AUSIEX
an NRI company

Prepare for Change

The Bond Atom: Understanding bonds at the atomic level

September 2025

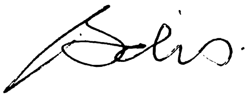
Preface

In 2024 we produced the second paper in our "Prepare for Change" series which focused on the need for Australian capital markets to adapt so as to provide the same, if not better, growth and wealth creation opportunities than those experienced by the Baby Boomer generation – which was the topic of our first research paper in 2023, where we highlighted the significance of demographic changes in Australia on financial markets.

This year I am pleased to share with you an extension to the series. The reason this is an extension is because it follows our recent acquisition of FIIG Securities. FIIG is Australia's largest specialist fixed income provider with over 6,000 clients and $4.5 billion of funds under advice, providing investors with direct access to domestic and international bond markets and a range of term deposits and other cash solutions. We acquired FIIG because as part of Nomura Research Institute, Ltd. (NRI), we are a research-led organisation, and our research led us to seeing the opportunity to create value for Australian investors and our wealth management clients by integrating its robust bond offering into our platform for financial advisers.

We will continue to provide research as we search for more ways to add value to all our stakeholders in the future, but for this research paper we are pausing to reflect on the opportunities and issues of improving Australian investor access to bonds in the near term. By sharing with you our analysis of the reasons as to why investors need bonds, how this led us to the FIIG acquisition, and by sharing what we think needs to be done to improve their adoption in Australian portfolios, we hope we can all work together to bring this important asset class to more Australian investors – because bonds are needed.

Patrick Salis



CEO, AUSIEX

Introduction

Australia has a retirement savings system that is the envy of the world. It is established and successful. However, like all systems, it has to adapt as it matures. When compared to the rest of the world, the Australian superannuation system does not use bonds as effectively as it could, and we suggest this is an area for improvement.

Notwithstanding this observation, the Australian financial services industry provides investors with a vast array of local and global investment products. The market is dynamic and able to meet Australian investors' appetite for innovation and quality. And yet, the numbers indicate there is little hunger in Australia for fixed income products (excluding cash and term deposits). Put simply, Australian superannuation funds are underweight bonds. The purpose of this paper is to discuss the need for – what we call the 'bond atom'. We call it this because bonds are one of the three core 'atoms' of an investor's portfolio along with equities and cash. We describe why bonds are an essential atom to be used in the construction of an investor's portfolio, and what we are doing, and what others can do, to help improve this aspect of the Australian retirement system.

Australian asset allocation observed

Table 1: Fixed Income allocation in Australia vs OECD averages

	Australian superannuation funds[1]	OECD pension funds[2]
Total	19% (average)	30-40% (range)

Table 1. shows that Australian superannuation portfolios hold, on average, half the allocation to fixed income vs OECD[3] pension funds. The headline from this data is that Australian superannuation portfolios are underweight bonds compared to global peers. This raises the obvious research question: why is this so?

We believe there are two important reasons.

1. **A national 'blind spot'.** Because our super funds are underweight bonds, a natural 'blind spot' has appeared. Bonds may not be explained often or well enough to Australian investors en masse because they aren't top-of-mind when we look at our portfolios.
2. **Structural differences.** There are structural differences between the Australian bond market and the rest of the world that can be addressed to benefit investors.

Addressing the structural issues can create a virtuous cycle that also helps fill the blind spot.

[1] ASFA Superannuation Statistics March 2025 (Source data APRA December quarter 2024)
[2] Pensions At A Glance 2023 © OECD 2023 Figure 9.3 (Data link)
[3] Organisation for Economic Co-operation and Development

Filling the blind spot: The three portfolio atoms

At their basic level, bonds are not a complicated product. They are one of three fundamental final assets along with shares and cash. For this paper, we focus on these three fundamental 'portfolio atoms'.

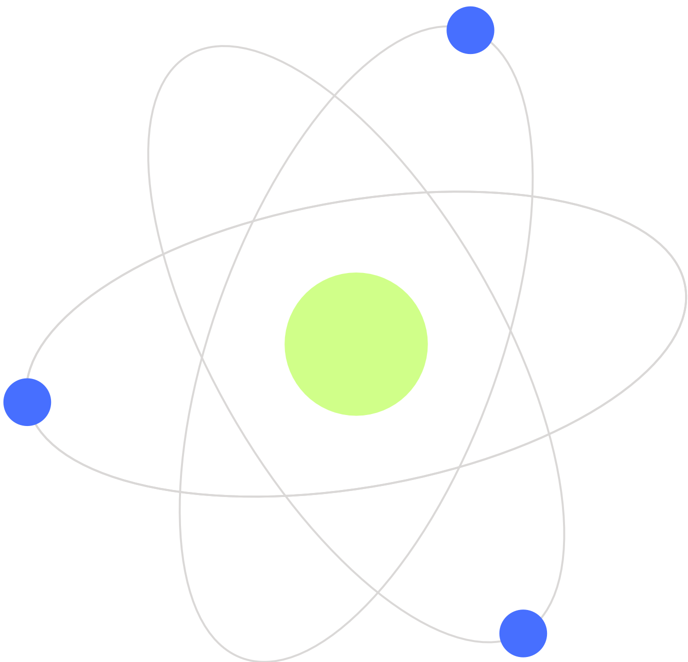
Other products like managed funds or ETFs can be considered 'molecules' – simply different ways of packaging these core atoms. We also exclude strategies like leverage or options, which are like the 'electrons' that surround the atoms.

The cash atom

In Australia, 'cash' is the Australian dollar and so-called cash equivalents (highly-liquid, short-term investments such as bank deposits and money-market funds). In general investment terms, it is considered 'the risk-free asset'. The risk-free asset for an Australian investor is different from that of an American or British investor because it is used to pay taxes. It's theoretically risk-free (not considering inflation or currency risk) because if you have a $100 Australian tax liability and $100 in Australian cash, you are free from any risk of being unable to pay. If you hold American dollars, you are not holding a risk-free asset because exchange rate changes put your ability to pay your $100 tax liability at risk. While cash in a bank account might earn a little interest, its face value never goes down (unless you spend it). And so, at a high level, cash is the portfolio atom to be considered the safest asset class you can own.

The equities atom

'Equities' is the term for shares traded on a stock exchange like the ASX. The name comes from 'shareholder equity', which is the value of the remaining equity that shareholders own after any debts are paid off. An 'equity' is a fungible (meaning identical and interchangeable) unit of ownership in a company. When you own an equity, you participate in the company's income, value growth (or decline), and governance through voting rights (dependent on the type of share). If the company goes bust, the value of your equity can go to nothing, but your risk is capped to the value lost, as you are not liable for the company's debts. And so, equities are the portfolio atom of ownership in a company.



The bond atom

Simply put, a bond is a share in a loan to an entity. It is a share in debt, not a share of ownership in a company (equity). It's called a 'bond' because it binds the borrower to the lender. In colloquial terms, it's a company saying, "my word is my bond to pay the interest and pay the money back". Bonds are issued by nation-states, government entities, and companies to raise capital. A 'bond' is also a fungible unit, but of loans, not companies.

The way bonds work is the issuer creates certificates (now electronic) representing a share in the total loan, called the **face value** or **principal**. They put a fixed **term** on it (how long before they pay it back) and a fixed **coupon** rate (the interest rate on the faced value of the bond). This is issued in the **primary market** which simply means direct sales. After issuance, similar to equities after initial public offering, bonds can be bought and sold among investors in the **secondary market**. In this secondary market, a bond's price can go up and down because of changes in prevailing interest rates (and other factors including the issuer's creditworthiness, demand for the issue and the credit spread). A key measure of a bond's sensitivity to interest rates specifically is its (**modified**) **duration**. Generally speaking, the 'longer' the bond's duration, the more its price is affected by interest rate movements. These movements in price impact the yield (more specifically the current **yield**), the interest income you are receiving over the current market price of the bond.

Bonds also have different investment **grades**. In general terms, sovereign bonds, or bonds issued by countries (also known as government bonds), have traditionally been considered the bonds of the highest grade. The US bond has historically been amongst the highest grade of all. However, even countries can **default** on their bonds (not repay them) like Russia did in 1998 when it defaulted on its bonds and sparked the 'Russian Bond Crisis'. Municipal bonds (issued by local government authorities in the US) are rated at varying grades, but very often at a lower grade than nation-state bonds. Hence, they have to pay a higher coupon which means a higher yield to the investor.

Corporate bonds also have different investment grades – for example a comparable bond from Apple may be lower risk than a bond from Ford Motor Company, and so Apple can pay a lower coupon than Ford. Companies such as Standard and Poor's, Fitch and Moody's do research to rate bond issuers – such as AA+ (S&P) for Apple and BBB- for Ford (Fitch) – based on their creditworthiness.

As this changes, so do their ratings. If a rating falls below a certain level it is considered below-investment-grade. These ratings agencies also rate individual bonds as to their creditworthiness and these ratings may be either higher or lower than the issuer's overall rating depending on the bonds features.

Somewhat paradoxically, a below-investment-grade bond is not to be perceived as having low worth – to the contrary there is a lot of high yield there for income-hungry investors who are comfortable with the risk profile of these lower grade bonds. The terminology of 'investment grade' vs 'below investment grade' is perhaps akin to the way we talk about the risk-return tradeoff between 'small cap' and 'large cap' equities. It should be noted that even though a bond can be called 'below-investment grade', in general terms it still carries lower risk than an equity investment in the same company. This is because bond holders are debt holders and are repaid from a (capital) restructure before remaining equity is determined and then returned to shareholders.

Why you would use the bond atom

Now that we have explained the 'bond atom' we turn our attention to why you would use bonds in your portfolio.

Managing investor risk and return preferences

Let's define risk, return and rationality in simple terms:

- **Risk** means the possibility that an investment or portfolio will experience financial loss, volatility, or deviation from expected outcomes due to market movements, credit events, interest rate changes, liquidity constraints, operational issues, or other factors. More risk can generate higher returns.
- **Return** is the overall financial outcome generated by an investment or portfolio over a given period whether through income, capital growth or a combination of both.
- **Rationality** simply means making choices that fit your own personal goals and comfort with uncertainty. Importantly, it's not a value judgment, as everyone's goals are different.

Risk and return allow us to describe at a high level how the different atoms and their combinations can work together to help manage an investor's individual preferences.

- A portfolio of **cash atoms** is lower risk but also the lowest return.
- A portfolio of **equity atoms** is higher risk and that may mean you need more time to get the highest potential return, depending on the economic cycle and the nature of the investment.
- A portfolio of **bond atoms** generally has a risk level between cash and equity atoms alone. The return of a bond atom portfolio is typically lower than one made of equity atoms, but higher than one made of cash atoms, which as you will see is why it is also an essential atom.
- A portfolio that blends all atoms is called a **balanced portfolio** as it balances the ratio of all atoms to meet an investor's particular needs at a given time in their investment journey.

By adding the bond atom to your investment portfolio, you can have more options to effectively manage your portfolio as your risk and return preferences change over time. Your stage in life is an important factor, as explained below.

Managing investment portfolio timing risk

Your personal investment experience is defined by when you are born and when you retire. Two

people who work for 45 years may have entirely different outcomes based on whether they experienced two market crashes or three during their career. We don't retire with the 'average'

Australian retirement portfolio; we retire with ours. And so, we have to manage this timing risk.

We can think of these phases as:

- **Starting out**: Bonds can be introduced as an alternative to cash, hedging against inflation.
- **Accumulating**: Bonds can start to build some insurance into your portfolio against market crashes.
- **Planning for retirement**: Bonds can smooth your glide path into retirement.
- **Retirement & estate planning**: For those living off their nest egg or planning to pass on savings, bonds provide stable income and can be balanced for both growth and protection.

Together, the three atoms let you construct a **shock absorber** system as you balance your portfolio, allowing you to adjust your ride comfort as you go through the different stages of life.

Meeting the needs of demographic and technological change

We highlighted the significance of demographic changes in Australia on financial markets in our first "Prepare for Change" paper in 2023. There are two important demographic trends that can be helped by better adoption of bonds in Australian portfolios. First, as the Baby Boomer cohort retires, preservation of capital while still maintaining a return above inflation becomes an important need. The greater use of bonds in a portfolio is a better solution to this requirement than what can be achieved by relying solely on cash and equities. And second, as new generations enter the system and they use new assets such as 'crypto currencies', bonds can be used to balance the higher volatility of these new assets in this cohort's investment portfolios.

The Australian financial advice market is sophisticated and is always striving for new ways to better service the Australian investor, adapting as the Australian population's needs deepen and change. Modern software and technology solutions, increasingly leveraging artificial intelligence (AI), are making the mathematically intensive methods used in institutional investment advice even more available to financial advisers. These methods rely on having bonds available for the asset allocation process to construct what are called 'optimal portfolios'.

Meeting the needs of 'sophisticated' advisers and 'rational' investors

This section is a short technical discussion about the unique attributes and benefits of using the 'bond atom' in quantitative models. Quantitative models are mathematical models used by institutional investors to construct portfolios often using the theory of **The Efficient Frontier**.

The Efficient Frontier[4] is a theory introduced by Harry Markowitz in 1952 for which he received a Nobel Laureate. His theory found a way to put the

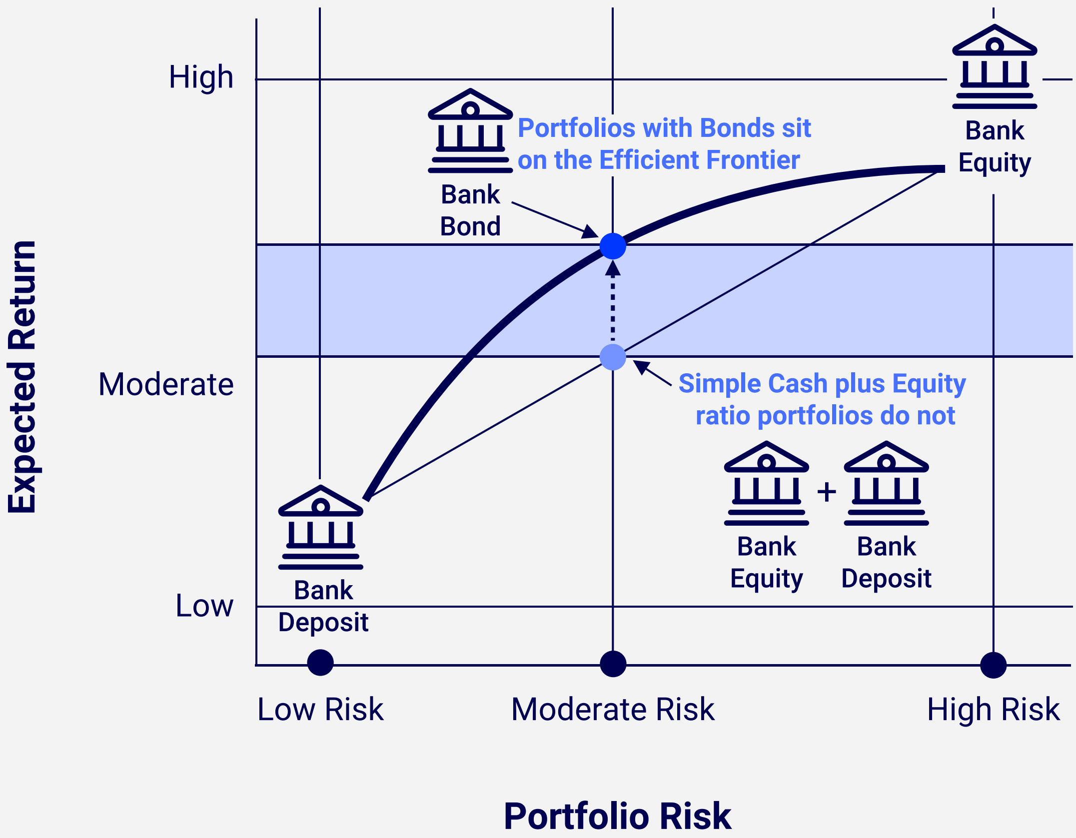
[4] https://en.wikipedia.org/wiki/Harry_Markowitz

risk and return concepts we defined earlier into a mathematical model that allows you to choose the 'optimal' portfolio for an investor that matches their risk tolerance with the observed risk of all the assets that they can choose to put into their portfolio. It is a rigorous mathematical way for an adviser to create a portfolio that is a **rational** model for achieving their client's investment goals according to their level of tolerance for risk.

Figure 1. shows the reason why bonds are an atomic element, not just another molecule made from other elements. The diagram is highly stylised and only shows a bank's products because a bank provides all the portfolio 'atoms' and can be used to illustrate each of our data points. Of course, in a real portfolio all atoms of all markets are available to the Markowitz model to create a properly diversified portfolio. At its core, the figure says that at high risk levels – an all equities portfolio – an investor will get the highest theoretical return over the longest run. At the lowest level of risk – all cash deposit – then the investor will get the lowest return for the lowest risk at any point in time. Now it is true that an investor can construct a moderate risk portfolio by creating a portfolio blended with equities and cash. However, the addition of bonds moves the portfolio to the edge of a more **Efficient Frontier**, providing more return at an equivalent level of risk. This is because the unique characteristics of bonds is **additive** to mathematical models and gives a better result than just combining equities and cash. The potential additional return achieved by using bonds for the same level of risk compared to only using cash plus equities is highlighted by the blue shaded band. Inversely, the incorporation of bonds can also deliver a lower level of risk for a given level of return.

This class of sophisticated asset allocation was once only available to institutional investors who could justify the cost of such sophisticated mathematics and computing. But in the age of huge datasets, powerful software and AI, this process is now becoming accessible to advisers and that is why it as an important part of why bonds are becoming an important atom in modern portfolios. The ability to make mathematically **rational** investment decisions is becoming available to all of us.

Figure 1: Illustrating the Efficient Frontier.



Structure of Australian investment markets

We will now discuss the structural differences between the Australian bond market and the rest of the world that can be addressed to the benefit of investors. This section is about the supply and delivery of bonds to Australian investors and the legislative environment in which they invest.

Financial advisers and planners

Australia has a mature financial planning industry with world-class wrap and other investment platforms. While bond funds and exchange traded funds (ETFs) are available on platform, an alternative way to deliver bonds is to enable direct investment in bond products on these platforms. FIIG, for example, already provides access to the primary market and a secondary market to investors and advisers.

We see this as similar to the early 'E*TRADE era' in the United States—when online platforms first made equities directly available to retail investors. Just as E*TRADE (and the platforms which followed) helped democratise equity investing globally, these emerging investment platforms in Australia are now beginning to do the same for bonds. And, as demographic shifts accelerate and superannuation flows transition from accumulation to decumulation, the demand for diverse, accessible retirement income options will grow – making it essential to broaden the range of investment tools available to advisers and their clients.

The ability to access stocks directly for clients helped drive the development of adviser wrap platforms which later enabled the creation of **separately managed accounts (SMAs)**. SMAs meant financial advisers could begin to provide efficient service to invest directly or in managed funds, via internet-enabled platform services. We see the same innovation happening for bonds. In the same way that equity managed fund products and direct equities were disaggregated into model portfolios inside SMAs, we believe this same dynamic should occur for bonds. This would allow bond funds to be disaggregated and made available to SMAs to allow for better service and potentially higher post-tax returns. We will make bond issues available on our platform and those we support so that advisers can improve the sophisticated asset allocation and services they provide to their clients at a time when more need access to a better range of income solutions.

The secondary bond markets

The Bond market in Australia is already well established and evolving. Corporate bonds can be issued by Australian or foreign companies and may be denominated in AUD or any foreign currency. Both institutional and retail investors have access to them and are taking advantage of that access in the existing primary and secondary markets as the blind spot recedes. The infrastructure is stable, secure and transparent, and is also backed by large and committed organisations such as AUSIEX.

The ASX is the major provider of the equities secondary market in Australia and provides economies of scale to equity-focused participants via CHESS, is the backbone of equity SMAs, and is endowed with a natural affinity for new products as the market evolves.

The creation of a large public secondary bond market has been a long-standing challenge however. In the meantime, the over-the-counter (OTC) is vast and is helping to make bonds as accessible as possible to advisers and end-investors. AUSIEX will continue to support this, using our scale and technology to integrate FIIG offerings and create one of the most comprehensive investments trading and portfolio administration platforms in the country today.

Regulation and tax

The 2021 report *The Development of the Australian Corporate Bond Market: A Way Forward*[5], provides a comprehensive review of the key regulatory barriers and recommendations, which if adopted would add to market liquidity and broaden participation by both issuers and investors. Numerous other factors, such as Australian companies gaining greater access to offshore debt markets, were explored in RBA's submission to the Federal Government's 2014 Financial System Inquiry[6].

One specific structural factor often mentioned in discussion about the adoption of corporate bonds by Australian retirement investors is the franking credit

[5] The Development of the Australian Corporate Bond Market: A Way Forward
[6] Sectoral Trends in Funding Patterns in the Australian Economy | Submission to the Financial System Inquiry – March 2014 | Financial Sector | Submissions | RBA (Box 5A)

system. Because franking credits are refundable in retirement phase super accounts and boost the after-tax yield, retirees may rationally favour higher-risk, franked-dividend-paying equities over the relative safety of bonds to maximise income. As Australia's population ages and superannuation flows shift from accumulation to decumulation, demand for more stable income-generating options may rise – highlighting the need for broader investment choices in retirement portfolios.

Conclusion: Activating the bond atom

Australia's retirement system is world-class, but its effectiveness can be improved. As we have shown, Australian superannuation portfolios are significantly underweight bonds when compared to their global peers, holding around half the allocation of the OECD average.

We argue this stems from two core issues: a cultural **blind spot** where the benefits of bonds are not widely known nor understood, and **structural inefficiencies** in the Australian market that make them harder to access and less attractive to issue.

The solution is not to simply abandon our successful growth-oriented approach, but to enhance it by activating the **bond atom**. By embracing bonds, investors gain access to a third portfolio atom that acts as a vital 'shock absorber' against market volatility and timing risk – the 'lucky dip' called real life. This allows for a more effective journey through the different stages of saving, from accumulation to retirement.

Achieving this requires tangible change.

Together, we must work to:

1. Educate investors to help grow and develop Australia's existing bond capabilities.
2. Enable better **direct bond access** on the platforms financial advisers use every day.

By filling the blind spot with education and evolving the structural plumbing of our market, we can build a more resilient and contemporary investment landscape in Australia. AUSIEX is committed to working with all stakeholders to make this happen – through evolving our platforms and capabilities – to ensure the Australian investment and capital markets landscape is not only dynamic, but robust enough to prepare all Australians for the significant changes ahead.

AUSIEX
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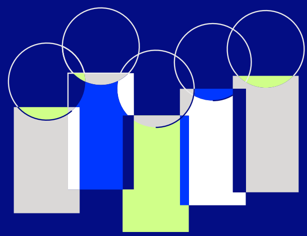
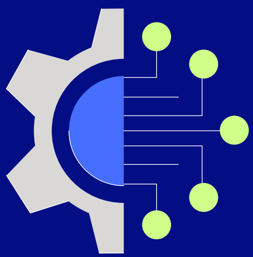
One solution for the future of trading

Broad multi-asset trading and portfolio management solutions



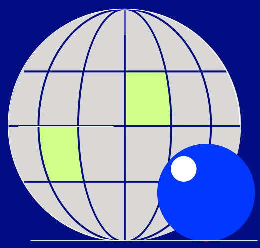
With our recent acquisition of Australia's leading fixed income expert FIIG, AUSIEX now offers one of the most comprehensive investment, trading and portfolio management platforms in the market, allowing institutions, financial advisers, high net worth and wholesale investors to build highly bespoke portfolios comprising a wide range of assets – including Australian and international equities, ETOs, ETFs, direct bonds, hybrids, warrants and IPOs – integrated on a single platform.



Trusted technology with scale

Powered by NRI's financial strength, proprietary integrated technologies, and deep development expertise and complemented by leading third-party solutions and modern, high-performance architecture, we collaborate with clients to deliver innovative, secure and scalable solutions that drive unmatched operational efficiency, elevate their client experience and prepare them for future growth.

Unrivalled market experience and service



Our 25 years of experience delivering comprehensive trading and technology solutions for the Australian market and our unique full-service account management offering with by local call centres ensures we provide the holistic support and form the strong partnerships required for long-term client success.

The clear partner of choice

Supporting over 475,000 direct customers and over 4,400 advisers from more than 1,000 advice firms, AUSIEX is the clear partner of choice for connecting the Australian wealth management industry to markets.

- Full, multi-asset trading solutions
- ISO27001:2022 Certified
- Optimised for investment professionals
- Execution, clearing and settlement solutions
- Extensive portfolio management tools
- Award winning excellence

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