

Removals & Additions Model

Forecasts for June

Three changes to ASX 200

The RAM forecasts three high probability deletions from the ASX 200 index in the upcoming June rebalance. The [deletions](#) are Tyro Payments (TYR), Polynovo (PNV) and Platinum AM (PTM). The two high probability [additions](#) are Lake Resources (LKE) and Core Lithium (CXO), and a medium probability addition is Brainchip Holding.

One probable change to ASX 100 for June

The RAM forecasts one probable change to the ASX 100 index for the upcoming June rebalance. The RAM forecasts a high probability [deletion](#) of Magellan Financial (MFG), and a medium likelihood of [addition](#) of Whitehaven Coal (WHC).

Removals & Additions Model

The Removals & Additions Model (RAM) is a quarterly report which aims to highlight our analysis of the likely additions and deletions to the S&P/ASX 200 and the flow on effect on ASX 100 and ASX 300 Index. While our ASX 200 and ASX 100 forecasts will be published on a quarterly basis, the forecasts to the S&P/ASX 300 model will be published on a six-monthly basis (March, September). The RAM model aims to;

- 1) help ETFs and tracking funds to plan the rebalance of their funds in advance
- 2) help hedge funds position for possible price movements leading up to index changes
- 3) help benchmark-aware investors to understand the potential implications of index changes in advance of the formal index change announcements.

Table 1: Important Dates

Dates for June rebalance

Event	Dates
Index Rebalance Announcement:	3-Jun-22
Index Rebalance:	17-Jun-22

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Table 2: Our S&P ASX Index likely inclusions

S&P ASX Index likely inclusions for June rebalance

	ASX 100	ASX 200	ASX 300
Predicted Additions (#)	1	3	--
Predicted Deletions (#)	1	3	--

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Refer to important disclosures on page 6 to 8.

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Forecasts for the June 2022 Quarterly Rebalance

Table 3: Our S&P ASX 100 likely inclusions

ASX 100 likely inclusions for June rebalance

ASX Code	Name	Sector	Current MCAP (AUD m)	Approx Weight	Likelihood of Inclusion
WHC	Whitehaven Coal	Energy	5,071	0.17%	Medium

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Table 4: Our S&P ASX 100 Likely Deletions

ASX 100 likely deletions for June rebalance

ASX Code	Name	Sector	Current MCAP (AUD m)	Approx Weight	Likelihood of Deletion
MFG	Magellan Financial	Financials	2,174	0.14%	High

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Table 5: Our S&P ASX 200 Likely Inclusions

ASX 200 likely inclusions for June rebalance

ASX Code	Name	Sector	Current MCAP (AUD m)	Approx Weight	Likelihood of Inclusion
LKE	Lake Resources	Materials	1,833	0.08%	High
CXO	Core Lithium	Materials	2,078	0.07%	High
BRN	Brainchip Holding	Info Tech	1,537	0.07%	Medium

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Table 6: Our S&P ASX 200 Likely Deletions

ASX 200 likely deletions for June rebalance

ASX Code	Name	Sector	Current MCAP (AUD m)	Approx Weight	Likelihood of Deletion
TYR	Tyro Payments	Info Tech	429	0.04%	High
PNV	Polynovo	Health Care	817	0.04%	High
PTM	Platinum AM	Financials	726	0.04%	High

Source : BofA Global Research, S&P, Factset, Bloomberg, IRESS

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Methodology

The Removals & Additions Model is designed to identify the likely inclusions and deletions of members in the S&P/ASX 100, S&P/ASX 200 and S&P/ASX 300 indices. The methodology follows the index eligibility rules prescribed by S&P. S&P/ASX rebalances the ASX 100 and ASX 200 index on a quarterly basis, and ASX 300 index on a six-monthly (March and September) basis. The Removals & Additions Model aims to identify the member inclusions and deletions two-weeks before the formal index announcement is made by S&P. S&P announces index changes (inclusions/deletions) on the first Friday of each quarter (March, June, September, December) and the actual changes are made on the third Friday of the relevant month.

Each quarter, the Removals & Additions Model will include all stocks listed on the Australian Stock Exchange. Consistent with the methodology provided by S&P, convertible stocks, warrants, bonds, listed investment companies, M&A candidates and preferred stocks (with guaranteed fixed returns) are not included in the Removals & Additions Model. The remaining stocks are then ranked based on daily average float-adjusted market capitalisation over the last six months. Each stock's "relative liquidity" is calculated using the stock's median liquidity (turnover) over the previous six months divided by the market liquidity (liquidity weighted-average of the 500 members in the ASX All Ordinaries Index).

Based on S&P's criteria, S&P/ASX 100 (top 100 stocks by market capitalization) and S&P/ASX 200 (top 200 stocks by market capitalization) index requires minimum relative liquidity of 50% for index inclusion. If a stock's relative liquidity falls below half of this level at quarterly review it may be considered for deletion. S&P/ASX 300 index requires minimum relative liquidity of 30% for index inclusion. If a stock's relative liquidity falls below half of this level at six-monthly review it may be considered for deletion.

Based on S&P's criteria, stocks are eligible for index inclusion based on their market capitalization rank relative to all eligible stocks. For example, a stock which is currently not a member of any index and is ranked 150, based on float-adjusted market capitalization and meets the liquidity hurdles (50%) may be considered for inclusion into the S&P/ASX 200 index. To limit index turnover, S&P only includes eligible stocks into the index once another stock is excluded based on the low rank (float-adjusted market capitalization) and low liquidity.

The number of inclusions and deletions to any index during a rebalance may vary depending on the number of eligible/ineligible stocks. Our back-testing analysis has shown that the top-third of stocks (top 2 ranked stocks within inclusions and exclusions) highlighted by the Removals & Additions Model for inclusions and deletions have a likelihood of >90% of being included/removed from an index. The likelihood falls as the relative rank of the stock falls during any rebalance. The bottom-third of stocks in the ranking have a probability of <25% being included/excluded from an index. In most cases S&P will include equal number of inclusions to replace the most likely exclusions from an index – irrespective of how attractive other stocks in the ranking are.

The RAM model probability weights the stocks (possible inclusions/deletions) High, Medium and Low based on the relative ranking. A possible inclusion/exclusion will get a High probability weighting if it ranks higher (based on average market cap and meeting liquidity constraints) than rest of the stocks qualifying for a certain index. For example, if three stocks qualify to enter ASX 200 index, the highest ranked stock will get a High probability weight, while the lowest ranked stock will get a probability weighting of Low. This relative ranking among the inclusion stocks also depends on how many stocks are eligible / forecasted to exit the index. If three stocks have high likelihood of exiting any index because of their relatively low rankings, then the three inclusion candidates will have High likelihood of entering the index, irrespective of their rank among the inclusion candidates. In this case, there will be no stock with a Medium or Low rating.

We do not predict stock performance or market trading volumes from this model.

Risks and caveats

There are a number of instances when the Removals & Additions Model fails to identify certain index member changes. These include:

- 1) Change in the number of shares of a company due to insiders (directors/CEO etc) purchase/sell activity
- 2) Instances when S&P gauges the market conditions before taking a decision to keep a stock in the index even if it breaches S&P's "inclusion eligibility" criteria.
- 3) Rights issue in the two-weeks before the actual index change announcement is made
- 4) Corporate actions including mergers & acquisitions
- 5) An index member which appears to breach the criteria for addition set by S&P may not be deleted especially when the market is volatile – this is up to the S&P Index Committee's discretion.
- 6) Intra-quarter changes (ad hoc index changes made by S&P based on corporate actions or M&A activity)
- 7) Exceptionally large IPO stock which might violate the eligibility criteria but might get included in the index as per S&P Index Committee's discretion.
- 8) Free-float adjustments due to the change in shares held by strategic holders.

The instances highlighted above can result in the model highlighting incorrect inclusions/deletions and investors should consider all relevant factors in making any investment decisions.

Going-forward however the model will take into consideration real-time changes in strategic holdings affecting the free-float, M&A announcements, and other corporate actions as outlined above. The consideration of real-time data may affect the efficacy (hit-rate) of the model going forward whereas the back-testing included here is based on the quantifiable and measurable components of S&P's criteria going back in time and on a historical basis only.

Inaugural Report

Please refer to the inaugural report - [RAM Model: Introducing a model to forecast changes to ASX indices 24 August 2015](#) - for backtesting and detailed methodology.

S&P Methodology & Disclaimer

Please refer to the link before for more details on S&P Methodology and Disclaimer associated with S&P Indices.

(http://www.spdji.com/documents/methodologies/methodology-sp-australian-indices.pdf?force_download=true)





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Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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