more than money

National Australia Bank

A world of INSIGHT

A focus on green infrastructure and the digital evolution of ESG investment.

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USING BLOCKCHAIN TO BOOST GREEN INVESTMENT

How to create trust, transparency and liquidity for green infrastructure opportunities.

The global green phenomenon

Green investments are rapidly gaining in popularity with investor mandates and demand changing significantly in recent years to support this asset class.

We have seen this first in the debt markets with a dramatic rise in the demand for green bonds. The market is expected to grow about 40% this year.

This is not because investors are prepared to "take a haircut to save the world", in the words of Sean Kidney, chief executive of the Climate Bonds Initiative.

Instead, investors are eyeing green bonds because they believe they can create value and deliver strong returns by increasing their exposure to renewable and clean energy projects, sustainable water management initiatives, green buildings and future low carbon mobility solutions.

"This is a global phenomenon…we have green shoots everywhere", Mr Kidney said in his keynote address at National Australia Bank's (NAB's) inaugural 'Insight Series' seminar in London on Thursday, 6 September 2018.

But are these investors across the spectrum actually changing and measuring the impact of their investment? Many investors are struggling to reconcile their desire to invest in sustainable business opportunities given their stringent investment criteria and reporting needs. New fintech technologies such as digital assets, built using blockchain, offer a solution by helping both investors and green infrastructure providers to meet the environmental, social and governance (ESG) requirements, and mobilise capital at the scale needed to finance this transition to a green, low carbon economy.

"This is a global phenomenon... we have green shoots everywhere"

Sean Kidney, Chief Executive, Climate Bonds Initiative

Rewards and risks

Around the world, we are witnessing a green investment shift away from purely short-term financial returns, towards a focus on long-term sustainability themed investing, taking ESG factors into account in the investment process and seeking both financial and societal returns.

Many industry regulators are already favouring sustainable businesses; taxation is increasingly penalising emissions; stock exchanges, meanwhile, reflect the trend and are more likely to list green companies.

All these developments make investors recognise that the transition to a low carbon and sustainable future is real.

Investors are going green, because they want to reduce their portfolios' exposure to climate change, which – as panellists at NAB's seminar repeatedly noted – "poses a big threat". Some of this is direct material risk, for example soaring insurance liabilities. Potentially much more damaging, however, is the exposure to indirect investment risks: global warming could turn investments in fossil fuel powered vehicles or coal into stranded assets; there is also the concern that climate exposure will create volatility that makes it more difficult to match assets and liabilities and to determine market prices for assets.

Evaluating green opportunities

The interest of investors in green bonds and green infrastructure could not be timelier, as the shift towards more sustainable investment opportunities comes at a time of great need.

World leaders promised in Paris in 2015 to prevent global average temperatures from rising by more than 2.0C (3.6F) above the pre-industrial era, to deliver on this, investment in green infrastructure to the tune of $60-90 trillion will be required by 2030.

Fortunately, as investors seek both new opportunities and diversification strategies, "we have a lot of money to employ", said Bertrand Loubieres, head of infrastructure finance at AXA Investment Managers.

But in spite of this meeting of minds – between those requiring investment in projects that make infrastructure climate-adapted and resilient, and investors with both the funds and the desire to get involved – it is often tricky to match demand with supply.

This is because investors are required to evaluate green infrastructure investment opportunities in terms of potential risks and rewards, both in the short and the long term, before funds can be directed towards mitigating initiatives that address pollution and climate change.

Hence, they require proper reporting procedures to be implemented. Without them, many investment opportunities simply fall foul of investors' investment screening and reporting requirements.

GREEN INFRASTRUCTURE AND THE DIGITAL EVOLUTION OF ESG INVESTMENT

Fintech for investors

The result is "a lack of credible investment opportunities for impact investors to act upon", observed Cecilia Repinski, executive director, Stockholm Green Digital Finance. "There's excess demand and a shortage of supply."

Fortunately, however, we are seeing a host of new fintech instruments that will help alleviate the situation. "I think we're going to see entirely new solutions to old problems", Ms Repinski said.

The solutions will include both new products and new market players, such as the blockchain-based green energy trading platform WePower, Stockholm Green Digital Finance – a not-for-profit centre tasked to accelerate green finance and investment through fintech innovations – and their Green Assets Wallet blockchain technology that validates and reports on green impacts, and the software technology company ConsenSys, which uses blockchain for digital verification.

"This digital transformation, it's everywhere, it's all around us," said WePower's chief executive Nick Martyniuk, who, together with business development manager Jokubas Viduto, created a digital platform that makes it possible to verifiably sign Power Purchase Agreements in order to "empower buyers of energy", while simultaneously "decreasing the risk on both sides" of the transaction.

WePower's tradeable Smart Energy Contracts are essentially Contracts for Difference, which enable renewable energy producers, even small ones, to sell energy tokens that represent digital utility services, which in turn represent their commitment to deliver energy in the future.

"This means the energy providers can be sure they'll have the income they'll need to run the business," said Nick Martyniuk.

The platform enables the seller to deal directly with buyers. Small companies, and even households, can invest in the energy market, where their tokens can be freely traded at current market price if their energy requirements change over time.

Faster funding

ConsenSys is also enabling investors to put their money to work for good more efficiently.

The company has created an impact investment blockchain platform that provides instant access to investment criteria. Investors and philanthropists can enter information about what investments they are looking for, what their capital needs and return requirements are, and whether their focus is mainly on generating returns or making an impact. They can also detail which of the sustainable development goals they want to invest in.

Another ConsenSys platform matches suppliers of environmental or ecosystem services with buyers. Let's say the owner of a forest that is in a water catchment area provides natural spring water to a bottling plant downstream. By using the ConsenSys platform, the bottling plant can pay the land owner within a transparent contractual framework, in order to safeguard water quality.

"There is huge potential for the blockchain to be used as a platform for such transactions", argued Kuhan Tharmananthar, product lead at ConsenSys.

It's also possible to underpin agricultural assets with Smart Contracts, using digital and blockchain platforms to turn them into digital assets. It allows farmers and smallholders to access funds instantaneously, by using a very simple futures trading formula. Previously, they would have to wait 12 to 24 weeks for funds to arrive; thanks to Fintech, they can run their farms much more efficiently.

"This digital transformation, it's everywhere, it's all around us"

Nick Martyniuk, Chief Executive, WePower

Investors have a role to play

As digital assets mature and regulators, politicians and the broader public drive demand for sustainable investments, we could soon see green bonds go mainstream.

Investors want these instruments to be employed more widely to help cut costs, build trust and enable impact investors to come onboard.

Too often, "we lack disclosure, we lack information", observed Axa's Loubieres. "I'm not an engineer. I'm not an environmentalist. There needs to be a methodology. You have to have a holistic approach."

Volker Häussermann, director of infrastructure investment at Colonial First State, said investors "cannot just wait until someone creates a green investment opportunity. It's about taking responsibility to make the investments sustainable and viable in the long term."

"We as investors can play a role," he said.

> "Digital evolution within ESG investment is going to change how borrowers borrow and how investors invest."
>
> **John McClusky,** General Manager, Head of NAB London Branch

Where are we headed?

In conclusion, it is evident that developments in the digital world are happening at a rapid pace and aren't something that can be ignored, as was echoed by NAB's John McClusky, General Manager, Head of NAB London Branch who said "digital evolution within ESG investment is going to change how borrowers borrow and how investors invest."

Much of the emphasis must be on education, to make sure both issuers and investors become more familiar with blockchain-based digital assets. This can happen quickly, so we expect ever more – perhaps even most – bonds and corporate loans to be agreed using blockchain technology.

As a consequence, there will be less bureaucracy, greater transparency, and the real economy will grow in ways that safeguard the environment and contribute towards the implementation of the UN's Sustainable Development Goals.

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