while offering financial returns to investors independent of social outcomes[87].

Key Facts

- The first Women's Livelihood Bond (WLB1) unlocked USD 8 million of private capital, which created sustainable livelihoods for 385,000 women in Southeast Asia.
- The second Women's Livelihood Bond (WLB2) significantly increases the number of women impacted by the Bond to over two million across South and Southeast Asia.
- Majority of the beneficiaries of the WLB2 are women – and by creating opportunities for advancement, the Bond provides women with the tools to become leaders in their economies and affect change from the ground-up.

The Women's Livelihood Bond 2 (WLB2) – a USD 150 million bond series was designed to empower over two million underserved women in South and Southeast Asia with sustainable livelihoods. The bond builds their resilience to climate change through access to affordable credit, products such as disaster insurance, agricultural inputs to support climate adaption, as well as clean and affordable energy to support climate change mitigation. As such, the WLB series effectively changes the dominant narrative from women as victims of climate change to women as solutions to climate action.

---

87 https://unfccc.int/climate-action/momentum-for-change/financing-for-climate-friendly-investment/women-livelihood-bond-2

The mechanism itself is an innovative financial instrument that mobilizes private sector capital for positive social and environmental impact. It offers financial returns to investors independent of social outcomes, and is able to be listed on both social and traditional stock exchanges. The WLB2 builds off of the success of IIX's first Women's Livelihood Bond (WLB1), which was the world's first impact investing instrument and the first financial instrument focused on women to be listed on a stock exchange, reported both social and financial returns.

In order to help mitigate climate change, the WLB2 includes environmentally focused enterprises in the clean energy and sustainable agriculture sectors. Through scaling clean energy enterprises, communities can decrease their dependence on non-renewable sources of power, thus reducing carbon emissions. Similarly, by expanding sustainable agriculture enterprises, communities can better utilize their natural resources while decreasing pollution and wastage.

The Bond's capacity to scale up sustainable, climate-smart agriculture has been shown to increase employment opportunities, grow incomes, improve resource efficiency and elevate productivity to allow for less time spent on subsistence activities. In the long-term, this allows for reforestation and the cultivation of resilient and sustainable communities.

The WLB2 reduces vulnerabilities of underserved women and their communities, enabling them to better cope with the effects of weather-related shocks. By scaling environmentally focused enterprises, communities in the developing world are better able to access affordable and clean energy. This in turn decreases their dependence on traditional forms of energy that are typically inaccessible or prohibitively expensive in times of crisis.

Moreover, scaling up sustainable agriculture increases employment opportunities, the amount of money earned and productivity to allow for less time spent on subsistence activities. In the long term, this allows for reforestation and the cultivation of resilient and sustainable communities. WLB2 focuses exclusively on women as IIX believes that women are the key to unlocking more resilient communities. This is because women are the backbone of rural enterprises and also play a pivotal role in advancing the overall welfare of their families and the wider community. By empowering them with capital resources unlocked by WLB2, women will be positioned to reach their full economic potential and spearhead climate adaptation in their communities.

The Women's Livelihood Bond can also be expanded to include more countries. WLB2 includes more developing countries like India, Sri Lanka, Indonesia, as well as Cambodia and the Philippines. In the future, IIX aims to bring the Women's Livelihood Bond to developing countries across Asia, Latin America and Africa. In addition, IIX aims to launch the Women's Climate Bonds (WCB) which positions women as solutions rather than victims of climate change, and will focus on Sub-Saharan Africa.

The third iteration, WLB3, closed its USD 27.7 million issuance in December 2020 and is focused on supporting women-focused enterprises in India, Indonesia, Cambodia, and the Philippines that are directly supporting women to respond to, recover from, or rebuild their livelihoods in the COVID-19 pandemic. The fourth issuance in the WLB series is scheduled for the fourth quarter of 2021.

The WLB series has also brought a wide range of private and public sector partners across many industries into the sustainability equation, contributing to a larger ecosystem-building process of knowledge sharing and collaboration. This enables ecosystem actors to gain expertise in innovative finance and climate friendly investment.

Recommendations:

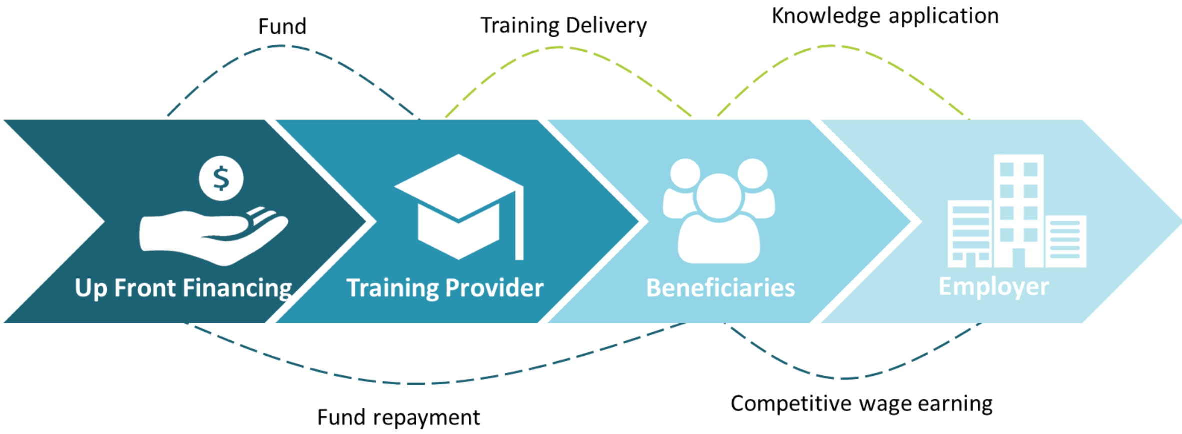
- As part of the development of impact bonds, the government should pay specific attention to gender aspects, and aim to develop a pipeline for a dedicated financial instrument of this kind.
- Pipeline building for these gender-focused bonds may require further investigation of specific barriers experienced by women in accessing finance in Armenia.

4.3.3.3. CAREER IMPACT BONDS

The Career Impact Bond is an innovative financing model that enables the beneficiaries (students, workforce participants needing upskilling, etc.) to participate in quality, industry-demanded comprehensive training courses. The social finance investors are providing upfront financing to cover training administration and development costs. The participants who graduate and get employed on specified income will repay the program costs through income-based payments over the specific period (some programs even define grace periods for the beneficiaries). Those who do not achieve employment and target income will pay nothing.

The scheme of Career Impact Bond engages several stakeholders such as impact investors, Government, philanthropists, service providers (training providers). This mechanism is unique as unites stakeholders (around shared goal and up front fund) which impacts upskilling the workforce with competitive competencies and contributing high income generation.

FIGURE 14: CAREER IMPACT BONDS



This financing model eliminates possible barriers present in the case of standard tuition loan products. Most of the loans are applying credit scores while providing a loan, in contrast the CIB considers the beneficiary learning potential before engaging in the training program. This enables many women with limited access to traditional finance (limited professional experience due to maternity) to get profound knowledge and earn competitive wages. To minimise the non-return rate, the scheme relies on the comprehensive selection process of beneficiaries by revealing their learning and upskilling potential.

The Career Impact Bond model is beyond providing upfront financing. The model scheme is flexible by providing student-centred support to the beneficiaries. The model is designed for incorporation of the study with life responsibilities. Considering individual needs, program might allocate dedicated funds for childcare, housing, transportation etc. to maximize women's chances to succeed.

The course focus of Career Impact Bonds can be around the high growth potential industries aligned with the country's economic development priorities. Moreover, to correspond with the international development trends, it is vital that the courses target highly demanded skills88such as analytical thinking and innovation, technology design and programming, complex problem-solving, active learning etc.

The mechanism offers a sustainable operating model, once the students successfully earn income, they will start to make repayments. In 2020 New Jersey became the first state to announce the establishment of the Pay It Forward Fund (publicly backed Career Impact Bonds that recycle funds based on employment outcomes).[89]

Box 9: Origin of the Career Impact Bond

Social Finance in cooperation with the General Assembly90 (GA) (a global education company that educates adults with the demanded digital-related skills) launched the first Career Impact Bond. The project delivered training to more than 1,000 individuals in 10 U.S. cities on tech related skills (e.g. coding).

[88] Future of Jobs, World Economic Forum, 2020
[89] Paying It Forward, [Link]
[90] Access to Opportunity, [Link]

GA is licensed as trade school, rather than traditional high education, thus GA students are not eligible for traditional student loans. They study to build new careers.
The GA designed courses are aligned with the job market requirements and agile to adapt in case of market changes. In 2018 GA launched Catalyst program an Individual Savings Account model that provides ISA financing opportunity with the following terms:

- ISA holders will make 48 monthly payments of 10% of their income when they get employed,
- Graduates will have six-month grace period.

Recommendations|

Public

- The Effectiveness of the Career Impact Bond Mechanism relies on the precise determination of the development areas and recognition of the potential audience. The international organizations currently conduct feasibility studies (Mapping the Labor Market Mismatch and the Skill Gaps, USAID, 2022), which is a solid basis for the Government to consider and take actions.
- The Government should enable the development of the training providers or empower the existing organizations (NGOs, Universities, etc.) that are capable of delivering high quality training programs that will fill the skill gaps in the workforce. As an alternative, the Government might cooperate with international training providers to obtain high quality curriculum and ensure comprehensiveness of the training programs.
- On the way to decreasing the unemployment rate and leading women into more competitive sectors of the economy, it is recommended the Government to establish “Pay It Forward Fund” and become the outcome funder of the Career Impact Bond.

Private

- Close PPD is essential to reveal skills and knowledge gaps available in the workforce.
- It is recommended that private companies actively participate in the process of setting learning outcomes. This will ensure the program outcomes alignment with the industry demands.
- The private companies that operate in priority areas are recommended to be engaged in the curriculum development of the training courses.

International

- International organizations may co-finance the “Pay It Forward Fund”.
- To ensure the high-quality delivery of training courses, the international organizations are recommended to enhance service providers’ capacities and establish comprehensive monitoring and evaluation framework for instrument efficiency.

4.3.3.4.ACCELERATOR AND CATALYTIC FUND| GENDER AND INCLUSION

Overview| The Accelerator and Catalytic Fund strategy incubates early-stage businesses to assure a pipeline of investable prospects for a catalytic investment fund, with an emphasis on women's job opportunities. It is divided into the following stages:

- An accelerator program designed to give grant-based business assistance and funding to early-stage micro-enterprises.
- Enterprises that demonstrate viability are enrolled into the model's next stage and earn funding from social investors via the catalytic fund.

Description| The model may be divided into several variants. In the basic concept, an accelerator program is established to give grant-based business financial support to early-stage micro-enterprises. Enterprises that demonstrate potential are enrolled into the model's next phase and get funding from social investors. The first seed financing is repayable as the business begins to grow. The fund is de-risked by the flow of elevated firms recruited through the accelerator.

In more complex variants, the model can be further de-risked in following ways:

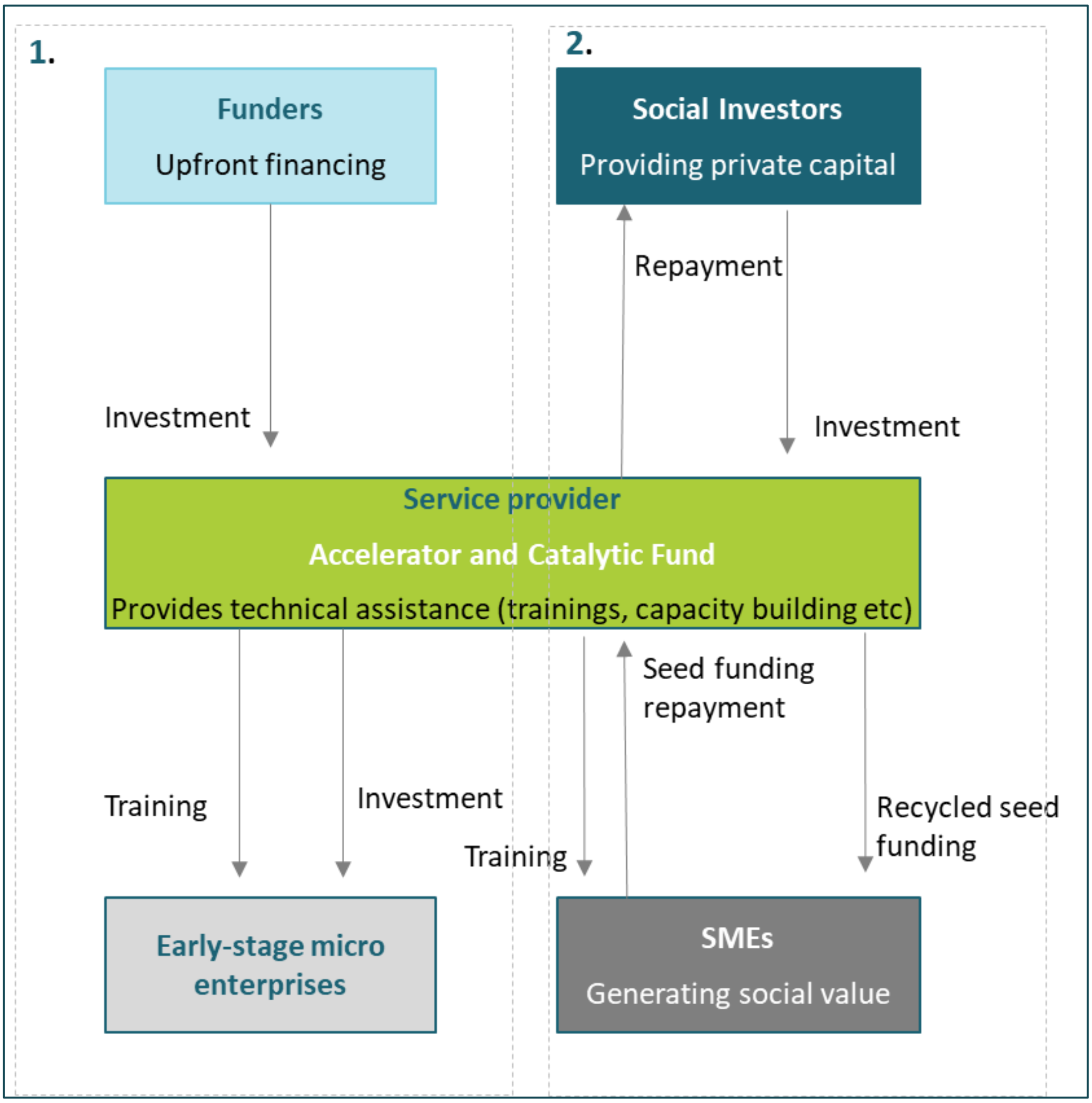
- A funder may offer a first-loss guarantee up to a specified sum, paying the investor if the early-stage firms default on their loans.
- An outcomes funder may also be engaged to pay based on the attainment of certain results, such as the recruitment of women or the creation of social value. This generates an extra funds stream for investors, monetizing the impact.

Depending on investor desire, payback of investor cash might be recycled to establish a revolving fund, increasing the fund's lifetime and decreasing its reliance on philanthropic contributions over time. If the fund is not exhausted too soon by excessively risky investments, it has the potential to become a self-sustaining model. Various initiatives promote SME development, where limited funding prohibits small and medium-sized businesses from achieving their full potential. The approach guarantees that those SMEs with the ability to develop and have promising potential have the opportunity to do so by getting technical assistance in combination with access to funding.

Success factors| Before the revolving fund can be established, it is desirable for the accelerator run for at least a year. This is to observe whether there is a consistent pipeline of micro-enterprises that can get funding. This is the major issue with this model, as several stakeholders stated that Armenia's project pipeline is quite thin. Usually impact funds fail early due to a lack of projects in the pipeline, and it is possible that this model will have to incubate firms from the ground up, which would require more upfront time and grant financing before investments can occur. One possibility is for a service provider to collaborate with a fund manager to develop a pipeline of micro-enterprises. Service provider might also consider working not just with female led entities but widen the pool of high potential SMEs.

Figure 15: How the Accelerator and Catalytic Fund works[91]

[91] Innovative Finance for Employment, Social Finance, 2021, Link



Repayable grants| This approach assists enterprises in establishing solid business practices from the start. Promising SMEs are advanced to a fund where they may have better access to cheap capital to help them scale and prepare them for future investments. Moreover, the model might assume that after the SMEs accelerated enough to generate revenue they start repaying the grant amount. The grants will be repayable, that is, if the program succeeds, as a result of which revenues are generated, an annual royalty fee is paid as a percentage of the revenue until the full amount of the grant is repaid. For the model to be self-sufficient and the grants provided to be used for the purpose, the repayable grant model may also include a co-financing share.

Depending on the complexity of the model taken forward, several stakeholders would be engaged, as set out below.

Figure 16: Stakeholder Engagement

The Investor

Social investor that is willing to put the investment in the fund, not expecting market returns.

Although commercial investors are not likely to invest in this model due to the high of the investment, the commercial banks along with other investors can make investments in the late stages of the business acceleration, such as acceleration graduation stage. In this stages the businesses pass the extensive capacity building of the acceleration process and are functional enough to get funding for further growth.

The Service Provider

Provides the extensive capacity building process, overall program coordination and management.

The service provider can be a single entity or a consortium of entities shaving specialized expertise in specific service offered. In case of the consortium model of service provider one of the companies act as lead entity to execute the process.

The Fund Manager

Financial management of the funding schemes, such as grant funding for acceleration component, as well as revolving investment for the expansion.

To ensure the harmonization between these two funding mechanism (acceleration and expansion)

one entity should be engaged in the process. It is also important that Service provider and fund manager closely cooperate to ensure that right entities are selected for acceleration and investment stages.

Validator

Validates the outcomes which trigger the repayment to investors.

The various aspects would need to be implemented in phases, first launch of accelerator, then set-up of revolving fund, and addressing supply side demand for such finance. This implies that the process will take at least five to seven years to properly develop, attract all stakeholders fundraise, execute, operationalize, and achieve outcomes. Depending on the investment criteria, the revolving fund may drain or continue to expand after the seven-year period.

Further study is needed to understand the model's feasibility and the predicted loss rate of investing in tiny SMEs. It is necessary to have an accurate assessment of how many SMEs that get investment are likely to fail, as this would impact the levels of expected return and, in the case of a revolving fund, how rapidly the fund is depleted. Small entities are more likely to request small volume investments, which assumes larger returns and high transaction costs in comparison to the amount of the investment.

During the accelerator phase, all the risks must be tested. Staff with specialized skills, knowledge, and know-how will be required to achieve the model's complete success. The model is among the most complicated instruments due to the wide range of beneficiaries and issues it strives to solve. A fund manager or equivalent with portfolio management expertise would be needed to manage the risk of engaging and financing enterprises.

Recommendations|

- The Government of Armenia should assess the potential for government-supported accelerator and catalytic funds in close cooperation with the private sector.
- A nationwide effort to establish and run accelerators that will operate as business catalysts is included in the ecosystem development plans.
- Support and initiate the development of technological entrepreneurship to assists the ecosystem of developing the pipeline of investable innovative start-ups.
- Support the ddevelopment of technology commercialization competencies.
- Utilize social investors and initiate awareness raising campaigns matching investable projects with the potential investors.

- Develop or outsource solid service providers by engaging professional coaches and network of mentors.
- To ensure the smooth operations of the Acceleration and the Catalytic Fund it is recommended that the service provider ensure the harmonization between two funding mechanism present in the scheme (acceleration and expansion)

4.3.3.5. LOANS WITH ALTERNATIVE CREDIT RISK ASSESSMENT| GENDER AND INCLUSION

Overview| Fintech organisations are developing alternative risk assessment mechanisms that allow financial institutions to assess the credit worthiness of women who lack sufficient credit history. These mechanisms allow women to get access to credit for business or emerging personal needs. The organisations leverage advanced data analytics tools as well as emerging artificial intelligence-based technologies like machine learning and natural language processing to establish credit scores for underserved women. Credit scores are determined by capturing consumer data from mobile phone records, utility bills, loan applications, and social media. This enables women to more easily gain access to credit, also enabling them to build their credit history by beginning with borrowing a small amount, and over time, borrowing a sizable amount.

Alternative credit scoring is not targeted to women only. This financial instrument helps people who were incapable of entering the credit system, by giving them easy loans and access into the system, thereby providing them with easier access to development opportunities and to start establishing their credit scores. On the other hand, it helps lenders gain access to the underbanked sections of the population, by using alternative credit scores to extend credit to this new target group. This brings down risks for alternative lenders, as well as, lowers the interest rates for borrowers, based on their alternate credit scores.

When using factors other than credit scores from past loans, credit scoring companies use the applicant's social and digital data to ascertain the above three factors, i.e., their ability and willingness of paying back the loan and if they are stable financially to ensure complete repayment. To put together an alternative credit score, credit scoring agencies use tools that run the following kinds of data through AI and ML-powered algorithms, such as utility bill payments, bank account details, telecom payments, or rental and lease payments.

Payments towards these bills and services show the applicant's intent and ability to pay their monthly dues in a disciplined manner[92]. Often, this portrays a person's creditworthiness more accurately than a traditional credit report would, as credit ratings reflected on traditional credit reports tend to last for 2-3 years.

[92] https://lendfoundry.com/blog/what-is-alternative-credit-scoring-why-is-it-so-popular/

Alternative credit scoring is extremely beneficial for the lending industry specifically and the finance industry, in general, given the immense opportunities it offers to both lenders and borrowers. Here's a look into some of the other factors that make alternative credit scoring such a popular concept.

- **Improved assessment:** Alternative credit scoring is focused on current parameters more than historical data. This makes it a better option for applicants with no credit score, as their report can be generated based on their current financial discipline and habits, as well as, their social interactions which provide a better view of their ability, stability, and intent of paying back the money they have borrowed. As such, alternative credit scoring emerges as the clear winner when it comes to accuracy, as compared to traditional scoring methods.
- **Increased market reach:** Alternative credit scoring has opened up the marketplace for a large portion of the unbanked population and lenders who would be eager to lend to this particular target group based on their payment discipline and alternative credit score. This not only opens up a new market for lenders but also provides applicants with more credit options and competitive interest rates to choose from.
- **Enhanced customer experience:** By using automated alternative credit scoring processes, lenders can minimize loan origination costs and transfer this benefit in the form of lower interest rates to applicants. By using automated processes for underwriting loans, lenders can also significantly reduce bias and errors that are common in manual underwriting.

Alternative credit scoring is already a well-accepted model in the US and has helped both fintech-powered lenders and new borrowers a lot by making credit accessible. Industry influencers have predicted that alternative credit score is all set to change the lending landscape in developing countries like India and China. The scope for its growth and adoption is even higher in India where a large part of the population remains unbanked.

There are indeed numerous examples of loans with alternative credit risk assessment applied in developing countries towards meetings SDGs[93] in China, Mongolia, Indonesia and Ethiopia. Most comparable for Armenia, however, is the related ADB work in Georgia. There ADB undertook the Unlocking Innovations for Development through digital financial services (DFS) project as part of the technical assistance on "Strengthening Financial Sector Operations in Asia and the Pacific".

The project aims to identify opportunities that would initiate increased usage and adoption of digital financial services, especially for women, those in rural areas, and micro-, small-, and medium-sized enterprises. Through the project, ADB is working with FINCA Bank Georgia to increase access to finance to rural micro-, small-, and medium-sized enterprises and smallholder farmers through digitization of field-based loan processing. FINCA Bank Georgia will partner with agri-product stores as agents to offer credit to farmers for farm inputs or machinery. The data regarding the customer's agricultural business will be

[93] ADB Sustainable Development Working Paper Series No. 67, April 2020, Innovative Financial Products and Services for Women in Asia and the Pacific Arisha Salman and Keiko Nowacka, available at https://www.adb.org/sites/default/files/publication/576086/sdwp-67-financial-products-services-women-asia-pacific.pdf

gathered digitally and fed into a credit decision tool to approve or reject a loan within 15 minutes of the request. In the event of a successful loan application, funds will be disbursed directly to the agri-dealer's account and the customer will receive their requested supplies. Borrowers (largely comprising women) are benefiting from the easy access to credit as well as fast and convenient loan processing—with one trip to the agri-supplier they can purchase the supplies and access the financing.

Recommendations|

- The Government of Armenia should adopt incentives for financial institutions using alternative credit risk assessment in order to quickly open opportunities for all parts of the society to become bankable.
- Armenia should work with its international partners such as the ADB to promote the introduction of alternative credit risk assessment towards disadvantaged parts of the population, and women.

4.3.4. INFRASTRUCTURE

4.3.4.1. GUARANTEE FUNDS| INFRASTRUCTURE

Guarantee funds are not suitable only for SMEs, but also for large infrastructure projects. For example, the Indonesia Infrastructure Guarantee Fund (IIGF) is an independent State-Owned Enterprise 100 percent owned by the Government of Indonesia. IIGF was established in December 2009 to be the sole institution — or the "single window" — for appraising, structuring, processing claim payment and providing government guarantees for infrastructure Public-Private Partnership (PPP) projects in Indonesia[94].

Faced with increasing demand for infrastructure to support Indonesia's economic growth, the government has prioritized attracting private capital, expertise and efficiency into public infrastructure development. The government committed to providing a robust framework for private financing of infrastructure and has established the IIGF to mitigate the private sector's exposure to the risk of Government actions/inaction vis-à-vis specific PPP contracts/agreements.

IIGF offers two types of guarantees:

- IIGF guarantees which are backed by IIGF's own capital, and
- World Bank-supported IIGF guarantees which are backed by World Bank financing. These guarantees are not World Bank Group guarantees, but rather IIGF guarantees backed by financial support provided under the Indonesia Infrastructure Guarantee Fund Project. World Bank-supported IIGF guarantees will only support projects that would be eligible for World Bank Group support. Both types of guarantees—IIGF Guarantees and WB-Supported IIGF Guarantees—follow government regulations and a common set of internationally accepted norms and operational procedures codified in IIGF's formal documentation.

[94] https://www.worldbank.org/en/country/indonesia/brief/faq-indonesia-infrastructure-guarantee-fund#1

IIGF is designed to be a credible and the sole provider of government guarantees in Indonesia. This is ensured through a robust governance structure minimising risk of political interference, high standards of transparency and disclosure, ring-fencing of IIGF's assets, and a mechanism to ensure full operational independence of IIGF.

Recommendations|

- The Government of Armenia should establish the proper legislative environment to enable the creation of guarantee funds in the infrastructure sector.
- The Government should set up a guarantee fund for large infrastructure projects and work with its international partners, especially the World Bank, EBRD and ADB to set up guarantee funds for projects potentially funded by these institutions, as in the case of IIGF.

4.3.4.2.INFRASTRUCTURE FUNDS| INFRASTRUCTURE

One of the most common, but least written about, public policy instruments implemented by governments to encourage private finance has been the establishment of Public Infrastructure Funds (PIFs). One of the benefits of PIFs is that they are unique, adapted to meet specific country contexts, but conversely this can make them hard to accurately define. They are a specific type of infrastructure financing fund that uses public resources to leverage much larger amounts of private financing for infrastructure development.

The P3 Canada Fund was created to improve the delivery of public infrastructure and provide better value, timeliness, and accountability by increasing the effective use of public-private partnerships (P3s). It was designed to incentivise innovation and encourage inexperienced governments to consider P3s in public infrastructure procurements. It was the first infrastructure funding programme in Canada that directly targeted P3s. It was a Government of Canada fund that supported subnational governments to undertake PPPs by providing up to 25 percent of project costs at substantial completion of the project. PPP Canada invested over CAD1.3 billion (just over USD1 billion) in 25 large or complex infrastructure projects across Canada in a variety of asset classes. Based on official estimates, these P3s have combined capital costs of over CAD6.6 billion and have resulted in savings of approximately Can$1.7 billion compared to traditional procurement approaches.

Recommendations|

- The Government of Armenia could investigate the potential for the establishment of a dedicated infrastructure fund, with initial funding provided by budget funds, against clear deliverables.
- To deliver such a fund in a relatively small country like Armenia, a pipeline of potential projects would need to be defined in advance.
- In order to establish such a fund, major development partners such as private sector-focused MDBs could be engaged to provide both funding and project structuring advice.

4.3.4.3. INVESTMENT TRUST | INFRASTRUCUTRE

Investment trusts are closed-end funds that are constituted as public limited companies. They can hold a variety of asset classes, according to their specific, individual investment objectives and risk profile and the assets held can be global. Investment trusts have an unlimited life and can issue new equity or borrow to finance their activities. The attributes of investment trusts have made them an important vehicle for investing into the green economy.

Until recently, the green economy as a sector for investment had been fragmented across asset classes. A green investment trust could in theory hold all asset classes – from cleantech start-ups to privately developed renewable energy assets to green bonds – within one vehicle.

In practice, green investment trust strategies vary based on specialisation and their target investor appetite. Some focus on renewable energy projects – often with a 'yieldco' model (see instrument #19 below) – while others focus on listed or private equity in green economy companies. Investment trusts are focusing on a greater diversity of technologies and geographical markets. Future developments are likely to see focus on greening sectors, such as real estate or transport.

A green investment trust provides a mechanism to spread risk when examining the potential for new technologies, whilst providing daily liquidity, an ability to mark the asset to market and a clear exit strategy.

By working with expert fund managers and pooling funds with other interested market participants, an issuer can leverage the capital of their fellow investors and not be reliant on a single technology or management team, which can be particularly beneficial in fast-moving sectors and where there may be a variety of risks.

Alternatively, an investment trust provides a vehicle into which an issuer can pool assets, making them available to other investors that are interested in a more mature or lower risk asset, freeing up capital and yet retaining a lower level of investment.

This instrument has been tested in various capital markets. For example, every green fund in London has returned to market within 18 months to raise additional capital, frequently with very strong demand – a strong signal that investors consider the fund managers are delivering on their strategy.

Concrete examples of investment trusts that focus on energy efficiency have invested in a range of projects from combined heat and power plants to rooftop solar and lighting installations. Their novelty attracted investors' attention not just through the green or impact focus, but also by the predictable income streams and the scalability of the business model proposed. Introducing such a novel instrument to the market also raised a number of challenges. Its distinctive focus on energy efficiency meant that initially it was hard to provide peer comparisons for investors. Differing and shifting perceptions of greenness had to be addressed, leading to great transparency and clarity.

Investment trusts therefore can lead to significant progress of SDGs related to energy and climate, but they also enhance the capacities of the institutions that issue them, generating overall sustainability, and development.

Recommendations|

- Investment trusts have not yet been used in Armenia. Because they can be listed at international capital stock exchanges – while focusing their impact on Armenian impact, they are yet another instrument which could attract the capital of the Armenian diaspora.
- The Armenian Government must verify if there are any legislative prerequisites for the introduction of investment trusts and disseminate information through its chamber of commerce and other organisation that influence investors.
- By ensuring that there is strong legislative environment and sound oversight, Armenia could attract expert fund managers and enable the pooling funds with other interested market participants.

4.3.4.4. YIELDCOS| INFRASTRUCUTRE

Yieldcos are a particular type of listed closed-end fund that have been used in the energy sector for some time. They are now proving a popular route to raise and recycle capital from renewable energy and related technologies and infrastructure. A yieldco is a company, often an investment trust that is formed to own operating assets that produce a predictable cash flow, primarily through long term contracts[95]. This is particularly attractive in renewable energy and related areas such as battery storage and energy efficiency; the structure separates higher-risk and shorter-term activities such as R&D and project development, from lower-risk and longer-term activities, such as the ongoing operation and management of a generating asset.

Yieldcos are listed equity vehicles that are specifically created to buy, then own and operate operational and performing assets from project developers. As such they carry little project risk and typically would have a lower level of dividends reflecting that, however, they have clear, long-term return profiles that are linked to long-term power off-takes from specific technologies in specific regions[96]. Yieldcos are expected to pay a major portion of their earnings in dividends, giving investors an opportunity to participate in renewable energy without many of the perceived risks. For pension funds looking for stable, long-term yield or for corporates seeking to secure energy supply from specific (but diversified) renewable sources, yieldcos can represent a more suitable investment proposition than a direct investment into the development of a new project. For project developers, the yieldco provides an opportunity to deliver, obtain a return and free up capital to focus on new project developments.

[95] https://www.lw.com/thoughtLeadership/lw-mlp-yieldco-comparison

[96] London Stock Exchange Group, 2019. Navigating the Green Finance Landscape: Exploring the market drivers and financial instruments enabling the global transition to a sustainable, low carbon economy. A comprehensive guide. Available at https://docs.londonstockexchange.com/sites/default/files/documents/lseg_green_finance_issuer_guide.pdf

There is growing evidence of investor appetite for the potential expansion of listed yieldcos in the London Stock Exchange, particularly for those with an investment focus on emerging markets with strong renewable energy potential, such as in India, Africa and South East Asia.

Global experience with yieldcos over the last decade has shown that as with any capital-intensive and fast-growing industry, there is a risk that the company grows too quickly, affecting its ability to manage its debt and pay its shareholders[97]. Yet, if operative assets (or a portfolio of different grade assets) are of good quality, are diverse and produce distributable cash flow (once capital expenditures to maintain the assets are taken into account), then this cycle can continue, helping to attract new investors and increase flows of finance to renewable energy projects.

A number of good practices in the design and operation of a yieldco can allow it to grow and meet investor expectations. Importantly, a manageable growth strategy is critical to avoid volatility in the yield valuation. As with structured finance, diversity of assets can also address potential associated risks. For instance, a portfolio of renewable energy asset types and locations can help manage issues like hydrological risks from droughts or periods of low electricity output from wind and solar farms.

Recommendations|

- The Government of Armenia should consider legislation to allow companies to unlock tied up capital by transferring operating and revenue-generating infrastructure assets to newly created yieldcos. These will create investment opportunities for certain investor classes looking to avoid risks associated with project development.
- Key findings of an OECD 2020 empirical investigation[98] found that around USD 150 billion of institutional investment in green infrastructure (not exclusively renewable energy assets) globally was already held through yieldcos, highlighting the important role of these securitised products.

[97] https://www.oecd.org/cefim/india/Yieldcos/

[98] OECD (2020), *Green Infrastructure in the Decade for Delivery: Assessing Institutional Investment*, Green Finance and Investment, OECD Publishing, Paris, https://doi.org/10.1787/f51f9256-en.

5. COUNTRY CASE STUDIES

5.1. MOLDOVA

Nationalization of the Sustainable Development Goals[99]

In 2016 the Republic of Moldova was one of the first countries to nationalize SDGs (amended in 2019) as part of the 2030 Agenda implementation. Approaches were developed with the aim of determining the importance of each indicator and then categorizing them in state initiatives accordingly.

Moldova's national policy papers were subjected to a Rapid Integrated Assessment (RIA) (such as strategies, programmes and plans). This activity meant to facilitate the identification of gaps and shortcomings in the national policy framework for SDG implementation. The RIA aimed at:

- assessing the relevance of specific Sustainable Development Goals (goals and objectives), as well as the link between both the 2030 Agenda and national policy priorities
- modifying (formulating) the 2030 Agenda's goals and targets through view of country priorities and needs, as well as suggesting policy documents that should be reflected
- establishing the data environment required for SDG implementation monitoring and evaluation

Generally, the national policy agenda is only somewhat linked with the SDGs, according to the RIA, a third of the SDG objectives are not reflected in any national policy documents. A total of 169 SDG objectives were examined, with the focus of 126 quantitative targets. Only 11% of SDG objectives were reflected in national policy documents. Furthermore, most of the SDG objectives (57%) are only partially linked to the Republic of Moldova's policy documents (just a few aspects of these targets were covered) which highlights the need to revise the national plans to better reflect specifics of the SDG targets. At the same time, roughly a third of the SDG objectives are not mentioned at all in national policy documents.

5.1.1. P2P PLATFORM FAGURA[100]

Fagura is a P2P lending platform in Southeast Europe. The start-up is registered in Estonia and successfully operates for Moldovan customers seeking investment. From the point of view of investors, the platform is open to all EU citizen. The platform has vision to become a digital bank.

- The platform founders invested more than ~EUR 250,000 and development took 2 years
- The platform intermediated loans in the total value of ~EUR 500,000

The funding decision is done in seconds. The scoring model is based on machine learning and has a 97% correct prediction of default. Fagura has an NPL of 3.03% (this considers to be one of the lowest rates in the region). The average return (XIRR) of investors is between 10-20% annually.

[99] Republic of Moldova Voluntary National Review, 2020, Link
[100] Fagura, Link

Once the platform was validated and Scoring technology recorded effectiveness, USAID and The European Fund for Southeast Europe (EFSE) offered a grant to develop Scoring for startups and SMEs and to facilitate access to finance for SMEs and startups in the post-COVID era.

Another crowdfunding platform is the Particip[101] platform that is an emerging crowdfunding platform developed and currently operates to make impact in various Moldovan projects.

5.1.2. CREDIT GUARANTEE FUND[102]

The guarantee system for SME loans issued through partner financial institutions and is managed by the Organization for Small and Medium Enterprise Sector Development (ODIMM) (analogue of Enterprise Armenia).

The document is a written agreement with a commercial bank partner to secure enough security for the loans. The instrument provides particular guarantee conditions for each type of guarantee product, ranging from 50% to 80% of the loan amount and up to 7 million lei in value (~EUR 345,000). The program offers several guarantee products such as for:

- Start-ups
- Companies managed by young entrepreneurs
- Enterprises set up or managed by women
- Other active (operating) enterprises
- Exporting or export oriented enterprises
- COVID-19 anti-crisis products

5.1.3. PARE 1 + 1[103]

ODIMM has been implementing the Program for Attracting Remittances into the Economy (PARE 1 + 1) program (since 2010 till 2021) with the goal of attracting human and financial resources from Moldovans working abroad and investing them in the Republic of Moldova's economic growth. The program is funded by the state budget, with supplementing funding from the European Union. The scheme uses the "1 + 1" approach, which means that for every leu invested through remittances, one leu is invested as a grant. The grant award is up to 250,000 lei (~EUR 12,350).

The project approved 53 investments (25 financed from the EU fund). Most of the benefited enterprises (25 enterprise) operate in agriculture sector (cereal cultivating, vegetable growing, growing vineyards) Within the scope of the project migrants have invested 1 billion lei (~ EUR 49,397,469) in the economy of the Republic of Moldova. The program trained 1623 enterprises managed by the migrants. The program impact is predicted to create about 4 thousand workplaces. Moreover, women highly benefited from the program.

---

[101] Particip, Link
[102] Credit Guarantee Fund, Link
[103] One Billion Lei in the country's economy, through "PARE 1+1", Link

5.1.4. DAR 1+3 PROGRAM[104]

The government of the Republic of Moldova has implemented the approach of involving diaspora in local development through the Diaspora Succeeds at Home "DAR 1+3" Program. The State Chancellery, through the Bureau for Diaspora Relations (BDR), launched it in 2020 with the goal of mobilizing the diaspora's people and financial capacity for the country's local socio-economic development.

Since 2015, UNDP and Switzerland have aided the establishment of the first local associations. The pilot was a good basis for the Government to adopt a Decision No 801/2018 on the approval and execution of the Diaspora Succeeds at Home "DAR 1+3" Program.

Diaspora engagement via hometown associations will support local development based on 1+3 formula (Government + local public authorities + development partners + hometown associations).

The program supported 12 projects, has total budget of MDL 7.9 million (~EUR 387,850). The UNDP and Switzerland financial contribution amounts for 16% of the total amount offered by partners for all projects. The program initiatives target waste management, street lightening, public infrastructure for sport and leisure.

5.1.5. OTHER INITIATIVES

TABLE 9: Other SDG finance initiatives in Moldova

INITIATIVE	DESCRIPTION
Women in Business program (grant)[105]	Program offers three support dimensions for business different development stages: 1. Startups: training and guidance 2. Startups: small scale investment and business development support 3. Growing companies: large scale investments to expand markets and improve export competitiveness.
Greening Program of Small and Medium Enterprises (grants)[106]	Implemented by ODIMM aims to promote entrepreneurial capacities of SMEs, in production processes and services adopt greening practices. Program stages: 1. Development of informational tool and implementation infrastructure 2. Financial support for small and medium enterprises 3. Monitoring of the investment and impact assessment of the program
EBRD and GCF green financing[107]	EBRD and GCF support Moldova's transition to a low-carbon and climate-resilient practices. EUR 5 million loan (EUR 3.75 million of EBRD finance and EUR 1.25 million of GCF co-finance) to Moldova Agroindbank SA for providing lending to private enterprises and households to invest in climate change mitigation and adaptation technologies.

[105] Women in Business, Link
[106] Greening Program of Small and Medium Enterprises, Link
[107] EBRD and GCF promote green financing in Moldova, Link

5.2. GEORGIA [108]

SDG Nationalization Georgia was one of the first governments to announce a National Voluntary Review (VNR) at the High Level Policy Forum (HLPF) in 2016 and a second VNR in the summer of 2020.

The Government Portal (sdg.gov.ge) has been set up and contains information about organizational settings, reports and SDG trackers. Georgia has nationalized all 17 targets, as well as 93 targets and 200 indicators. The United Nations' Mainstreaming, Acceleration and Policy Support for the 2030 Agenda (MAPS) survey, commissioned by the United Nations in 2019, surveyed 55 national policy documents and included the 2017-2020 national budget documents. All in all, 36 national strategies and the Georgia EU Union Agreement cover 93% of the nationalized SDG target.[109]

5.2.1. ENTERPRISE GEORGIA[110]

Enterprise Georgia – Business Division implements various support mechanisms to develop entrepreneurship in Georgia. These mechanisms include:

- Micro and small business support (All Georgian citizens participate in the program as entrepreneurs who already have or have not yet received the financial support)
- Business universal (The program aims to support development of business in Georgia and diversification of domestic production, through creation of new enterprises, and expansion / re-equipment of existing enterprises)
- Tourism development (The program aims to develop and financially support the country's tourism and tourism-related services)
- Credit guarantee mechanism (The program aims to improve access to finance for small and medium size businesses)
- Government program-mortgage subsidy (The program involves subsidizing the interest on mortgage loans for five years term)
- Export Promotion and Development (Export division aims to promote the export potential of the country, in order to increase the competitiveness of local products on international markets)

In June 2014, the Ministry of Economy and Sustainable Development of Georgia launched a new government program "Production in Georgia" in collaboration with the Ministry of Agriculture. The program aims to promote a national entrepreneurial culture by encouraging the creation of new businesses and supporting the expansion of existing businesses. Enterprise Georgia is Georgia's leading implementation partner for Produce, responsible for business support, export promotion, and investment in the Georgia sector. As a facilitator between foreign investors and the Government of Georgia, the investment sector has access to the latest information, provides an efficient means of communication with government agencies and supports investors throughout their investment.

[108] Financing in Georgia: Small and medium enterprises and the private sector (eib.org)
[109] SDG Financing Report_24 Dec Final_0.pdf (un.org)
[110] Enterprise Georgia

5.2.2. CREDIT GUARANTEE MECHANISM

- The Loan Guarantee Program is based on Portfolio Guarantee, where loans are evaluated by the Merchant Bank / Microfinance Organization.
- The agency guarantees up to 80% of the principal of the loan made by the commercial bank under the program. Guarantees are issued to each participating bank at any time for up to 35% of the loan portfolio paid under this program.
- For commercial banks, the minimum loan amount is 50,000 GEL (approx. EUR 15 862) and the maximum loan amount is 5,000,000 GEL (approx. EUR 1 586 170)
- For microfinance organizations, the minimum loan amount is – GEL 20,000 (EUR 6 345) and the maximum loan amount is – GEL 5,000,000.
- Maximum loan period is 10 years

5.2.3. GREEN BOND[111]

The European Bank for Reconstruction and Development (EBRD) has invested US $ 50 million in the first green bond issued by Georgian Railway (GR), the state-owned railway company of Georgia. The total amount of bonds is US $ 500 million and the term is 7 years. Bonds will be priced on June 10th, subscribed to by domestic and international investors and traded on the London Stock Exchange on the settlement date of June 17th. For the first time in Georgia and the Caucasus region, a shipping company has issued a $ 500 million green bond to the London Stock Exchange.

Georgian Railway has refinanced its existing bonds, benefiting from an interest rate of 4% instead of 7.75%.

5.2.4. VENTURE CAPITAL[112]

TABLE 10: Venture capital funds in Georgia (registered as legal entities)

INITIATIVE	DESCRIPTION
Delta Capital Partners	It is offering venture capital financing to companies which have minimum a year of experience. The size of investments in capital is from $100,000 to $ 2,000,000.
Venture capital fund Green Capital	It is a wealth management firm based in Tbilisi. The firm provides investment and assets management services focusing on Georgia and Black Caspian Sea regional markets.
Gazelle Finance	It is responsible for the environment, society and governance (ESG) and is committed to doing business and investing with the highest ethical standards.
KedariVentures (Website under construction)	It is a fund for start-ups and innovative companies. The project has been started and managed in Georgia for at least three years. The size of the fund should reach 10 million GEL (about 3 172 340 EUR) over the next three years.

[111] EBRD invests US$ 50 million in green bond in Georgia
[112] Digital-innovation-SMEs'-access-to-finance-Policy-recommendations-Georgia.pdf (eufordigital.eu)

5.2.5. PIRDAPIR.GE-PEER TO PEER[113]

"Direct (Pirdapir)" is Georgia's first financial platform that connects investors (lenders) and borrowers without an intermediary. Direct (Pirdapir) is Georgia's first direct lending (peer-to-peer lending) site, and loan applicants without banks or microfinance institutions can easily borrow directly from locals and foreign investors at low interest rates. Borrower Benefits include:

- Easy online application
- Low interest rates
- Unsecured loan
- Long-term loan (up to 3 years)
- Credit volume of 500 GEL or more (up to 6,000 GEL)

5.2.6. CROWDFUNDING[114]

Donation-based crowdfunding platforms existing in Georgia:

- Investme.ge is a public funding platform that connects ambitious, innovative and creative projects with the public to raise funds. Total mobilized funds: 2,833.29 GEL (approximately €913,94). Successful projects: 1, Supported Projects: 72.
- Wehelp.ge. The Foundation's mission is to connect key beneficiaries in need of medical assistance with the general public through the online space. Included projects – 126, users – 3,732, transfer amount 4,444 – GEL 566,267.86 (approx. € 182,620.89).
- Charte.ge (GiveInternet) is a non-profit funding platform aimed at helping underprivileged high school students reach their full potential by giving them access to the Internet.

Equity-based crowdfunding platforms include:

- Crowdfund.ge (equity, loan, award-based investment) – the first Georgian equity crowdfunding platform. Crowdfund.ge has begun to change the regulatory framework based on recent international practices and is currently in the process of negotiating with the government to adopt the change.
- CrystalCrowd (stocks, loans, awards). This platform was created by the microfinance organization "Crystal" to support young entrepreneurs and their initiatives through crowdfunding. This platform was founded by the Crystal Foundation to support USAID's Youth Entrepreneurship Skills Development for Job Creation and Income Generation in Georgia project.

5.2.7. REGULATORY SANDBOXES FOR ALTERNATIVE FINANCE[115]

Alternative finance refers to a variety of products that appear outside the traditional banking business for companies struggling to obtain bank loans due to high-risk business plans. Alternative lending includes a

[113] EBRD invests US$ 50 million in green bond in Georgia
[114] Digital-innovation-SMEs'-access-to-finance-Policy-recommendations-Georgia.pdf (eufordigital.eu)
[115] Digital-innovation-SMEs'-access-to-finance-Policy-recommendations-Georgia.pdf (eufordigital.eu)

variety of lending systems, from peer-to-peer lending to crowdfunding, marketplace lending, and initial coin offerings (ICOs).

The MoESD and NBG are key players in sandbox development for access to alternative finance, and the Georgia Sandbox is under development or in the early stages of development. This rule allows regulated financial institutions to test innovative products and services in a test environment. NBG plans to continuously expand the range of sandboxes (such as crowdfunding). NBG has already developed communication with leading EU organizations on Alternative Finance Regulation. For example, NBG is a member of the Global Financial Innovation Network.

6. GLOSSARY AND LITERATURE LIST

6.1. GLOSSARY

ADB	Asian Development Bank
CIB	Career Impact Bond
BCP	Basel Core Principles
CBA	Central Bank of Armenia
CNG	Compressed natural gas
DFS	Digital financial services
EaP	Eastern Partnership
EBRD	European Bank for Reconstruction and Development
EECCA	Eastern Europe, the Caucasus and Central Asia
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ENA	Electric Networks of Armenia
ESG	Environmental & Social Governance
EU	European Union
EV	Electric vehicle
FAO	Food and Agriculture Organization
FINARM	Financial Market Member Association
FREDA	Fund for Rural Economic Development in Armenia
GBP	Green Bond Principles
GCAP	Green City Action Plan
GCF	Green Climate Fund
GDP	Gross domestic product
GEFF	Green Economy Financing Facility
GIIF	Global Index Insurance Facility
GPA	Government Procurement Agreement
GPP	Green Public Procurement
ICMA	International Capital Markets Association
ICT	Information and Communications Technology
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	Innovative Finance Instrument
IIGF	Indonesia Infrastructure Guarantee Fund
ISC	Investment Support Center
LDC	Least Developed Countries
MDB	Multilateral Development Bank
MSME	Micro, small and medium size enterprises
NDC	Nationally Determined Contribution
NDVI	Normalized difference vegetation index
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organization

OECD	Organization for Economic Co-operation and Development
P2P	Peer-to-peer
PPP	Public-Private Partnership
PVC	Private venture capital
RED	Research England Development
SBG	Sustainability Bond Guidelines
SCP	Sustainable consumption and production
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
SIB	Social impact bond
SLBP	Sustainability-Linked Bond Principles
SME	Small and medium-sized enterprises
SMEs	Small and medium-sized enterprises
SPP	Sustainable public procurement
UCO	Universal credit organization
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDAP	United Nations Development Assistance Plan
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USA	United States of America
VAT	Value-added tax
VC	Venture capital
VCGF	Venture capital government fund
WCB	Women's Climate Bonds
WLB	Women's Livelihood Bond
WTO	World Trade Organization

6.2. LITERATURE LIST

Innovative Financing for Development: A New Model for Development Finance?. UNDP. (2012). Retrieved from https://www.undp.org/content/dam/undp/library/Poverty%20Reduction/Development%20Cooperation%20and%20Finance/InnovativeFinancing_Web%20ver.pdf

Innovative Finance for Development Solutions. WB. Retrieved from https://olc.worldbank.org/system/files/Innovative_Finance_for_Development_Solutions.pdf

World Investment Report 2021. UNCTAD. Retrieved from https://unctad.org/system/files/official-document/wir2021_en.pdf

Planting an idea: Tirana's radical, orbital green vision. ARUP. Retrieved from https://www.arup.com/perspectives/planting-an-idea-tiranas-radical-orbital-green-vision

Sustainable Cities Platform. Retrieved from https://sustainablecities.eu/transformative-actions-database/?c=search&action_id=eu2ii6rw

WEF 2021 Country Financing Roadmap for the SDGs: Ghana. Retrieved from https://www.weforum.org/reports/country-financing-roadmap-for-the-sdgs-ghana

SDG Pulse, UNCTAD Takes the Pulse of the SDGs. UN. (2021). Retrieved from https://unctad.org/system/files/official-document/SDGPulse2021_en.pdf

Strategic frameworks support for Armenia through ARMSWISSBANK. GCF. (2020). Retrieved from https://www.greenclimate.fund/document/strategic-frameworks-support-armenia-through-armswissbank

The Inclusive Development Index 2018 Summary and Data Highlights. WEF. (2018). Retrieved from https://www3.weforum.org/docs/WEF_Forum_IncGrwth_2018.pdf

Armenia Country Gender Assessment. ADB. 2019. Retrieved from https://www.adb.org/sites/default/files/institutional-document/546716/armenia-country-gender-assessment-2019.pdf

United Nations Development Programme. Human Development Reports. Human Development Data Center. UNDP. Retrieved from https://hdr.undp.org/en/data

Armenia's Transformative Urban Future. ADB. (2019)

The Global Competitiveness Report 2019. WEF. Retrieved from https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

Sustainable Infrastructure for Low-carbon Development in the EU Eastern Partnership : Hotspot Analysis and Needs Assessment. OECD. Retrieved from

https://www.oecd-ilibrary.org/sites/50079b68-en/index.html?itemId=/content/component/50079b68-en

How peer-to-peer lending platforms are transforming the consumer lending industry. PWC. (2015). Retrieved from https://www.pwc.com/us/en/consumer-finance/publications/assets/peer-to-peer-lending.pdf

Determinants of Peer-To-Peer Lending Expansion, The Roles of Financial Development and Financial Literacy. ADB. (2020). Retrieved from https://www.adb.org/sites/default/files/publication/575061/ewp-613-peer-peer-lending-expansion.pdf

Peer-to-Peer Lending and Bank Risks: A Closer Look. Sustainability. Yeo, E.; Jun, J. (2020). Retrieved from https://doi.org/10.3390/su12156107

Innovative Financial Products and Services for Women in Asia and the Pacific Arisha Salman and Keiko Nowacka. ADB.(2020). Retrieved from https://www.adb.org/sites/default/files/publication/576086/sdwp-67-financial-products-services-women-asia-pacific.pdf

Loan Guarantee Funds. IFAD. (2014). Retrieved from https://www.ifad.org/documents/38714170/40185546/Loan+guarantee+funds.pdf/ef9500ef-f892-479d-8d8f-50ebfb767a5c

World Bank, Green Climate Fund provide Vietnam with US$86.3 million to spur energy efficiency investments. WB. (2021). Retrieved from https://www.worldbank.org/en/news/press-release/2021/03/08/wb-gcf-provide-vietnam-with-us863-million-to-spur-energy-efficiency-investments

Convergence Data Brief February 2019, Blending with Technical Assistance. Convergence Data Brief. (2019). Retrieved from https://assets.ctfassets.net/4cgqlwde6qy0/3RZClckJliqSyQVy5zkxaT/d3154bf0a55836bd3ec26fb07258a913/Technical_Assistance_Brief_vFinal.pdf

OECD Sovereign Borrowing Outlook 2022. OECD. (2022). Retrieved from https://doi.org/10.1787/b2d85ea7-en

Green Bond Principles – Voluntary Process Guidelines for Issuing Green Bonds, June 2021. Retrieved from https://www.icmagroup.org/assets/documents/Sustainable-finance/2021-updates/Green-Bond-Principles-June-2021-140621.pdf

Navigating the Green Finance Landscape: Exploring the market drivers and financial instruments enabling the global transition to a sustainable, low carbon economy. A comprehensive guide. London Stock Exchange Group. (2019). Retrieved from https://docs.londonstockexchange.com/sites/default/files/documents/lseg_green_finance_issuer_guide.pdf

A Green Bond to Help Fiji Secure a Greener Future. IFC. (2017). Retrieved from https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/cm-stories/fiji-green-bond-for-a-greener-future

Furthering Gender Equality Through Gender Bonds. International Institute for Sustainable Development, Matthew Gouett. (March 2021). Retrieved from https://www.iisd.org/system/files/2021-03/equality-gender-bonds.pdf

Government-Backed Venture Capital, Korea Science. Retrieved from https://www.koreascience.or.kr/article/JAKO201654447931174.pdf

Regulation on financial support for start-ups.ISC. (2015). Retrieved from https://isc.am/media/2019/10/09/677a045b537d565ff23192e0cd85f166d8a7f04b.pdf

Access to credit and financial instruments in agriculture. European Parliament.(2016). Retrieved from https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/586677/EPRS_BRI(2016)586677_EN.pdf

Kosovo Credit Guarantee Facility Feasibility Study. USAID. (2012). Retrieved from https://pdf.usaid.gov/pdf_docs/PA00JM49.pdf

Policies to Optimize the Performance of Credit Guarantee Schemes During Financial Crises. ADB. (2021)

Warehouse Receipt: Financing Agricultural Producers. USAID. Retrieved from https://pdf.usaid.gov/pdf_docs/PNACQ697.pdf

*Warehouse Receipts: facilitating credit and commodity markets.*WB. Retrieved from https://documents1.worldbank.org/curated/en/224521468316149887/pdf/401220Warehouse1Receipts01PUBLIC1.pdf

Armenia Dairy Development Impact Bond: Summary of design proposals. EV Consulting. (2021)

A *Needs Assessment for Introducing Agricultural Insurance in Armenia in the Context of Climate Risk Mitigation*. Clémence Tatin-Jaleran.(2014). Retrieved from https://info.undp.org/docs/pdc/Documents/ARM/Agriculture%20Insurance%20Report.pdf

What are the different types of "crop" index insurance?. WB. Retrieved from https://www.indexinsuranceforum.org/faq/what-are-different-types-%E2%80%9Ccrop%E2%80%9D-index-insurance

Republic of Armenia: *On approval of State support programme for energy-efficient renovation of apartment and dwelling house*

The Law of The Republic of Armenia on Public-Private Partnership. (2029). Retrieved from https://mineconomy.am/media/12960/PPP%20LAw%20english_official_2019_HO-113-N_en.pdf

Public–private partnerships for agribusiness development – A review of international experiences, by Rankin, M., Gálvez Nogales, E., Santacoloma, P., Mhlanga, N. & Rizzo, C. Rome, Italy. FAO. 2016. Retrieved from
https://www.fao.org/3/i5699e/i5699e.pdf

Buying green! A handbook on green public procurement 3rd Edition. European Commission 2016. Retrieved from
https://ec.europa.eu/environment/gpp/pdf/Buying-Green-Handbook-3rd-Edition.pdf

Going Green: Best Practices for Sustainable Procurement. OECD 2015. Retrieved from https://www.oecd.org/gov/ethics/Going_Green_Best_Practices_for_Sustainable_Procurement.pdf

"How to work on gender responsive budgeting in Armenia,". L. Hovhannisyan and Sh. Ghahriyan. (2019)

A Guide to Gender-Responsive Budgeting. OXFAM. Retrieved from https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620429/gt-guide-gender-responsive-budgeting-280218-en.pdf;jsessionid=171F8EA3AD1D38323229AA86C7A1AE32?sequence=13

Women's Livelihood Bond™ Series | Global. UN Climate Action. Retrieved from

https://unfccc.int/climate-action/momentum-for-change/financing-for-climate-friendly-investment/women-livelihood-bond-2

Innovative Finance for Employment. Social Finance. (2021). Retrieved from https://www.socialfinance.org.uk/sites/default/files/publications/muvareport.pdf

Green Infrastructure in the Decade for Delivery: Assessing Institutional Investment, Green Finance and Investment. OECD. (2020). Retrieved from https://doi.org/10.1787/f51f9256-en.

"Energy Sector Development Strategic Programme to 2040", Retrieved from https://www.arlis.am/DocumentView.aspx?docID=149279

"2022-2030 Energy Saving and Renewable Energy Programme" , Retrieved from https://www.e-gov.am/gov-decrees/item/37978/

"Strategy of the main directions ensuring economic development in agricultural sector of the Republic of Armenia for 2020-2030", Retrieved from https://mineconomy.am/media/10030/Razmavarutyun.pdf