Milliman Market Monitor - October 2023

Market Commentaries

Equities

● Global equities fell this month due to the recent conflict in the Middle East and surging oil prices. The S&P 500 was down 2.1% this month. At their October policy meeting, FOMC members voted to hold rates steady, but FOMC chair Powell suggested that "the bar would be higher for further rate hikes."

● European equities were also weaker. The EuroStoxx 50 was down 2.6%. In the UK, the FTSE 100 was down 3.8%. The ECB voted to hold rates steady this month and Eurozone CPI for October was lower, at 2.9% YoY.

● Japanese equities were also weaker, with the Nikkei down 3.1%. The Bank of Japan announced that they would relax their Yield Curve Control program by allowing the 10-year yield to exceed 1.0%. Other Asian equities followed the global trend, with the MSCI Asia Ex-Japan Index down 3.9%.

● Aussie Equities were weaker, with the ASX 200 down 3.8%. The utility sector stocks were the best-performing sector, up 1.7%, while all other sectors fell. Healthcare and Tech were the laggards this month, both dropping over 7%.

Fixed Income

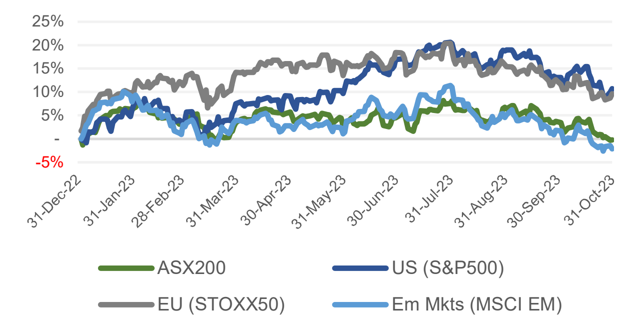
● Sovereign bond yields surged throughout the month. US 10-year Treasury yields rose to 5% due to geopolitical tensions and further rate uncertainty.

● The RBA maintained rates at 4.1% in their October meeting. Inflation in the Q3 CPI print was lower, with a YoY growth of 5.4% (vs. 6.0% in Q2). Overall, Australian Bonds returned -2.1%, and Global Bonds returned -0.8%, respectively, as measured by the Bloomberg Aggregate indices.

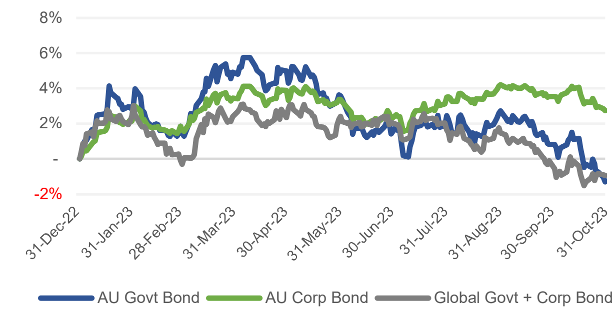
Currencies

● The Aussie dollar further weakened against the US Dollar, driven by higher yields and volatility. The AUD/USD rate fell by 1.5%, closing at 63.37 US cents. This depreciation of the AUD has boosted the returns on unhedged global equities from an Australian investor's perspective.

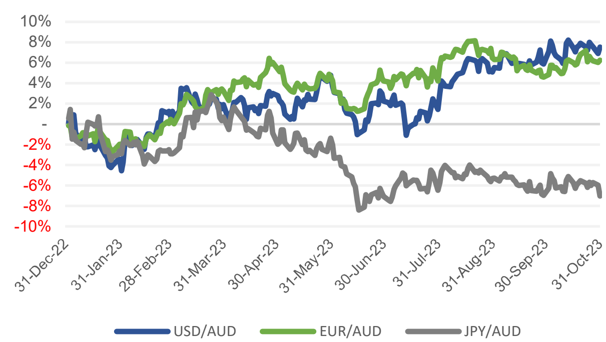
Equities: YTD Total Return[1] %



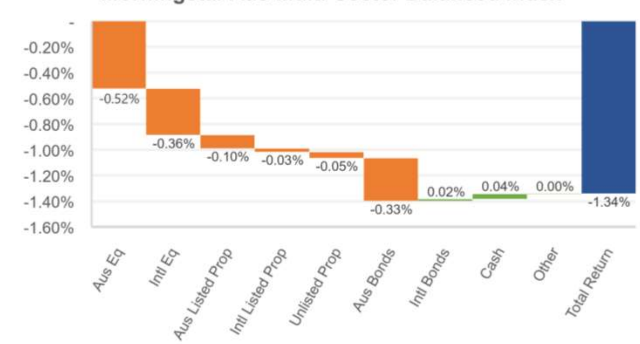
Fixed Income: YTD Return[2] %



Foreign Currencies: YTD Return %



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



Returns ending 31 October 2023

	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	-3.8%	-2.1%	-2.6%	-3.9%	-2.1%	-0.8%	-0.8%	1.5%	1.6%	-0.1%
3 Month	-7.2%	-8.3%	-9.0%	-12.2%	-3.1%	-0.4%	-2.9%	6.0%	1.9%	-0.6%
1 Year	3.0%	10.1%	15.1%	10.8%	-2.1%	3.5%	0.1%	1.0%	8.0%	-1.0%
CYTD	-0.2%	10.7%	9.6%	-2.1%	-1.3%	2.7%	-0.9%	7.5%	6.2%	-7.0%

[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

Milliman Market Monitor - October 2023

Upcoming Key Economic Events & Risk Commentaries

- Implied volatility, often viewed as the market's fear index, has largely increased for the S&P 500, ASX200 and Stoxx 50. The S&P 500 sits at around 50th percentile, and ASX200 has increased to above the 75th percentile mark. The implied likelihood of the S&P 500 falling more than 10% and 5% in November has increased from last month, currently sitting at 3% and 13%, respectively.

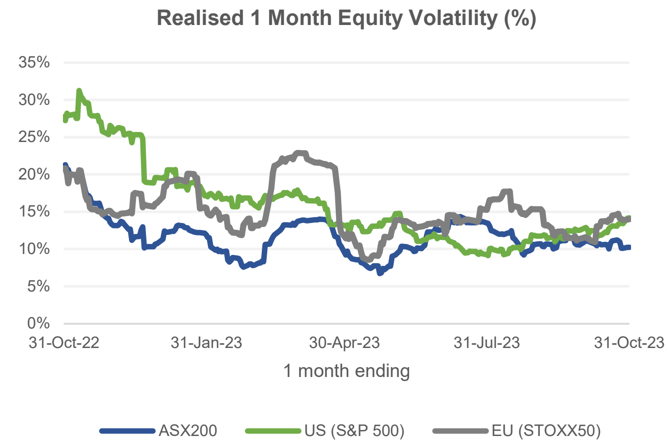
- Despite the FOMC keeping its official cash rate at 5.5% in October, the long-term bond yields continued to climb due to higher real interest rates. The US Treasury 10yr yield went over 5% momentarily this month for the first time since 2007. This would make corporate debt refinancing more difficult and the global equities had fallen around 3.5% over this month.

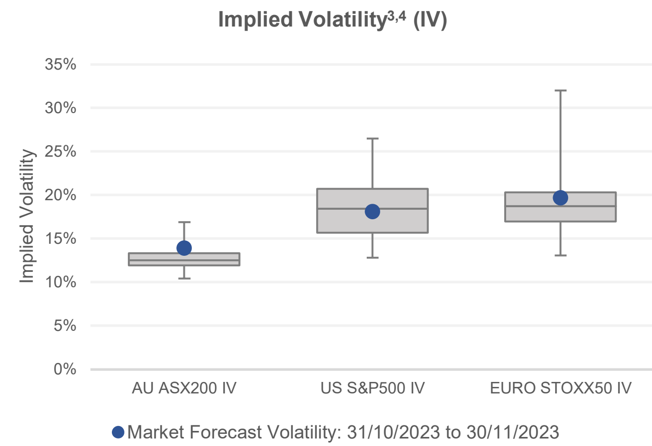
- The Fed’s preferred measure of inflation (PCE) accelerated to a 4-month high, and the US labour market remains fairly tight with under 4% unemployment. The Non-Farm Payroll report for this month indicated that 336,000 jobs were added in September, more than double the economists' estimate. Given the strong US economic backdrop and the slow moderation of inflation, there is a risk that the Fed may raise the cash rate again, which could put further downward pressure on equity.

- The new Middle East conflict between Israel and Palestine has added further geographical instability to the region and pushed up crude oil prices, which could contribute to inflation and lead to further rate hikes. Another concern is the possibility of other Arab countries getting dragged into the conflict.

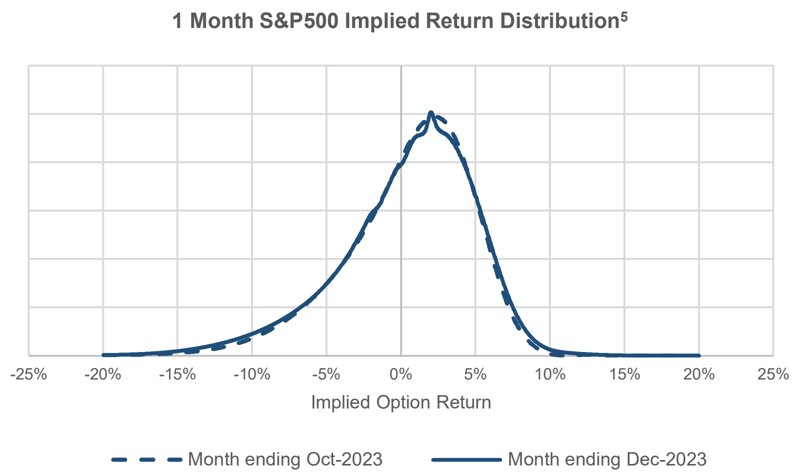
- The Australian job growth figure came out lower than expected this month, signalling a turning point indicating that the labour market is loosening, but it has yet to slacken by a significant degree. It is important to monitor wage inflation, especially when the current unemployment rate is still under 4%.

- The Australian retail sales jumped in September, rising 0.9% to well exceed the consensus forecast for a 0.3% increase. The pricing for a hike on 7 November (next Tuesday) at the RBA Board meeting jumped from 45% last month to 80%.





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.



Implied likelihood[5] of S&P 500:	Month ending Nov-2023	Month ending Oct-2023
Falling more than 10%	**~ 3%**	~ 2%
Falling more than 5%	**~ 13%**	~ 11%

[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

Observations on Sustainable Withdrawal Rates

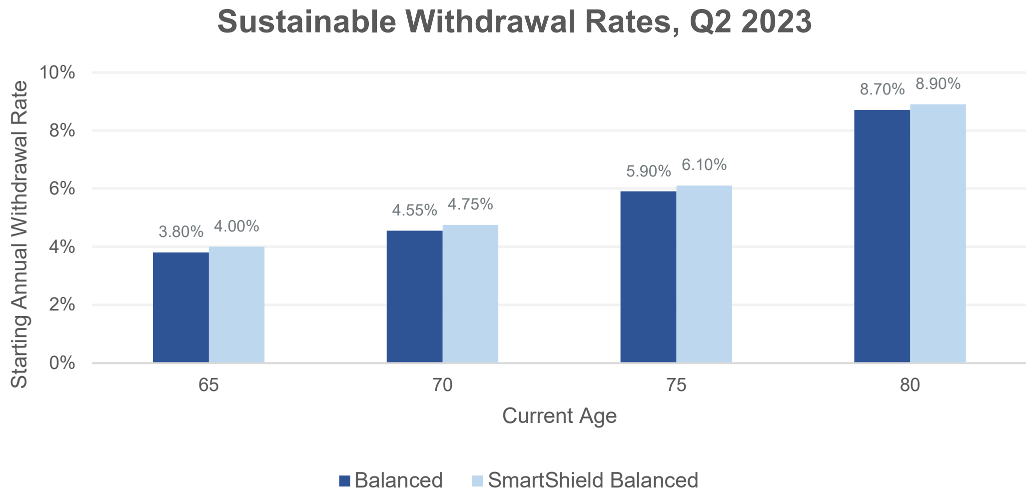
We observe that sustainable withdrawal rates at the end of Q3 2023, are higher compared to Q2 2023.

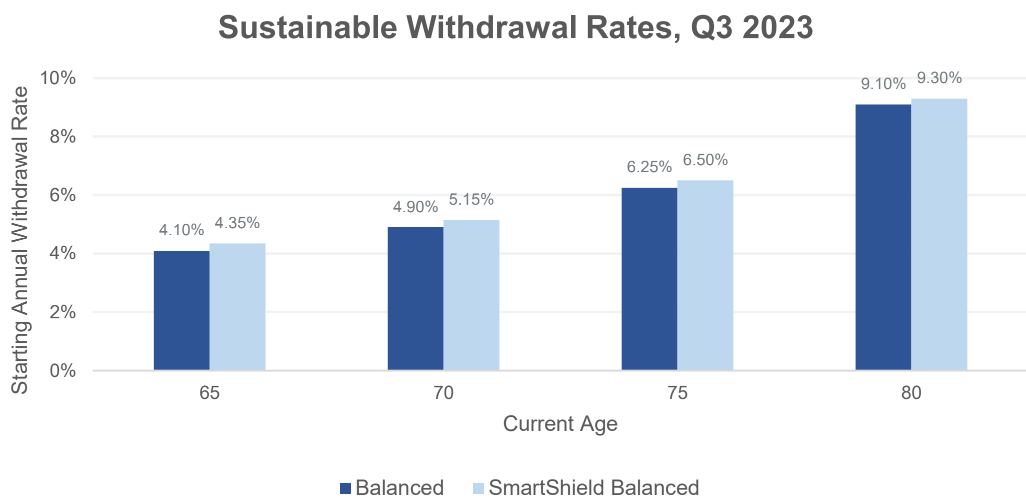
This was mainly driven by the change in interest rate levels over the period with 10-year government bond yields increasing by approximately 45bps, leading to higher simulated returns from all asset classes.

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 which employ a risk management strategy, can reduce the exposure to sequencing risk and result in higher sustainable withdrawal rates for retirees.

In October, Milliman's SmartShield portfolios maintained an average hedge level of approximately 32% for Australian equities and 36% for global equities.





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/.

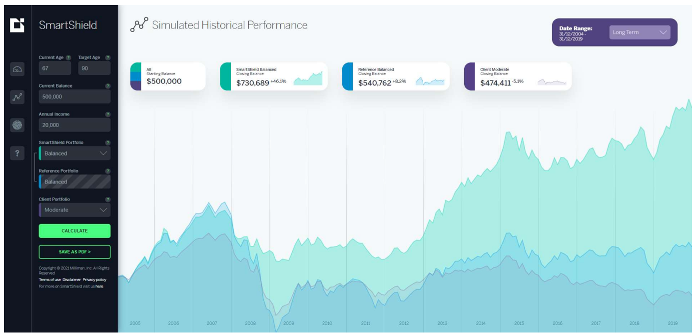
For example, a 4% sustainable withdrawal rate for a 70 year old retiree with $500k balance means the retiree can withdraw $20k in the first year. And for each subsequent years, the amount the retiree can withdraw is $20k plus any increase due to projected inflation (CPI).

Milliman Market Monitor - October 2023

SMARTSHIELD™ SIMULATOR – FREE ACCESS FOR FINANCIAL ADVISERS

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

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



Simple to sign-up and FREE to access CLICK THIS LINK: https://smartshield.millimandigital.com/Identity/Account/Register

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**

Favourable SQM RESEARCH

LIMITATIONS & DISCLAIMERS

Milliman Pty Ltd ABN 51 093 828 418 AFSL 340679 (Milliman AU) for provision to Australian financial services (AFS) licensees and their representatives, [and for other persons who are wholesale clients under section 761G of the Corporations Act]. Not for public use or distribution.

Past performance is not indicative of future results. Recipients must make their own independent decisions regarding any strategies or securities or financial instruments mentioned herein.

Milliman Pty Ltd does not make any representations that products or services described or referenced herein are suitable or appropriate for the recipient. Many of the products and services described or referenced herein involve significant risks, and the recipient should not make any decision or enter into any transaction unless the recipient has fully understood all such risks and has independently determined that such decisions or transactions are appropriate for the recipient.

Any discussion of risks contained herein with respect to any product or service should not be considered to be a disclosure of all risks or a complete discussion of the risks involved.

The recipient should not construe any of the material contained herein as investment, hedging, trading, legal, regulatory, tax, accounting or other advice. The recipient should not act on any information in this document without consulting its investment, hedging, trading, legal, regulatory, tax, accounting and other advisors.

Milliman Pty Ltd does not ensure a profit or guarantee against loss.