Milliman Market Monitor - October 2021

Market Commentaries

Equities

- As fears subsided over the possibility that beleaguered property developer China Evergrande would cause a wider crash, and the US Congress voted to extend it's current debt ceiling deadline to December, overall sentiment toward Global Equities became more optimistic. The S&P 500 index closed the month up 7%.
- Australian equities rallied through most of the month, however, the greater than expected Q3 CPI figure lead to a rout in markets, as investors priced in the possibility of the RBA raising rates sooner. The ASX200 ultimately closed down -0.1%.

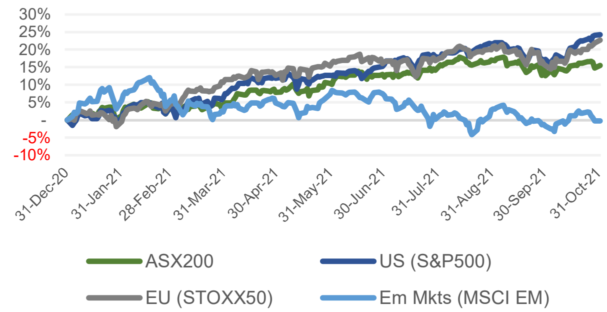
Fixed Income

- Aussie Bond yields surged higher following the Q3 CPI figure beating expectations, as investors priced in the RBA bringing potential rate rises forward. Yields continued to climb in other developed markets as investors price in potential tapering from the US Fed. Australian Government Bond[2] and Global Bond[2] returned -3.7% and -0.3% respectively.

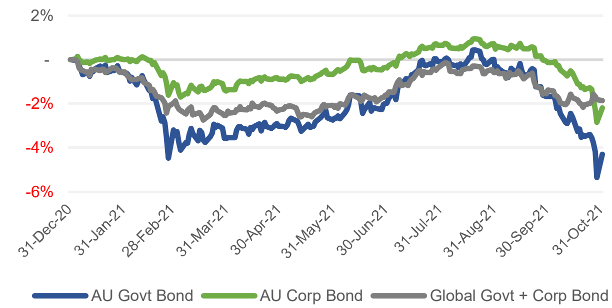
Currencies

- The Aussie Dollar surged higher against the US Dollar this month following the Aussie Q3 CPI data release and subsequent rise in Aussie Govt bond yields. The AUD/USD rate closed at 75.18 US Cents, a 4.0% gain against the USD.

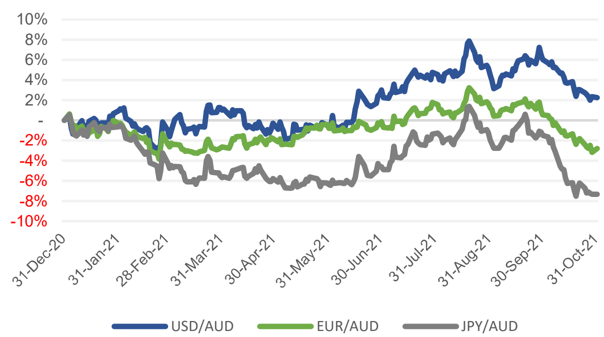
Equities: YTD Total Return[1] %



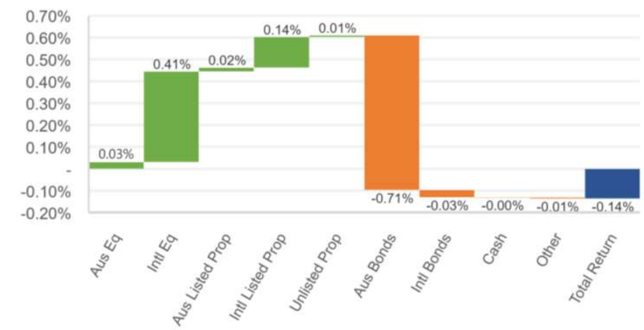
Fixed Income: YTD Return[2] %



Foreign Currencies: YTD Return %



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



Returns ending 31 October 2021

	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	-0.1%	7.0%	5.1%	1.0%	-3.7%	-2.8%	-0.3%	-3.9%	-4.1%	-6.2%
3 Month	0.5%	5.1%	4.2%	-0.5%	-5.3%	-3.5%	-1.4%	-2.3%	-4.9%	-6.1%
1 Year	28.0%	42.9%	46.4%	17.0%	-5.9%	-2.1%	-1.0%	-6.5%	-7.2%	-14.2%
CYTD	14.7%	24.0%	21.8%	-0.3%	-5.4%	-2.8%	-1.8%	2.3%	-3.2%	-7.3%

[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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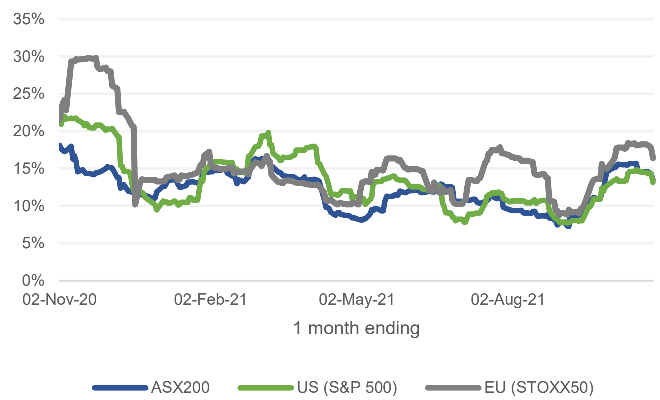
Upcoming Key Economic Events & Risk Commentaries

- The concerns going into October revolving around the US debt ceiling and China Evergrande did not eventuate. A good US Q3 earnings report season has helped to lower both realised and implied volatility (1-month forecast) across the AU, US and EU stock markets. The implied likelihood of the S&P 500 falling more than 10% and 5% during the November month, is 3% and 9% respectively (as estimated from option pricing); a significant decrease in risk compared to October.

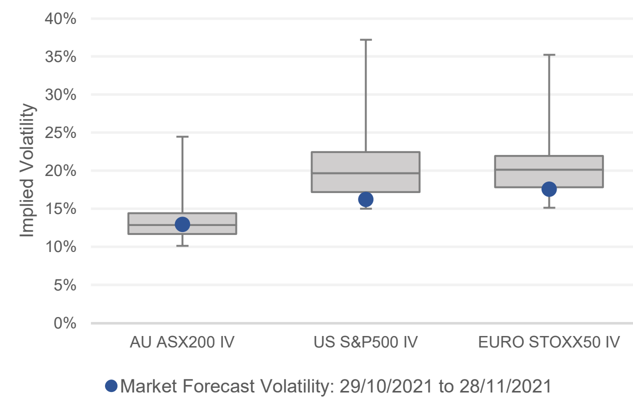
- In November, key domestic events include the monthly RBA meeting on Tuesday 2nd; a closely watched event. Economists expect the RBA to announce changes to scrap the current Yield Curve Control program and may bring forward rate hike expectation to become state-dependent given the rising inflationary pressure. Forecasts given in the Statement of Monetary Policy on 5th Nov will also give further insights on the RBA's thinking, as they update their forecasts for important economic variables.

- Offshore, the Fed FOMC meeting and BOE meeting on 3 Nov and 4 Nov will be closely watched. It is expected that the tapering of the US QE program to kick off from this month. The market is also expecting 60% probability of a 15bp hike from the BOE. The non-farm payroll print on 5th Nov will add weight to assessment of the growth trend in US. (Forecast to be 450k after a poor reading of 194k last month). China's CCP is also expected to hold its sixth plenum on 8-11 Nov.

Realised 1 Month Equity Volatility (%)

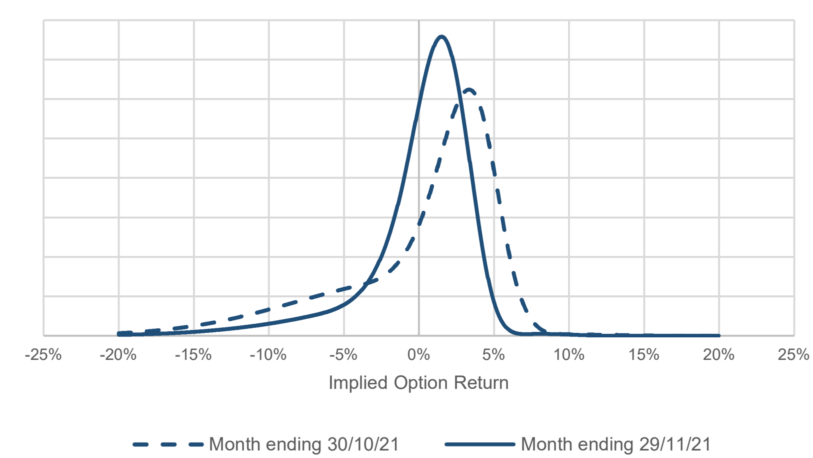


Implied Volatility[3,4] (IV)



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 30/11/21	Month ending 29/10/21
Falling more than 10%	~ 3%	~ 7%
Falling more than 5%	~ 9%	~ 17%

[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.

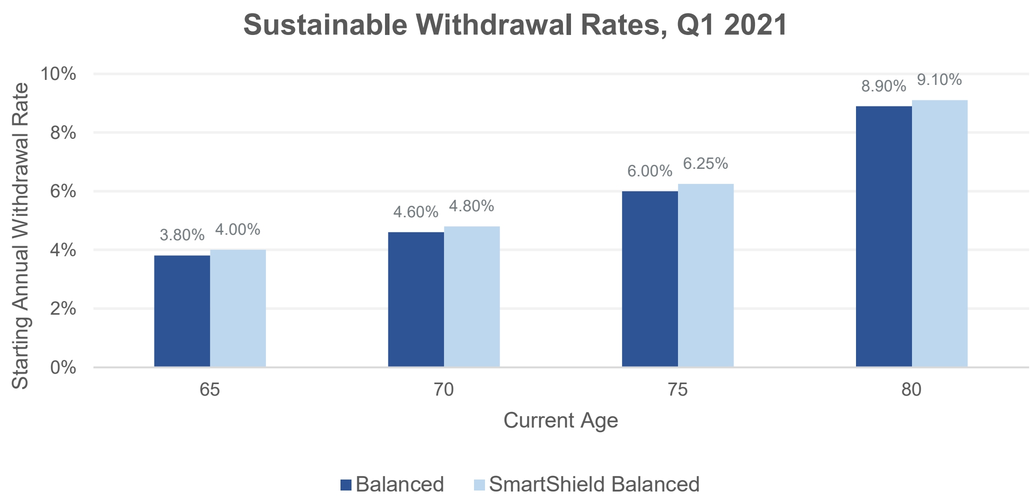
[5]**Implied Return Distribution / Implied Likelihood r**epresents the forecasted return (and its likelihood) of the index over the next 30 days (starting from the effective date of this report), as implied from the market prices of index options traded on the exchange.

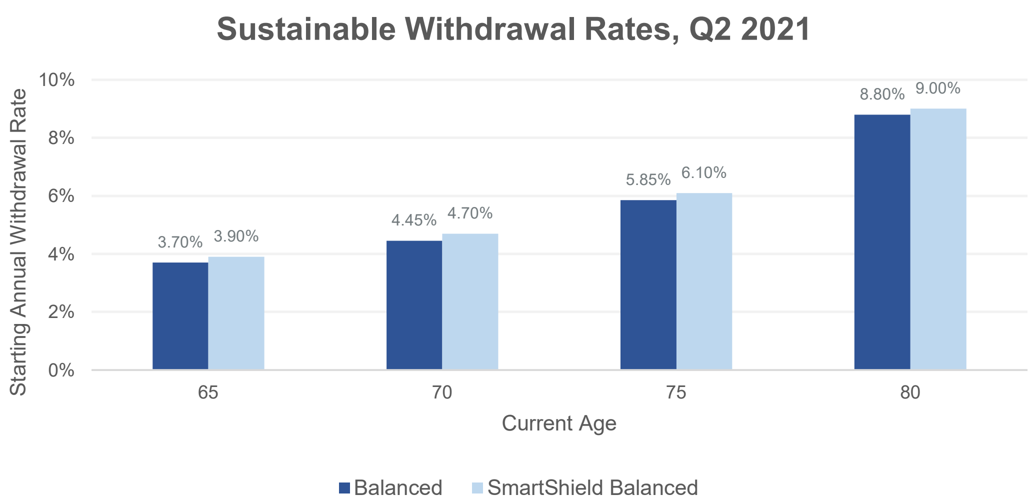
Observations on Sustainable Withdrawal Rates

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

This was mainly driven by the change in interest rate levels over the period with 10 year government bond yields decreasing by approximately 30bps, leading to lower simulated returns from all asset classes.

We have also illustrated the additional sustainable withdrawal rates that can be achieved by adding risk management into the portfolio using the SmartShield series of portfolios as an example. By controlling the level of volatility, and reducing the impact of sustained market drawdowns, risk management strategies can reduce the exposure to sequencing risk, and result in higher sustainable withdrawal rates for retirees.





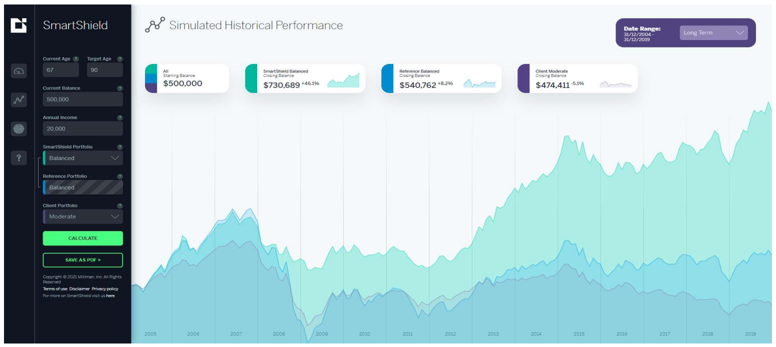
Sustainable Withdrawal Rate is defined as the maximum amount that can be withdrawn from a portfolio each year with a 90% certainty that this rate can be sustainably withdrawn (adjusted for inflation) until the target age of 90. An additional constraint introduced is for the potential shortfall to be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

SMARTSHIELD™ SIMULATOR – FREE ACCESS FOR ADVISERS

Built for financial advisers and complementary to Milliman's SmartShield portfolios, the Simulator helps strengthen 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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