CCT/NOV 2023 SUPPLEMENT_VOL 18 ISSUE 139 WWW.kanganews.com AN AUSTRALASIAN ANGLE ON ESG

OCT/NOV 2023 SUPPLEMENT_ VOL 18 ISSUE 139 www.kanganews.com Reaching for the higher fruit Australia has made significant steps on energy transition. The easy wins have mostly been harvested, however, leaving a long

climb ahead to get to net zero.

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Head of content

LAURENCE DAVISON Idavison@kanganews.com

Senior staff writer

KATHRYN LEE klee@kanganews.com

Staff writer

JOANNA TIPLER jtipler@kanganews.com

Editorial consultant

ichunn@kanganews.com

Head of commercial

JEREMY MASTERS jmasters@kanganews.com

Head of operations

HELEN CRAIG hcraig@kanganews.com

Information and data manager

ALMA O'REILLY aoreilly@kanganews.com

Office and administration manager

bonley@kanganews.com

Chief executive

sswiss@kanganews.com

Design consultant HOBRA (www.hobradesign.com)

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Jeremy Masters jmasters@kanganews.com +61 2 8256 5577

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TRANSACTION ANALYSIS



NBN adds corporate flow to August issuance rebound with new green bond

NBN Co says it attracted a diverse investor base – including a book of more than 60 unique accounts - to its latest deal, which was its thirdever green bond and its second in the domestic market. The transaction also makes NBN the largest corporate borrower in Australia by outstanding volume.

he A\$850 million (US\$542.3 million) green bond priced on 16 August at a margin of 105 basis points over semi-quarterly swap - tighter than launch guidance of 110 basis points but at the wide end of the 103-105 basis point range mooted prior to pricing.

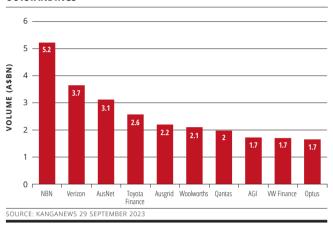
Fiona Trigona, executive general manager and group treasurer at NBN in Sydney, says the final margin worked for issuer and investors. The context is the issuer's volume of supply since its 2020 debut: the latest deal makes NBN the largest corporate issuer in Australia and takes its local outstandings to A\$5.2 billion (see chart 1).

"We know the key to successful issuance is to have great engagement with our investors, so it is important that we work with them," Trigona tells KangaNews. "We had the ability to print more but we want our bonds to perform and to look after our investors."

Deal sources say there was plenty of liquidity on display throughout NBN's execution process. Deal updates revealed an orderbook of more than A\$500 million less than an hour after launch and A\$1.2 billion of bids at final pricing. The book included 62 investors – almost twice as many as participated in NBN's inaugural green bond in April 2022.

Trigona says she was particularly pleased that NBN was able to reward investors that showed leadership early in the process. "There were investors that expressed interest in the transaction early, showing that they really wanted the bonds and as much

CHART 1. TOP 10 CORPORATE ISSUERS BY AUSTRALIAN DOLLAR BOND **OUTSTANDINGS**



of the allocation as possible. This shows real leadership, and of course we tried to assist them."

Intermediaries often say building extensive liquidity for a frequent corporate borrower in the Australian dollar market is helped by regular investor engagement. Trigona says the introduction of a short-tenor promissory notes programme has added to NBN's opportunities for this sort of interaction.

"The promissory programme has allowed us to walk the pavement and engage with domestic investors, particularly those we had not worked with previously," she explains. "For instance, it has helped us to attract super funds to invest in us they started investing in our short-term notes and now buy our longer bonds as well. It has been a successful strategy."

NBN has enjoyed other tailwinds including a May ratings upgrade, to Aa3, from Moody's Investors Service, confirmation from the federal government that it has no medium-term privatisation plans, the green-bond label, the release of NBN's latest sustainability bond report a week before pricing and a general improvement in market tone over the past 12 months.

Brad Peel, Sydney-based executive director, capital markets origination at National Australia Bank - a lead on NBN's latest deal alongside Mizuho Securities, RBC Capital Markets (RBCCM) and Westpac Institutional Bank – comments: "In 2022, general orderbook participation was down so deals were more concentrated toward larger ticket sizes. This year has had a different dynamic. Investors have a better read on where rates are going and are less willing to sit on the sidelines."



"There were investors that expressed interest in the transaction early, showing that they really wanted the bonds and as much of the allocation as possible. This showed real leadership, and of course we tried to assist them."

FIONA TRIGONA NBN CO

Even so, he adds, not every issuer would be able to achieve double its 2022 expectations – noting that NBN is reaping the rewards of "extensive work in the domestic market".

Timing was also on NBN's side, adds Simon Ward, managing director, debt capital markets at Mizuho in Sydney. Execution hit a sweet spot between successful market reopening transactions from major banks and a growing supply pipeline. "The US market is printing moderate volume but supply elsewhere has been quieter due to holidays in the northern hemisphere," Ward explains. "NBN got ahead of issuers seeking to fund off the back of full-year results."

DISTRIBUTION DYNAMICS

The geographic distribution included a large domestic flavour (see chart 2), a point that Andrew Brown, RBCCM's Sydney-based head of corporate debt capital markets, Australia, says is particularly positive.

The domestic bid is notable considering NBN's inaugural Australian dollar transaction in April 2022 had only slightly more than half its volume placed with Australian and New Zealand accounts. "The proportion of the deal sold to Australian and New Zealand investors reaffirms the home market's support for the NBN credit story. Along with the number of unique investors in the book, it paints a picture of increasing confidence," Brown says.

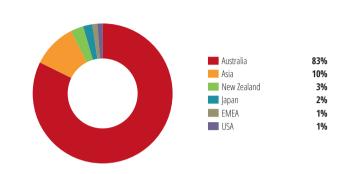
He adds: "In the last six months, NBN has done a benchmark dual-tranche euro green bond, had a ratings upgrade, and closed several private placements in sterling, euros, and Hong Kong dollars. All this shows domestic investors that offshore accounts are increasingly getting the credit approved, and it suggests there will be less regular opportunities to buy the NBN credit in primary – the issuer is in a very different position from where it was 12 months ago."

NBN also attracted a prominent real-money bid (see chart 3) including some super funds. Jack Geddes, director, frequent borrowers and syndicate at Westpac in Sydney, says deal allocation to this sector has been increasing. "The super funds are a large part of this market, and there has been a lot of press about them adding to their fixed income allocations. We are certainly seeing this throughout our coverage across various asset classes within fixed income – and this transaction was no different," he comments.

DOMESTIC OUTLOOK

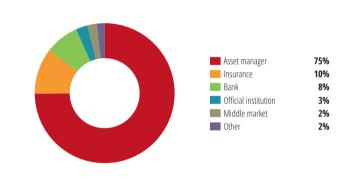
Intermediaries are still reluctant to predict a wide-scale revival of Australian dollar corporate issuance. Geddes, for instance, says the market feels opportunity driven. "There will be some activity in the weeks ahead, though it is too early to say how much," he tells *KangaNews*. "The key consideration for corporate issuers will be execution risk and how pricing in the Australian dollar primary market compares with other markets,

CHART 2. NBN 2023 GREEN BOND GEOGRAPHIC DISTRIBUTION



SOURCE: WESTPAC INSTITUTIONAL BANK 16 AUGUST 2023

CHART 3. NBN 2023 GREEN BOND DISTRIBUTION BY INVESTOR TYPE



SOURCE: WESTPAC INSTITUTIONAL BANK 16 AUGUST 2023

including the term loan market. Spread performance has been encouraging, however the recent rise in yields means issuers are unlikely to be in a rush."

Ward says issuers are considering the Australian dollar market among their funding options but agrees it is still early days. "Deals such as NBN's give other issuers comfort about execution dynamics and there is a mandated pipeline building," he reveals. "Corporates, financial and Kangaroo issuers are starting to look at the market again."

Peel adds that lingering hesitation from potential corporate borrowers is probably inevitable. "Conditions are getting toward where a lot of corporate borrowers would be happy to print, and transactions like NBN's give them more confidence that perhaps it is a sooner rather than later decision," he says. "But the majority would still prefer to see proof over a longer period."

Peel continues: "This is a natural part of the Australian market – we do not have the same depth as the US or Europe so issuers prefer to see more data points. But there are borrowers that could execute well-priced transactions and are thinking about doing so." •

TRANSACTION ANALYSIS



Brighte's ABS outcome shines a light on green securitisation demand

Brighte's return to the public securitisation market with another all-green deal demonstrates demand for labelled instruments and for asset-backed securities in general, deal sources say. The issuer chose a fully public execution with no pre-placement of notes.

righte Green Trust 2023-1 priced on 23 August. The A\$200 million (US\$127.6 million) deal featured a top tranche of A\$146.6 million priced at 155 basis points over BBSW. The lender returned to market to refinance its debut A\$190 million green asset-backed securities (ABS) deal, which it redeemed in July.

"We had significant interest in a new transaction from the moment we redeemed Brighte Green Trust 2020-1," Brighte's head of funding, George Whittle, tells KangaNews. "When we announced the new mandate, on 8 August, we received a significant amount of interest across the structure from investors happy to give us very early feedback on volume and price. Nothing had been pre-placed at that point."

The issuer's confidence to launch a deal without preplacement is notable in a sector that has adapted to volatile market conditions. "Everything was available for sale as of the mandate date, and I think the investors appreciated a more normal, open market execution," confirms Stephen McCabe, Sydney-based executive director, securitisation at the deal's arranger, National Australia Bank (NAB).

"When we announced the new mandate on 8 August, we received a significant amount of interest across the structure from investors happy to give us very early feedback on volume and price. Nothing had been pre-placed at that point."

GEORGE WHITTLE BRIGHTE

This marks a contrast with the typical approach taken in recent times, he adds: there has been a trend to reduce execution risk by pre-placing notes – specifically mezzanine tranches.

Demand came through for Brighte. "We received a lot of reverse enquiry between the mandate and the start of the roadshow, partly helped by the fact that Brighte executed the first call option on its first transaction," McCabe reveals. "By the time we got to the roadshow meetings, everything from the double-As and below was gone. We were basically just finding a solution for the triple-A notes, both the certified and noncertified tranches."

ISSUANCE PROSPECTS

Brighte now has A\$580 million on loan to Australian homeowners to support financing of rooftop solar, battery storage solutions, solar hot water systems and energy efficiency upgrades. The average loan is for A\$8,600 with repayment over 66 months. Brighte's 30-day arrears are running at less than 1 per cent, the lender says.

Residential solar is a mature technology and more than two million Australian rooftops host arrays of photovoltaic panels. Brighte believes consumers view payments on solar systems as similar to utility bills with the additional value of the offset of lower use of grid power. The book profile appeals to capital market investors, McCabe says.

"Although Brighte's loans are unsecured they target homeowners, which means the book tends to be skewed toward a much higher quality of borrower than traditional offerings of unsecured loans," he explains. "Investors have of late weighted away from unsecured transactions toward safer assets such as mortgages and high-quality autos."

Overall, McCabe, tells KangaNews, the securitisation market is healthy - and he expects a flurry of transactions to year end across every asset class. "We are seeing a very strong pipeline coming through," he says. "The number of nonmortgage

> asset-backed securities deals has certainly increased from previous years."

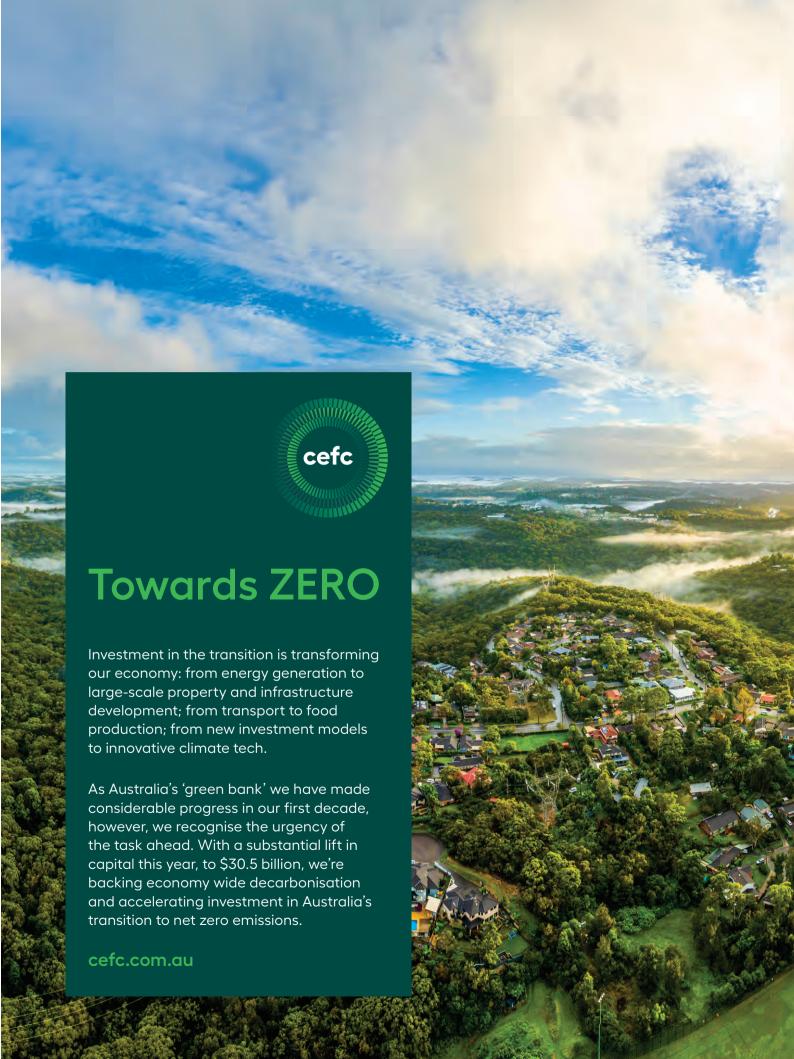
Bank prime mortgages and nonbank unsecured receivables are effectively the bookends of the sector, McCabe continues – and the spread on triple-A notes between these two asset classes is as wide as it has been for some time "This

allows everyone to have a much better sense of where relative value is in the market," Whittle concludes.

In the capital market, Brighte is targeting what Whittle describes as "the annual rhythm we have stuck to in difficult years like 2022 and better ones like 2023".

The lender is optimistic about origination growth. As mortgage payments have risen over the past 18 months and electricity costs have become more volatile, Whittle explains, the economic rationale for solar and efficiency upgrades has become stronger.

"A key avenue to defray higher cost is by using solar, electrification, insulation and draft proofing," he says. "Our payment plan product and green loan allows homeowners to make these changes and fund them in a way that aligns with the inherent payback period." •



AUSTRALIA'S ENERGY TRANSITION SEEKS THEHIGHER

Australia's energy transition has accelerated. But it is not a straight-line journey to net zero and signs are that each progressive step brings new challenges. With the low-hanging fruit now mostly picked, martialling investment capital for equally vital future progress will be no easy task.

BY KATHRYN LEE

he next three decades should see Australia progress to fully renewable energy generation. In this future, the sun takes the day shift while wind steps in to ensure the lights are on at night. When there is a shortfall, battery and other storage technology will be there to fill the gaps. This is no longer a dream or even an aspiration but a concrete target. What it is not – yet – is a *fait accompli*.

Australia has legislated targets to be net zero by 2050 and to have reduced greenhouse gas emissions by 43 per cent on 2005 levels by the end of the current decade. Tied into the 2030 target is an ambition to grow the renewables share of the National Electricity Market (NEM) to 82 per cent.

There is still a lot of work to do. As it stands, energy production is the largest contributor to Australia's greenhouse gas emissions: according to the National Greenhouse and Energy Reporting (NGER) scheme it accounts for almost half Australia's total scope-one emissions (see chart). Clean Energy Australia data show renewables account for just 35.9 per cent of Australia's total electricity generation (see table).

Progress is being made. In the 2021/22 reporting year, NGER data note a 5 million tonne year-on-year reduction in scope-one emissions by the 946 corporations that report under the scheme – mainly due to increased use of renewables. Australia's overall use of renewable energy has almost doubled in barely half a decade, from 16.9 per cent in 2017.

In the same vein, in April the International Energy Agency (IEA) released a review that commended Australia's updated decarbonisation targets and noted renewable deployment had a positive outlook thanks to "the success of rooftop solar, ambitious targets, and increased funding at federal and state levels".

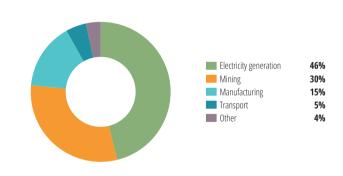
Even so, analysts say hitting the 2030 renewable energy goal still looks challenging based on the trajectory of renewables use. The IEA paper highlights the significant transformation Australia's electricity industry still needs to undergo. "Power sector decarbonisation efforts need to be stepped up considerably," it stated. "This will require an accelerated implementation of renewable energy zones, faster permitting of grid related projects and additional coal retirements."

DIFFICULTY STEP-UP

t the Investor Group on Climate Change (IGCC) Summit in Sydney in August, Anna Freeman, policy director, decarbonisation at the Clean Energy Council (CEC) – a not-for-profit that represents Australia's renewable energy industry – noted that Australia's increase in renewable energy use since 2017 "deserves a round of applause". But she has a degree of concern about future progress.

For one thing, the pace of renewables uptake may simply be slowing. There were no new financial commitments to large-scale renewable energy projects in the first quarter of 2023 and just four in Q2. According to a CEC report, investment in 2023 is 50 per cent below the rolling 12-month average and "a long way off the pace necessary for Australia to achieve an 82 per cent renewable energy share by 2030". Freeman said this "shows that we are struggling" and attributed Australia's investment slowdown to four primary causes.

CHART 1. AUSTRALIAN SCOPE-ONE EMISSIONS BY INDUSTRY



SOURCE: CLEAN ENERGY REGULATOR 2023

MAKEUP OF AUSTRALIA'S RENEWABLE ENERGY MIX		
ENERGY SOURCE	SHARE OF RENEWABLE GENERATION (PER CENT)	SHARE OF TOTAL GENERATION (PER CENT)
Hydro	19.7	7.1
Wind	35.6	12.8
Small-scale solar PV	25.8	9.3
Bioenergy	3.8	1.4
Medium-scale solar PV	1.2	0.4
Large-scale solar PV	14	5
TOTAL	100	35.9
SOURCE: CLEAN ENERGY AUSTRALIA REPORT 2023		



"There has been a painful shift away from the world of zero interest rates, no inflation, and flat construction and commodity costs. The economics of renewable projects look weaker and there is a big clear-out going on."

DAVID MURRAY PM CAPITAL

The first is the significant shortfall of investment in transmission infrastructure. Australia's electricity grid was built to handle one-way distribution from large generators to the end user – generally, from coal-fired power plants directly to customers. Now, however, many customers feed their own power into the electricity grid via rooftop solar panels. This is a fundamental change in the way the grid is used.

In addition, the location of wind and solar farms is usually different from fossil fuel power plants, meaning new infrastructure to transport power has to be built. Then there is the complication of the intermittent nature of renewables compared with conventional power. "Chronic underinvestment in grid capacity has led to congestion and constraints for where generation can be placed. This makes for a lengthy and complex process for projects to get online," Freeman said.

It also introduces a "great deal of investor uncertainty", she added. To commit what can be very substantial funds to a project, investors typically need to have a final letter from the operator confirming capacity to connect.

The Australian government's A\$20 billion (US\$12.8 billion) commitment to improve grid infrastructure via its Rewiring the Nation programme will go some way to help. But it is not as simple as throwing money at the issue. Vivek Dhar, lead mining and energy commodities strategist at Commonwealth Bank of Australia in Sydney, tells *KangaNews* the task is significant especially in some areas of the country.

Project developers in northwest Victoria, for instance, are at risk of significant curtailment of asset value because the network is not up to scratch for a change in the generation and distribution matrix. Dhar comments: "Getting everything right is a huge challenge. Coal is exiting but it is not a simple one-for-one substitution – the replacement is complicated."

Historical context also plays a role. Dhar explains that grid infrastructure has been difficult to develop due to rules designed

to prevent future 'gold plating'. This is when the setup of a regulated profit system in the privatised network infrastructure sector gives power companies a perverse incentive to over-invest in infrastructure.

Past gold-plating scandals led to an overhaul of the regulation – which, Dhar says, has now swung back the other way to the extent that power distributors find it hard to commit to building a grid suitable for a largely renewable generation mix. "The historical context is holding us back because the regulatory investment test for transmission is quite onerous and getting a project approved under this process is hard. There are good policymakers out there trying to quicken the process, but the challenge is to do so while also maintaining everyone's best interests."

In this context, social licence issues can also stand in the way of putting new infrastructure in place – such as getting permission from landowners to build new poles and wires. Dhar asks: "We need thousands of kilometres of poles and wires – but how do we bring everyone along on this journey?"

Freeman's second key issue is rising project cost. Over the last five years, developers have contended with higher commodity prices, more expensive steel, and increased shipping and labour costs – to the extent that Freeman revealed that CEC members are reporting a 30-40 per cent increase in some project costs. There is a consequent marginal reduction in willingness to green-light developments.

The third issue is the difficulty of planning, including environmental processes hampering progress – so-called 'green tape'. "In some states – and I will give an honourable mention to New South Wales – it is particularly difficult, complex and costly. In some jurisdictions it is actually becoming harder," Freeman said at the IGCC conference.

Finally, Freeman noted the lack of a target or policy mechanism for the Clean Energy Regulator's renewable energy



"The cost of a solar panel today is about a tenth of what it was 15 years ago – and it is very hard for a company to grow profits while prices fall by 90 per cent. The same dynamic will need to occur in hydrogen production, carbon capture and storage, and most of the other solutions required to decarbonise."

TOM KING NANUK ASSET MANAGEMENT

"The chronic underinvestment in grid capacity has led to congestion and constraints for where generation can be placed. This makes for a lengthy and complex process for projects to get online."

ANNA FREEMAN CLEAN ENERGY COUNCIL



target schemes, which have created a market to incentivise renewable energy generation via tradeable certificates but are due to end in 2030.

Tradeable certificates are registered by the regulator for every megawatt hour of power renewable generators of all sizes produce. Wholesale purchases of electricity then buy the certificates to meet renewable energy obligations. There is also a secondary market used by financial institutions, traders, agents and installers.

Freeman said: "Let's say a developer makes a financial investment decision this year or next. This project might come online in 2025 or 2026. This means four years of certificates, which is not necessarily enough to be financially material to support an asset over a typical 25-year lifespan."

Corporate power purchase agreements (PPAs) have partly filled the gap. These are a lasting agreement for a company to buy power from a renewable energy project for a fixed price over an extended period. For example, NBN Co announced a PPA in October this year under which it will purchase 90GW hours of electricity from the Macarthur Wind Farm in south-west Victoria. "Corporate PPAs are helping," Freeman commented. "In fact, the voluntary market is driving investment decisions more than any mandatory mechanisms."

CAREFUL CAPITAL

here is also the issue of aligning capital with projects. Social need and even legislated targets do not necessarily align with investor preferences, yet the expectation is that private-sector capital will do much of the heavy lifting in Australian energy transition. The rates environment has thrown project economics for a loop.

David Murray, senior credit analyst at PM Capital in Sydney, explains: "There has been a painful shift away from the world of zero interest rates, no inflation, and flat construction and commodity costs – everything has become more expensive in the

past two years. The economics of renewable projects look weaker, which is why we have focused our investments on companies that structure their business to accommodate these hurdles. There is a big clear-out going on."

Scale is an important consideration – and this plays into the hands of global operators that tend to be far larger than Australian equivalents. For instance, Murray tells *KangaNews* US-based renewable energy developer, NextEra, is a good example of a business that has added resilience via scale. It started as a utility but added renewable generation capabilities – in effect, using regulated returns to build renewables in Florida. Eventually, this lowered the cost of power in the state and the company has now expanded into other part of the US.

Murray comments: "NextEra is an early mover, experienced and has massive scale. Each individual project in this sector is so chunky that companies need to be able to absorb issues without blowing up the business. NextEra's projects are big but not makeor-break. They each add a little more value and there is always something developing."

It can be harder to find equivalent opportunities in the Australian market. PM Capital therefore tends to make most of its renewable-oriented investments overseas. "Our Enhanced Yield Fund has very specific requirements and it can be hard to find an Australian renewables business that is actually investable," Murray reveals. "Most are not listed, not bond issuers or conglomerates, or don't meet our quality hurdles. I'm sure there are some great Australian businesses but they typically don't meet these requirements and are therefore a more specialist investment proposition."

Where there is scale in Australia, it tends to mean renewable assets being wrapped up in larger businesses. Murray cites APA Group as an example. He notes that while the company is developing renewables, and certainly has the right size profile, it does not line up as a specifically renewables investment.

"The regulatory investment test for transmission is quite onerous and getting a project approved under this process is hard. There are good policymakers out there trying to quicken the process, but the challenge is to do so while also maintaining everyone's best interests."

VIVEK DHAR COMMONWEALTH BANK OF AUSTRALIA

OFFSHORE WIND PROSPECTS CHANGE DIRECTION

Offshore wind power generation is a burgeoning industry in Australia. For instance, in December 2022, the Australian government declared an area in the Bass Strait off Gippsland in Victoria to be suitable for offshore wind and followed with a similar announcement in July for an area in the Pacific Ocean off the Hunter region. David Murray, senior credit analyst at PM Capital, shares his views on the potential.

Where does offshore wind sit as a technology today compared with other renewables?

Onshore wind and solar started developing decades ago and are becoming mature industries with a clear value proposition. Offshore wind is a step behind in technology and cost.

The first offshore wind farm was built more than 20 years ago in Denmark. It was small and hardly made any power. It was a start, nonetheless, and from this point offshore wind gained popularity in other parts of Northern Europe and the UK.

Today, it has reached the point where Germany was able to run an unsubsidised offshore wind auction: market forces allowed offshore wind to make money on its own. This is an important milestone for any technology.

How did Germany manage to get offshore wind to this point and how does this compare with the

technology's position in Australia? What role will subsidies have to play here?

Germany subsidised the industry for years, gradually winding it down to the point where it can now host unsubsidised auctions with a lot of competition for offshore wind rights. To get to a similar position, Australia will absolutely need subsidies. It is not yet possible to start the industry without it. Offshore wind, as a technology, is initially expensive and needs the establishment of an entire supply chain.

Modern offshore wind blades are more than 100 metres long and don't come in pieces that attach together – they come as giant single blades. For this reason, manufacturing everything in China or Europe then shipping it to Australia would be expensive and impractical, so generally it needs a local manufacturing supply chain. This carries the added benefit of creating a local industry that can eventually

become an unsubsidised source of Australian energy.

There is a big outlay to establish a manufacturing base. This also means that the fifth wind farm, for example, becomes cheaper after the first four have been built. But the first is very expensive, which is where subsidies come in.

Europe and the UK are reaching that point of lower subsidies. Meanwhile, the US is investing lots of money into subsidies and supply chains, and should have a far more mature offshore wind market in five years. Australia is a step behind.

Where do you see Australia heading in its use of the technology and how could it fit into the future energy mix?

Victoria is already developing offshore wind zones. This will help lower the cost of the technology and meet energy transition goals. The cost will come down further as

New South Wales and South Australia get involved – wherever there is space, and the wind and the sea depth stack up.

Eventually we will get to a point where lots of power is generated from solar, onshore wind and offshore wind.

These will complement each other and have storage to tie it all together. Maybe there will also be gas generation available for emergencies. But I see a point where at least 80-90 per cent of power can be renewable. It would be cheap, clean, long-lasting and a real endgame solution.

What are the advantages of offshore wind generation over onshore wind or solar? What makes it so exciting to an investor?

Onshore wind needs many approvals from farmers and landowners, and can be an eyesore. Offshore wind, on the other hand, tends to be many kilometres from land and the turbines can be larger.

Offshore wind can be built relatively close to where people live. To build a large onshore wind farm 20 kilometres from Sydney today would mean dealing with a huge number of local groups – it would be a mess. Offshore wind, however, can be built off the coast and generate a massive amount of power close to where it needs to be.

"APA's composition is mostly gas pipelines plus some solar and wind, so it isn't the most efficient way to gain renewables exposure," Murray tells *KangalNews*. "There are not many big, dominant companies in Australia for investors that want exposure to pure-play renewables. It may be different for banks and many funds but, for an investor like us that looks for best-in-class pure-play businesses, the offshore options are a long way ahead."

Neither can investors assume they are going to ride an upward trajectory of renewables exposure within larger energy businesses. Tom King, Brisbane-based chief financial officer at Nanuk Asset Management – a global fund manager that considers a broad environmental sustainability and resource efficiency theme in its investments – says it is easy to compare the net zero transition

to the internet boom and assume it will yield the next Apple, Microsoft and Google.

However, King argues that it is important to recognise the energy transition has a fundamentally different profile from the growth that happened in tech in the early 2000s. "The difference is that decarbonisation means a lot of heavy assets and the companies involved in these supply chains do not have the profound global network effects and low incremental costs we have seen in software and technology," he explains. "Instead, they have large, capital-intensive operations that require a lot of working capital. To achieve emissions targets, solutions will have to be sold at cheaper and cheaper prices. This creates a very challenging investment dynamic."

How about floating offshore wind? How does this differ from traditional fixed-platform offshore wind and what advantages could it bring?

Fixed-platform offshore wind is only recently beginning to reach viability in Europe while floating offshore wind is another step behind. The technology is available to float a giant spinning wind turbine - a technological marvel in itself - and make power in the high seas. This is important and exciting because fixed-platform offshore wind can only be built in water up to about 80 metres in depth, which limits availability. Once the water gets deeper, a floating platform is the only option.

As this technology develops it has the potential to be another step-change in renewable generation. Places like Japan and Korea rely on imports to meet their energy needs, which is why they are big buyers of Australian LNG, for example. There is limited space for renewables right now, but they have strong wind resources offshore.

Floating offshore wind projects are already being built in places like Scotland and Norway. It is not yet as effective as fixed-bottom offshore wind but is getting there.

If countries like Japan and Korea have an opportunity to alleviate their energy dependence, where does the prospect of floating offshore wind fit with the idea of Australia being a future 'renewable energy powerhouse'? If these countries can produce their own energy from offshore wind, they presumably will not need to buy Australian clean energy.

The first step for Australia, as with other countries, is to develop its own cleanenergy economy. Decades of investment will be needed not just in renewables but the electricity infrastructure needed to move and store all this energy.

The next possible step, which is converting this energy cheaply and cleanly to a transportable form and selling it overseas, is a very long way off. Green hydrogen, for example, is potentially a neat solution. It is gaining traction, but the reality is it also remains in the early stages of development.

It is hard to say for certain how the energy transition plays out even though the broad direction is clear. The trick for investing in this space will be to find bestin-class businesses that benefit regardless of which technology comes out on top.

King points to the solar industry as an example. It has grown by a multiple of 50 in a decade and a half, but many businesses have failed and even those that have survived have rarely delivered good investment returns.

"The cost of a solar panel today is about a tenth of what it was 15 years ago — and it is very hard for a company to grow profits while prices fall by 90 per cent," King comments. "The same dynamic will need to occur in hydrogen production, carbon capture and storage, and most of the other solutions required to decarbonise. Investing in these industries requires a careful and selective approach to avoid falling into a trap."

The same pattern is emerging in other prominent technologies. King suggests that it has become obvious to the

investor community that sectors like solar, batteries and electric vehicles have attracted huge amounts of capital in public markets and this has, in many cases, pushed valuations to a level that makes the risk-return profile significantly less attractive.

SEEKING INVESTABILITY

he energy transition will require a wave of investment capital. Investors say making the right calls requires them to have a clear view of how the next 30 years will play out and then to use this scenario to inform decisions. The challenge is that the low-hanging fruit has largely been picked and the next phase, while equally critical, does not have the same obvious alignment of interests.

King categorises the last 15 years as government and investors striving to implement "near perfect" solutions. In the near future, he expects a ramp up in support for all solutions that can decarbonise industries.

He says: "We know where emissions are coming from and we have done so for a long time. To get to net zero we must either eliminate or offset these emissions and the government will need to legislate for this to occur. But we are not going to get where we need to by insisting that everything is done 'perfectly'."

This means the decarbonisation of the electricity sector, oil and gas, and industry more broadly – as a big proportion of emissions comes from processes like the production of steel, cement and plastics. Then there is the decarbonisation of transport. The good news, King continues, is that in most cases the technology solutions "are already clear". It is just a matter of how and when progress happens.

In practice, this means King sees opportunities in ancillary areas such as the electrification of buildings, heavy transport – including air transport and shipping – and grid technology. "These are areas that require significant capital but have not become investment trends in the same way as electric vehicles or renewables. This means they present a more interesting opportunity," he says.

Meanwhile, Murray is excited about the burgeoning opportunity presented by offshore wind (see box on facing page) on the basis of his belief that, ultimately, solar and wind will be able to meet most of Australia's electricity needs with future improvements in storage filling demand gaps.

The technology lag means the transition fuel argument has some validity, Murray says. "There is a general dislike for fossil fuels but, realistically, gas demand is increasing. There is a lot of money to be made by carefully investing in these areas. A realistic transition can't just be a full, immediate switch to renewables — we need to get there in a way that doesn't put too much cost or unreliability on consumers," he comments.

"Gas isn't clean – but it is cleaner than coal and better at filling in the gaps left by intermittent renewables," Murray adds. "It would be idealistic to deny that the transition requires something else to complement renewables while clean storage options improve. Gas fits this gap much better than coal. There is a good case that it is the most responsible option." $^{\circ}$



THE FOUNDATIONS – AND VALIDITY – OF ESG

ocial factors have tended to be the black sheep of the sustainable finance family: harder to measure than emissions and frequently less prioritised than the need to respond to the existential threat of climate change. Participants at a *KangaNews*-Westpac Institutional Bank roundtable, which took place in Sydney in September, discussed moves to improve the measurability of social impact, the sector's challenges and why the link between the pillars of environmental, social and governance (ESG) might make the term redundant.

PARTICIPANTS

- Katherine Palmer Executive Director, Strategic Balance Sheet Management NEW SOUTH WALES TREASURY Linh Quach Director, Sustainable Finance WESTPAC INSTITUTIONAL BANK Aleksandra Simic Director, Office of Social Impact NEW SOUTH WALES TREASURY Ainsley Simpson Chief Executive INFRASTRUCTURE SUSTAINABILITY COUNCIL OF AUSTRALIA Siobhan Toohill Group Head of Sustainability WESTPAC BANKING CORPORATION
- Nancy Tran Principal SOCIAL VENTURES AUSTRALIA Kate Turner Global Head of Responsible Investment FIRST SENTIER INVESTORS
- Adam Vise Group Treasurer AUSTRALIAN UNITY Marayka Ward Director, Fixed Income Strategy QIC

MODERATORS

■ Charlotte Plaisant Millecamps Director, Sustainable Capital Markets WESTPAC INSTITUTIONAL BANK ■ Sam Swiss Chief Executive KANGANEWS

SOCIAL'S PLACE TODAY

Plaisant Millecamps How would participants assess the success or otherwise of attempts to address societal challenges through finance?

■ **TOOHILL** We are at an interesting juncture to reflect on this. The UN Sustainable Development Goals (SDGs) put a lot of focus on social issues but the gravity of the Paris Agreement shifted attention to climate change. Nevertheless, the focus on

social is growing, particularly through a human rights lens and, in Australia, through modern slavery legislation.

I act as co-chair of the banking board for UNEP FI [UN Environment Programme Finance Initiative] and we have carriage of the Principles for Responsible Banking. The principles have traditionally focused on the Paris Agreement and SDGs, but we are currently refreshing them to focus on four key pillars out to 2030. These are climate, nature, economic inclusion and human rights.



"We believe environmental and social will become even more linked so we are also trying to extract ourselves from using the phrase ESG – we are looking at the bigger picture."

CHARLOTTE PLAISANT MILLECAMPS WESTPAC INSTITUTIONAL BANK



It is clear that the balance is being re-addressed and social dimensions are increasing in significance, underscoring a global view that we need to be leaning into these areas. I believe there is also a greater appreciation of the intersection between social and environmental factors, as well as nature. Frameworks recognise that banks in particular have a role in economic inclusion. A need to better understand intersectionality across these dimensions is emerging as a solid theme.

■ WARD We also view environmental and social as inextricably linked. There is far more awareness now than there was 20 years ago of the social and environmental impacts companies can have and the influence investors can bring to bear on nonfinancial topics.

Debt investors don't need a labelled bond to convey expectations on behaviour and social impact to issuers. As part of QIC's UN Principles for Responsible Investment (PRI) stewardship commitment, we have the flexibility to mobilise capital away from transgressions such as modern slavery breaches. Our clients expect us to do this and, most importantly, this is what the law expects. What is more difficult for vanilla bond investors is to mobilise capital toward specific social impacts.

■ PALMER I agree about the link between environmental and social, to the extent that separately ringfencing the two is not quite correct anymore. This is partly why New South Wales Treasury Corporation (TCorp) created a sustainability bond programme that contains green and social assets.

In fact, individual assets often exhibit both characteristics. For example, we have included assets from the transport sector such as Sydney Metro. Not only is this supporting electrified mass transport but the way in which the asset was constructed achieved a number of social milestones. Along the same lines, we also included the Transport Access Program, which provides more accessible train stations.

A sustainability bond programme makes sense for government because much of its spending is on education, health and other social activities – a significant proportion of expenditure already goes toward supporting social objectives.

There is also the argument about transition. While climate and environment may be more developed in the sense that they have more consistent standards and metrics, we also need to consider how we get from A to B in social. It is incumbent on us as an industry to look ahead and assess how we bring everyone along on the transitional journey.

■ QUACH Westpac Institutional Bank worked on the Sydney Metro Western Sydney Airport SSTOM [stations, systems, trains, operations and maintenance] project, which could be viewed as an early adopter of the link between environmental and social given its combined green and SLL [sustainability-linked loan] transaction.

Given the nature of the project, it would have been easy to just consider the green aspect or even just the environmental component in the SLL. But the sponsors were keen also to address and link social objectives and impacts from the project. As the social impacts were specific to the projects, ascertaining the relevant benchmarks, measurements and appropriate metrics for the social-related KPIs was far more challenging.

■ **TOOHILL** Inherently we know that, with these kinds of projects, we have created enormous social and financial value because of the positive social impact. Sometimes it is hard to measure or anticipate, but it is tangible when we experience it. The value of a project like this has been informed by the way it was managed from a social and community engagement perspective.

MEASURING SOCIAL IMPACT

Swiss We often hear that social is more difficult to tackle than climate because it is hard to

"It is clear that the balance is being readdressed and social dimensions are increasing in significance, underscoring a global view that we need to be leaning into these areas. I believe there is also a greater appreciation of the intersection between social and environmental factors, as well as nature."

SIOBHAN TOOHILL WESTPAC BANKING CORPORATION



ISSB STANDARDS AND MODERN SLAVERY

The publication of International Sustainability Standards Board (ISSB)'s first standards has turbo-charged environmental reporting. The consequences for social impact measurement are also significant.

PLAISANT MILLECAMPS ISSB has recently published its standards 1 and 2. Is any part of these applicable to reporting standards relating to human capital and human rights?

■ TURNER I think what ISSB confirms it will do next will be interesting for social issues. It is currently considering a range of issues, including human rights and human capital. Another hat I wear is chairing an initiative called Investors Against Slavery and Trafficking APAC, and we are advocating for there to be some social standards in the next tranche of work.

Much of standard 1 is focused on disclosure of frameworks and processes. As an investor, we also need to see how the policies and procedures are moving toward outcomesbased measurement.

An example I would use is that it is great to see a company that has a modern slavery policy and therefore ethical procurement standards in contracts, but the number one question we ask companies we engage with is 'have you found any instances of modern slavery in your operations or supply chain in the last 12 months?' There are 50 million victims and we know this is likely to be sitting in the supply chain of every company.

We need to get to the bottom of whether companies are box ticking or really working on finding the issues. I would therefore like to see more outcomes-based metrics.

- WARD I agree. When we came across the Hyundai example, it had all the policies everything ticked the box. But what it was actually doing and what was written on paper were two very different things. We have to ask the right questions and also check that the policies are being implemented that it is not just a nice piece of paper.
- TOOHILL The risk of a 'say-do gap' is one that many organisations are seeking to close. Going back to standards and ISSB, what is powerful for climate in particular is that the standards have been framed around the TCFD [Task Force on Climate-Related

Financial Disclosures], which is a series of recommendations financial institutions have been working toward for quite some time. There is alignment and agreement on these.

Now, as we turn to human rights, the expectation is that we will look to standards such as the UN Guiding Principles on Business and Human Rights to assess what it means for expectations about effective due diligence and grievance mechanisms.

I am very excited about establishing outcomes we need to look for as well as ways to gauge the effectiveness of due diligence. These are difficult to measure but disclosures should not just be about



"WE ALMOST VIEW MODERN SLAVERY AS THE 'SCOPE-THREE OF SOCIAL', GIVEN WE ARE ALREADY DOING THE WORK TO UNDERSTAND THE CARBON IMPACT OF OUR SUPPLY CHAINS. WE CAN ALSO FIND OUT IF THEIR PROCUREMENT POLICIES MEET OUR REQUIREMENTS."

ADAM VISE AUSTRALIAN UNITY

measure. How did Australian Unity land on wellbeing as its measure for social?

■VISE We had a theory that social needed a measure, similar to the carbon measure for environmental, to make it investible and understandable. I recently had an interesting conversation with Mary Delahunty, the former head of impact at HESTA, about sustainable investing. One of the revelations from this discussion is that social is really a people measure and this is inherently subjective. The question is thus whether the best measure for social is a series of development goals from the UN or a subjective measure of people's wellbeing.

We concluded that wellbeing is the measure of social. A really exciting opportunity to consider is consistent, universal measurement of social outcome rather than a series of discrete development goals or other tests.

Through this, we aim to advance social from being 10 or 20 years behind environmental frameworks to catching up. The

moment we start to measure, manage and assign social factors, and find where capital gets return, we have the ability to move from small- to large-scale sources of capital to produce social policy outcomes. When we have good social policy glue, we get enhanced economic outcomes as well.

Australian Unity has undergone an interesting journey of pulling together all these strands to hone in on what does – and what does not – work for a purposeful organisation that measures wellbeing.

Swiss Issuers can define how they measure social impact but is this kind of measurement sufficiently definitive from an investor's perspective?

TURNER Investors love to measure things and I wholeheartedly agree with the saying 'what gets measured gets managed'. When we started our modern slavery work at First Sentier Investors,



the numbers – they should be telling the stories and revealing the case studies, including lessons learned.

When I first started working on sustainability reporting, 20 years ago - for a different organisation – an investor told me after my first sustainability report was published that it was great but if he saw another one like that he would throw it in the bin. Shocked, I asked why. He said "you didn't tell me about the hard stuff, the difficult case studies and what you will do differently next year". This was a very powerful lesson. When we get into some of the social areas we are going to have to get better about telling the stories of what didn't work, what we have learned and what we will do differently in future.

■ SIMPSON At the ISC [Infrastructure Sustainability Council], we have a modern slavery coalition in infrastructure that started just before the regulations came out. The industry worked together rather than trying to reinvent the wheel. It was clear from the early engagement that wherever we have looked for modern slavery, we have found it.

In line with the discussion about 'what gets measured

gets managed', it is also how we behave. When we have the opportunity to share lessons and are rewarded for doing so – almost getting incentivised for it – more of the tough stuff comes out. In this way, we are reducing the learning curve on what might go wrong and how to overcome it if human rights abuses or challenges are found.

In the infrastructure sector, we have learned the valuable lesson of the importance of outrage, and what this means as a lag indicator in cost and construction delays, as opposed to engaging early with stakeholders to understand what the beneficiaries are seeking as outcomes.

If we don't start early enough and we don't listen, the foundations that make clear what is of greatest value and how to foster social licence will not be in place.

■ VISE S1 and S2 from ISSB are all about the stakeholder point. Until we know what our stakeholders want and value, we can't even start with these diclosures. In particular, S1 demands a risk-based lens and requires us to know stakeholders and their values.

We opted for measurement as a priority. Nancy's work at

Social Ventures Australia has really focused our attention on the stakeholders we are serving in our businesses and finding out what matters to them.

By the time we were ready to start discussing our recent sustainability-linked loan with Westpac Institutional Bank, and we were asked what was material, we were able to identify the materiality from our discussions and work with our stakeholders.

Our S1 risk assessment is shaped by the starting point of what matters and what to measure. Measurement demands a series of questions be answered, and S1 and S2 require us to know what matters to our stakeholders. Once we have worked this out, it makes S1 and S2 reporting easy and consistent – whether it be social or environmental.

We are excited about S1 because we believe our community and social value (CSV) framework report meets the requirements once we put the stakeholder risk assessment in. We are beginning to think about S2 as a secondary requirement: we didn't think it was as material as our social impact and we are focusing on our environmental impact. Ultimately, though, we are

undertaking more or less the same work for both.

We almost view modern slavery as the 'scope-three of social', given we are already doing the work to understand the carbon impact of our supply chains. We can also find out if their procurement policies meet our requirements.

What is really going to change the world is that we will all have to take our auditors through this in 2-3 years. We have already taken our auditor through the CSV. If anyone thinks it is hard with greenwashing and the Australian Competition and Consumer Commission on our backs about what we say regarding sustainability, wait until you take your auditor through the process of all your data, analysis and words!

I think the thing that has been missed in the adoption of S1 and S2 is the increasing levels of negative assurance all the way through to audit assurance over the next three or four years. Taking an auditor through a whole supply chain to sign off, rather than just writing reports, makes S1 and S2 start to look quite dramatic in impact – because of what compliance will demand in robustness and reliability of data.

several years ago, we brought together a working group across investment teams to brainstorm effective measurements. The answer for modern slavery was that there are some things we can measure qualitatively and some that we can measure quantitatively, but we will never be able to land on a set of metrics that is a silver bullet.

Metrics can be incredibly helpful to identify risk and see how it is managed, but they will never be the end point. We decided, therefore, to measure what we can and not to use the fact that something is difficult to measure as an excuse to not get started. Even though there has been progress with investors and companies considering social issues, it all too often falls into the too-hard basket. Inability to measure is one of the reasons for this.

I completely agree with the need to link social and environmental issues. I don't think we have done ourselves any favours with the ESG [environmental, social and governance]

acronym as it encourages people to view them separately when they are not, in any way, three different topics.

For example, we have been doing a lot of work on deforestation recently, which is a biodiversity issue and also a climate change issue — deforestation is a huge contributor to emissions. It is also very much a social issue. We have been taking the modern slavery data we have pulled in the past to ascertain how it might be an indicator of deforestation, precisely because we know these issues are so closely linked.

I believe social and the environment are inextricably linked. Unfortunately, all too often they aren't considered this way and climate change can often be looked at to the exclusion of other issues. I can visualise a future where we have decarbonised but a huge amount of inequality has been created through, for example, a ballooning number of victims of forced labour.

■ **PLAISANT MILLECAMPS** When discussing use-of-proceeds (UOP) bonds with issuers, we encourage them to add social



"As an investor, I may not agree with the values of my client but I must respect its mandate and values, and where the money I am investing is coming from. There is a values input to social that doesn't arise in the same way in green investing."

MARAYKA WARD OIC

indicators to their reporting on social co-benefits. To do this, they have to find measures for social. It doesn't have to be perfect but the idea is to start somewhere.

This is an iterative process that improves over time. By making a start on measuring social aspects, issuers also surround themselves with experts in the field who can help measure and find the right indicators to use. We believe environmental and social will become even more linked so we are also trying to extract ourselves from using the phrase ESG – we are looking at the bigger picture.

■ SIMPSON I think ESG as a term is unhelpful. Using the term sustainability includes economic outcomes and it truly is quadruple-bottom-line stressing the need to do things in an integrated way. To get better outcomes we have to look at social, environmental, economic and governance.

One reason social is not featuring highly is that there is not sufficient governance and measurement yet. We can take politics out of some of the investment decision making in infrastructure when we embed sustainability into governance. ESG forces us to focus on certain aspects rather than on the complexity of the whole – which is greater than the sum of its parts.

■ TRAN We specialise in social impact measurement and we have had the pleasure of working with Australian Unity on its community and social value (CSV) framework over the years. I echo Adam's point about social measurement being subjective.

One of the factors holding social back relative to environmental, I believe, is that it is inherently more complicated to measure social impact. Social impact is about what happens to people and communities, and how they change over time – and they have their own perspectives about how they are affected, which should be listened to in a meaningful way. Measurement is a lot less straightforward.

With all social impact measurement, there needs to be a degree of judgement – and this adds to the complexity of constructing accepted standards. In other words, even if there are standards there still needs to be good judgement informed by a true understanding of the impact that has occurred when applying those standards. It is promising to see the extent of development in this space so far – for example, the Impact Management Platform, which is a collaboration seeking to pull together different standards, as well as SDG impact standards. The sector is rapidly evolving and working to build consensus on the standards and practices for measuring social impact. But it is still at an earlier stage of its evolution.

■ PALMER Having standards and an evidence-based approach is a key point. It is possible to do this and it doesn't have to be politically or emotionally charged. If we can measure and monitor something, we can point to where there is progress and work out where we need to allocate our resources.

This is the kind of work Aleksandra's team delves into very deeply – whether it is the metrics of the social aspect of the state's sustainability bond programme or social impact investment. It is all about measuring and monitoring.

SIMIC It is, and I like the point that has been made today that even if we cannot measure social impact perfectly this shouldn't prevent us from exploring different metrics, testing them and iterating based on the lessons learned.

The New South Wales (NSW) government has been at the forefront of social impact investing in Australia over the past decade, delivering social programmes through payment-by-results contracts and social impact bonds. In these contractual arrangements, payments to service providers and investors depend on the achievement of agreed outcomes.

Where viable, the most robust way to measure achievement is via a statistically matched control group. However, over the years, we have gained appreciation for the trade-off between robustness and timeliness. By the time statistically robust results are available, which may be anywhere between three and six months after service delivery, it may be too late to implement programme changes before a new measurement cycle begins.

Hence, for more recent investments we have been looking at separating payment metrics from evaluation metrics. This means we may use leading indicators or proxies for payment measures and then a more robust holistic analysis toward the end of the programme to inform the decision on whether and how to continue.

Building on the link between social and environmental, from the inception of the NSW sustainability bond programme we have looked at all eligible assets through both lenses before deciding if the case is stronger for social or green. One of the first assets we included in the programme was Sydney Metro Northwest, which is very clearly a green project and was certified accordingly. However, once it was in the asset pool, we made a point of highlighting its social aspects in our annual report to investors.

One of the strongest social aspects of large infrastructure projects is enabling employment and training of people facing disadvantage. Through the Sydney Metro's workforce



"While climate and environment may be more developed in the sense that they have more consistent standards and metrics, we also need to consider how we get from A to B in social. It is incumbent on us as an industry to look ahead and assess how we bring everyone along on the transitional journey."

KATHERINE PALMER NEW SOUTH WALES TREASURY



development and industry participation programme, more than 1,000 long-term unemployed people, people with disabilities and young people not in education, employment or training were employed and upskilled.

■TRAN Social Ventures Australia (SVA) has also been heavily involved in the development of the social impact bond (SIB) market since Australia's first SIB in 2013: the Newpin social benefit bond in NSW. We play an intermediary role between government, service providers and investors, establishing and managing SIB arrangements.

SIBs are an example of where private capital can play a valuable role in helping to finance social service programmes: by stepping in to share the performance risk. This supports innovation, and helps services learn and scale up what works to drive better outcomes for participants.

The programmes delivered through our nine SIBs to date cover a range of social issues, demonstrating the model can be applied to funding services across education, out of home care, homelessness, recidivism, employment for people experiencing disadvantage and mental health.

ADDED VALUES

WARD There is another aspect to social, which has been mentioned by Adam: personal values.

There have been some great examples of the link between the green and the social outcomes of a project like the Northwest Rail Corridor. But if we take an example such as a healthcare, for instance a pharmaceutical company that is undertaking medical research that will reduce healthcare costs overall – most of us would say this is a great investment. However, some clients have religious-based values and may have an ethical objection to other things the same company is researching.

As an investor, I may not agree with the values of my client but I must respect those values and where the money I am investing is coming from. There is a values input to social that doesn't arise in the same way in green investing.

■ TRAN Personal values is an important element of measuring social impact. People have different values, and we place different value on various social impacts. This is a challenge in applying standard measurements to social change.

In our impact measurement work, we come back to the core principle of listening to and involving stakeholders. If we are seeking to understand impact, we need to put parameters on who judges the value of a programme or service, or a social impact investment.

To us, this is the beneficiary of the programme or the people that are affected by the change. What the beneficiary judges the impact to be should inform how impact is measured and reported. We come back to this principle to help us understand what the reported value of a social change should be.

■ TOOHILL Through an Indigenous-relations lens, we need to think about the concept of free prior and informed consent. When we reflect on the principles set out in the UN Declaration on the Rights of Indigenous Peoples, we recognise that financial institutions need to better understand the concept of free prior and informed consent, and how it can be built into their operations — including lending decisions.

There are no easy answers, but we need to engage and listen so we can better assess. It is interesting that we can talk about ascribing a number to values, but sometimes it is excellent judgment that will inform the value of an outcome as well as positive or negative social impacts.

■ PALMER Earlier this year, the NSW government published an ESG review of the investment funds managed by TCorp. The independent reviewer, Pru Bennett, called out the idea of value versus values. That is, value from a financial outcome

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NANCY TRAN SOCIAL VENTURES AUSTRALIA





"One reason social is not featuring highly is that there is not sufficient governance and measurement yet. We can take politics out of some of the investment decision-making in infrastructure when we embed sustainability into governance."

AINSLEY SIMPSON INFRASTRUCTURE SUSTAINABILITY COUNCIL OF AUSTRALIA

perspective as compared with specific investor beliefs or desire to achieve societal outcomes.

For example, when I receive my superannuation maybe I want to have the highest possible return on my investment. However, my values might prompt me to ask 'at what cost?' The value versus values issue is not an easy question to answer, and it will differ from entity to entity. We work with entities across the investing spectrum and find, for example, that the philanthropy sector may be highly motivated around a more complex set of outcomes than just dollar value return.

■ VISE In our reporting, it is interesting to see where we get traction and where we don't when it comes to values and value.

The philanthropic market finds values really attractive because it reflects the values of the individual – it is not intermediated. We have had success with our mutual capital instruments in the high net worth market because we are able to connect with individuals on their wealth as well as their values.

The importance of value for everyone else is interesting. Our CSV is a central element of our investability for institutional investors. But when we talk to super funds, they are 'no' on the sole purpose test unless we prove that we are providing at least equivalent on financial value.

This is important. Social does not mean a trade-off to philanthropy and charity; it should be a signal for businesses that are in the world of providing social service, showing we are providing value to our customers as much as we are charging. We have had more success in engaging with super funds when we show that we are delivering more value, more growth or more opportunity in the sectors in which we operate.

ISSUER FRAMEWORKS

Plaisant Millecamps How was Australian Unity's CSV framework developed? How did it come up with the wellbeing factors?

■ VISE The starting point was to decide what we were going to measure. As an organisation, we are focused on people and impact. We have always reported on our impact to our board as we justified our various activities. The board members said they would like us to find a way to measure this impact effectively.

We then asked ourselves what we would measure. Australian Unity had already been measuring wellbeing via the Australian Unity Wellbeing Index for the past 22 years, in partnership with Deakin University, so we had a good sense of how wellbeing performed through various events for the community.

We knew we wanted to measure wellbeing and how value shows up in improving people's lives. We engaged SVA, and it became clear that social value is a good framework for assessing outcomes for stakeholders.

The federal government's "measure what matters" living framework has 50 clear outcomes that matter from a public policy perspective. We measured 220 stakeholder outcomes across our business lines. Because we work with the Commonwealth government, we took an extra step and added a value measurement to ascertain the more and less material aspects – in a value sense – to our stakeholders.

By attributing the value to our stakeholders of things that show up in community and social value, effectively they are aligned to wellbeing. This enabled us to break down the areas of impact. We identified three key areas of material impact, and six specialist areas within these, that we believe to be important to our purpose and achievement of our corporate strategy.

Ultimately, it comes back to the wellbeing insights of thinking about subjective outcomes for stakeholders, and having accountability that wellbeing can be measured, change over time and show up as social value.

Plaisant Millecamps What methodology did SVA use for measuring impact?

TRAN The work we did with Australian Unity was informed by our experience measuring the value of a range of community programmes across the social sector.

In particular, we drew from the social return on investment (SROI) methodology, which is an internationally recognised framework for measuring and accounting for the broader concept of value. It can cover social, environmental, cultural and economic values. This allowed us to put a financial value on the social and community impacts created by Australian Unity so it could be better understood, reported and tracked against.

At the beginning, we spent a lot of time across the business units to understand their products and services, as well as what they believe to be the social impact of these products and services to members, customers, employees and the broader community.

This was followed by further interrogation to ascertain how the organisation can be confident it has created social impact – for example, is there feedback from customers or data from



"I believe social and the environment are inextricably linked. Unfortunately, all too often they aren't considered this way and climate change can often be looked at to the exclusion of other issues. I can visualise a future where we have decarbonised but a huge amount of inequality has been created."

KATE TURNER FIRST SENTIER INVESTORS



the business that can speak to how much impact is created? We then used our best knowledge about the impacts to estimate a financial proxy for the value of the impact to the stakeholder.

One of the principles in the CSV framework is to avoid overclaiming. There are therefore additional steps that 'discount' the value claimed by Australian Unity, which consider whether impact would have happened even if Australian Unity's activities had not taken place, and the proportion of outcomes that should be credited to the contribution of others. This helps us better isolate and report only on the social value that Australian Unity is uniquely responsible for creating.

This is the third year we have worked with Australian Unity to report on its CSV, and the framework and data continue to improve. One of the ways we can reduce the learning curve for other organisations that may be going through a similar process, as well as building capability in impact measurement and holding ourselves to account, is to be very transparent about the methodology. To this end, we have included a lot of detail about the CSV methodology in Australian Unity's impact report.

Swiss How does Australian Unity's approach to impact measurement compare with what NSW Office of Social Impact Investment uses?

SIMIC The type of social impact investments we facilitate through the NSW Treasury's Office of Social Impact Investment is payment-by-results (PbR) contracts and SIBs.

We look at these investments via four pillars: preventions and early intervention, innovation, partnerships and outcomes. The first pillar is whether we can shift expenditure from acute services to early intervention and prevention. Then we consider whether we can deliver this through innovative programmes and funding arrangements to establish an evidence base of what works. We do this via partnerships with the for-purpose and for-profit sectors, leveraging their expertise and capital. The fourth pillar aims to show whether we are making an impact. To do this, we embed outcomes in the contract, and measure, report and pay on them.

Through early intervention and prevention, we aim to reduce avoidable usage of government services such as justice, specialist homelessness services and emergency room presentations, by enabling NSW residents to achieve better outcomes for themselves. This can mean achieving stable housing, engaging in education, employment or community health services.

Therefore, when structuring social impact investments we seek outcomes that link back to government service usage. But when it comes to evaluating a programme delivered through a PbR or SIB, we look at a much larger suite of measures.

To give an example, we have a programme delivered in partnership with the NSW Ministry of Health for palliative care, called Silver Chain Community Palliative Care Service. There are two objectives: to improve quality of life for people during their last phase of life by caring for them in a community setting and to support them to die in the place of their choice.

What we measure for our payment metric is use of hospital services. But when we are looking holistically at the whole value of this programme, we also use qualitative measures, including structured interviews with patients' carers on their experience. We measure and report on a much broader system of social outcomes.

Swiss The Infrastructure Sustainability Council was set up to ensure infrastructure delivers cultural, social, economic and environmental benefits. One of the key tools offered is the IS rating scheme. What kinds of social elements are rated and what metrics are used?

■ SIMPSON The IS rating scheme has been in existence since 2012 and it has been deployed on about A\$294 billion (US\$187.6 billion) of assets across Australia and Aotearoa New Zealand. From a social perspective, I agree with Katherine that the ability to measure is growing — a strong evidence base is emerging. However, while some features are measurable they can't always be easily monetised.

An example is stakeholder engagement, which is one element within the social theme. In assessing this, we look at the engagement strategy and how a company or project team identifies who its stakeholders are so it can understand what they value and what kind of impact and benefits can be created. We also consider heritage, which includes First Nations people and their connection to country.

We also assure workforce outcomes. As Adam has said, social is all about people. In the built environment, many of the ways in which we deliver value and impact are through a highly engaged workforce. Here we consider skills requirements, creation of long-term careers as well as jobs, diversity and inclusion, and workforce wellbeing and culture.



"Given the nature of the Sydney Metro project it would have been easy to just consider the green aspect or even just the environmental component in the SLL. But the sponsors were keen to also address and link social objectives and impacts from the project."

LINH QUACH WESTPAC INSTITUTIONAL BANK

Legacy is another consideration. The way we measure legacy is looking at how an asset might be delivering benefits that are not solely for the purpose for which it was designed. Sydney Metro is an excellent example. The intent was to streamline traffic congestion and get greater throughput into the economic centre. But there were job and skills outcomes as well as incredible community engagement outcomes, such as embedding STEM from a programme that focused on increasing and reaching school students.

Some of the governance elements we measure are sustainable and social procurement practices. Here we look at how local employment opportunities are created and local business, including social enterprise, are engaged. This is a very clear and defined policy outcome that can be delivered.

Resilience is critical, so we consider the resilience enabled by an asset for the community it serves. How will the community function in response to shocks and stresses?

Something we look at right from the feasibility or business case planning stage is benefits realisation. This involves how the asset owners are making sure the benefits are going to come to pass not only from an economic perspective but also when it comes to the social and environmental aspects.

Swiss How do investors go about measuring the social aspect of instruments such as UOP or sustainability-linked bonds?

■ WARD Whether we are talking about green, social and sustainability bonds or sustainability-linked instruments, we have an investment standard that guides the minimum structural requirements we will accept on a deal. It starts with credit approval of the issuer. We are not just buying because the security has a green or social label.

If I put a credit analyst hat on, it is far easier for me to look at a green asset pool and understand how I can value the underlying assets that are being funded. If I'm looking at something like solar panels or LED lights going into buildings, I know there is something physical from which I can recover value if I need to. I can see the cost savings for the issuer and how I am going to get repaid. There is also the science element to it that we have talked about. It is an easier decision than a deal that has social elements.

Take education improvements. Longer term, I can see the benefit for society in improving education standards. But I have to rely on the creditworthiness of the bond issuer, because

I can't see how a child is going to pay me back in the five-year time frame the bond is in the market for.

From our perspective, when we look at the pure social bonds that have been issued we are in in a lucky position because they largely come from government or supranational issuers – this kind of financing is core to their purpose. They are the ones that are going to be paying us back. We would have to really think hard about a pure corporate issuer of a social bond.

Having said this, there are plenty of areas where private sector finance can support government policies. We are in a lucky position in the sense that we are close to government but we are also looking after private sector financing. There are various ways to support social investment but it is much easier if the underlying creditworthiness is that of government or supranational entities.

■ **TOOHILL** A relevant issue here is the concept of just transition. When we consider the social impact of climate change and how best to assess it, we can make it more tangible by taking a placebased approach. By looking at the challenge of just transition in a place or region, we can consider a specific community and a set of values. This is when it becomes more real, and investors and others can understand it and test real solutions.

Once the different stakeholders come together about a place, we can begin to assess the social outcome we are looking for. Then we can structure the finance accordingly and understand the role of government, other financiers and other actors in relation to that place. Tailoring solutions for particular regions or places will be very relevant for just transition.

■ TURNER The majority of our funds are not labelled as sustainable — they are mainstream products that integrate sustainability. Our credit analysts seek to identify ESG risks alongside other risks. As Marayka described with QIC, our starting point is to look at the issuer. Our credit analysts give an internal credit rating and as part of this they will assess how an issuer is managing ESG risk overall.

Some issuers might have more exposure to environmental or social risk so there might be more emphasis on one of the elements of ESG – depending on its materiality for a particular company.

Quach If analysts include issuers' overall sustainability strategies as a component of their standard credit assessments, does it



"Through early intervention and prevention, we aim to reduce avoidable usage of government services such as justice, specialist homelessness services and emergency room presentations. When structuring social impact investments we seek outcomes that link back to government service usage."

ALEKSANDRA SIMIC NEW SOUTH WALES TREASURY



make it easier if bonds or loans do not have a sustainability label?

- TURNER I wouldn't say a label makes things more difficult. There are many advantages of having a label, including third-party assurance and a robust framework.
- **WARD** I have always been a fan of the sustainability bond because I view it as an easy way to sneak social financing in without having to go out on a limb with a pure social bond.

Labels are great because many investors have signed up to net zero asset initiatives. I'm wandering into the environmental space here, but an example is that we are working through the Investor Group on Climate Change's net zero framework. Under the framework, we have to decarbonise bond portfolios but we also have to show increasing investment in sustainable finance. Labelled securities are one of the few ways bond investors can really demonstrate this in the Australian market.

We also need to balance criticism of getting involved in policy as well, when we are meant to be financial investors. A few of us are involved in the PRI sovereign engagement pilot. This is the first time the PRI has engaged with a country – and it picked Australia as the pilot.

Some media have suggested this is stepping into the policy arena. But, as a bond investor in Australia, I have little choice but to hold Australian government bonds – and my ability to decarbonise my portfolio is therefore heavily influenced by the country decarbonising. The ability to get involved in these discussions with government, where I'm potentially carrying risks beyond the political cycle, is really valuable. I think this is something we have to get involved in.

Swiss Are social factors part of this engagement?

- WARD It is a climate focused engagement. But the inextricable link between social and environment is well recognised and accepted. It's a very two-way engagement process.
- TURNER I often say that, in an ideal world, my job wouldn't exist because investors would all be integrating ESG into their investment decisions and my role would be redundant. I think the same goes for labelled products. In an ideal world, they wouldn't need to exist. Maybe we will get there one day, but until we do there is a real need for them.
- PALMER I agree. The sustainability bond programme we set up was always a first step because our priority is ultimately how we are viewed as an issuer overall. Credit rating agencies are

already assessing issuers holistically based on ESG parameters, not just for the bonds issued under dedicated programmes. These assessments, by agencies and investors alike, consider the policy framework and evidence of progress in this space.

In the meantime, one of the differences between Tcorp's labelled bonds and general purpose bonds is that with the labelled product investors are getting transparency every single year in the form of the annual report on specific projects underpinning the bond.

This makes it easier for investors to say what they are invested in and what improvements are being made. A labelled bond gives investors a narrative straightaway, as well as certification and alignment with international principles. Hopefully, we meet most investors' requirements. We will never be able to meet them all because, going back to the concept of value and values, some investors may have a different set of values.

■ TOOHILL This takes us to that beautiful word: taxonomy. Last year, Westpac Banking Corporation put out a paper on how we are thinking about a sustainable finance taxonomy for our own organisation. And, of course, the Australian Sustainable Finance Institute (ASFI) is working with Treasury on a national taxonomy. Westpac's approach includes looking at the social dimensions of affordable housing and diversity. But it will be interesting to see how, as a nation, we will face into this and how we set the tone of what we mean by social finance.

Palmer Is your intention that the Westpac taxonomy will be aligned with the national one? Through ASFI, there is a lot of discussion about the importance of the interoperability of taxonomies and the importance of having a common language.

■ TOOHILL We are mindful that the ASFI project still has a way to go, so the purpose of working on our taxonomy is to reflect on and strengthen our own sustainable finance targets. We want to reset these because they have been very narrow.

We engaged with the regulators on developing our own taxonomy. Our idea is to release our framework to the market so we are clear about how we are assessing the different dimensions of sustainability, including social. This is also an important step to address greenwashing risks. We will continue to engage with ASFI and we will aim to align with where it lands with the national taxonomy. •

Practical considerations to the fore in Australian mandatory reporting

Mandatory climate reporting is quickly becoming a reality for Australian entities, with the development of standards well under way and implementation rapidly approaching. At the Investor Group on Climate Change Summit, which took place in Sydney in August, speakers discussed what is coming down the line in Australia and how it tracks with global developments.

<mark>BY KATHRYN</mark> LEE

n the next 18 months, large Australian entities will be required to deliver climate reporting just as they now complete financial reporting. The mandate will extend to a range of medium-sized entities by later this decade.

Discussions at the Investor Group on Climate Change Summit made clear that thinking is rapidly turning to implementation. For instance, Australia's federal Treasury has completed two consultation processes on mandatory reporting in 2023 – one on discovery and another on design.

Rebecca McCallum, director of the Treasury's climate disclosure unit, said the consultation responses suggest broad support for the concept of mandatory reporting. "The second consultation, which closed in July, maintained strong support for the reforms but I also think everyone has stepped another layer into the level of detail. There are now a lot of questions about 'how will it apply to me' and 'what will it look like on the ground'."

Treasury expects to release a consultation on draft legislation in the coming months before introducing final legislation to parliament during 2024. It will be up to the Australian Accounting Standards Board (ASSB) to decide what the actual reporting standards will be. So far, the understanding is that they will align closely with the International Sustainability Standard Board (ISSB)'s newly published standards.

"We are still working through this, finalising policy, and then we will consult again on the exposure draft legislation later this year," McCullum continued. "We are also working closely with the ASSB and the Auditing and Assurance Standards Board, and with our colleagues the regulators ASIC [the Australian Securities

and Investments Commission] and APRA [the Australian Prudential Regulation Authority] to ensure what we are setting up is meaningful from a regulatory perspective."

The final standards are not a *fait accompli*, however. According to McCallum, Treasury is not completing "consultation for consultation's sake". Rather, she revealed that it is carefully considering all feedback and is operating on the basis that the form of the standards is undergoing a genuine evolution through the development and consultation process.

"We have approached the consultation rounds with a genuine desire to ensure we are considering the feedback received. It is particularly hard when there is feedback that we have gone too far and that we have not gone far enough," she said. "Then again, sometimes this is a sign that policy settings are right. I would be very surprised if the final policy position the government announces is exactly what went in the consultation papers, across a range of issues."

According to the latest Treasury consultation, the reporting regime will be rolled out in stages beginning in 2024/25 with Australia's largest listed and unlisted companies, banks, superannuation funds and credit unions. By 2027/28 this will include a much larger group of companies (see table). Treasury estimates about 20,000 entities will ultimately be affected by the regime.

ONGOING EVOLUTION

missions reporting is a large and developing part of the global landscape. The delivery of mandatory requirements in Australia will not be the end of the story, however.

"We have approached the consultation rounds with a genuine desire to ensure we are considering the feedback received. It is particularly hard when there is feedback that we have gone too far and that we have not gone far enough. Then again, sometimes this is a sign that policy settings are right."

REBECCA MCCALLUM FEDERAL TREASURY

PROPOSED TIMELINE FOR AUSTRALIAN MANDATORY DISCLOSURE REQUIREMENTS			
ENTITY GROUP	IMPLEMENTATION FROM	REPORTING ENTITIES ADDED	
1	2024/25	 Entities reporting under chapter 2M of the <i>Corporations Act</i> that meet two of three thresholds: More than 500 employees. A\$1 billion or more consolidated gross assets. A\$500 million or more consolidated revenue. Entities reporting under chapter 2M of the <i>Corporations Act</i> that are a "controlling corporation" under the <i>NGER Act</i> and meet the NGER publication threshold. 	
2	2026/27	 Entities reporting under chapter 2M of the <i>Corporations Act</i> that meet two of three thresholds: More than 250 employees. A\$500 million or more consolidated gross assets. A\$200 million or more consolidated revenue. 	
3	2026/27	 Entities reporting under chapter 2M of the <i>Corporations Act</i> that meet two of three thresholds: More than 100 employees. A\$25 million or more consolidated gross assets. A\$50 million or more consolidated revenue. 	
SOURCE: AUSTRALIAN FEDE	RAL TREASURY JUNE 2023		

Speakers at the IGCC event pointed out that the standards will represent a minimum baseline that should not be interpreted as a finish line.

"It is important to start with a reporting framework that sets a minimum standard," said Michael Salvatico, head of Asia Pacific, Middle East and Africa sustainability solutions at S&P Global. "Some companies will struggle to achieve the minimum – for instance, a number of private companies we work with really struggle with reporting and even to calculate carbon emissions, energy use or water consumption. There will be challenges for companies to meet the minimum standard, but there will also always be companies that go above and beyond to demonstrate to stakeholders that they truly have control."

In this context, the initial format of the Australian standards will be an important factor in determining how the reporting ecosystem evolves in future. One hint for the local market is that ISSB has taken a relatively prescriptive approach to disclosure requirements, as Sue Lloyd, vice chair at ISSB, outlined at the IGCC event.

She explained that ISSB felt it was important to be precise rather than allow any risk of doubt. "There are very specific requirements about the scenario analysis companies need to do to assess climate resilience and when to do qualitative versus quantitative analysis," Lloyd explained. "This is because we want to make sure there is the same confidence in this new reporting system as exists for financial statements."

Overall, ISSB wants its standards to be "precise enough they can be subject to assurance and regulation", so users can be confident the disclosures they provide are truly reliable and consistent.

This is not the only philosophical approach to a reporting regime, however. April Mackenzie, chief executive at New Zealand's External Reporting Board (XRB) – which is responsible for the local climate-reporting regime – said the process of developing standards in New Zealand chose to focus on a principles-based approach rather than a prescriptive list of requirements.

She explained: "When there are entities that are unfamiliar with but are trying to meet a new requirement, giving them a

list of disclosures inevitably pushes them toward compliance. While there are challenges to not telling companies exactly what they need to do, we are trying to fill the gap with nonmandatory guidance."

The aim is to bring about behavioural change. "We want New Zealand to shift the dial to genuinely move to a low-emissions economy, rather than to simply produce a list of disclosures that allow entities to be compared with each other," Mackenzie added. "It is no good to compare companies if there has been no behaviour change."

This applies as much to the buy side as it does to corporate entities. Mackenzie pointed out that not all investors are as progressed on sustainability engagement and reporting as the leaders in the field. Reporting standards are just as valuable a tool to promote engagement in this space as they are in the corporate world.

She said: "If all we do is shine a light on information, it might not change behaviour. XRB is about moving the dial inside the entity as well. We have developed our standards with the view that it is not only about external capital and what can be achieved there, but also about the allocation of capital inside the entity and to promote behavioural change right through organisations from the board downward."

McKenzie said she sees the merits of a prescriptive approach and acknowledges the XRB's way brings its own challenges. However, she is also confident that the New Zealand approach leaves potential for more growth. Most importantly, the slightly different priorities do not reflect a fundamental divergence of purpose. XRB is in constant conversation with ISSB and Mackenzie credited the global body with helping New Zealand's mapping process, answering questions and facilitating comparison of the two sets of standards.

"In a field that is changing so rapidly and where there is so much innovation, as the standard setter we do not know better than the entities that need to do these disclosures or their investors," Mackenzie told conference delegates. "We try to engage with investors to understand the areas they want to learn about, and we need to allow entities and investors wiggle room to keep innovating and pushing boundaries."



BIODIVERSITY BECOMES TOO BIG TO IGNORE EVEN AS COMPLEXITY CAPS ACTION

he nature crisis may be less widely discussed than the climate crisis but

– as well as being a tragedy on its own terms – it represents no less of a
threat to human wellbeing. Sustainable finance has the chance to learn
from decades of gradually evolving expertise in the climate space to
deliver faster action on biodiversity, according to participants at an ANZ-KangaNews
roundtable that took place in Sydney in September. But the window to act will not
stay open forever.

PARTICIPANTS

- Mark Bennett Head of Agribusiness and Specialised Commercial ANZ Carolyn Hogg Senior Research Manager, Australasian Wildlife Genomics Group SYDNEY UNIVERSITY Tom Murphy Head of Natural Capital, QIC
- Zoe Whitton Managing Director POLLINATION GROUP Cherie Gray Global Lead for Sustainability and Market Development SWISS RE
- Sally Townsend Head of Sustainability BLACKMORES Katharine Tapley Head of Sustainable Finance ANZ

MODERATOR

■ Helen Craig Head of Operations KANGANEWS

BIODIVERSITY IN CONTEXT

Craig Why is biodiversity becoming such an important focus area in the world of sustainable finance?

HOGG As a scientist, for more than 20 years I feel like I have been screaming into a void that a nature crisis is coming. Finally, everyone is starting to pay attention.

The biodiversity and climate change crises are two sides of the same coin. But climate change scientists have been much



better at highlighting issues and how to address them. This is in part because climate issues are more tangible and knock-on effects are more direct: if we stop using fossil fuels, we will reduce CO₂ emissions.

Biodiversity is more nuanced and it is also more localised, which makes investment more challenging. We have to fix biodiversity in our own backyards before we can start to have an impact further afield.

The crux of the biodiversity crisis is that everything we do is dependent on nature – even for those who claim they don't like being in nature. As someone who does, it was interesting to see the number of people who ventured outside during the COVID-19 pandemic lockdowns. But anyone who likes the food they eat and appreciates the medicines they take needs to care about nature. Food security and our ability to discover new medicines are entirely dependent on what happens in the natural world.

We estimate that there are around 300,000 species in Australia. But there could be many more with invertebrates and species of plants still being categorised. There are species we thought were extinct that have suddenly been rediscovered. For example, genetics confirm that rodents found on the islands of Shark Bay are the same species that were thought to be extinct on the mainland.

The main issue is the rapid pace at which habitat is being lost. Agriculture is most frequently blamed but there is a wider, more systemic problem that is made more challenging by lack of responsibility for land tenure at local, state and federal government levels.

While I don't want to be a pessimist, from where I sit the biodiversity crisis seems insurmountable at this point. My biggest fear is that we will spend too long discussing perfect solutions when we should be getting on with imperfect ones so we can start to make a change.

Craig Have we learned enough from our response to the climate crisis to provide some hope that this isn't the case?

■ **HOGG** There is optimism. It comes from the involvement of big business and the finance industry, as these took the lead in the climate crisis. But I think we all recognise that overcoming the biodiversity crisis requires legislation and government leadership, and all of society, as well as change within the business sector.

TOWNSEND The challenge is that most supply chains are global so we need to deal with multiple governments and jurisdictions.

WHITTON There are useful lessons from climate change but they don't make the nature and biodiversity challenge any easier. It has taken more than 20 years to build infrastructure to tackle climate change, to get comfortable with target commitments and to create and label financing structures.

We have the intellectual infrastructure to approach an issue of this magnitude. However, in many ways the task on nature is broader so will require the same type of work we undertook on climate across a number of fronts at once.

■ TAPLEY The finance community coalesced around climate. After a lot of work, we know how to get insurance, banks, investors and corporations to work together. Biodiversity is the next natural step, notwithstanding it is a more complex issue — for instance the way it is localised but also global.

AGRICULTURE IN FOCUS

Craig How is the agribusiness sector responding to the climate and nature nexus?

BENNETT There are many interrelationships between climate, biodiversity and production. Ultimately, the way people consume and make decisions adds to the complexity, whether this flows up or down.

Farmers are by nature daily. But they see trends coming and have been collectively adaptive to and adoptive of information that will improve their businesses. Most farming is also multigenerational, which means I can't think of an industry that is more heavily invested in its own sustainable future.

Most farmers are strongly dedicated to preserving and improving the landscapes they control. Initiatives to support productivity and to combat rising costs are built on efficiencies that tend also to be supportive of the environment.

■ TOWNSEND Building the data set is very important for the business community as it is the tangible evidence needed to demonstrate the business, productivity and financial benefits of investment in nature. This comes back to the point made earlier on: people love nature and they want to be in it. Without sufficient data, though, nature-positive programmes start to seem purely altruistic.

In order to be transformative, we need to embed evidence into our business systems. This means we will rely on receiving

"The biodiversity and climate change crises are two sides of the same coin but climate change scientists have been much better at highlighting issues and how to address them. This is in part because climate issues are more tangible and knock-on effects are more direct."

CAROLYN HOGG SYDNEY UNIVERSITY



AGRICULTURE AT THE CUTTING EDGE OF IMPACT MEASUREMENT

One of the challenges of incorporating biodiversity considerations into business is measuring impact in a way that finance can interpret. The agricultural sector is at the forefront of developments in this space.

HOGG How is improvement of the environment from sustainable agriculture measured?

■ MURPHY There is a series of different methodologies that apply different strengths. One is change of practice. With reef water credits, for example, there is variable-rate fertiliser use versus comprehensive fertiliser use. If a user can prove it, they will know through the change in practice that there is a benefit that can be defined.

Change of practice measurements are a good first step and it is possible to see this in biodiversity. If a user implements improved area management practices onto an area of land, it will be in a better place tomorrow than it is today.

It becomes more complicated with soil carbon methodology. We have some way to go before we can apply this methodology to several terrains and consistently

say the measurement is where it needs to be.

Through certain change-ofpractice methodologies, proof of delivering a practice change can provide definable, auditable improvement. It becomes more technical in other methodologies, particularly when we get to soil carbon.

■ HOGG All this methodology development needs to be financed, and this is the crux of the problem. Investors need methodologies to understand whether their investment or the step-change plan is making a difference, and this is where there is a gap.

From a research perspective, we can develop all the methodologies. But we need access to funding that we no longer have after the Australian government reduced Australian Research Council funding.

We are constantly asked to evaluate return on investment

and our response is that we are developing something that can be used. But, in the short term, users need to pay for it – before there is any return on investment. The challenge is bridging this gap.

In Australia, we do not do investment into translational science very well – and this is why we find ourselves where we are. In Europe and in North America, there is investment in translational science for benefits and outcomes that are not immediately tangible.

Despite the risk associated with this, the investment is still made because investors can see the direction in which it is going. This is the part I would like to see changed in Australia, but frankly I don't know how we are going to get there.

■ **GRAY** We need to come up with methodologies that are attractive to the private sector. For example, how we can use remote sensing to

deliver speed and scale rather than having people being out in the field manually counting.

■ BENNETT Australia is a mature and developed economy where technology improvements in agriculture are continually sought and adopted. This is of course part of the problem in developing countries, where people need to be actively engaged and occupied in work.

There is a lot of public money and farmer-funded levy research going on. There is barely a commodity group here that doesn't have a sustainability programme in place. We require living and learning in an effort to come up with not only a framework that we believe is better but one that everybody adopts as acceptable.

On greenwashing and the costs of red tape and bureaucracy, referenced elsewhere in this discussion, we don't want to see industries satisfying standards to suit a single purpose only to find that, as we enter into a global trade environment, they have to start all over again because international jurisdictions do not agree with the way we arrived at our environmental credentials or net zero position.

There is the potential problem of standardisation missing the mark because of our fragmented systems of production across an enormous geography. But lack of standardisation can also create bigger problems and increase cost.

"THERE IS THE POTENTIAL PROBLEM OF STANDARDISATION MISSING THE MARK BECAUSE OF OUR FRAGMENTED SYSTEMS OF PRODUCTION ACROSS AN ENORMOUS GEOGRAPHY. BUT THE LACK OF STANDARDISATION CAN ALSO CREATE BIGGER PROBLEMS AND INCREASE COST."

MARK BENNETT ANZ

the kinds of proof points that Mark has mentioned – in order to build solid business cases to support long-term systemic change.

■ BENNETT To date, much of the evidence hasn't been measured sufficiently well to create the appropriate proof points, even though my own, unsubstantiated, view is that a lot of farming today has worked out what the right balance looks like.

The sooner we can better account for reliance and impact issues, the quicker we can understand the linkage between financial outcomes and the environment – for all to learn from

and to measure improvement going forward. In this way, we can build defendable and robust food and fibre production to support the global population's needs into the future.

Tapley With a mandate from the Queensland government, QIC has established the Queensland Natural Capital Fund. The aim is to facilitate private sector co-investment to generate commercial and environmental market returns while also producing positive environmental, social and economic



co-benefits. How are the fund's investments progressing?

■ MURPHY QIC's natural capital strategy evolved from our investment in the North Australian Pastoral Company (NAPCo) in 2016. NAPCo is a unique and iconic, 140-year-old Australian agricultural asset which, at six million hectares, represents almost 1 per cent of Australia's total land mass encompassing 14 properties leading to a feedlot in south-east Queensland.

We represent the state investment endowment fund and a UK-based investor, and 20 per cent is retained by one of the original families.

As an investor, our mandate is defined by our end clients. While this is obviously an agricultural investment, in the seven years since we bought NAPCo it has been interesting to observe the changing attitudes of our clients, particularly institutional investors. They are increasingly focused on natural capital considerations.

We have long believed that well-run businesses already incorporate sustainable management, developed through resilience and survival over more than a hundred years. However, institutional investors are starting to place increasing importance on capital considerations from a nature perspective.

Alongside the evolution of carbon markets, the importance of biodiversity offsets has started to increase in Queensland. These are different from the federal government's biodiversity credit initiatives. We have also owned an asset in the Great Barrier Reef catchment and are beginning to see the emergence of a reef water credits market.

We have an obligation from management as well, that is building in a natural capital perspective and forms part of our commercial strategy. As markets evolve, a value stream will start to emerge around achieving these outcomes.

We also need to consider the methodologies that apply to managing agricultural assets, including measuring what we can deliver. With biodiversity, as with carbon, the difference now is that there is capital standing ready to invest in nature. There is a dedicated mandate stemming from a desire to achieve positive natural capital as well as commercial outcomes.

■ BENNETT Credits and offsets are an evolving but positive market development for agriculture. The Australian agricultural market has only been fully deregulated since around the turn of this century — it is young and still finding its feet. There are always concerns about non-market-driven

interventions in agriculture being a lasting solution, or building dependence on rules and regulation that can be subject to change. Even so, carbon credit production will perhaps be at least part of the solution.

However, I feel more comfortable about natural drivers of sustainable production. This means efficiency, productivity and profitability as a path forward for farmers. Much of this primary effort can additionally unlock the potential for other forms of carbon or environmental credit production that could be an additional bonus – if not as revenue streams, at least as a way of maximising market participation.

- MURPHY Land clearing is obviously an issue that makes headlines in the agricultural sector, as does farming unsuitable land. There are bad actors everywhere, though, and this kind of attitude isn't unique to agriculture. The vast majority of the farming community respects the nature within which they live. Farmers want to preserve species and unique vegetation, and they want cleaner water. But we need to create a way either for them to be incentivised or to have regulation that removes compliance and administration burdens.
- BENNETT Agriculture as an industry has direct control of the natural capital resources it requires for its production systems. No-till farming has been an excellent example of positive change. Preventing soil erosion and maximising the capture and use of rainfall that was challenged by a drying climate in many cropping regions of Australia has been critical for yield. It has also created richer soils of improved organic matter and organic carbon, and is supportive of improved soil biology.

The irrigation industry is another that is heavily criticised in some quarters. But, among other things, water reuse systems that were incentivised by governments during the 1990s had enormous environmental and economic benefits, based on the goal of producing more from less.

These kinds of initiatives are tangible evidence of the farming industry growing and improving its sustainability, and having a positive impact on the environment. While programmes were developed to support these transitions, the primary driver was farmers investing their own capital at their own risk to generate the outcomes.

This is a case of addressing physical nature risk in a predominantly market-driven way. Practice that is managed through regulatory change can create a fear factor for business owners and for investor confidence, be it within farming or from outside interests.

"The finance community coalesced around climate. After a lot of work, we know how to get insurance, banks, investors and corporations to work together. Biodiversity is the next natural step, notwithstanding it is a more complex issue – for instance the way it is localised but also global."

KATHARINE TAPLEY ANZ



■ WHITTON This is particularly challenging because it is important to have a regulatory regime that evolves clearly and carefully to enable investors to understand how assets they own may be subject to change over time. At the same time, underlying natural infrastructure is eroding. When we think about where we need to get to and the time we have to get there, it becomes clear that we require a significant step change in activity.

There are synergies with climate change: in order to establish regulatory certainty, we need a pathway and we need to be able to determine how the pathway will evolve between points A and B. This means we need to get to a distinctly different operating regime – and in not very many years.

- **HOGG** Within seven summers, or two election cycles.
- **WHITTON** The other issue is that the last time we set global nature targets, we failed to meet them. The Australian government is currently reviewing the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* but we face some trade-offs, particularly in relation to access to land, if we are to arrive at our goals by 2030.

In climate, many have been saying lately that we are in the 'messy middle'. We know what we need to do and a bit of how, but we are nowhere close to achieving it. There are many stakeholders and years of negotiation to go, and it all seems a bit interminable.

There is an interesting question about how we navigate the messy middle in nature, particularly in Australia. How can we learn from the implementation we are now going through on climate rather than just adopting the financial and intellectual infrastructure to put around it?

■ **HOGG** The other implementation challenge is that all climate-positive developments are in some way detrimental to nature. For example, clean energy facilities pose a threat to local habitats. Any transition element has an impact on biodiversity — and this is often not accounted for in the rush to net zero.

As a conservation biologist, I am very concerned about changes proposed in the *EPBC Act*. The act aims to provide businesses with increased confidence to seek approvals for net zero infrastructure. To meet these requirements, however, the protecting biodiversity section of the act has been diluted.

TOWNSEND We can't get to net zero without nature-positive solutions. In the last few years, a lot of ground has been covered to improve climate literacy in boardrooms. The task at hand now is to improve nature literacy in boardrooms.

■ **HOGG** It is important to ensure boards understand that climate and nature are interlinked and that a positive change for the net zero transition can have a negative impact on biodiversity – but there are ways to mitigate this.

Craig Are there industries where the connections are less discernible?

WHITTON I think that, in Australia in particular, we have a tendency to think of agriculture as soon as nature is mentioned. However, there is a much wider set of sectors and assets that depend or have an impact on the natural world.

For example, iPhone production requires minerals that would be significantly more expensive without natural assets. If there are wildfires, people in cities breathing smoky air are paying the productivity cost of a failure in the resilience of natural assets. Dependence and impacts on natural assets go much, much wider than just agriculture.

■ GRAY For many corporate organisations, the risk is in the value chain. However, most do not think broadly enough about their dependency on inputs like critical minerals or water usage, and they don't have mechanisms in place to identify and manage a case of breakdown in supply. I think this is where the Taskforce on Nature-Related Financial Disclosures (TNFD) framework will be very helpful.

CAPITAL CONSIDERATIONS

Tapley What impact can the insurance sector have?

■ GRAY Swiss Re's environmental, social and governance (ESG) framework prevents us from engaging with businesses which, for example, build on protected areas or do not have a net zero commitment. This approach sends a clear signal that businesses may not be able to attract the insurance — and, down the track, potentially labour, resources and finance — they need to operate.

Swiss Re estimates that there was US\$270 billion of global economic losses from natural catastrophes in 2022. This relates to climate and doesn't even begin to include the impacts of biodiversity loss. As an industry, we have learned that financial motivation is a big accelerator for action so speaking about commercial outcomes is one way to attract attention.

Businesses are focused on improving outcomes when it comes to their assets and services in, for example, the avoidance of damage and business interruption. They must learn to treat



"Most farmers are strongly dedicated to preserving and improving the landscapes they control. Initiatives to support productivity and to combat rising costs are built on efficiencies that tend also to be supportive of the environment."

MARK BENNETT ANZ



their natural assets and ecosystem services in the same way as any other financial asset.

Bennett There will be a price for a longterm sustainable future. How do institutional investors respond to this?

■ MURPHY Every company, super fund and institutional investor is talking about ESG, decarbonisation and, increasingly in the last eight months, biodiversity. They are developing strategies to invest with ESG-, decarbonisation- or biodiversity-rich outcomes. However, most have not worked out how to structure their portfolios or mandates to incorporate investment in nature and land management.

One of the main issues seems to be working out where natural capital fits into existing mandates and structures. Is it infrastructure, property or, depending on the growth profile, private equity? Investors are also not comfortable with how to treat the trade-off between fiduciary duty, returns and the nature outcome. Solving for how to invest in nature at scale is a work in progress.

At the moment, the intention is there but the structure is not – and policy is not particularly supportive. Governments worldwide describe nature as a national emergency but are not treating it as such. We aren't seeing a response to the global nature crisis that matches the government response to the global health pandemic.

Humans are great at problem solving. But all the red tape and no pathway or resources means, in my view, that solving the nature crisis is going to take a lot longer than it should.

HOGG We also need to consider restoration. We need not only to preserve what we have but also restore what we have lost – and this costs a lot of money. This is not easy to raise for benefits that only become visible in 50 years when the corporate sector is seeking a return on investment that is immediately measurable. We need more investment on the ground and an economic solution – because it is clear that governments aren't going to get us there. It needs a combined effort.

SCORE CARD

Tapley Is Australia ahead of the biodiversity crisis compared with jurisdictions globally?

HOGG Australia is made up of a set of unique ecosystems. We are the sixth most diverse country in the world from a



biodiversity index perspective. There are 17 countries in the world that make up 60-80 per cent of the world's biodiversity, but only two – Australia and the US – are developed economies.

If we can't work out a way to protect biodiversity in Australia – which is one country, one continent and has a developed economy – how can we expect developing countries to succeed?

WHITTON I agree that we have a set of unique opportunities in Australia. The economy is very focused on primary production and our geographic footprint is extremely diverse. At the same time, the investment system is sophisticated and arguably well-prepared to deal with these types of challenges.

The key is to find the most appropriate funding models. One frequent talking point is that Australia has a unique combination of nature need and financial experience. Many have asked how we can use this combination to create structures – such as public-private partnerships and other types of infrastructure financing – that recognise the broader value footprint of nature and manage opportunities, including across time, in a more clinical and codified way.

Pollination Group recently surveyed a large group of global investors on nature. An interesting finding is that investors are very focused on opportunities in nature today – far more so than they were on climate change at the same stage of development.

Slightly more than 60 per cent of the investors we surveyed said they are either fully – the vast majority – or partially focused on the opportunities. They are already identifying ways to push financing toward nature opportunities, a development

"We can't get to net zero without nature-positive solutions. In the last few years, a lot of ground has been covered to improve climate literacy in boardrooms. The task at hand now is to improve nature literacy in boardrooms."

SALLY TOWNSEND BLACKMORES



CREDIT WHERE IT IS DUE

Carbon offsetting remains a controversial topic in climate finance. Biodiversity offsets and credits are, if anything, even more hotly debated given the more heterogeneous nature of local environments and ecosystems. There may still be a role for credits and offsets, even so.

CRAIG There is much hope - and some hype - associated with biodiversity credit and offset markets on the basis that they could help solve the biodiversity crisis. But it has also been said we cannot offset our way out of a problem of this nature. How are participants thinking about the offsetting debate?

■ TOWNSEND One way of achieving investment at the required scale could be through biodiversity credits. However, even as this market matures the risk is that companies use it as a way to mitigate their on-paper impact without fundamentally addressing the real impact across their supply chains.

Investment through offsetting has a place. But it can't be at the expense of people and

companies taking responsibility for their own footprint. Investment is required at scale and offsets are one mechanism to help achieve this. However, we also need to build frameworks and develop investor expectations that fit alongside the work businesses can do to measure their footprint and take responsibility for impacts right through their supply chain.

■ WHITTON Some companies believe they can buy their way to mitigation. But this idea keeps being challenged, locally and internationally. As an example, Norges Bank, which has around 9,000 equity investments globally, has recently updated its position on the use of offsets for investee companies. It suggests companies should engage with offsets but should do

so as a proactive investment in reducing damage and increasing resilience rather than as part of efforts to meet a net zero pathway.

The debate within environmental markets is very clearly starting to shift in this direction. Many are starting to say environmental markets are a mechanism that directs capital to emissions sequestration but also nature recovery, landscape improvement and resilience. The emphasis on using nature markets to mitigate or compensate for an entity's system footprint is definitely shifting.

■ HOGG Offsetting is a tragedy. Most people who work in conservation are a little traumatised by the offset market, particularly in New South Wales – where habitat is destroyed in one place and an offset in a completely different ecosystem and habitat paid for in another. This will have its own long-term consequences.

In the conservation space, offsetting is great as a way to get capital into the system for restoration. But, as others have said, it should not be

a way to pretend to be a nature-positive company.

- **GRAY** Integrity needs to go a lot further than project level, because biodiversity markets are moving very quickly. We need to learn from carbon markets and build biodiversity credits as a credible economic market, not as a hobby or philanthropic project.
- MURPHY It is good to debate this and the issues with offsets are clear. However, offsets play an important role if we want to invest capital in preservation and protection at real scale. There is a readymade, functioning market that can support preservation. If we accept that there will be environmental damage in mining and energy projects, hundreds of millions of dollars could be invested in protection that would help get the biodiversity credit market up and running.
- **HOGG** The key is to ensure that the offset market is not the end point but a step on the road to transition. This has been the issue in the past and has caused problems particularly in southeastern Australia, where offsets have been most prevalent.

The nature systems in this part of Australia are not found elsewhere in the world. If we lose them, they will be gone. Much of the area that is benefited through offsets is not agricultural land: it is desert – which is already well protected in Australia.

"MOST PEOPLE WHO WORK IN CONSERVATION ARE A LITTLE TRAUMATISED BY THE OFFSET MARKET, PARTICULARLY IN NEW SOUTH WALES – WHERE HABITAT IS DESTROYED IN ONE PLACE AND AN OFFSET IN A COMPLETELY DIFFERENT ECOSYSTEM AND HABITAT PAID FOR IN ANOTHER. THIS WILL HAVE ITS OWN LONG-TERM CONSEQUENCES."

CAROLYN HOGG SYDNEY UNIVERSITY

that wasn't anywhere near as evident at this stage in tackling climate change.

Moreover, while many investors are focused on risk and impact – whether systemic risk or environmental outcomes – a significant proportion are focused on short- or medium-term return potential.

In some ways this is a threat because it suggests investors are less concerned about possible damage caused by the footprint of the economy as it presently operates and the risks that arise from this. However, it also means there is significant institutional capital standing ready to be deployed into viable structures that improve nature — if we can build them.

This puts Australia in an advantageous position as a mega-diverse region with significant capital, a well-developed institutional finance sector and many of its citizens engaged in industries that have direct interaction with nature.

■ GRAY Swiss Re is working in countries like Indonesia, which seem to be ahead in acknowledging its natural capital and working on solutions to protect the landscape and related economic factors. For example, they are working on solutions to protect their coral reef, because of their heavy dependency on fishing. There appears to be more urgency and openness to innovation than we typically see in Australia. Perhaps developing countries are feeling greater impact from the biodiversity crisis.



"In developing markets, we tend to find there is more enthusiasm and open-mindedness to experiment with products and structures. In more mature markets where there are a lot of existing products – like Australia – it can be easier just to do what the market has always done."

CHERIE GRAY SWISS RE



Tapley Is the urgency coming from government or industry?

GRAY There is urgency from governments but it is enabled by the multilateral development banks. They play a significant role by providing a funding stream that helps governments take action and effectively allocate their resources.

For example, when Indonesia puts a value on the coral reef it becomes an asset class that can be included in its public asset inventory. All public assets in Indonesia are subject to insurance, maintenance and inclusion in investment programmes.

- **HOGG** I was surprised at the extent to which the Australian government fought to not let UNESCO include the Great Barrier Reef on its list of "in danger" world heritage sites. The government must have anticipated some benefit because it pushed incredibly hard on this. But if it had received the in danger profile it would have potentially received further investment and protections. The reef significantly affects the local fishing industry in Queensland and New South Wales.
- GRAY Government plays an important role in prioritisation, risk management and creating an enabling environment. While environmental regulation is critical, action is also determined by elements such as financial regulation. For example, globally, Swiss Re offers index-based or parametric insurance but the regulation in Australia makes some primary insurers less comfortable. Regulation needs to be supportive of enabling environments.

Whitton Why is it that regulation in Australia makes primary insurers less comfortable to provide these products?

GRAY In short, because it is not clearly defined and is thus open to interpretation. Index-based or parametric products could be viewed as derivatives rather than insurance. In

developing markets, we tend to find there is more enthusiasm and open-mindedness to experiment with products and structures. In more mature markets where there are a lot of existing products – like Australia – it can be easier just to do what the market has always done.

We work with APRA [the Australian Prudential Regulation Authority] and we have engaged in education and information sharing. We also provide support to insurers looking to develop these products.

HOGG When we undertake conservation work with developing nations, for example in the South Pacific, we also tend to find there is a willingness to try something even if what we are proposing is not perfect or guaranteed to work.

In Australia, we have a societal mindset that a product or service has to be perfect before we can roll it out. There is a concern that, if we get it wrong, we will be taking a backward step. However, in my mind, having a half-finished product that will get us some way toward the success point is better than spending several years trying to ascertain the perfect market solution or product.

- **GRAY** Some data is better than none. Even if we only get halfway, we have a case study and actual data from which to learn. Then, for the insurance community, we have historical data to feed into models, which helps inform pricing and other aspects.
- TOWNSEND Something that has prevented the corporate sector from being able to fully address this issue is that it is hard to solve a problem that isn't very well understood. Nature is innately complex, which businesses are only just now beginning to appreciate. Complexity is just part of the fabric of the problem and having access to data and ways of understanding measurement will help.

There are some key milestones we must achieve along the way but, assuming these can be overcome, we will reach a point where all we are missing is the strong business case – whether

"One of the main issues seems to be working out where natural capital fits into existing mandates and structures. Is it infrastructure, property or, depending on the growth profile, private equity? Investors are also not comfortable with how to treat the trade-off between fiduciary duty, returns and the nature outcome."

TOM MURPHY QIC



"Australia has a unique combination of nature need and financial experience. Many have asked how we can use this combination to create structures such as public-private partnerships and other types of infrastructure financing that recognise the broader value footprint of nature."

ZOE WHITTON POLLINATION GROUP

for investment in large-scale or long-term opportunities, or supply chain transformation. But first, we need to understand impacts and dependencies.

After two years of design and development, the TNFD launched its final recommendations this week. When we see the final TNFD framework, we hope it will provide a framework to help scope impacts and dependencies through a business lens.

We need to solve for the big capability uplift that is required as well as the capacity issue. All the issues businesses are grappling with at the moment are inextricably linked to collective global challenges. We are seeking to do something the business community has not historically been very successful at: building regenerative business models.

The success we have had with decarbonisation has come from decoupling business growth from our emissions footprint. As Mark mentioned earlier, there are some really good examples of water re-use applications. This is the circular economy at its best – and what we must do is find a way to ensure our leaders understand that it is not only about addressing climate.

Instead, we need to address climate, circular economies and nature-based solutions collectively, as a way of taking a fresh look at how our businesses operate in the long term, rather than constantly trying to solve for individual problems.

PATH FORWARD

- HOGG My world is filled with uncertainty. Every day is uncertain but the reason I like being a scientist is that it is my job is to try to find solutions to unanswered questions. However, there is a very big gap between the mindsets of the science and finance communities. There will never be certainty in nature. We need to learn and develop a common language to bridge the gap, helping the finance community deal with the level of uncertainty that comes from interacting with nature.
- **TOWNSEND** Ironically, though, risk mitigation through nature-based solutions can help address some of these inherent challenges.
- GRAY We also need to avoid overcomplicating the issue. There is a lot of discussion about capturing data, and standardisation of measurements and metrics. While global standards are clearly the goal, we know they are not available to us yet.

Despite this, Swiss Re has been able to provide reinsurance cover in Brazil based on the cost of replanting. It is a relatively

- easy valuation and, in the absence of something better, it is a good start. It means there is activity to form the basis of a case study, allowing teams of actuaries and scientists can get on with their modelling.
- **HOGG** We are just about to get a pilot into this exact topic underway with Sydney University. We will be exploring how we can carry out a full biodiversity assessment at scale using remote sensing tools and what the cost of doing so is. As a scientific community, we are still unable to provide definitive answers. We can't even agree on three metrics we can use for biodiversity.
- **BENNETT** To be optimistic for a moment, there is a lot of trial and error going on across Australia. There is private adoption and adaption, and plenty of willing partners to projects. What they add up to collectively is yet to be seen but they are already creating some very positive outcomes.
- **WHITTON** It is incumbent on the various groups involved with nature the scientific community, finance and commerce, and industries themselves to try to find a way to simplify the work. In our industry, we have a tendency to sit back and admire the problem in depth then get together and talk about how outrageously complicated it is. We can't afford to do this with nature or the task will put too much stress on many businesses.
- BENNETT The supply chain comes into play here and this is where some of the investment capital is being directed. If a business is sourcing food for consumers, there is currently a substantial drive to account for the entire supply chain, through scope-three requirements, as the company takes a product to the store shelf.

My view is that co-investment and activity through the supply chain will create a better, demonstrated balance for the environment as food and fibre are produced. But it needs to be done in an informed and fair way that takes full consideration of all participants in the chain.

Ultimately, this will still add up to a better outcome whether it is driven by a large fund or by an investment in a company that creates change through its supply chain. Ideally, there is a consumer part to play and to help pay, because without margin there is no production.

It is a good space for investment and one where innovation is likely. Large investors can drive positive change from the ground level up. But individual farmers will need an appropriate level of time and support as their own capital base



can be quite limited and income levels highly variable through the seasons. Again, there needs to be the right level of incentive to ensure positive change can be enacted.

- **WHITTON** It is important that we find ways to make it tractable, whether via the supply chain or by prioritising some factors over others.
- MURPHY We talk a lot about getting the right data sources. If we find a solution for this we will be able to finance the problem. A lot of this will be learning by doing. It is hard to know what the perfect framework is, unless we are doing it and doing so at scale.

An added issue for investors is greenwashing. There is almost too much talk about the risk of investing where the outcome is uncertain. But a bigger risk than the initial investment being seen as greenwashing is that there is no investment at all, simply because institutions are too wary of investing in something uncertain.

I agree that – with what we already know, which will be refined over time – we can have an impact and invest at scale using the methodologies that already exist.

By contrast, the fact that the market is still evolving is almost a good way for institutional investors to kick the can down the road. The sustainable agriculture pathway that already exists should provide comfort to investors that the frameworks and data will develop and improve over time.

- **BENNETT** There can be a scaled efficiency or a cultural advantage here, depending on whether we are talking about a big, diversified fund or a mid-market investor in Australian farming. This where a one-size-fits-all solution is not the perfect outcome.
- **MURPHY** Farmers with smaller or more fragmented blocks can't undertake these trade-offs. This is where corporate agricultural institutional investment at scale actually can lead the way, because there is a greater buffer for risk.

Whitton We talked about finding the pieces of work that we can do early, before we know all the answers. Are there examples of this that demonstrate good outcomes?

GRAY As a risk organisation, we have models that identify climate risks such as floods, drought and storms. Clients provide us with their data so we can examine their asset exposure.

In south-east Asia, we are looking specifically at reef data and applying Swiss Re's climate risk insights to ascertain the insurable solutions in the same way as we would identify these for human-made property. We are doing this in Indonesia and the Phillippines, and there will be several good outcomes from this work that we could replicate in Australia.

TOWNSEND Within our business, we have had a few attempts at piloting the TNFD framework. We have had some success with being better able to understand the problem and improve nature literacy. Our next challenge will be how we scale this and apply it across our entire business. We have more than a





thousand ingredients in our supply chain across 36 countries and we work with more than 170 suppliers. Many of these suppliers source from hundreds of farms to get a specific ingredient. How we scale will be the next challenge.

We have undertaken this work with Pollination and it has taken us a couple of years to fully understand how the frameworks apply to our business and how to integrate them. The best advice I can give to anyone who has not already started is just to get going. The most important thing is to start on the path now and therefore to be in a position to identify at-scale solutions.

Blackmores is a member of the Climate Leaders' Coalition, which has carried out a deep dive into value in nature. It has been truly inspiring to see the appetite to find an approach that lets us get started on nature preservation. This is what we are working on within the deep dive at the moment: how the business community can create on-ramps to TNFD and LEAP [locate, evaluate, assess, prepare] nature-risk assessments.

There are many competing considerations within businesses, including stakeholders, geographies, organisational boundaries and nature interfaces. Before we can understand all of this, we need to understand how we create value.

The role collaboration can play in how we reach the next stage really cannot be underestimated, whether this is across value chains or sectors, or simply across different influences on the commercial model. This is where we will be able to attain the speed and scale we know we need. •

THE NITTY GRITTY OF FIXED-INCOME INVESTORS' ESG ENGAGEMENT AND DEMAND

Each year, Commonwealth Bank of Australia and *KangaNews* survey Australian fixed-income asset managers to get an update on the lay of the land in local sustainable capital markets, then invite investors to add qualitative thoughts to the data at a roundtable discussion. The 2023 outcome paints a picture of a market that continues to mature but still has a number of hurdles to clear.

BY HELEN CRAIG AND LAURENCE DAVISON

nce again, more than 35 Australian fixed-income investors, representing fixed-income assets under management (AUM) of approximately A\$800 billion (US\$510.4 billion), filled in a survey that *KangaNews* conducted in August. The majority – 60 per cent – of responses came

from institutional fund managers, with the balance comprising a relatively even mix of insurance, superannuation and retail funds, and others. The roundtable discussion followed in mid-September, when Commonwealth Bank of Australia (CBA) and *KangalNews* brought together half a dozen investors to talk through the survey results in detail.

The survey is aimed at all fixed-income investors: specialist environmental, social and governance (ESG) or impact investors can and do respond, but the bulk of the data comes from mainstream vanilla funds.

Responses to questions on mandates back the claim that ESG considerations are increasingly integrated into investment decisions. More than half the survey respondents say all their AUM have an ESG overlay or equivalent while 63 per cent of respondents manage at least a portion of AUM in dedicated ESG funds or mandates (see chart 1). There is no obvious sign of a wide-scale proliferation of dedicated mandates, however: more than 80 per cent of respondents have no more than 10 per cent of their AUM in this format.

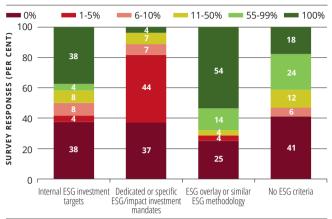
Adrian David, division director at Macquarie Asset Management in Sydney, suggests ESG adoption reflects a fundamental shift in end-investor preferences that only a few are not embracing. "Everyone still cares about alpha but it is no longer the full story," David explains. "While some clients are only focused on returns, there is a growing desire to embed emissions reduction in portfolios. Some of our clients are really closely focused on it: they might ask us, for instance, why we



"We have all become accustomed to credit ratings and the methodologies behind them, and I think there had been some expectation that, in time, we would get an equivalent type of score for ESG. But we are starting to understand that this is such a complex area that it might not be so straightforward."

CHARLES DAVIS COMMONWEALTH BANK OF AUSTRALIA

CHART 1. PROPORTION OF FIXED-INCOME FUNDS MANAGED ACCORDING TO ESG CRITERIA



SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

sold a bank and bought a transmission company if doing so increased portfolio emissions. There is a lot of dialogue about these issues nowadays."

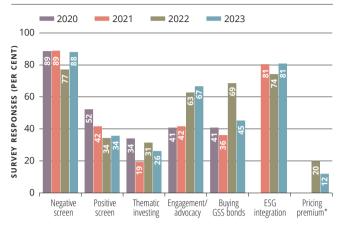
What the survey data most likely reflect is different speeds and levels of sophistication among end clients. Ben Squire, executive director and head of credit research, Asia Pacific at UBS Asset Management in Sydney, agrees that clients are, in general, demanding more focus on ESG.

But he adds: "The issue may be that, in some cases, they are still trying to work out what they themselves want. We are trying to have two-way dialogue to help them on the path. The insurance sector is leading because of its awareness of risk on both sides of the balance sheet, but it is also a developing theme with superannuation funds. It is happening – but it still feels like early days."

Investors at the roundtable are therefore not surprised that dedicated ESG funds have not overtaken more broad-based ESG integration. Lucie Bielczykova, Sydney-based portfolio manager at Revolution Asset Management, says ESG focused funds "are becoming confined to the impact or thematic investment space" while even the most ESG-engaged client type – superannuation and insurance funds – want to tailor their mandates to ESG considerations but not exclusively so.

Other influences are likely at play, too. One is the growing buy-side awareness of greenwashing, which may be leading investors to be wary of making claims about the sustainability

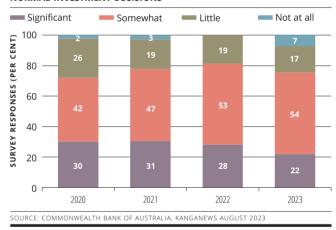
CHART 2. APPROACHES USED WHEN APPLYING ESG TO INVESTMENT STRATEGY



*Introduced as an option for the first time in 2022.

SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

CHART 3. POSITIVE ESG FACTORS' INFLUENCE ON NORMAL INVESTMENT DECISIONS



credentials of their funds (see box on p38). Meanwhile, 2022's fixed-income rout may have been particularly hard hitting in the ESG space. Kylie-Anne Richards, deputy chief investment officer at Fortlake Asset Management in Sydney, notes: "Because of the relatively poor performance of thematic fixed-income funds in 2022, I suspect some investors are stepping back from the space. I expect – or I certainly hope – this will change over the next couple of years."

"Because of the relatively poor performance of thematic fixed-income funds in 2022, I suspect some investors are stepping back from the space. I expect – or I certainly hope – this will change over the next couple of years."

KYLIE-ANNE RICHARDS FORTLAKE ASSET MANAGEMENT



INVESTORS SEEK TO **GET AHEAD OF GREENWASHING RISK**

Greenwashing has become a focus of regulatory and media attention in Australia in recent times, with the investment community well and truly in the crosshairs. Fixed-income investors report an elevated – but manageable – degree of concern.

The Commonwealth Bank of Australia (CBA)-KangaNews survey suggests nearly three-quarters of investors are currently at least somewhat concerned about greenwashing risk in the sustainable finance market as a whole (see chart).

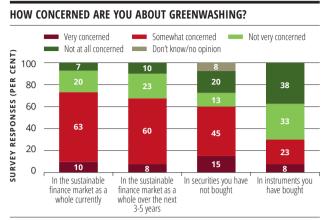
The large majority of these responses are only "somewhat" concerned, however. Investors also seem to be confident in their own ESG analysis: while 60 per cent of survey respondents express concern about greenwashing in securities they have not bought, only half as many extend this concern to their own holdings.

Nonetheless, greenwashing risk is clearly top of mind for investors. The number of pending cases brought by the Australian Securities and Investments Commission

against investment firms for alleged mislabelling or misleading environmental, social and governance (ESG) conduct continues to mount. Investors are wary of being caught up in such a case – or in negative media coverage – due to what might be inadvertent behaviour.

"We have seen a number of investors in Europe get in trouble for mislabelling and we are certainly taking an ultra-cautious approach to the evolution of green-labelled products," reveals Ben Squire, executive director and head of credit research, Asia Pacific at UBS Asset Management. "Reputation is really important and we want to avoid any element of greenwashing risk."

Unfortunately, there may be a particular challenge when it comes to the most valuable role capital can play



SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

in decarbonisation: funding the transition to a low-carbon economy. The fundamental problem is that financing high-emitting industries can increase portfolio emissions and trigger exclusion policies, even if the subject of the investment has a credible and ambitious transition strategy or, indeed, if the investment is specifically to fund transition. Such exposures in a labelled ESG or green fund are potentially susceptible to accusations of greenwashing.

"We hear different views on the value of labelled bonds when it comes to credibility," reveals Charles Davis, managing director, sustainable finance and ESG at CBA." Investors tell us the external review and ongoing reporting associated

with a label provides value. But the label alone does not provide automatic credibility."

A way forward may be to develop options in the funds universe. "One solution could be to perhaps establish labelled transition funds," suggests CBA's head of ESG DCM origination, Lauren Holtsbaum. "We have seen this offshore – a willingness to invest in high-emitting issuers with credible transition plans that potentially provide more impact. The fund distinguishes these investments as 'transition' rather than 'dark green'.

Market participants hope the Australian sustainable finance taxonomy will offer guidance on transition.



"We have seen a number of investors in Europe get in trouble for mislabelling and we are certainly taking an ultra-cautious approach to the evolution of green-labelled products. Reputation is really important and we want to avoid any element of greenwashing risk."

BEN SQUIRE UBS ASSET MANAGEMENT

Overall, however, ESG is increasingly mainstream: nearly 40 per cent of fund managers apply "internal ESG investment targets" to all their AUM. Squire reveals: "We look at ESG for every company, whether or not our clients ask for it. This is because there may be material risk or technical implications for the way the issuer's bonds are priced or trade. Even if a client isn't interested in ESG, the bonds it is investing in can be influenced by it."

The varying level of client sophistication is further demonstrated by the ongoing prevalence of the negative screen as the most common approach used in ESG deployment. After dipping slightly in the 2022 survey, in 2023 nearly 90 per cent of investors responding to the CBA-*KangaNews* survey report the use of negative screening (see chart 2). ESG integration is also popular, and the use of engagement and advocacy continues to grow.

Investors acknowledge that exclusion is still an important part of many end clients' thinking and in some cases forms the entirety of their ESG approach. It also tends to be the first step into ESG – and many end investors are still at this stage. Taken together, these factors mean that, overall, exclusions are increasing rather than being replaced by more sophisticated approaches.

"The client focus is typically exclusionary, accompanied by ever-more focus on emissions – specifically net zero emissions," Squire confirms. "The challenge is that transition by really dirty companies is where we will get the biggest change in emissions globally and make the most positive difference to the world. This is what we need to convince our clients about – but it is a slow-moving process."

At this stage in the development of Australian sustainable finance, stewards of the bulk of investment funds do not appear to have fully engaged with the needs of financing transition. Investors at the roundtable point out that exclusion alone is likely to produce worse outcomes, by allowing the most polluting or hard to abate assets to be acquired, at a discount, by parties with little or no interest in pursuing transition.

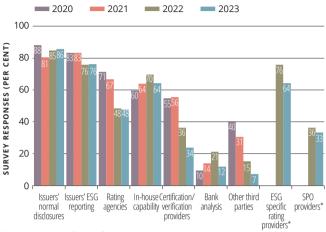
Squire adds: "There is an education component to the advocacy and transition approach but I admit it can be challenging. It's not that our clients don't want to do transition, but as a first step it's possibly easier for them to go down the exclusionary path and take the benefit of initial, relatively easy step-changes in their emissions profile."

This may go some way toward explaining why positive ESG factors only have a limited impact on fixed-income investors' normal credit decisions. The proportion of investors reporting a "significant" influence from ESG on the positive side has actually fallen over the four years that CBA and *KangaNews* have conducted their survey, although more than half of investors consistently say it has "somewhat" of an impact (see chart 3).

Gus Medeiros, CBA's Sydney-based head of credit strategy, suggests there may be room for even further integration of ESG risk and credit risk. He explains: "If a company has an operational edge associated with emissions reduction it could become a competitive advantage that may be interpreted as a creditworthiness edge – if the company is able to reduce ESG operational risks or demonstrate a stronger emissions glidepath relative to comparable issuers. This could contribute to better relative credit pricing for the issuer."

Bielczykova agrees that ESG risk is a component of overall credit risk. But she also notes constraints on the ability of debt

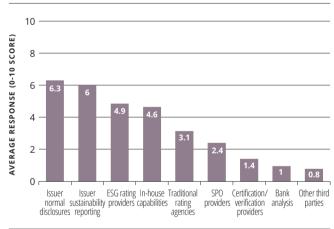
CHART 4. SOURCES OF INFORMATION AND DATA USED TO CONDUCT ESG ANALYSIS



* Options added for the first time in 2022.

SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

CHART 5. RANKING IMPORTANCE OF INFORMATION SOURCES USED TO CONDUCT ESG ANALYSIS



SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

investors to consider it as a positive factor. "We are never going to invest in a company that is great from an ESG perspective but which is losing money and we do not think has realistic prospects of ever doing well," she comments. "Meanwhile, because our upside is limited we are naturally focused on bad outcomes and how we can mitigate them."

"A big chunk of Australian corporate bond issuance comes from privately owned borrowers and, even when the owners are high-credentialled funds, the disclosure we get can be lacking. We always say to companies that we want to spend our time understanding their business rather than just trying to get information about it."

ADRIAN DAVID MACQUARIE ASSET MANAGEMENT



CHART 6. HOW WELL DOES INFORMATION PROVIDED BY ISSUERS AND THIRD PARTIES MEET ESG INVESTMENT NEEDS?

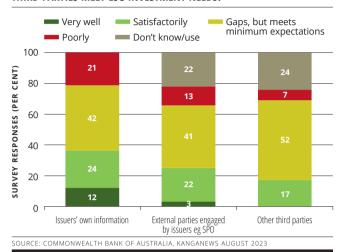
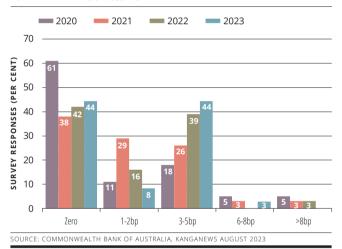


CHART 7. PREMIUM INVESTORS WOULD BE WILLING TO PAY FOR A LABELLED UOP GSS BOND



REPORTING AND DATA

he growing focus on understanding ESG risk as credit risk and evolving client demand are driving a need for more and better data disclosure and analysis. But they are not the only reasons why data is perhaps the most important single component of sustainable finance evolution at present. Mandatory climate risk reporting is coming, which will require significant investment in systems and capability.

Investor preferences are clearly migrating toward a focus on data that comes direct from the source and on their own capabilities, rather than reliance on third-party providers. Investors' use of ESG data provided by mainstream credit rating agencies or by certification and verification providers has fallen in the last two iterations of the CBA-KangaNews survey, while bank analysis and second-party opinion (SPO) providers have only ever been used by a minority of investors (see charts 4 and 5).

The buy side reports more interest in ESG-specific ratings but even here usage has fallen, perhaps because they are typically used to supplement rather than replace in-house analysis.

The clear preference is for issuers' own data – whether provided in normal disclosures or as part of ESG-specific reporting – which investors can conduct their own analysis upon. David says: "We love source documents so we want to go straight to the companies themselves. We expect all issuers to be producing public sustainability or ESG reports."

Charles Davis, CBA's Sydney-based managing director, sustainable finance, suggests: "There is an absolute desire for more consistency of external data and information but this is a highly complex and nuanced area. We have all become accustomed to credit ratings and the methodologies behind them, and I think there had been some expectation that, in time, we would get an equivalent type of score for ESG. But we are starting to understand that this is such a complex area that it might not be so straightforward."

Patricia Gacis, Sydney-based senior credit analyst at First Sentier Investors, adds: "There is a place for standardisation but the reality is that the transition pathway for one sector will be very different from another. In this context it is no surprise that we are all still grappling with what data we should be recording and what targets we should be setting. It will be very helpful if we get a local taxonomy sooner rather than later."

The development of an Australian sustainable finance taxonomy could also help deal with another issue the CBA-KangalNews survey highlights: that investors are far from fully satisfied with the information they receive, even when it comes direct from issuers. Nearly two-thirds of survey respondents suggest issuer data generally has, at least, gaps – including more than 20 per cent that rate it as outright unsatisfactory (see chart 6). Data from external providers is no more reliable, investors say.

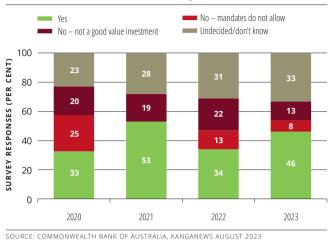
David says: "A big chunk of Australian corporate bond issuance comes from privately owned borrowers and, even when the owners are high-credentialled funds, the disclosure we get can



"There is a place for standardisation but the reality is that the transition pathway for one sector will be very different from another. In this context it is no surprise that we are all still grappling with what data we should be recording and what targets we should be setting."

PATRICIA GACIS FIRST SENTIER INVESTORS

CHART 8. WOULD YOU BE PREPARED TO BUY A BOND OR LOAN PRODUCT WITH A TWO-WAY MARGIN ADJUSTMENT?



be lacking. We always say to companies that we want to spend our time understanding their business rather than just trying to get information about it, and we always prefer to go to the source document where possible."

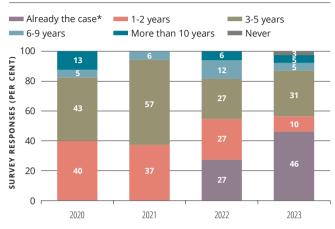
Richards adds: "There are several thousand potential ESG variables, yet the data sets have significant gaps, varied time frequencies and inaccuracies. If we apply standard models we will not get meaningful information."

The situation is likely even more challenging in the private debt space. Bielczykova explains that the sector lends itself to advocacy and engagement approaches because access to management is typically part and parcel of lending arrangements. But this work is often qualitative in nature because there is very little available data. "There are rarely credit ratings, let alone ESG ratings, on the loans and the borrowers we deal with," Bielczykova confirms.

Data provision by issuers and third parties may improve symbiotically. Lauren Holtsbaum, head of ESG DCM origination at CBA in Sydney, says many issuers are making a concerted effort to make more information publicly available in preparation for mandatory climate reporting and to satisfy stakeholders including rating agencies. ESG rating providers rely on publicly available data – and if an issuer is not providing this data on a public platfom its rating may not accurately reflect its ESG credentials.

Having a sustainable finance taxonomy in place should help standardise many aspects of data provision, potentially easing the

CHART 9. LENGTH OF TIME BEFORE POOR ESG PERFORMERS STRUGGLE TO ACCESS CAPITAL WITHOUT PAYING A MATERIAL PREMIUM



* Option added for the first time in 2022

SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

resource burden on issuers. Davis believes Australia's forthcoming taxonomy will help provide a common standard and a credible framework to guide the allocation of capital. Mandatory climate risk reporting, meanwhile, should help bring data laggards up to at least a minimum standard of disclosure.

ACCESS TO CAPITAL

verall, the survey and investor commentary suggest there is a divergence in opinion on the 'greenium' attached to labelled bonds. More than half of respondents would be willing to pay a premium, the majority of these in the 3-5 basis points range (see chart 7). CBA believes the willingness to offer a premium is likely to be driven by ESG mandates that support a buy-and-hold strategy, while those not willing to pay more are likely to be general funds that are more return focused.

There is a relatively stable level of willingness to pay a greenium for labelled use-of-proceeds (UOP) green, social and sustainability bonds. The proportion of investors that will not do so fell significantly between the 2020 and 2021 surveys, and while it has climbed slightly since it remains well below the 2020 level.

Almost half of investors are willing to support two-way coupon adjustments for sustainability-linked bonds (SLBs), up from 2022 and broadly in line with 2021 (see chart 8). In addition, the number of investors outright rejecting the concept

"There is scope for further development in transition financing. Considering the scale and pace of investment needed to address the climate crisis, there is a significant opportunity to deliver both returns and impact."







"We are never going to invest in a company that is great from an ESG perspective but which is losing money and we do not think has realistic prospects of ever doing well. Meanwhile, because our upside is limited we are naturally focused on bad outcomes and how we can mitigate them."

LUCIE BIELCZYKOVA REVOLUTION ASSET MANAGEMENT

on the basis that it is not a good investment has fallen, suggesting the buy side is open to the concept where it incentivises outcomes.

There is still a good level of in-principle support for SLBs. David says: "There are some companies that ordinarily we would not want to invest in, because the carbon risks are too high or the transition is going to be beyond what we think they can deal with. But if such a company came out with a transition product that, in our view, addressed the risks we perceive in its business or the way it operates, this could allow it to become a name we will invest in. We believe it is possible for risks we identify through our ESG process to be addressed through a product."

The challenge lies in delivering a transition-aligned product that all sides can agree reflects an ambitious decarbonisation pathway. Doing so has proved easier in the loan market, but Gacis explains: "The loan market is easier because of the relatively small number of investors involved. A step-up and step-down SLB mechanism is hard because it is difficult to get a consensus among a large number of bond investors about what they want in an instrument."

There is clearly a lot of work still to be done. Davis adds: "The key question is how we define credibility in transition. This starts with what decarbonisation pathway an issuer is going down but there are layers of nuance to it – it's possible to keep digging deeper and deeper. I don't feel we have yet coalesced around consistent themes in this respect."

On the other hand, Australian investors are much more confident that poor ESG performers are already incurring elevated cost of funds to the extent that there is a material impact on access to capital. Nearly half of survey respondents believe this is already the case and most of the rest believe it will become so within the next five years (see chart 9).

This response matches Medeiros's analysis, which breaks the Australian corporate bond market down into higher-emission issuers, vanilla issuers and ESG labelled bond issuers. He says there is a growing relative discount or widening of spreads for the higher-emission entities, even relative to early 2023.

"The market is becoming more aware of ESG costs, which gives investors a greater opportunity to explore transition as well as an incentive for issuers to reduce the relative discount," Medeiros concludes.

Investors at the roundtable agree. "We are certainly witnessing a pricing differential emerging for higher-emitting borrowers — and it is also leading to changes in behaviour," Gacis says. "This could mean increasing the volume of recyclables in its products or introducing new targets. Capital market pricing is undoubtedly driving change."

The phenomenon extends beyond the investment-grade sector, too. Bielczykova notes "very material differences" in pricing even within sectors in the private debt market. As an example, she points to a recent transport company deal where a significant proportion of the borrower's clients were miners and the collateral was things like trucks that have been purpose built for coal transportation. The deal priced materially wider than otherwise comparable leveraged loans and where the market would be for a transport company without the underlying exposure to mining.

The data all appear to be pointing in one direction: that the integration of ESG analysis in the mainstream credit process is well underway, even if it has some way to go to reach full maturity. In this context, it is perhaps unsurprising that expectations on the outlook for labelled securities – whether in UOP or SLB format – are of gradual rather than exponential growth in supply.

Almost no survey respondents anticipate a reduction in issuance, while nearly half expect it to grow in the next 12 months and nearly 60 per cent in the next three years (see charts 10 and 11). But while just 12 per cent of survey respondents forecast a "significant" increase in labelled supply in the coming year, this number jumps to 32 per cent over a three-year horizon.



"Some issuers are questioning whether they should be issuing labelled securities or just coming to market in vanilla format and promoting their positive ESG credentials. If the issuer has resource or capacity constraints to maintain a labelled programme, the vanilla path can make more sense at a particular point in time."

LAUREN HOLTSBAUM COMMONWEALTH BANK OF AUSTRALIA

Investors suspect further growth in issuance of labelled product will be limited by supply-side factors rather than lack of demand. "There is certainly demand out there for labelled bonds," Richards insists. "SLBs are a little more challenging, although they offer incentives for issuers and investors and I certainly think they are a great product."

Jo Lyn Tan, executive director, ESG DCM at CBA in Sydney, comments: "Having capacity to source quality data and commit to additional reporting is a challenge for issuers considering whether to issue labelled bonds. I suspect this will mean some struggle to justify the cost. It would be great if there were more support mechanisms or tools."

Tan points to the Singapore government's scheme that makes grants to cover the cost of external reviews available to issuers as the type of support that might facilitate labelled bond issuance in Australia.

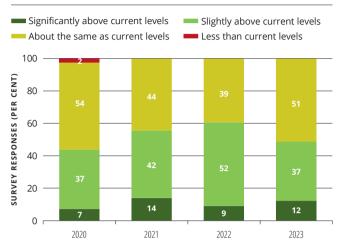
She adds: "There is scope for further development in transition financing. Considering the scale and pace of investment needed to address the climate crisis, there is a significant opportunity to deliver both returns and impact."

In the meantime, Holtsbaum says: "Some issuers are questioning whether they should be issuing labelled securities or just coming to market in vanilla format and promoting their positive ESG credentials. If the issuer has resource or capacity constraints to maintain a labelled programme, the vanilla path can make more sense at a particular point in time. This discussion will continue as the ESG market evolves, and I don't think every issuer will come to the same conclusion."

Some issuers opt to convey a strong signal to the market regarding their ESG commitments and ambition, Holtsbaum continues. This is the case particularly for companies with well-defined top-down sustainability strategies and which want to align financing with their overall approach. In this case, the issuer may consider resourcing a labelled transaction to be a part of its everyday operations.

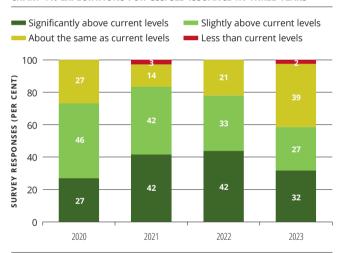
While volume may not have exploded, investors are generally pleased with the way labelled product has evolved. David suggests some of Australia's first green-bond issuers had very good green credentials but, on occasion, were not as strong on social or governance areas. But he adds: "Since the pandemic, the labelled market has matured with more issuance from a wider range of companies. This provided more choice, so we were able to buy some deals while still avoiding those that were strong in one area but weak elsewhere."

CHART 10. EXPECTATIONS FOR GSS/SLB ISSUANCE IN 12 MONTHS



SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

CHART 11. EXPECTATIONS FOR GSS/SLB ISSUANCE IN THREE YEARS



SOURCE: COMMONWEALTH BANK OF AUSTRALIA, KANGANEWS AUGUST 2023

In general, investors believe labelled product has a role but are wary of giving it a universal green light. Gacis explains: "I believe labelled bonds have a place until transition is complete – and this is going to take some time. We will continue to see, and support, this type of issuance for the foreseeable future. On the other hand, not all green-bond issuance is the same and we will have to analyse each and every one that comes to market." •

"If a company has an operational edge associated with emissions reduction it could become a competitive advantage that may be interpreted as a creditworthiness edge – if the company is able to reduce ESG operational risks or demonstrate a stronger emissions glidepath relative to comparable issuers."

GUS MEDEIROS COMMONWEALTH BANK OF AUSTRALIA





EVS' AUSTRALIAN POWER-UPGATHERS PACE

fter years of lagging uptake in other global economies, uptake of electric vehicles in Australia is finally starting to accelerate. Clean Energy Finance Corporation and *KangaNews* hosted institutional participants in the

sector at a September roundtable in Sydney, to discuss the detail on infrastructure and financing behind the headline uptake numbers.

PARTICIPANTS

- Dom Di Gori Group Treasurer FLEET PARTNERS Chau Le General Manager, Strategy and E-mobility ORIGIN ENERGY
- Ellen Liang Co-Founder and General Counsel JETCHARGE Ben Milsom Chief Commercial Officer PLENTI
- Thang Tran Associate Director CLEAN ENERGY FINANCE CORPORATION

MODERATOR

■ Helen Craig Head of Operations KANGANEWS

THE POLICY ENVIRONMENT

Craig How is the policy environment shaping the local market for electric vehicles (EVs)?

■ LE Two or three years ago, the states were leading Australia's EV strategy and uptake by offering supportive incentives across the eastern seaboard, including stamp duty exemptions and targets for 2030. The eastern states stepped in due to policy vacuum at the federal level.

There is now more leadership from the current federal government, which is a very pleasing development. However, from a state perspective, Victoria has taken a step back, followed by New South Wales (NSW) in its recent budget update. This is highly disappointing because the market is not

yet sufficiently equipped for the states to remove subsidies or the stamp duty exemption.

■LIANG I completely agree. In Australia, 8 per cent of all new cars sold are EVs, which is still lagging most of the rest of the world. However, we know from global comparisons that 5 per cent is the tipping point at which disruption becomes inevitable – so we are past the point of inevitable disruption.

To move from early movers to mass market, at around 25 per cent, we need to have supportive factors in place. An important component is policy settings – we are not at the point where we can remove policy.

■ DI GORI Unfortunately, we continue to have a mismatch of policy across any number of settings. The decision in the September NSW budget underscores the continued history



of governments struggling to grapple with the EV transition. I think we need to be realistic that the EV sector will continue to be held back without consistency between federal and state governments.

It is no doubt a complex policy area, but there are precedents for federal and state governments implementing consistent policy settings with positive outcomes. Nonalignment of federal and state governments is just another example of the challenges Australia faces.

It is positive to see the federal government finally start to take a stance but, at the same time, it will be able to do very little without state government cohesion.

- **LE** I think it is a budget issue. In my view, the NSW government still has the ambition to lead. It has one of the leading EV strategies and its EV fleet incentive remains in place.
- DI GORI But there are other unknowns. For example, the Victorian EV road user charge is being challenged in the High Court and the outcome may determine how electric and hybrid vehicles are taxed in Australia.

This is why we need the federal and state governments to sit at the same table. Transition is inevitable and the federal government needs to decide how it can best support the states through this transition. Without this, we will continue to have an inconsistent policy response from each of the states.

The confusion this causes cannot be underestimated. We see it within our own customer base. A procurement manager in charge of fleets across Australia must operate within settings established by individual states and a continually changing policy framework. It is very challenging.

■ MILSOM In our view, the federal government's national EV strategy is a good one, focused on solving the big barriers to EV uptake relating to vehicle supply, charging infrastructure, and consumer awareness and demand. In particular, the recently announced review of fuel efficiency standards in Australia is a very important step.

One only has to look at the the ultra low emission vehicle regime on older and higher-emitting vehicles in London or the clean car discount in New Zealand to see how supportive these types of initiatives are in the transition to EVs.

However, we query the efficiency and fairness of the strategy's consumer-facing financial support being delivered via fringe benefits tax (FBT) relief on novated leases. Novated leases can lack important consumer safeguards such as responsible lending requirements, or lock customers into longer-term

arrangements. Due to pricing opacity, a significant amount of the incentive value is often captured by intermediaries. We believe there is room for the government to provide easier and more equitable access to financial incentives.

DEMAND AND SUPPLY DYNAMICS

Craig To what extent has the landscape transformed as the market has evolved from low supply and demand to ongoing low supply but significantly increased demand for all types of EVs?

■ MILSOM We prepared a report with Accenture in March 2022 on the potential for EVs in Australia that studied uptake, trajectory to date and the consumer decision-making process for EV adoption. In 2021, EV sales were 2 per cent of all new car sales in Australia. At around 8 per cent now, it is on par with the global average in 2021. Demand-led supply has increased fourfold in just over a year.

Taking the data we had from a range of international sources and overlaying it with the trajectory of jurisdictions we view as leaders in EV adoption – such as China, the UK and California – this level of adoption places Australia ahead of comparator countries relative to when they started their transition to EVs. It is pleasing to see adoption exceeding expectations even though supply is constrained in Australia.

■ TRAN We work with a number of lenders and demand continues to be very robust. We faced some logistical issues early last year and uptake was slow as a result. However, logistical issues eased in the second half of 2022 and sales improved – and they have not slowed down since.

Sales of EVs in the last 6-7 months – at about 8 per cent of all new cars sold – far exceed the volume of sales of around 4 per cent in 2022. New sales are predicted to reach around 10 per cent this year.

It is clear that there is strong demand. We need to solve the supply issues while at the same time making sure imported EVs can be serviced with public charging infrastructure in the right places.

■ DI GORI The extent of the uptake in demand for novated lease EVs off the back of the federal government's changes to FBT is quite remarkable. In the novated leasing space, almost one in two vehicles being financed by our business is now an EV, compared with less than 5 per cent a year ago. To me, this

"In Australia, 8 per cent of all new cars sold are EVs, which is still lagging most of the rest of the world. However, we know from global comparisons that 5 per cent is the tipping point at which disruption becomes inevitable – so we are past the point of inevitable disruption."

ELLEN LIANG JETCHARGE



LEASING AND USER **FINANCING OPTIONS**

Fleet and employer-sponsored takeup will be the biggest single driver of electric vehicle (EV) demand. Getting the financial incentives right could be a major difference maker.

CRAIG The cost of buying an EV has been a barrier to increased takeup in the past. What options are there to ease the upfront cost burden?

■ LE Through our own employee base and in talking to other organisations, we have found considerable interest in EVs – especially with the fringe benefits tax (FBT) exemption. But employees are hesitant to try a new technology, especially if they haven't fully considered all the requirements and implications.

At the end of last year, we launched a fully flexible, month-to-month subscription package, with the added benefit of salary packaging to make use of the FBT exemption. It has been very popular because it is a 'try before you buy' model for people who are not sure if owning an EV will work for their lifestyle. They can return it with 30 days' notice and no cancellation fee.

We have seen significant uptake in the EV subscription offer within the Origin Energy employee base as well as strong interest from employees of other organisations that are offering the programme. A lot of the employees who have taken an EV with Origin would not have taken the first step without the flexibility the subscription provides.

CRAIG How many of the employees have kept the EVs?

- LE The majority have kept them. One of the disadvantages of a novated lease is that you are locked in for 4-5 years. If you leave your existing employer, you cannot transfer the novated lease you must pay for it with your post-tax salary. However, with the subscription option, if an employee leaves they can simply hand the vehicle back.
- **DI GORI** As I mentioned earlier, almost half of all the leases in our novated business

in recent months are EVs and we haven't had feedback from clients about the challenges Chau alludes to.

Novated finance has been a popular product among government employees and some of the largest corporates in Australia for many years, and recently announced government changes to the FBT regime supporting EV uptake has further enhanced product penetration. This is positive as it is a valuable and unique product offering in the Australian financial services market.

It is worth noting, though, that our larger customers are professional services employees and their demand, for the time being, is largely for Tesla vehicles. This is purely because of the supply-side constraints we have all spoken about already.

It is also worth noting that the people who generally opt for

a novated lease are aboveaverage income earners. Higher-income earners are always going to be early adopters of newer technology but, for real transition to occur, more manufacturers need to come to the table. Whether the meaningful uptake of EVs in the novated financing space is enough to drive a supply response is the real question.

The infrastructure debate adds an unnecessary layer of noise and confusion. However, we tend to find that most individuals are open to working through the issues when the car has arrived, by which point the financial benefits have started to come through and the perceived barrier to entry disappears.

LIANG BYD is hitting this sweet spot in price for customers and is very popular in Europe. Our experience with novated leasing is the same. Across the board, the novated book has exploded.



"NOVATED LEASING HAS DRIVEN UPTAKE, HOWEVER WE THINK IT IS TIME TO CONSIDER OPENING INCENTIVES TO OTHER TYPES OF FINANCE TO DRIVE COMPETITION, IMPROVE TRANSPARENCY IN LENDING AND INCREASE ACCESS TO CONSUMERS WHO ARE NOT ABLE TO ACCESS SALARY PACKAGING."

BEN MILSOM PLENTI

suggests the demand-side response will be swift when the right policy settings are in place.

However, there are still supply-side challenges. With the average amount financed of around A\$70,000 (US\$45,000) for new novated finance leases where the vehicle is an EV, it is mainly professional-services type employees that can afford to purchase these – in large part Tesla-manufactured – vehicles. To progress the market, we need to see a meaningful supply-side response from a range of manufacturers, increasing the diversity of makes and models available to make them better suited for the mass market.

We expect the demand-side response in the novated finance market would be be very substantial if the current policy setting combined with a supply-side response. Many more employers are now considering offering novated leasing, which then expands the number of individuals who will consider the transition to an EV.

FLEET SOLUTIONS

Craig Is the situation similar in the fleet sector? What are the specific challenges?



- DI GORI We hear many anecdotes that employees that had not considered an EV at this point in the cycle are now buying one. Some customers ordering a BYD, for example, will take the one that is in stock. We do not see this response to a typical ICE [internal combustion engine] vehicle, where customers are willing to wait 6-12 months for a specific vehicle tailored to their exact specification requirements.
- TRAN I had the same experience with independent lenders and OEMs [original equipment manufacturers]. The speed between the outright purchase has improved dramatically for traditional loans and novated leases

OEMs focus heavily on the customer experience. Their main concerns are with the way the novated lease market is structured and, with only one or two preferred financing partners, the fact that costs can be high. An improvement in the novated lease product could help accelerate choice whereby employees can seek their own finance and bring it on board through the same providers. This will optimise cost over benefit for users.

■ MILSOM Rental is useful as a try-before-you-buy option. There are also notable use cases for rental schemes, for example with ride-sharing drivers. However, these are likely to always play a smaller part of the overall market, as we believe Australians generally prefer to own their vehicles.

The rise in popularity of the novated lease is a direct result of generous government subsidies. The opportunity for higher income earners to save thousands of dollars in tax is a very clear incentive. Our concern is that novated leasing is not a level playing field. There is a narrow field of providers and consumers are not always offered the same protections, such as responsible lending checks, as they would with regulated loans. We also worry that some of the incentive value is absorbed by elements of the supply chain, including salary packagers, and that consumers are not always aware of this.

If we ask about the experience of taking on a novated lease, many will say they struggled to calculate the effective cost of the arrangement. I think we would all agree that this is not a satisfactory state of affairs.

Novated leasing has driven uptake. However, we think it is time to consider opening incentives to other types of finance to drive competition, improve transparency in lending and increase access to consumers who are not able to access salary packaging – for example, employees of SMEs or the self-employed.

- **LE** There are limited fit-for-purpose vehicles for EV fleets. The makes and models that are more affordable and better suited to fleet, such as the Hyundai Ioniq and Kona, are supply stricken and scarce. There is also a trickle of light commercial vehicles but they have very low range, of less than 250 kilometres.
- DI GORI Half our portfolio comprises light and heavy commercial vehicles. When we cannot fulfil 50 per cent of our customers' requirements because there is no meaningful EV option, it is a difficult conversation to have.

A few vans and SUV-style vehicles are starting to trickle into the Australian market and these may prove to be fit-for-purpose

vehicles for our fleet customers. This may assist with further EV penetration over the next couple of years.

We have ongoing, engaging and genuine conversations with customers that want to know what type of EVs are available and what the EV transition means for their fleets. But engaging in meaningful dialogue with customers on fast transition is a major problem when there are only around 30 makes and models in Australia and only a handful of fit-for-purpose EV vehicles for fleet customers.

■ LIANG The fact that fuel efficiency standards are under consideration has given the original equipment manufacturers (OEMs) leverage. Our OEM clients are already finding success increasing the number of EVs that are being imported, based on this fact alone. Vehicle production cycles are 2-3 years so they know they have to bring the vehicles in now if they believe the standard is coming.

Having said this, supply is not consistent – with trucks and utility vehicles there are far less vehicles coming in. Globally, the total cost of ownership has fallen but scarcity of vehicles in Australia means this isn't replicated here.

- LE We have changed Origin Energy's fleet policy to mandate EVs as default. If someone has the ability to charge at home, we install a smart charger at no cost. Because we are an energy company, we have been creative with our charging solutions except in Queensland, where we can't install chargers in our employees' homes unless they are prepared to go on a control load.
- DI GORI A traditional fleet will be managed by a procurement team but it may not have the expertise to manage the transition to EVs. Not many corporates have this expertise in-house. They need to deal with the transition but are potentially not going to be able to do so using internal resources, so they will need to consider outsourcing to fleet managers. I suspect not many corporates that have traditionally managed their fleet in-house have thought about this in any meaningful way at this point.
- LE Change management is often overlooked by organisations considering the transition to EVs. They used to provide employees with a car and a fuel card. Now they need to talk to facilities to install charging at the office, and to the employees and to the employees' landlords and bodies corporate. As we have now gone through this process first-hand for our own fleet, we are better equipped to support our business customers in the transition.
- LIANG The EV conversation usually centres on the cars because this is what everyone is excited about. However, there is a significant infrastructure issue and not just physical infrastructure but societal economic infrastructure. For years, fleets have outsourced their entire fuelling infrastructure to a fuelling ecosystem that now has to be brought completely in-house.
- DI GORI Most corporates are grappling with this. Some don't appreciate the speed with which this will have an impact on their business. The International Financial Reporting Standards will come into force in Australia from July 2024, requiring



larger companies to report on scope-one, scope-two and scopethree emissions. Smaller corporates will be required to report in the years thereafter. We recently undertook a series of briefings for our customers to help them understand emissions reporting.

It is important to frame the complexities involved so customers understand that, for example, ICE [internal combustion engine] vehicles in their fleets are captured within scope-one emissions and the transition of these to lower-emitting vehicles can go a long way to meeting scope-one emission reduction targets.

Replacing an ICE vehicle with an EV that is charged in the workplace falls within scope-two emissions. Take the same vehicle and charge it at home, and it becomes a scope-three emissions reporting item. Having the employee use renewable energy to charge the vehicle at home removes it from all forms of reporting. Our customers are all engaged in the conversation and they want to be prepared for the transition. But we quickly get back to the supply problem, given the limited range of fitfor-purpose vehicles currently available in Australia. **TRAN** Customer education is very important. Customers typically order their EV online. This is a good thing for convenience but lacks interaction between the customer and a specialist that can best advise them. Education is even more important when it comes to charging, because the charging decision is made early in the process and a customer adopting the right charging option from the outset is better than having to retrofit later.

EV MARKET INFRASTRUCTURE

Craig There is also a potential challenge in the form of the electricity grid as it currently stands. Is it sufficient to manage the requirements of charging an increasing volume of EVs, particularly given there may be unpredictably large variations in the demand load?

■ MILSOM Concerns with the grid are well-founded in the data and continued investment in infrastructure is clearly needed. But there is a reasonable way to go before we reach the point where EVs are the primary driver of these issues. Even so, we know from international data that an EV can increase household energy consumption by as much as 40 per cent.

One of the best ways to mitigate the effects of increased consumption on the grid is to continue to support the adoption

of household solar and batteries. Residential solar coupled with battery storage reduces charging costs for EV owners and assists in reducing the impact on the grid from EV demand and growing solar generation. For this reason, we view EVs as an important catalyst for the improvements we need at the end of the chain.

Outside the home, the roll out of larger-scale charging infrastructure – such as street-side chargers and charging for apartment and office buildings – is in its very early days. It will only be when we are further into this journey that we will see real pressure on the grid from these sources.

Craig How much difference is there between 'dumb charging' – which takes no account of power demand or cost – and smart charging?

- TRAN Dumb charging will put an unpredictably large variation on load. It is very important that we ensure our partners educate their customers on smart charging from the off
- **LE** We strongly encourage EV adopters not to install dumb chargers because not being able to manage chargers efficiently is a nightmare from an energy system point of view.

All our chargers are smart and are connected to our virtual power plants (VPPs), which means we can help our customers save money by scheduling their charging according to their tariff structure. It also gives the network more comfort because we know where the chargers are and what the charging patterns will be.

It is not just value for the electricity system. It is sharing this value back to EV drivers to help subsidise the cost of charging. In the early adopter phase, EV drivers are very engaged. As we get to mass market adoption, consumers and EV drivers need to be informed about charging options so they choose the one that works for them as well as for the energy system.

■ MILSOM Plenti is active in the VPP space with its GreenConnect platform, a centralised hub that makes it easier for solar and battery installers to connect their customers to a range of VPPs. This has given us an interesting perspective on how consumers understand third-party control of their energy assets, the types of offers and incentives that resonate with consumers, and how to help them understand the trade-offs.

Early on, industry was concerned about how users would understand VPPs and, in particular, their comprehension of battery use, and charging and discharging patterns, relative



"Education is even more important when it comes to charging, because the charging decision is made early in the process and a customer adopting the right charging option from the outset is better than having to retrofit later."

THANG TRAN CLEAN ENERGY FINANCE CORPORATION



to the value they receive. In reality, feedback is that users understand how grid connection may have an impact on their battery availability and lifetime usage but are happy to make the trade-off for the financial benefit of VPP membership.

We expect a dynamic charging environment to be more or less the same for EVs. When there is an incentive for consumers, we expect they will come to terms with it reasonably quickly – particularly when it requires no active management themselves.

■ LIANG Our experience is that consumers want smart charging — and not for the future hypothetical benefit of making money but simply because they like it. EV owners are no longer early adopters but the early majority. They enjoy being able to see data about charging.

When it comes to load shaping, EV loads are one of the easiest to defer as they are very low impact to consumers. They don't mind if their charging stops at 1am or 1.15am provided the charge is full by morning. Customers are willing to change the traditional paradigm for EV charging.

Craig We seem to be talking mainly about charging at home – but is this always an option?

- TRAN No in fact there is only potential for about 30 per cent of charging to take place at home. The majority will need to rely on public infrastructure. There is currently greater EV uptake from customers with access to off-street charging. But when it comes to mass adoption, the level will reduce owing to a great proportion of owners living in apartments.
- LIANG Apartment living absolutely is a challenge. It is not so much a challenge for greenfield, because the National Construction Code includes provision for EV charging. But it is hard to do infrastructure on brownfield and we have a lot of it.
- TRAN The ratio of public charging points in Australia is one charger to about 17 or 18 EVs. It is a lot lower in the EU and China. This is something we need to drive to encourage EV take up.
- LIANG When we talk about infrastructure, usually the first thing that springs to mind is public charging infrastructure. Actually, there is infrastructure that is even more critical to the transition than public charging for example, fast-tracking grid connections for the 50 per cent of new vehicle plates in commercial. It takes years to get grid connections and this is not quick enough for the transition.

There is a clear need to update policy settings to boost the uptake of charging points in apartments. There is also an equity issue for people who are off-street or renting, who have to pay twice as much for their fuel.

■ DI GORI I would go as far as to say the private infrastructure issue is binary. Either it gets solved or the transition will not happen in a meaningful and effective way — because a country like Australia cannot rely on public infrastructure.

The vast majority of public infrastructure sites are not viable financial products. If we can't solve for brownfield apartments,







we will prevent a sizeable portion of the Australian population from having the infrastructure to operate an EV. It is highly unlikely that large portions of this population subset will turn to EV product as a result.

LE If we had to advocate for a pocket of government funding, I would argue for more going into the private charging space. Even if someone has access to off-street parking, the cost of installing a smart charger is considerably higher than a dumb charger.

Encouraging uptake by subsidising the cost of smart chargers, as well as solving the brownfield apartment building challenge, would be more beneficial to EV uptake than focusing government money on public charging.



"The rating agency approach is still to start with the ICE vehicle assessment and assume larger relative losses for EVs – and thus apply more punitive haircuts. Ultimately, this means the equity required to finance the portfolio will be significantly higher – and it is the end customer that pays."

DOM DI GORI FLEET PARTNERS

DATA AND CREDIT QUALITY

Craig Moving to the funding side, one of the challenges for EV securitisation finance has been data – especially resale value data. What is the latest on this issue?

■ **TRAN** With increasing volume of EVs, sooner or later — perhaps as soon as later this year or early next — we will inevitably see a term securitisation deal come to market. Lenders will need to refinance their warehouse funding if the market is to continue to grow.

At the moment, we don't have a concrete view on how to deal with residual value risk in Australia. In the recent Tesla Auto Lease Trust 2023 asset-backed securities (ABS) deal in the US, one rating agency applied conservative assumptions to the residual value – reducing it by about 10 per cent relative to ICE. The rating agency says this haircut has improved over time. However, actual performance based on residual value outcome has outperformed rating assumptions since 2018 – but the agency still applies the haircut, because of insufficient data. ■ DI GORI Rating agencies are extremely conservative in this regard. They claim they need more data to be able to analyse residual value risk accurately. The New Zealand market has had a strong uptake of EVs so there are some valuable data points, however the rating agency approach is still to start with the ICE vehicle assessment and assume larger relative losses for EVs – and thus apply more punitive haircuts.

the portfolio will be significantly higher – and it is the end customer that pays. The fact that this is an issue in the deep US market for Tesla, where there is ample data on resale value, demonstrates there is no easy solution. I don't expect the rating agencies to change their approach in the short-to-medium term.

•LE While the industry waits for data, there is a very important role organisations like the Clean Energy Finance Corporation (CEFC) can play with residual value. Origin funds power plants, solar and gas but, because of the residual value issue, we are now also funding EVs on our balance sheet. Taking a view on residual value is not in our DNA, but in order to support our customers in the transition – and so we are not accepting the residual value the financiers or rating agencies dictate – we believe we have to take an industry-leading position.

Ultimately, this means the equity required to finance

Government-owned and private organisations have an important role to play in the early stages of any market. If we

sit around waiting for the data to come, it will be several more years until we see a more sensible level of residual value being posted.

■ DI GORI We are taking a market-leading stance, which we believe is our responsibility as we have been active in the Australian market for almost 40 years. To support customer transition, we have elected to set our residual values for EVs at ICE-equivalent levels.

We can take extremely conservative views on residual value but it makes the overall whole-of-life cost materially more expensive, which slows down the transition. We believe we have a role to play in financing EVs that will then provide used vehicle resale data points the industry and the broader population needs. Mass market uptake is supported by owner confidence that they can sell their EV at a predictable level in future

The data will not come from mums and dads buying EVs, because mums and dads hold onto their cars much longer than corporate fleet customers. Private passenger vehicles are held on average for 7-8 years but fleet customers will turn their vehicles over at the 3-4 year mark. Resale data points will come through more quickly in the fleet space.

It is all well and good to have a view on Tesla residuals. But a Tesla is also not a fleet vehicle. The typical fleet vehicle will be an ICE equivalent, and we will go to market with these equivalent settings so we can lead the conversation from there.

• MILSOM Much of the available data is from the US and reflects older EVs that are of a different technology generation, so we exercise caution about relying too much on this information. However, we now have some useful data from the US and Europe on battery usage, range and degradation. This offers a positive picture – that batteries are lasting longer and remaining of higher quality than expected.

There is so little by way of used sales – less than 1 per cent of our book is used EVs – and residual value is affected by larger manufacturers making significant price changes across their range. This means there is limited useful data in the Australian market at the moment to get a fair sense of value.

On credit quality more generally, the profile for EV buyers is very robust with meaningfully higher average incomes relative to other automotive borrowers and a higher credit score than the average across our book. EVs are very much a prime borrower product at present. We believe this customer profile supports increased investor appetite in the asset class.



"Change management is often overlooked by organisations considering the transition to EVs. They used to provide employees with a car and a fuel card. Now they need to talk to facilities to install charging at the office, and to the employees and to the employees' landlords and bodies corporate."

CHAU LE ORIGIN ENERGY



This may change over time but for now it is a good-news story for the sector.

Craig How has the funding market for EVs evolved over time?

- LIANG We have been pleasantly surprised at the earlier-thanexpected engagement of global tier-one funders with the specifics of EV charging. There are multiple players in the market with different focuses. But there is a growing understanding from funders that boots on the ground, capability to deploy at scale and technology are inextricable when it comes to the EV market. For all its policy hiccups, this is an industry that is growing rapidly and it is pleasing to see the sophistication in funding.
- **LE** It's a very attractive industry for financiers because it comes with a green halo. For banks and third-party funders, this is a renewable asset that they are very keen to hold in their portfolios. Whether it is vehicles or charging, there is a lot of interest in providing finance, and quite a lot of innovative structures as well.
- DI GORI We have had a long-standing relationship with the CEFC, which facilitated very early lease financing adoption for low-emitting vehicles and now for EVs. The CEFC has played a key role in funding the transition story, particularly in the securitisation market.

Many ABS investors ask when they will be able to have EVs in their portfolios – it is clear that there is underlying demand. Novated EVs are a very different proposition to operating lease EVs so there is natural conservatism about residual value risk settings for operating leases. There is also great curiosity, however, as many investors are interested in understanding what the transition looks like.

We have been fortunate with our programmes to always have a component of the portfolio in lower-emitting vehicles. We started with lower-emitting ICE vehicles that became hybrids, then plug-in hybrids and now EVs. We have open dialogue with our ABS investors about funding these vehicles and the leasing that attaches to them.

The next phase of development is to ensure we have a fully functioning public ABS market that supports EV financing. A public capital market is a prerequisite for financing the transition, and initial conversations with investors show there is clear appetite in Australia for EV ABS.

In Australia, 85-90 per cent of collateral in public securitisation is mortgages. There has always been demand

for diversity at the asset level and there is a great response from investors when we bring our leasing securitisation deals to market. We believe EV collateral will offer an additional diversification option for our investor base.

- TRAN Many lenders are seeking to accelerate their EV deployment and investors are as interested in the asset class. There is a focus on the residual value of EVs but over time, as EV ownership overtakes ICE, there will be a similar focus on the residual value of ICE. Then, investors will start to ask about residual value for ICE, and this will translate into the funding goal.
- DI GORI This in itself will help the transition because, at some point, fleet companies will start reducing residual values for ICE vehicles. This gradual reduction in residual value increases the cost of ICE vehicles.

On the other hand, as relative value settings for EV vehicles change, and potentially improve, over the time, this will improve the whole-of-life cost for EVs. Technological obsolescence is a key consideration, but this is as true for ICE as it is for EV.

■ LIANG The other risk is that 2050 is when the country is committed to net zero, which means 100 per cent of our new car sales must be EVs by 2035. For infrastructure, 12 years passes in the blink of an eye.

Three models have been developed. One is public charging, which can be funded but is losing its halo effect because of usage risk. Next is depot-style charging, which is quite familiar. Finally, there is private charging. As Dom said earlier, the transition hinges on private charging.

For Australia, it has to be about bringing the lowest cost of capital to the transition. Otherwise, it will cost billions of dollars more than it should. Because it is diversified, everybody is relying on their own cost of capital – and this is far more expensive than it needs to be.

■ LE Like the CEFC, the Australian Renewable Energy Agency (ARENA) has been instrumental in driving EV uptake — including rounds of funding focused on supporting uptake in private charging.

At Origin, we partnered with ARENA to help fleets drill down into the cost of charging. This is a not a cost that the fleet has had to foot in the past. It didn't fund petrol stations, but now it has to fund charging stations. Before private capital comes into the market, ARENA and the CEFC are playing a vital role. •

EVs TAKE GRID POSITIONS

As electric vehicles slowly replace petrol-guzzlers on Australian roads they will collectively have the power to inject cheap electricity into the grid when it is needed most. This all hinges on their owners thinking like rational economic actors – and taking steps to maximise their value.

BY JEREMY CHUNN

he potential role for electric vehicles (EVs) extends well beyond providing pollution-free transportation.

As these powerful 'batteries on wheels' continue to replace petrol-powered cars on Australia's roads and — importantly — new models are marketed that allow bidirectional charging, EVs can collectively help stabilise volatility in demand for electricity and make way for more generation from variable renewable sources such as solar and wind.

By mid-2023, renewables made up 36 per cent of all electricity generation in Australia, according to Clean Energy Australia. Wind energy accounted for 13 per cent, small-scale solar 9 per cent, utility-scale solar 5 per cent and hydro 7 per cent. In 2000, renewables made up just 1 per cent of the National Electricity Market (NEM).

In the Australian Energy Market Operator (AEMO)'s 2022 integrated system plan (ISP) – a 30-year roadmap for the transition of the NEM to net zero emissions – the market operator anticipated an electrified fleet may have a "strong influence" on the shape of demand for electricity and where it is used.

EVs can load up on solar around noon or on wind overnight – when power demand is at its lowest. If not otherwise being used, they can unload it in the late afternoon peak when electricity is expensive and generators are often pushed to the limit. This is all predicated on the roll-out of smart charging technology, however.

Rewiring Australia's Melbourne-based executive director, Dan Cass, estimates that charging an EV direct from solar can provide a full "tank" for A\$5 (US\$3.20). "We need to build more low-cost solar-powered charging infrastructure in our communities and

at our workplaces," Cass says. "A typical EV owner could drive as much as they need and still automatically charge and discharge at the times most suitable to the system to create a more resilient and sustainable energy grid."

START BUTTON

s more buyers choose electric in the years ahead, the legion of batteries-on-wheels will grow. Under the "step change" scenario described in its 2022 ISP, AEMO expects 58 per cent of vehicles on Australian roads to be electric by 2040 and 99 per cent by 2050.

Very few of the models available at the moment are capable of bidirectional charging – but the technology is coming. Tesla, the biggest-selling EV brand in Australia with 59 per cent market share, has indicated it will include bidirectional charging within two years. The technology allows vehicle-to-grid (V2G) or vehicle-to-home (V2H) power supply.

Network operators generally allow 5kW of export capacity from a residential solar system. If a similar allowance is applied to EVs with export capability, the aggregate could be a very large amount of potential generating capacity. Tristan Edis, director, analysis and advisory at Green Energy Markets in Melbourne, notes that 50,000MW is more than total peak demand in the main Australian grid.

The typical EV battery holds about 60kWh, or 12 hours worth of export if fully discharged at 5kW output. The average vehicle commute only requires about 5-10kWh of battery capacity, Edis suggests. "There is huge latent capacity sitting there that will, most of the time, never be used."



"Consumers fundamentally prefer to save rather than try to make money. It will be easier to plug in an EV and power the house – but this is just as valuable to the whole community as a car that is exporting to the grid."

TIM RYAN READY ENERGY

While buyers might select their vehicle based on a 500km range they will only require once or twice a year, most of the time they might cover no more than 30km a day.

Meanwhile, in the decade or two ahead Australia will be generating so much rooftop solar energy that surplus generation will need to be spilled around the noon peak. In SA, this phenomenon means wholesale electricity prices are regularly pushed to zero or below for as long as six hours a day.

"Market outcomes in SA are likely a few years into the future across other states, when there is a large excess of solar," Edis says. "EVs with V2G capability can provide a way to soak up the excess and provide it back into the home and the wider grid in the evening peak demand period."

There are also a few weeks of the year where wind and solar output is low for several days in a row. These can be forecast reasonably accurately a week ahead, Edis says. "The message could go out to households in the lead up to make sure their vehicle is charged to full capacity. The charge could then be steadily drawn down over the week and the vehicle owner paid for the service."

EV owners may also choose to use their vehicle's battery to power their own home. An EV that covers about 15,000km a year will use about 3MWh, whereas a house might use 4-10 times this amount of energy, says Tim Ryan, Sydney-based energy consultant and founder of Ready Energy. "Consumers fundamentally prefer to save rather than try to make money," he says. "It will be easier to plug in an EV and power the house – but this is just as valuable to the whole community as a car that is exporting to the grid."

OUT OF GAS

he relationship between EVs and the grid is not all upside, however. Passenger vehicles and buses have made up the advance guard in EVs but commercial vehicles and articulated, heavy and light trucks are on their way. This last category will be the main drain of all EVs on the grid in 30 years' time when they charge up after work, according to Cornwall Insight analysis.

Modelling of uncontrolled charging by 2052 forecasts an 8,000MW load around 8pm – a potential disaster for the grid. If truck owners are incentivised to charge overnight, after the evening peak, they can provide a significant improvement by easing pressure on the grid. Truck fleets will be working during the day while passenger vehicles can top up while the sun is shining.

Bjorn Sturmberg, Canberra-based senior research fellow at Australian National University's battery storage and grid integration programme, has tested the possibilities of bidirectional charging and says there is a long way to go. A trial of 51 government Nissan Leafs in the Australian Capital Territory was hampered by teething issues with bidirectional chargers. The Spanish company that produced the charging unit used in the trial has ceased production while it works on an upgraded version.

The trial, part funded by the Australian Renewable Energy Agency, was designed to test the possibilities for EVs in supporting the grid. The hypothesis remains to be tested, but Sturmberg does not feel defeated. "The immediate focal points of efforts should be around smart charging or managed charging," he says. "This is the huge opportunity and it is a stepping stone to perhaps doing bidirectional charging in the future."

The power required to charge an EV is 2-3 times greater than powering a household so it is vital car buyers understand the responsibilities of operating such a piece of kit. "We don't want a situation where lots of people have EVs and expect to be able to plug them in and charge at full bore at their convenience. If we get to that point it will be hard to convince millions of people to change their behaviour," Sturmberg adds.

Instead, EVs should be plugged in when not in use, with software used to control charging to optimise stability of the grid and use of renewables, and to minimise emissions. "We know we have to have 100 per cent EVs, and we know they are going to use a lot of power – there is no uncertainty around this," Sturmberg continues. "We should make sure the technical systems and social expectations are in place from the get go."

Australia needs much more public charging infrastructure to service EVs, anywhere and everywhere cars are parked. Tariffs should also reflect time of use so a charge is virtually free in the middle of the day and more expensive during the morning or afternoon peaks. Cornwall Insight expects about 200-250MW of "negative demand" throughout the night. The driver of this behaviour is economic, in the sense that the EV battery will have charged using cheaper energy from the daytime so it will be more cost-effective for the consumer to use this energy to power their homes through the night.

The disruption to car ownership and energy supply caused by EVs could in turn be disrupted by driverless vehicles, which can be shared and get by with much smaller batteries. There would be as many cars in motion but very few would be parked and doing nothing. It would be a much more efficient battery configuration relative to need, but there would no longer be a huge fleet of 60kWh powerpacks on call to manage peaks and troughs. •

"We need to build more low-cost solar-powered charging infrastructure in our communities and at our workplaces. A typical EV owner could drive as much as they need and still automatically charge and discharge at the times most suitable to the system to create a more resilient and sustainable energy grid."

DAN CASS REWIRING AUSTRALIA





AUSTRALIAN AND **NEW ZEALAND**SUSTAINABILITY BOND DEALS AND LEAGUE TABLES

AUSTRALIAN DOLLAR SUSTAINABILITY DEALS PRICED 1 JAN - 5 OCT 2023						
ISSUER	VOLUME (A\$M)	SETTLEMENT DATE	MATURITY DATE	BOND TYPE	BOND LABEL	ICMA ALIGNED*
World Bank	1,500	13 Jan 23	13 Jan 28	UOP	Sustainability	Υ
Asian Development Bank	450	17 Jan 23	17 Jan 33	UOP	Sustainability	Υ
Asian Development Bank	700	17 Jan 23	17 Jan 28	UOP	Sustainability	Υ
Industrial and Commercial Bank of China, Sydney Branch	500	19 Jan 23	19 Jan 26	UOP	Green	Υ
European Investment Bank	225	20 Jan 23	20 Jan 33	UOP	Green	Υ
BNG Bank	100	10 Feb 23	21 Jul 32	UOP	Social	Υ
Asian Development Bank	700	17 Feb 23	17 Feb 26	UOP	Social	Υ
European Investment Bank	1,500	21 Feb 23	21 Aug 28	UOP	Green	Υ
BNG Bank	20	21 Feb 23	21 Jul 32	UOP	Social	Υ
BNG Bank	40	21 Feb 23	21 Jul 32	UOP	Social	Υ
Bank Australia	225	22 Feb 23	22 Feb 27	UOP	Sustainability	Υ
International Finance Corporation	100	24 Feb 23	15 Apr 35	UOP	Social	Υ
BNG Bank	30	24 Feb 23	21 Jul 32	UOP	Social	Υ
International Finance Corporation	25	24 Feb 23	15 Apr 35	UOP	Social	Y
International Finance Corporation	50	24 Feb 23	15 Apr 35	UOP	Social	Y
BNG Bank	45	28 Feb 23	21 Jul 32	UOP	Social	Υ
International Finance Corporation	100	1 Mar 23	14 May 27	UOP	Green	Y
International Finance Corporation	50	3 Mar 23	15 Apr 35	UOP	Social	Υ
International Finance Corporation	75	3 Mar 23	15 Apr 35	UOP	Social	Υ
African Development Bank	50	8 Mar 23	8 Mar 38	UOP	Green	Υ
Queensland Treasury Corporation	3,000	9 Mar 23	9 Mar 33	UOP	Green	Y
International Finance Corporation	100	10 Mar 23	15 Apr 35	UOP	Social	Υ
BNG Bank	95	15 Mar 23	21 Jul 32	UOP	Social	Y
International Finance Corporation	100	24 Mar 23	14 May 27	UOP	Green	Υ
World Bank	300	31 Mar 23	14 May 27	UOP	Sustainability	Y
International Finance Corporation	50	6 Apr 23	15 Apr 35	UOP	Social	Υ
Korea Housing Finance Corporation	200		6 Apr 26	UOP	Social	Y
Korea Housing Finance Corporation Korea Housing Finance Corporation	120	6 Apr 23	6 Apr 26	UOP	Social	Υ
Ŭ ,						Y
Worley Financial Services	350	13 Apr 23	13 Oct 28	SLB	Sustainability-linked	
International Finance Corporation	50	14 Apr 23	14 May 27	UOP	Green	Y
BNG Bank	30	19 Apr 23	21 Jul 32	UOP	Social	Υ
International Finance Corporation	50	19 Apr 23	15 Apr 35	UOP	Social	Υ
World Bank	340	21 Apr 23	21 Apr 33	UOP	Sustainability	Υ
World Bank	500	8 May 23	21 Apr 33	UOP	Sustainability	Υ
Asian Infrastructure Investment Bank	500	17 May 23	17 May 28	UOP	Green	Υ
Oversea-Chinese Banking Corporation Sydney Branch	1,000	18 May 23	18 May 26	UOP	Green	Υ
Australian Postal Corporation	100	22 May 23	22 May 29	UOP	Sustainability	γ
KfW Bankengruppe	650	24 May 23	24 May 28	UOP	Green	Υ
World Bank	410	31 May 23	21 Apr 33	UOP	Sustainability	Y
European Investment Bank	450	2 Jun 23	2 Jun 33	UOP	Sustainability	Υ
BNG Bank	25	5 Jun 23	21 Jul 32	UOP	Social	Υ
BNG Bank	30	5 Jun 23	21 Jul 32	UOP	Social	Υ
CPPIB Capital	500	8 Jun 23	1 Sep 26	UOP	Green	Υ
Western Australian Treasury Corporation	1,900	15 Jun 23	20 Jul 33	UOP	Green	Υ
NRW Bank	300	19 Jun 23	19 Jun 26	UOP	Social	Υ
Asian Development Bank	300	20 Jun 23	20 Jun 30	UOP	Social	Υ
BNG Bank	30	20 Jun 23	21 Jul 32	UOP	Social	Υ
BNG Bank	40	28 Jun 23	21 Jul 32	UOP	Social	Υ
Transpower New Zealand	300	30 Jun 23	30 Jun 30	UOP	Green	Υ
BNG Bank	30	12 Jul 23	21 Jul 32	UOP	Social	Υ
African Development Bank	25	13 Jul 23	8 Mar 38	UOP	Green	Υ
BNG Bank	30	21 Jul 23	21 Jul 32	UOP	Social	Υ
Central American Bank for Economic Integration	30	28 Jul 23	28 Jul 33	UOP	Green	Υ
La Trobe University	175	8 Aug 23	8 Aug 30	UOP	Green	Υ





ISSUER	VOLUME (A\$M)	SETTLEMENT DATE	MATURITY DATE	BOND TYPE	BOND LABEL	ICMA ALIGNED*
International Finance Corporation	50	15 Aug 23	14 May 27	UOP	Green	Υ
National Housing Finance and Investment Corporation	27	17 Aug 23	30 Jun 36	UOP	Sustainability	Υ
International Finance Corporation	550	23 Aug 23	15 Dec 26	UOP	Social	Υ
NBN Co	850	25 Aug 23	25 Aug 28	UOP	Green	Υ
BNG Bank	225	13 Sep 23	13 Mar 34	UOP	Social	Υ
KfW Bankengruppe	450	20 Sep 23	24 May 28	UOP	Green	Υ
African Development Bank	75	27 Sep 23	8 Mar 38	UOP	Green	Υ
International Finance Corporation	150	6 Oct 23	15 Apr 35	UOP	Social	Υ
International Finance Corporation	50	6 Oct 23	15 Apr 35	UOP	Social	Υ
TOTAL	21,022					

NEW ZEALAND DOLLAR SUSTAINABILITY DEALS PRICED 1 JAN - 5 OCT 2023						
ISSUER	VOLUME (NZ\$M)	SETTLEMENT DATE	MATURITY DATE	BOND TYPE	BOND LABEL	ICMA ALIGNED*
Inter-American Development Bank	375	25 Jan 23	25 Jan 30	UOP	Sustainability	Υ
World Bank	550	2 Feb 23	2 Feb 28	UOP	Sustainability	Υ
Meridian Energy	200	20 Mar 23	20 Sep 28	UOP	Green	Υ
Kiwi Property Group	125	27 Mar 27	27 Sep 29	UOP	Green	Υ
Contact Energy	300	6 Apr 23	6 Apr 29	UOP	Green	Υ
New Zealand Local Government Funding Agency	1,100	17 Apr 23	15 May 30	UOP	Sustainability	N
International Finance Corporation	275	15 May 23	13 Dec 29	UOP	Social	Υ
Mercury NZ	150	19 Jun 23	19 Jun 28	UOP	Social	Υ
World Bank	950	22 Jun 23	22 Jun 26	UOP	Social	Υ
Asian Development Bank	675	29 Jun 23	20 Jun 28	UOP	Social	Υ
Genesis Energy	240	10 Jul 23	10 Jul 53	UOP	Green	Υ
World Bank	500	17 Aug 23	2 Feb 28	UOP	Sustainability	Υ
Auckland Council	300	27 Sep 23	27 Sep 28	UOP	Green	Υ
New Zealand Local Government Funding Agency	250	12 Sep 23	15 Apr 25	UOP	Sustainability Financing Bond	N**
New Zealand Local Government Funding Agency	500	12 Sep 23	15 May 30	UOP	Sustainability Financing Bond	N**
Transpower New Zealand	200	14 Sep 23	14 Sep 26	UOP	Green	Υ
TOTAL	6,690					

AUSTRALIAN MARKET SUSTAINABLE BOND LEAGUE TABLE

(INCLUDING SELF-LED DEALS) 1 JAN – 5 OCT 2023

BOOKRUNNER	VOLUME (A\$M)	NO. DEALS	MARKET SHARE (%)
ANZ	3,386	11	16.1
UBS	2,115	7	10.1
RBC Capital Markets	2,187	18	10.4
Nomura	1,861	9	8.9
Westpac Institutional Bank	1,809	6	8.6
TD Securities	1,688	14	8
Commonwealth Bank of Australia	1,617	9	7.7
National Australia Bank	1,509	6	7.2
Deutsche Bank	1,463	7	7
J.P. Morgan	1,285	12	6.1
Daiwa	570	10	2.7
Mizuho Securities	284	2	1.4
OCBC	250	1	1.2
Morgan Stanley	225	1	1.1
HSBC	194	2	0.9
Citi	150	1	0.7
Barrenjoey	113	1	0.5
BofA Securities	88	1	0.4
BNP Paribas	88	1	0.4
Bank of China	71	1	0.3
ICBC	71	1	0.3
TOTAL	21,022		

NEW ZEALAND MARKET SUSTAINABLE BOND LEAGUE TABLE

(INCLUDING SELF-LED DEALS) 1 JAN – 5 OCT 2023

BOOKRUNNER	VOLUME (NZ\$M)	NO. DEALS	MARKET SHARE (%)
ANZ	1,935	13	28.9
BNZ	1,468	10	21.9
Commonwealth Bank of Australia	1,352	9	20.2
Westpac	1,179	7	17.6
Craigs Investment Partners	286	5	4.3
Forsyth Barr	286	5	4.3
TD Securities	183	1	2.7
TOTAL	6,690		

^{*} ICMA aligned means the bond aligns with the International Capital Market Association's Green, Social or Sustainability-Linked Bond Principles, or Sustainability Bond Guidelines.

To see the full KangaNews sustainable bond league table criteria, go to www.kanganews.com/league-tables.

SOURCE: KANGANEWS 6 OCTOBER 2023

^{**} The LGFA Sustainable Financing bonds do not 100% meet the ICMA Principles because one component of the underlying assets is not covered by the Principles. The issuer aligned with the Principles as far as was possible and disclosed where and why they were not met. As a result, KangaNews has included these bonds in its sustainability bond league tables.

PARTNERS IN BUILDING A SUSTAINABLE FUTURE

Westpac is partnering with corporates, institutions and governments to back nation-building development, supporting clients with their transition to net zero emissions and helping them drive innovation and efficiency. We're leading the way in financing Australian infrastructure and renewable energy development, delivering innovative sustainable finance solutions, and empowering organisations with data insights.

We're your partner in building a sustainable future.



Source: Westpac leading position based on IJ Global League Tables as at 30 May 2023 and Westpac research, approximate based on public information. Westpac Institutional Bank's financing exposures are not limited to green and sustainable financing. For more details of Westpac Institutional Bank's financing exposures please see westpac.com.au/investor-discussion-pack-FY22. Westpac Institutional Bank is a division of Westpac Banking Corporation ABN 33 007 457 141 AFSL 233714. This information is correct as at 5 June 2023. These products and services are available only to wholesale clients within the meaning of s761G of the Corporations Act 2001. You should consider whether or not these products and services are appropriate for you. Terms and conditions apply. Copyright 2023 Westpac Banking Corporation.





