Milliman Market Monitor - September 2022

Market Commentaries

Equities

● Equity markets continued to slide this month as investors priced in higher US cash rate forecasts. Recession fears have also grown as the US Federal Reserve signalled high rates may remain for quite some time, to combat rampant inflation.

Aussie equities also fell sharply through the back half of September following the global trend. Across the month, the ASX 200 lost -6.2%, while in the US the S&P 500 returned -9.2%.

Fixed Income

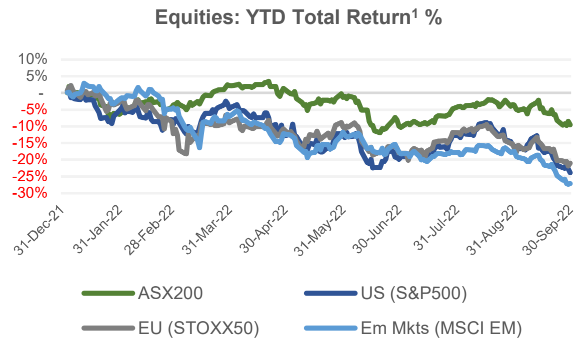
● Fixed Income markets were rattled this month following the large rate increases from central banks such as the RBA and US Fed, as well as increased peak rate forecasts. In the UK, Gilts were sold off in a dramatic circumstance, following the new Truss government's planned tax cuts which were to be funded via debt.

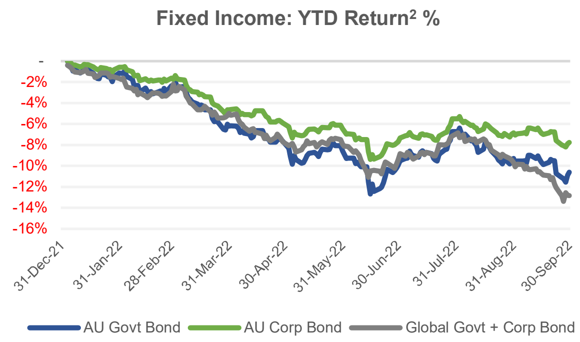
In Australia, the RBA raised interest rates by another 50bp to 2.35%. The Australian Government Bond and the Global Bond generated a negative return of -1.4% and -3.5%, respectively.

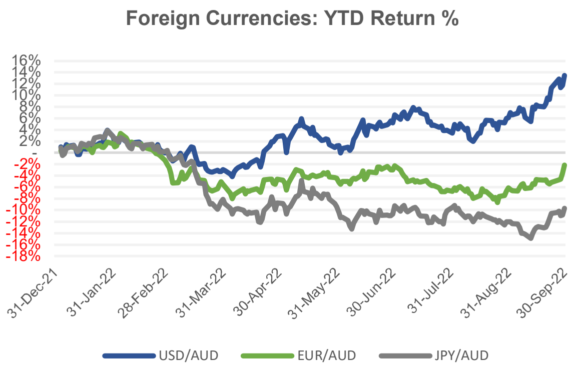
Currencies

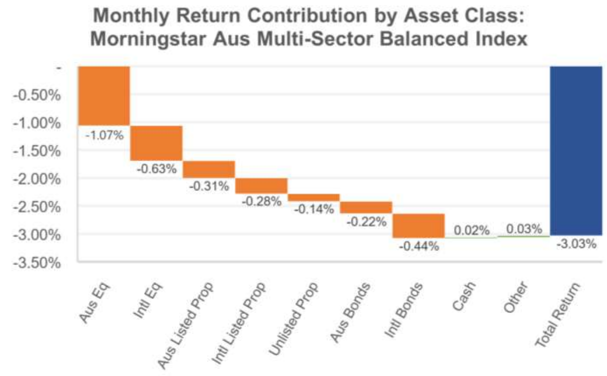
● The US Dollar strengthened significantly against other major currencies, including the Aussie, as investors fled riskier assets for the safety of the US Dollar. The USD appreciation helped to offset some of the large losses made in the US when measured in AUD terms.

The Aussie Dollar closed at 64.00 US Cents, a loss of -6.9%.









Returns ending 30 September 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	-6.2%	-9.2%	-5.6%	-11.7%	-1.4%	-1.0%	-3.5%	6.9%	4.2%	2.6%
3 Month	0.4%	-4.9%	-3.7%	-11.6%	-0.7%	-0.1%	-3.8%	7.9%	0.8%	1.1%
1 Year	-7.7%	-15.5%	-15.9%	-28.1%	-11.9%	-9.2%	-12.8%	12.9%	-4.4%	-13.2%
CYTD	-9.6%	-23.9%	-21.0%	-27.2%	-10.6%	-7.8%	-12.8%	13.5%	-2.2%	-9.7%

[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 October is 10% and 23% respectively, which represents an increase in risk compared to the prior month.

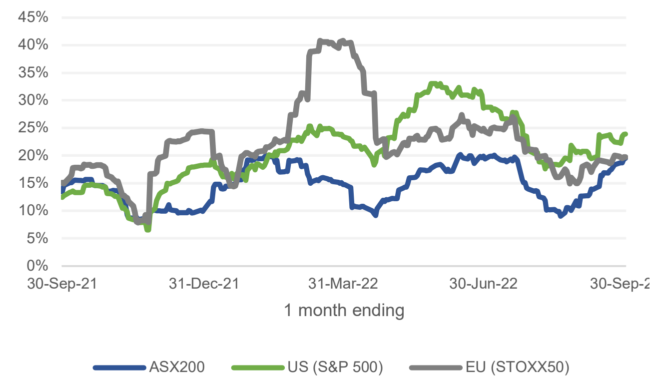
● Risk markets have resumed their sell-offs after an upside surprise in US CPI. Markets have repriced the terminal rates substantially higher, putting pressure on both equity and fixed income assets. The tax-cuts plan from the new UK Prime Minister Liz Truss, has also wreaked havoc, as it induced a massive sell-off in Gilt prices. As a result, realised equity volatilties in general, trended higher.

● Domestically, the monthly RBA meeting is on 4 Oct with the market expecting rates to rise by another 50bps, taking the cash rate to 2.85% in a further effort to curb inflationary pressure. Following that, the NAB Business surveys (Sep) are due on 11 Oct and Labour force data (Sep) is due on 20 Oct. Q3 CPI will be released on 26 Oct.

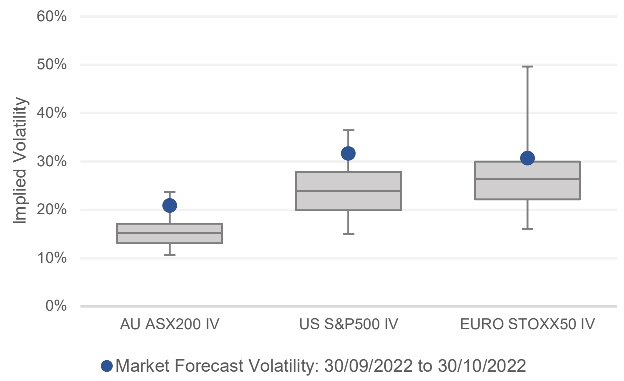
● Offshore in the US, the ISM Manufacturing PMI data is due on 4 Oct. (f/c 52.4, prior 52.8) The Non-Farm Payroll data for Sep is released on 7 Oct (f/c 250k, prior 315k). US CPI (Sep) is due on 13 Oct (f/c 0.2% m/m headline, 0.4% m/m core). Retail Sales (Sep) data is out on 14 Oct and industrial production (Sep) is out on 19 Oct.

● In Europe, the preliminary October PMI data will be released on 24 Oct. Moreover, the ECB is widely expected to hike rates by 50bps on 27 Oct. Eurozone Q3 GDP (advanced) is due on 31 Oct. In China, the closely watched 20th National Congress will be held on 16 Oct 2022, it is likely to give direction on key economic developments to be put in place and an end date for the Zero Covid Policy.

Realised 1 Month Equity Volatility (%)

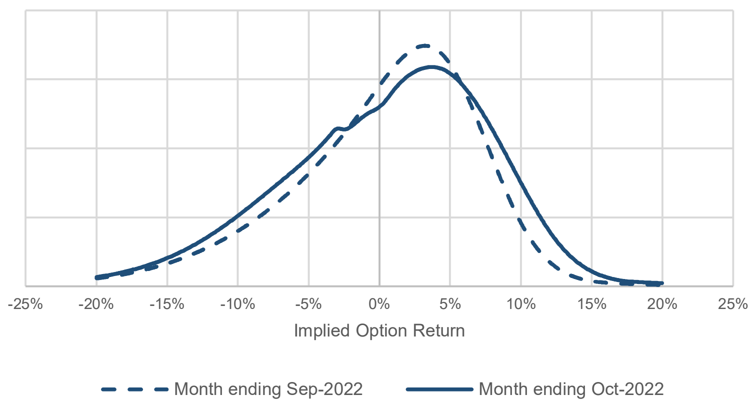


Implied Volatility[3,4] (IV)



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 Oct-2022	Month ending Sep-2022
Falling more than 10%	**~ 10%**	~ 9%
Falling more than 5%	**~ 23%**	~ 20%

[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

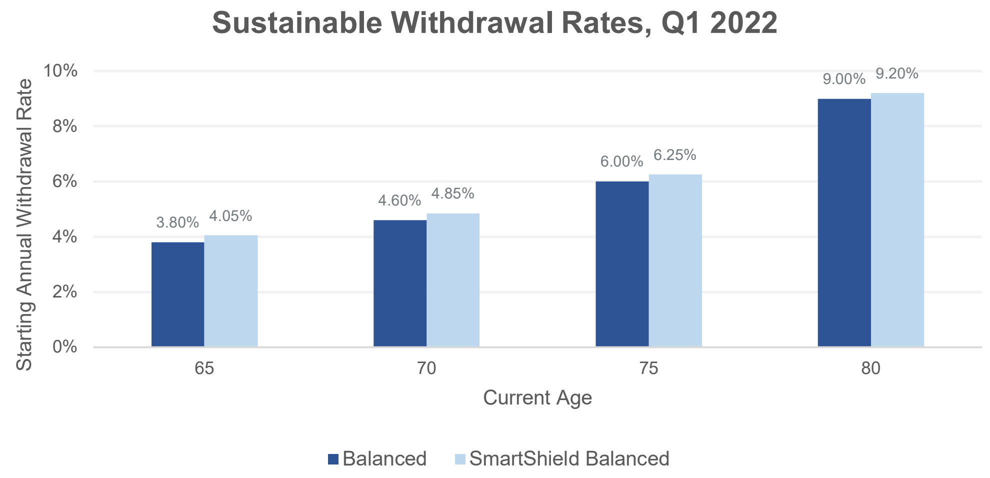
We observe that sustainable withdrawal rates at the end of Q2 2022 are higher compared to Q1 2021.

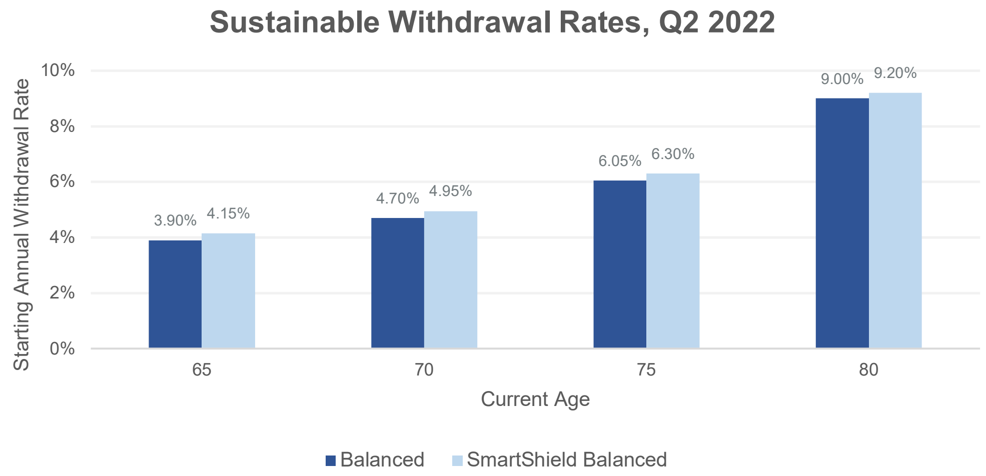
This was mainly driven by the change in interest rate levels over the period with 10 year government bond yields increasing by approximately 80bps, leading to higher simulated returns from all asset classes.

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 means to mitigate the continuing market sell-off in September, the equity hedge level within SmartShield Portfolios has increased from approximately 30% at the beginning of the month to 60% by the end of the month. As a result, the SmartShield portfolios have enjoyed a good amount of outperformance compared to the market benchmark.





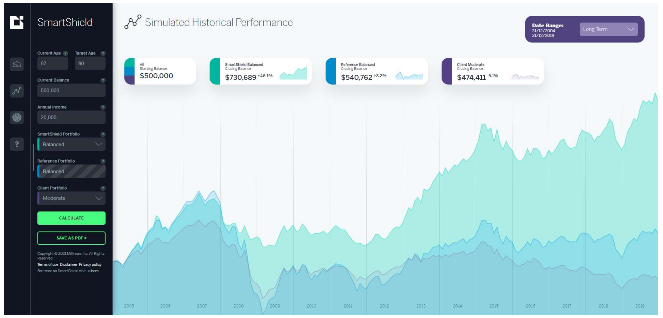
Sustainable Withdrawal Rate is defined as the maximum amount that can be withdrawn from a portfolio each year with a 90% certainty that this rate can be sustainably withdrawn (adjusted for inflation) until the target age of 90. An additional constraint introduced is for the potential shortfall to be 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).

SMARTSHIELDTM 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



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**

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