Milliman Market Monitor - October 2022

Market Commentaries

Equities

● Equity markets rebounded in October, as investors priced in a higher probability that the US Fed may raise rates by a smaller degree, than the past few meetings.

Aussie equities performed strongly this month, with investors predicting rates here in Australia may be close to peaking. Across the month, the ASX 200 gained 6.0%, while in the US the S&P 500 returned 8.1%.

Fixed Income

● Fixed Income markets recovered slightly in October, as traders speculated that the US Fed may turn more dovish, by slowing their rate of interest rate rises.

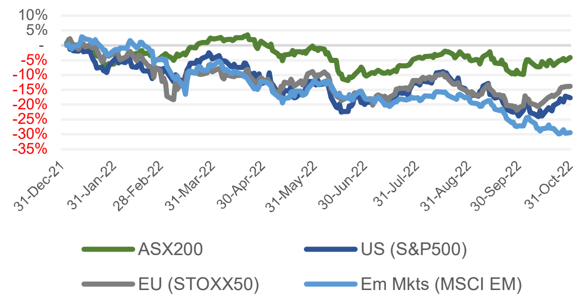
In Australia, the RBA raised interest rates by another 25bp to 2.60%. The Australian Government Bond and the Global Bond generated a return of +1.0% and -0.4%, respectively.

Currencies

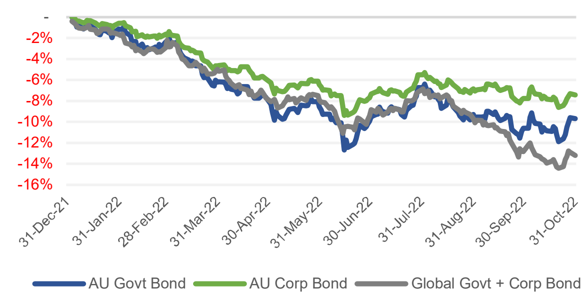
● The Aussie Dollar ended the month flat against the US Dollar and was mixed against the other major currencies. The surprise 25 basis point rate hike by the RBA lead the Aussie Dollar to sink, as markets had priced in a larger rate rise.

The Aussie Dollar closed at 63.99 US Cents, which was a 0% return.

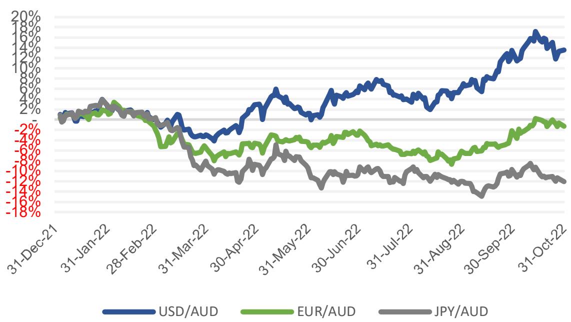
Equities: YTD Total Return[1] %



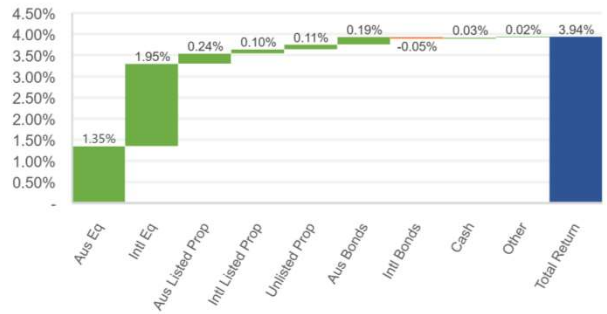
Fixed Income: YTD Return[2] %



Foreign Currencies: YTD Return %



Monthly Return Contribution by Asset Class: Morningstar Aus Multi-Sector Balanced Index



Returns ending 31 October 2022

	ASX200	US (S&P500)	EU (STOXX)	EM Mkts (MSCI)	AU Govt Bond	AU Corp Bond	Global Bond	USD/AUD	EUR/AUD	JPY/AUD
1 Month	6.0%	8.1%	9.1%	-3.1%	1.0%	0.4%	-0.4%	0.0%	0.9%	-2.6%
3 Month	0.7%	-5.9%	-2.2%	-14.1%	-3.2%	-2.0%	-6.5%	9.2%	5.6%	-2.1%
1 Year	-2.0%	-14.6%	-12.8%	-31.0%	-7.5%	-6.3%	-12.9%	17.5%	0.5%	-9.9%
CYTD	-4.1%	-17.7%	-13.8%	-29.4%	-9.7%	-7.4%	-13.2%	13.5%	-1.3%	-12.1%

[1]Equities returns captures both the capital gains as well as any cash distributions, such as company dividends.

[2]AU Govt Bond uses the Bloomberg AusBond Govt 0+ Yr Index, which measures the return of Australian Treasury and Semi-government bonds maturing in 0+ years. AU Corp Bond uses the Bloomberg AusBond Credit 0+ Yr Index, which measures the return of Australian corporate/credit securities maturing in 0+ years. Global Govt + Corp Bond uses the Bloomberg Barclays Global Aggregate Index, which measures global investment grade debt from 24 countries, both developed and emerging markets issuers.

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Upcoming Key Economic Events & Risk Commentaries

● Implied volatility (often viewed as the market's fear index) has increased compared to last month, settling at the historical 1-year 90th percentile level. The implied likelihood of the S&P 500 falling more than 10% and 5% in November is 8% and 22% respectively.

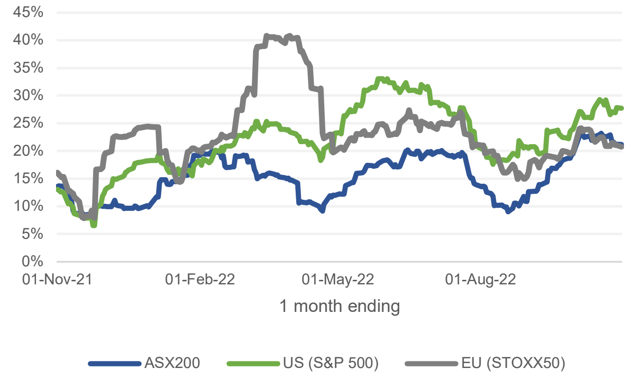
● Risk markets have continued to come under pressure since the start of October, with hawkish comments from the Fed FOMC and higher-than-expected US CPI. Towards the end of the month, a series of events including dovish moves from BoC and ECB, plus comments from officials such as Federal Reserve President Mary Daly, have reignited discussions of a central bank "pivot". As a result, despite the move higher in risk assets, realised equity volatilties in general trended higher.

● Domestically, the monthly RBA meeting is on 1 Nov with the market expecting rates to rise by another 25bps, taking the cash rate to 2.85% in a further effort to curb inflationary pressure. Statement of Monetary Policy will be released on 4 Nov, possibly downgrading growth and upgrading inflation estimates for 2023-2024. Following that, the NAB Business surveys (Oct) are due on 8 Nov and Labour force data (Oct) is due on 17 Nov.

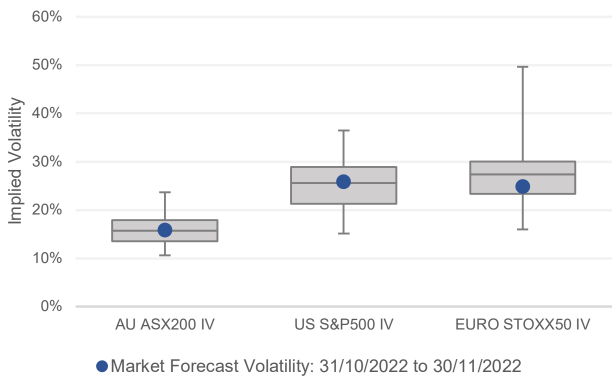
● Offshore in the US, the Non-Farm Payroll data for Oct is released on 4 Nov (f/c 191k, prior 263k). The Mid-Term election result is due on 8 Nov. US CPI (Oct) is due on 11 Oct (f/c 0.7% m/m headline, 0.5% m/m core). Retail Sales (Oct) and Industrial Production (Oct) are both out on 17 Nov.

● In Europe, the Q3 GDP data will be out on 15 Nov. The Nov PMI data will be released on 23 Nov. Eurozone Nov CPI is due on 30 Nov. In China, the CPI (Nov) data is due on 9 Nov, Retail Sales (Oct) data will be due on 15 Nov.

Realised 1 Month Equity Volatility (%)

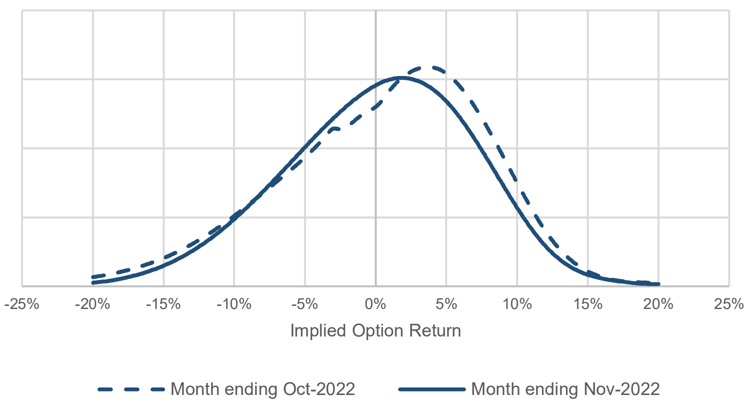


Implied Volatility[3,4] (IV)



The chart above shows the current market implied volatility for the next month, and compares it against the range of implied volatilities for the past 1 year.

1 Month S&P500 Implied Return Distribution[5]



Implied likelihood[5] of S&P 500:	Month ending Nov-2022	Month ending Oct-2022
Falling more than 10%	**~ 8%**	~ 10%
Falling more than 5%	**~ 22%**	~ 23%

[3]**Implied Volatility (VIX) r**epresents the expected volatility of the index over the next 30 days (starting from the effective date of this report), as derived from the market prices of index options traded on the exchange.

[4]**Box & Whisker Plot** is designed to give readers a quick sense of the range of implied volatility for the past year. The end of the whiskers indicate the maximum and minimum implied volatility for the past year. The box represents the interquartile range (from first to third quartile implied volatility values), and the middle line indicates the median implied volatility value for the past year.

[5]**Implied Return Distribution / Implied Likelihood r**epresents the forecasted return (and its likelihood) of the index over the next 30 days (starting from the effective date of this report), as implied from the market prices of index options traded on the exchange.

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Observations on Sustainable Withdrawal Rates

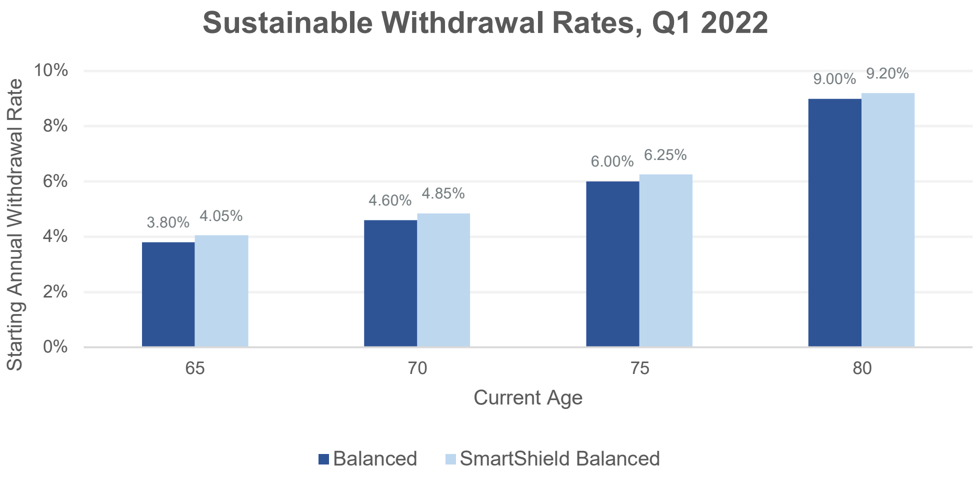
We observe that sustainable withdrawal rates at the end of Q2 2022 are higher compared to Q1 2021.

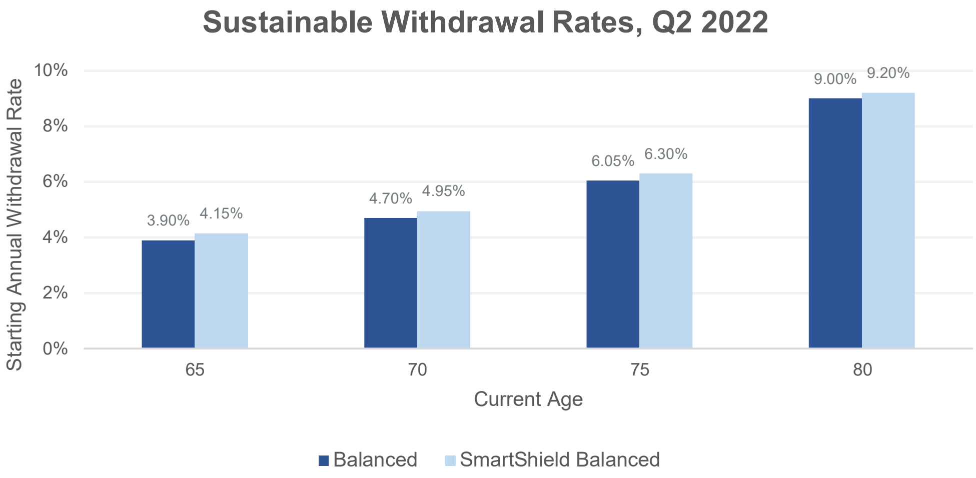
This was mainly driven by the change in interest rate levels over the period with 10 year government bond yields increasing by approximately 80bps, leading to higher simulated returns from all asset classes.

Using the SmartShield series of portfolios as an example, we have illustrated that additional sustainable withdrawal rates are achieved, when we add a risk management strategy to the portfolios.

By controlling the level of volatility and reducing the impact of sustained market drawdowns, solutions such as the SmartShield portfolios that employ a risk management strategy, can reduce the exposure to sequencing risk, resulting in higher sustainable withdrawal rates for retirees.

As the market rebounds in October, the equity hedge level within SmartShield Portfolios has reduced from approximately 55% at the beginning of the month, to 40% by the end of the month.





Sustainable Withdrawal Rate is defined as the maximum amount that can be withdrawn from a portfolio each year with a 90% certainty that this rate can be sustainably withdrawn (adjusted for inflation) until the target age of 90. An additional constraint introduced is for the potential shortfall to be less than 5 years. Note the withdrawal rate is calculated with regards to future projections of 5,000 stochastic scenarios. Further information on the assumptions used to generate these scenarios can be found via our portfolio simulator, which is free to access at https://smartshield.millimandigital.com/.

For example, a 4% sustainable withdrawal rate for a 70 year old retiree with $500k balance means the retiree can withdraw $20k in the first year. And for each subsequent years, the amount the retiree can withdraw is $20k plus any increase due to projected inflation (CPI).

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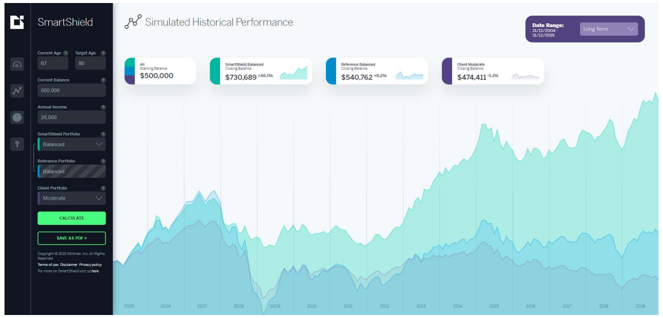
SMARTSHIELD™ SIMULATOR – FREE ACCESS FOR FINANCIAL ADVISERS

Built for financial advisers and complementary to Milliman's SmartShield portfolios, the Simulator strengthens your client conversation through:

- Calculating the likelihood of meeting retirement goals
- Illustrating the impact of experiencing a market crash scenario e.g. Covid-19



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If you would like more information on the content in this report, or more information about our SmartShield Managed Account portfolios, please call us on +61 (0)2 8090 9100 | or visit **advice.milliman.com**

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