Milliman Market Monitor - September 2021

Market Commentaries

Equities

- Market sentiment was pessimistic on Global Equities through September, largely driven by news that large Chinese Property Developer Evergrande, could default on its outstanding debt, as well as concerns on whether the US Congress would be passing a bill to raise it's current debt ceiling, or pass a bill for more infrastructure / economic stimulus. The S&P 500 index closed the month down as a result -4.7%.
- Australian equities were hit hard, due to the prolonged lockdowns across NSW and VIC as well as falling commodity prices (in particular iron ore and coal) and Chinese industrial production slowing. In addition, general negative sentiment from the US over tapering and future stimulus added to concern. The ASX200 closed at -1.9%.

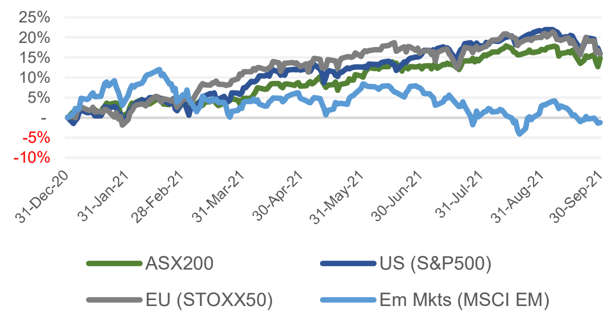
Fixed Income

- Bond yields across developed markets have continued to climb this month; as investors price in potential tapering from the US Fed this year. Australian Government Bond[2] and Global Bond[2] returned -1.7% and -1.0% respectively.

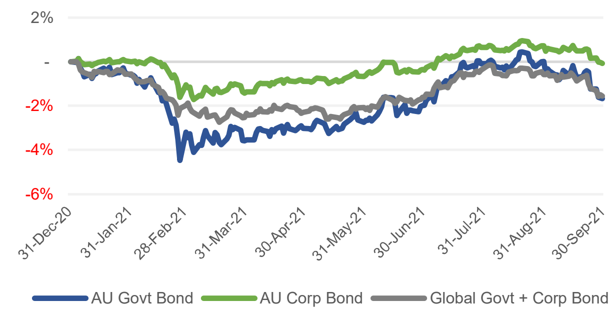
Currencies

- The US Dollar continued to grow stronger against AUD. This was due to a combination of stronger economic conditions overseas, the continued impact of the lockdowns, as well as weaker Chinese data leading to further falls in commodities, such as Iron Ore and Coal. The AUD/USD rate closed at 72.27 US Cents, a -1.2% depreciation against the USD.

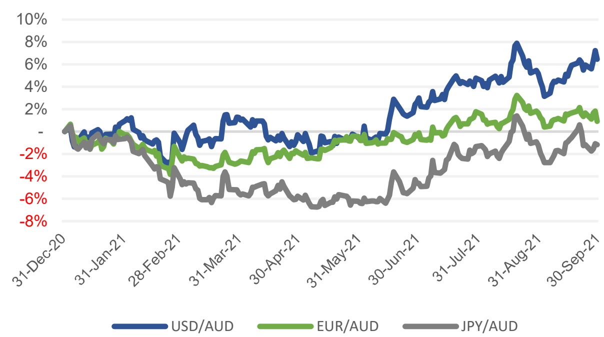
Equities: YTD Total Return[1] %



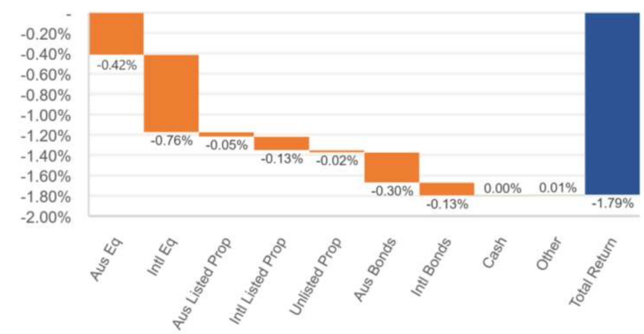
Fixed Income: YTD Return[2] %



Foreign Currencies: YTD Return %



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



Returns ending 30 September 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	-1.9%	-4.7%	-3.4%	-4.0%	-1.7%	-0.8%	-1.0%	1.2%	-0.7%	0.1%
3 Month	1.7%	0.6%	-0.2%	-8.1%	0.3%	0.3%	0.1%	3.7%	1.3%	3.6%
1 Year	30.6%	30.0%	29.1%	18.2%	-2.0%	1.3%	-0.8%	-0.9%	-2.1%	-6.1%
CYTD	14.8%	15.9%	15.9%	-1.2%	-1.7%	-0.1%	-1.6%	6.5%	0.9%	-1.2%

[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.

Upcoming Key Economic Events & Risk Commentaries

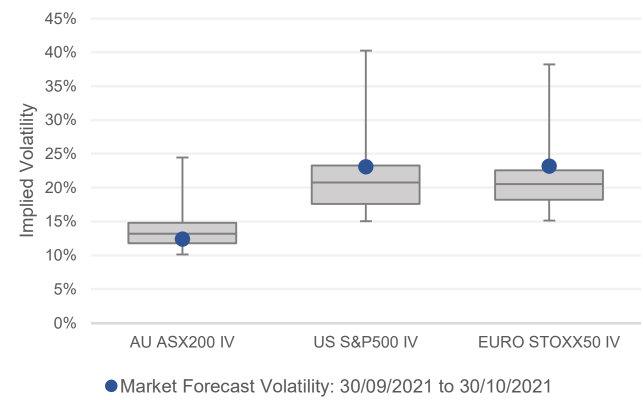
- Due to the concern surrounding Evergrande, as well as the tapering/repricing of future rate hikes in the US, the historical and implied volatility (1-month forecast) across the AU, US and EU stock markets has risen, since mid-September. The implied likelihood of the S&P 500 falling more than 10% and 5% during the October month, is 7% and 17% respectively (as estimated from option pricing); an increase in risk compared to September.

- In October, key domestic events include the monthly RBA meeting on the first Tuesday 5th, plus the release of Q3 CPI on the 27th. Given the supply channel disruption, rising energy prices and subsidies for housing construction costs decreasing; focus will be upon the potential emergence of further inflationary pressure.

- Offshore, eyes will be upon the Republican and Democrats' ability to find a solution to increase the debt ceiling for the US government, in order to avoid a technical default on 18th Oct. Furthermore, in its September meeting the US Fed made it clear they see the tapering of the QE program will be completed by mid-2022. Depending on the strength of the September and October employment reports, their decision to taper could come as early as November. Non-farm payroll reports will also be of key importance (8th Oct) and news around Evergrande and its upcoming debt obligation is also causing concerns for further impacts.

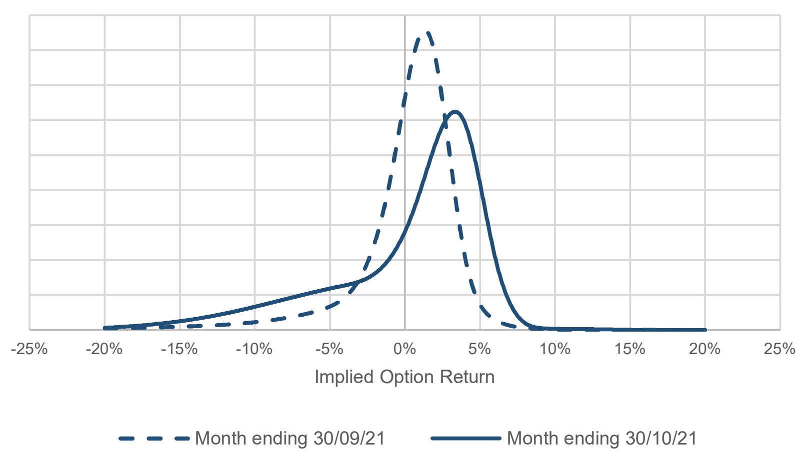
Realised 1 Month Equity Volatility (%)

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 29/10/21	Month ending 30/09/21
Falling more than 10%	~ 7%	~ 3%
Falling more than 5%	~ 17%	~ 8%

[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.

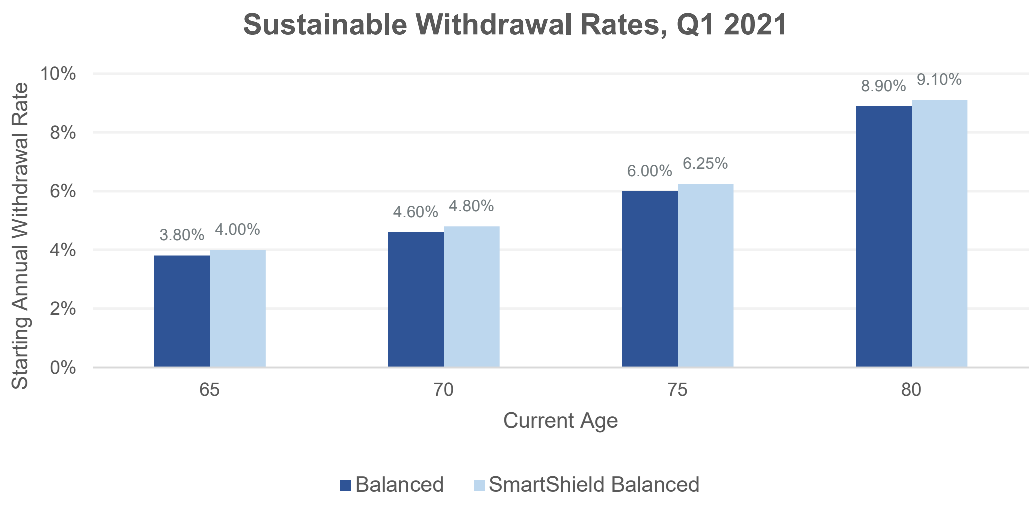
[5]**Implied Return Distribution / Implied Likelihood r**epresents the forecasted return (and its likelihood) of the index over the next 30 days (starting from the effective date of this report), as implied from the market prices of index options traded on the exchange.

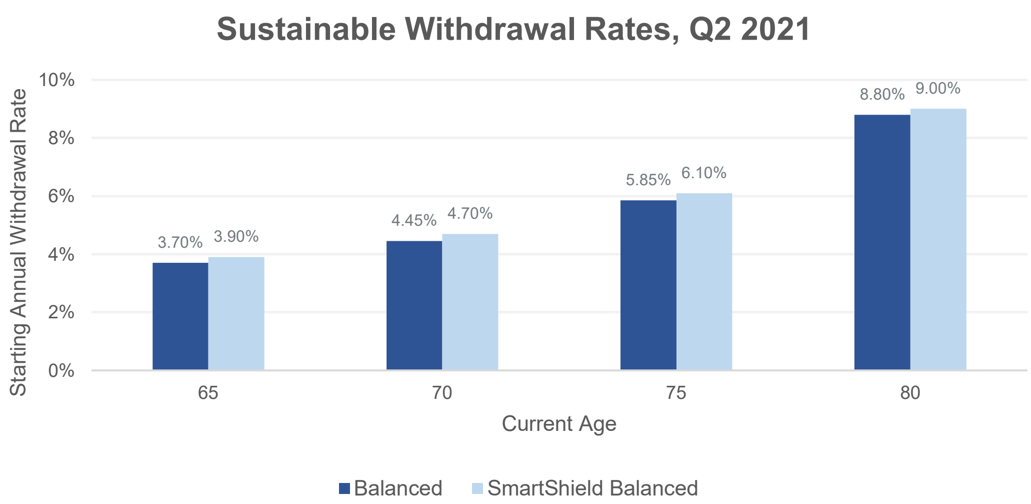
Observations on Sustainable Withdrawal Rates

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 withdrawal $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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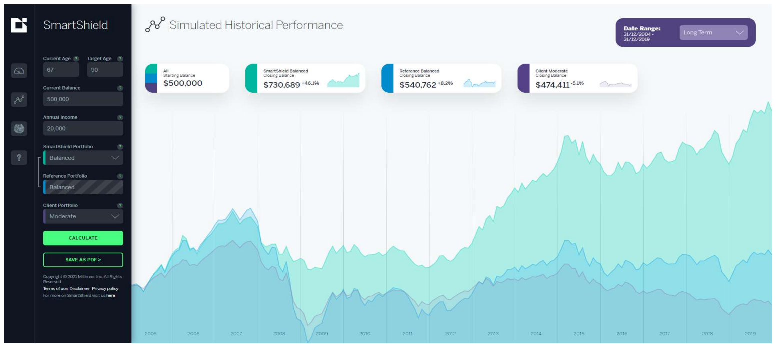
SMARTSHIELD™ SIMULATOR – FREE ACCESS FOR ADVISERS

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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