EXPLAINER

Green Finance, Explained

To achieve the Sustainable Development Goals, countries need financial products and services that support environmentally friendly investments. Photo credit: ADB.

Asia needs to mobilize private capital to bankroll its transition to an environmentally sustainable future.

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Introduction

Over the past 30 years, Paul Tregidgo has seen how capital markets can become a major force for good. A former vice-chairman at Credit Suisse, he witnessed emerging debt capital markets grow to hundreds of billions of dollars, providing much-needed financing for growth and development at scale to governments and corporations from formerly struggling countries across Asia, Europe, and Latin America.

Tregidgo believes that capital markets are poised to take on a new challenge—filling the huge need for environment and climate finance. At the Asian Development Bank's Green Business Forum in 2016, he expressed optimism that the key to green growth lies in the interface between investors, borrowers, and users of these markets. "The markets have done it before and they'll be able to do it again," he confidently stated.

If Tregidgo is correct in his optimism about capital markets, future investments to mitigate climate change, reduce pollution, and conserve natural capital will be driven, at least partly, by the buying and selling of equity and debt instruments. This is the promise of “green finance.”

"From being a barrier to green business in the past, finance is now becoming a key driver,” said Daniele Ponzi, chief of the environment thematic group at ADB. “This is why green finance was one of the main tracks of the 2016 Green Business Forum, along with policy and regulatory frameworks and technology and innovation."

What is green finance?

To satisfy growing demand, new financial instruments, such as green bonds and carbon market instruments, are being established, along with new financial institutions, such as green banks and green funds. Together, these instruments and institutions constitute green finance.

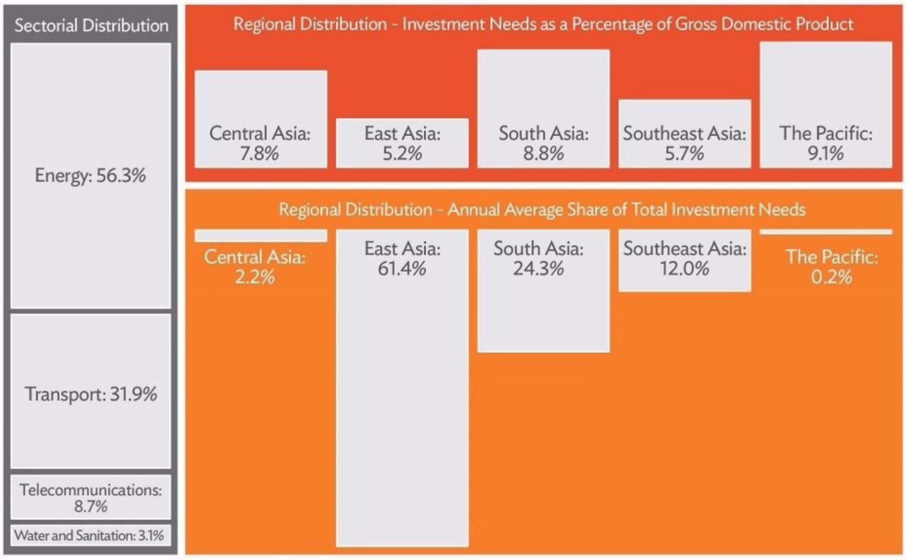
In simple terms, green finance involves engaging traditional capital markets in creating and distributing a range of financial products and services that deliver both investable returns and environmentally positive outcomes. This involves internalizing environmental externalities and adjusting risk perceptions in order to boost environmentally friendly investments and reduce environmentally harmful ones. Promoting green finance on a large and economically viable scale helps ensure that green investments are prioritized over business-as-usual investments that perpetuate unsustainable growth patterns.

The focus can be on greening of existing infrastructure spending or mobilizing additional investments in key sectors, such as clean energy, sustainable transport, natural resources management, ecosystem services, biodiversity, sustainable tourism, and pollution prevention and control.

Why is green finance important?

According to recent analysis by ADB, developing Asia will need to invest $1.7 trillion annually in infrastructure between 2016 and 2030. As shown in Figure 1, this estimate covers transport, power, telecommunications, water supply and sanitation, and other urban infrastructure.

Figure 1: Estimated Climate-Adjusted Infrastructure Investment Needs in Developing Asia (2016-2030)



Source: ADB. 2017. *Catalyzing Green Finance*. Manila. p. 13; and ADB. 2017. *Meeting Asia's Infrastructure Needs*. Manila. p. xiv.

Recent estimates of annual investment requirements for oceans, forestry, land and agriculture, and biodiversity sectors range from $300 billion to $1 trillion globally, with only a fraction of that currently provided.

Investments in these areas must be green if developing Asian countries are to achieve sustainable development in line with the United Nation's Sustainable Development Goals. To help achieve this outcome, green finance addresses some of the deficiencies of markets and the financial system, including the following:

- The costs and benefits of economic activities (externalities), such as air and water pollution, are not internalized in the pricing system.
- Banks are typically not willing to make loans for long-term sustainable infrastructure projects.
- Environmentally and socially responsible investors do not know which companies to invest in, because of lack of information.
- Investors do not have the reference data or the analytical tools necessary to assess investments in green projects.

An enabling framework that promotes green finance can address these problems and help change people's mindsets and behaviors. On the fiscal and taxation side, subsidies for fossil fuels could be phased out, while subsidies for green products could be phased in. On the legal side, information disclosure could be made mandatory, along with environmental insurance. Banks could also be made accountable for the environmental damage of the companies they lend to, a concept referred to as "lender's liability."

What is the role of the private sector in green finance?

Public sector funds and development assistance can supply only a small portion of green investments. The private sector needs to fill financing gaps for green investments over the long term. For example, it is estimated that over 85% of the total green investment in the People's Republic of China's (PRC) will need to be financed by private capital.

According to the ADB report Catalyzing Green Finance, the whole financial system needs to be reoriented to support a green economy. To scale up and crowd in private sector finance, governments can team up with a range of actors to increase capital flows and develop innovative financial approaches across different asset classes. These actors generally fall into two categories:

- Capital providers, which include pension funds, insurance companies, commercial trusts, and endowment funds.
- Financial intermediaries, which include commercial banks, investment banks, investment management firms, and private equity firms. These entities can be used by capital providers as intermediaries that link capital to investment opportunities, such as green projects, and that function mainly as appraisers of risks and returns.

Domestic organizations, including national development banks, government agencies, and nationally sponsored climate funds, are playing an increasingly critical role both as providers and as intermediaries of green finance in their countries. This is particularly the case in emerging markets like the PRC and India.

The report also highlights the need for a pipeline of bankable green projects, which can be developed through national development planning or through financing facilities that support pipeline preparation. Without such pipelines, financing from institutional investors, commercial banks, and capital markets will go elsewhere.

Greening the banking system

Promoting green banking involves working with banks to incorporate environmental factors into their lending portfolios. In practice, this means incorporating environmental outcomes in risk and pricing assessments. This potentially increases the cost of debt financing for high-polluting firms, while easing access to lower-cost funding for environmentally conscious firms. Both can help to entrench best green practices throughout the business and financing sectors.

In this effort, key initiatives such as the Equator Principles (which cover international project finance) and the UNEP Finance Initiative could be useful. The latter has worked with the banking sector to establish systematic frameworks to manage environmental, social, and governance risks. The end goal is to supply credit and raise capital for green investments, building on the key role of banks in funding for renewable energy and other environmentally sound projects.

In developing Asia, special attention must be given to small and medium-sized enterprises (SMEs), since they play an integral economic role in the region and access to green finance is especially difficult for them. Over 90% of informal businesses are proprietorships or partnerships, and many are run by women who face additional challenges linked to gender discrimination, especially in rural areas. This market is largely untapped and offers a revenue generation opportunity for banks and financial institutions willing to introduce innovative financial products.

Greening the bond market

Did You Know? Green Bonds in 2 Minutes

Green bonds are debt instruments used to finance projects that deliver environmental benefits. The green bond market can offer several benefits, both for green projects and investors, including providing an additional source of green financing to bank lending and equity financing (and also a source of funding for bank lending), and providing a new class of green assets for investors.

Expanding these markets could involve developing local green bond markets, with outside support focusing on data collection, knowledge sharing, and capacity building. Alternately, it could involve promoting international collaboration to facilitate cross-border investment in green bond markets.

Although the number of Asian investors driven by environmental and social considerations is not as large as in Europe or the United States, there is a growing pool of interested parties in the region. The PRC is the largest driver of the green bond market in Asia with a share of more than 75%. It accounts for 30% of the world's green bond market.

ADB is one of the regular issuers of green bonds in the Asian market, with an outstanding bond issuance of over $3 billion. It launched a Green Bond program in 2015 in line with the Green Bond Principles. Proceeds are used for energy efficiency and renewable energy, sustainable transport, and green cities. The scope is expected to expand to other areas of green investments, such as natural resources conservation and ecosystem management. This program is in addition to ADB's issuance of water bonds, which has exceeded $1.5 billion since 2010.

Greening institutional investors

Sustainable investing is an investment approach that considers environmental, social, and governance (ESG) factors in portfolio selection and management. Global investments that incorporate these criteria into their decision-making are growing, reaching $22.9 trillion in 2016.

The global sustainable investment market encompasses a number of activities and strategies, including:

- Negative/exclusionary screening,
- Positive/best-in-class screening,
- Norms-based screening,
- Integration of ESG factors,
- Sustainability-themed investing,

- Impact/community investing, and
- Corporate engagement and shareholder action.

According to the Global Sustainable Investment Alliance, the proportion of sustainable investing relative to total managed assets was still less than 1% in Asia in 2016, compared with just over 26% globally. However, the landscape is beginning to evolve, driven by an increasing awareness of the massive capital needed to finance the region's transition to an environmentally sustainable future. The largest Asian markets for sustainable investments by asset size are Malaysia; Hong Kong, China; and Republic of Korea, while fast-growing markets include Indonesia and Singapore.

The Rockefeller Foundation forecasts that Asia, especially Southeast Asia, will be the next hub for impact investing. This involves targeted investments, typically made in private markets, aimed at solving social or environmental problems. Community investing, whereby capital is specifically directed to traditionally underserved individuals or communities, is included in this category, as is finance that is provided to businesses with an explicit social or environmental purpose.

In India, impact investing is expected to have an increasing influence on the overall sustainable investment landscape. For example, Intellecap (an India-based advisory firm focused on social enterprises) estimated that $1.6 billion of capital has been invested in more than 220 impact enterprises across the country. At present, the majority of capital is sourced from outside the country. However, local institutional and high net worth investors are increasingly interested in impact investing as a defined investment strategy.

Why is public green finance still important?

Although the majority of green finance will come from the private sector, public green finance will continue to play an important role.

Governments can support innovation on the supply side by increasing their direct budget allocations, which can provide flexibility for funding priority green programs and mainstreaming green innovation with current development programs. They can also support procurement and demonstration programs and increase direct research and development efforts. The latter can be conducted by governmental agencies or research bodies and backed by subsidized loans and grants.

Green business incubators and other similar venture support programs (including early-stage venture funding support) via government or multilateral agency interventions can also play a vital role in helping smaller firms scale up. Together, these measures can help green technologies make the leap from applied research to demonstration.

Meanwhile, bilateral development finance institutions and dedicated environmental finance funds account for the largest share of public finance flowing from developed to developing countries for green finance purposes. They typically provide finance from one developed country to multiple developing countries.

Multilateral development banks like ADB provide funds using their own capital or on behalf of multiple government donors, and through their dedicated funds. In 2015, ADB committed to doubling its annual internal climate financing to $6 billion by 2020. Of this amount, $4 billion will be dedicated to mitigation projects and $2 billion to adaptation measures. ADB also works with and through international environmental finance mechanisms and funds, such as the Global Environment Facility and the Green Climate Fund.

How can "blended finance" jump-start high-risk, nascent markets?

To provide green start-ups the long-term support that they need to grow and thrive, there are also growing opportunities for governments to join private investors and international aid providers in providing "blended finance." According to the World Economic Forum's ReDesigning Development Finance Initiative, blended finance is the "deliberate use of public funds to attract private capital towards investments delivering development impact in emerging and frontier markets."

Even small amounts of well-designed and targeted public investments can help overcome barriers and catalyze the much larger flows of private finance that is necessary to unlock green business innovation on a wider scale. By taking advantage of private sector management, governments can also address their lack of human resource capacity to manage these investments.

There are three major ways that governments can pursue blended finance.

1. Concessional finance

Governments and development finance institutions can directly participate in a given investment opportunity, whereby public investors provide debt or equity financing at market rates and terms, and in many cases below market rates, in order to incentivize private investors. The Global Environment Facility, for example, offers flexible concessional interest rates to the private sector under its Non-Grant Pilot Program.

Concessional loans and grant resources must be designed carefully to sufficiently adjust the risk profile to attract appropriate investors without crowding out private capital or creating an unsustainable market that will depend on long-term government support. This risk can be minimized if a clear exit strategy makes way for increased private capital.

2. "De-risking" instruments

Public investors can provide products that help mitigate specific types of risk, including credit, contractual, political, and systemic risk. Examples include partial and full credit guarantees, political risk insurance, and currency swaps. Reducing the real and perceived risks surrounding an investment could help boost private investor confidence, especially in high-risk projects.

Credit guarantees provided by governments or development finance institutions have proven useful in "on-lending" agreements, where governments underwrite loans issued through intermediaries. For instance, Malaysia launched the Green Technology Financing Scheme in 2010 to provide a 60% guarantee of the loan amount and a rebate of 2% on interest charged by the financial institution.

3. Grant-based funding for pipeline development

Public investors support efforts to identify or develop investment opportunities by providing grant-based funding and/or technical assistance. Prior to actual investment support, public investors could fund feasibility studies to help prove the case for investment opportunities in emerging and frontier markets.

One such model is Project Financing for Permanence, which gives countries the ability to think big on environmental improvements. Tried most famously in Brazil and now in Bhutan, it resembles a Kickstarter model, where donors give money to the cause, but the deal is not done until the full amount needed is raised. In contrast, Project Financing for Permanence entails ongoing and consistent funding, since conservation cannot be completed with a single payment. The global conservation group WWF and its partners are using this approach to ensure that protected areas receive the long-term financial support that they need, while also inspiring governments to commit to effective policies and institutions for long-term conservation efforts.

What are some requirements to promote green finance?

Policies and capacity development

As is the case with all policies, administrative simplicity in developing countries is a must. In addition, there must be significant efforts to educate the public. For example, green bonds benefit from using well-known and proven mechanisms, but investors may need help in understanding the definition of green projects.

In these efforts, governments can look for opportunities to build capacity. There are growing knowledge-based capacity building platforms, such as the Sustainable Banking Network, the UN-backed Principles for Responsible Investment, and the Green Bond Principles, and efforts among multilateral development banks to harmonize impact-reporting metrics. These initiatives could be expanded to cover more countries and financial institutions to bring in financing for green growth.

Measures can also be taken at a regional level. For instance, the ASEAN Capital Markets Forum introduced in November 2017 the ASEAN Green Bond Standards, which can be tailored at the country level. Based on the Green Bond Standards, these voluntary regional standards help develop a green asset class to support sustainable growth in ASEAN.

Disclosure

One important pre-condition to boost green finance is to improve disclosure. Good disclosure allows financial investors to understand risk properly and to price for that risk. Improving disclosure programs, perhaps by making them mandatory, is essential if decisions are going to be taken on a properly informed basis. For green bonds, for instance, this would involve ensuring that the proceeds are allocated to eligible green investments, with the extra disclosure allowing potential investors to differentiate between green bonds and normal bonds.

Right now, disclosure programs are largely voluntary. For instance, banking group HSBC is disclosing not only its emissions but also the emissions of clients under the Taskforce on Climate-Related Disclosure of the Financial Stability Board.

The Sustainability Accounting Standards Board is one example of an independent organization dedicated to facilitating high-quality disclosures. It develops and manages sustainability accounting standards for 79 industries in 11 sectors.

Companies are also issuing sustainability reports to disclose corporate environmental, social, and governance performance to its stakeholders.

The Global Reporting Initiative has developed guidelines for organizations to assess and report their sustainability performance.

ADB publishes its Sustainability Report bi-annually to provide information about its continued work on promoting environmentally sustainable and inclusive growth and reducing its corporate footprint.

Valuation

For financial instruments that seek to protect natural capital (e.g., in a river or forest), another vital pre-condition is the ability to put a price on natural assets. This must be done in ways that provide “investable supply,” meaning instruments that are available at scale, with liquidity. This will allow investors to invest for instance in conserved forests through tradeable securities like bonds.

Such debt-based financing instruments must be backed by data, so that there are metrics that may be used for comparison. There are a number of emerging tools, such as data analytics, predictive analytics, data mining, digital wallets, and mobile satellite technology. However, valuing nature is not without significant challenges.

Resources

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Websites

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International Capital Market Association. Green Bond Principles.

Related Links

Explainer: Making Green Business Work

Event: 2016 Green Business Forum

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Paul Tregidgo currently serves on the Board of ACCION International, the Advisory Board of the Center for Financial Inclusion, the Council of Global Advisors, and Yale School of Management. He is a senior advisor with Blue Haven Initiative. At Credit Suisse, he was head of Debt Capital Markets and Emerging Debt Capital Markets. He founded and co-chaired the bank's

Impact Investing Advisory Council and served on the Global Investment Banking and Fixed Income Operating Committees and the Emerging Markets Council. He also led the Global Government Client Segment. Prior to joining Credit Suisse First Boston in London in 1985, he practiced international financial law in London and Hong Kong, China.

Daniele Ponzi

Former Chief of Environment Thematic Group, Asian Development Bank

Daniele Ponzi has worked for more than 30 years in the field of environment policy and management as staff and consultant for various international organizations and Italian companies, including the academe and NGOs. He was the Chief of Environment Thematic Group at ADB until March 2019. In his 18 years with ADB, Ponzi has worked in several departments and held a wide range of responsibilities covering the corporate strategic environment agenda and associated policies, and knowledge management for green growth.

Jeffrey Bowyer

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For the past 12 years, Jeffrey Bowyer has been contributing to environment-related publications for ADB, including on green growth, climate change, and water resource management. He has also worked on several regional programs, from environmental safeguards in Central and West Asia to climate change in the Pacific. He holds a master's degree in urban planning from the University of North Carolina.