ETFs / ETMFs – Bid-Ask Spreads

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February 2022

Overview

To state the obvious, ETFs trade on a listed exchange just as equities do. However, there is one key difference between ETFs and equities, specifically the presence of one or a group of institutional brokers/investors referred to as either authorised participants (APs) or market makers. Market makers provide price and volume quotes in in the ETF and ensure the continuous trading. Whereas APs manage the creation and redemption of ETF units in the primary market.

Without wishing to confuse the matter, often APs can also act as market makers and hereafter this article refers to both as 'market makers'.But there is an important distinction - only APs engage in the creation redemption process but is not present 'in the screen' with a bid and ask during the trading day.

The creation and redemption process, which is only undertaken by an AP, leads to ETF flows, specifically the increase or decrease of ETF units on issue as determined by investor supply and demand (a key distinction between equities). It is a process that is critical to ETFs trading, in practical terms, at parity to NAV (there is extremely limited discount to NTA risk in ETFs bar a marginal risk in bond ETFs in very extreme market dislocation events).

For market markers, first and foremost its role is to provide liquidity to the ETF and the ability to continuously create and cancel units based on supply and demand in the market. But of course, this participation is driven be a profit motive. In this regard, market makers seek to generate a profit based on a small arbitrage margin between the price at which the ETF is transacted and the underlying value of the securities that represent the ETF portfolio (the NAV of the ETF).

That margin represents the bid / ask spread. For example, if an AP or market maker is present in the market as a buyer it will offer a bid price that is marginally below the NAV of the ETF (the bid spread). Assuming the market maker is 'hit', i.e. there is not a investor offering a slightly higher bid price, then sells the individual shares on market (the redemption process) with the intent of making a marginal arbitrage profit.

To complicate matters further, a market maker may or may not be contracted to maintain a maximum spread. If the market maker is not contracted in this regard, it is still bound by ASX rules in relation to maximum spreads (but these are quite wide) and by minimum bid and ask volume offers. The benefit of a contracted bid-ask spread is it better ensures an ETF remains competitive with other ETFs. And investors should be aware that it is periods of heightened volatility that spreads are likely to blow out where there is not a contracted bid-ask spread.

All ETFs / ETMFs must have at least one market maker unless, it is our understanding, and ETF has more than a 1,000 investors and the issuer is confident spreads will remain tight (i.e., there is sufficient trading volume). But the reality is the vast majority of ETFs have an external market maker.

There is one exception to the use of an external market maker, specifically for exchanged traded managed funds (ETMFs or Active ETFs). For the purpose of not disclosing portfolio IP, a fund manager of an Active ETF appoints itself as the market maker. This is referred to as an internal market maker arrangement, in contrast to the appointment of an independent third-party AP or market maker. To our knowledge, this arrangement only exists in Australia and had courted some controversy prior to ASIC's review of the process in 2019.

The relevance to investors of the internal market making process to investors is that there is a clear pattern that bid-ask spreads in ETMFs are generally consistently higher than ETFs. For the vast majority of ETMFs in Australia, the fund manager is internalising the arbitrage risk in the creation-redemption process (for the purposing of protecting portfolio IP).

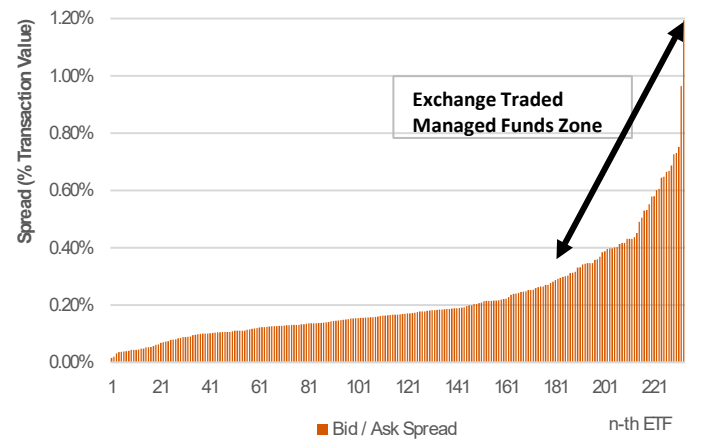
The main reason bid-ask spreads in ETMFs are higher than ETFs is because there is only one market maker (i.e. the responsible entity). On the other hand, an ETF that has an external market making arrangement has a primary market that allows multiple market makers and authorised participants. This promotes competition and tighter spreads. We discuss the internal market making process in greater detail below.

ASX-Listed Bid-Ask Spreads

The chart below details the bid-ask spread of all 233 ASX-listed ETFs over the month of January 2022. The amounts are based on the average bid-ask spread over the course of each day of the month divided by two with all daily amounts over the month then averaged to provide the end figure.

The chart presents these levels on a sorted basis, from lowest to highest over January 2022. As evident, there is a material variation between ETFs, from a low of 0.015%, or 1.5 basis points (bps) to 1.2%, or 120 bps.

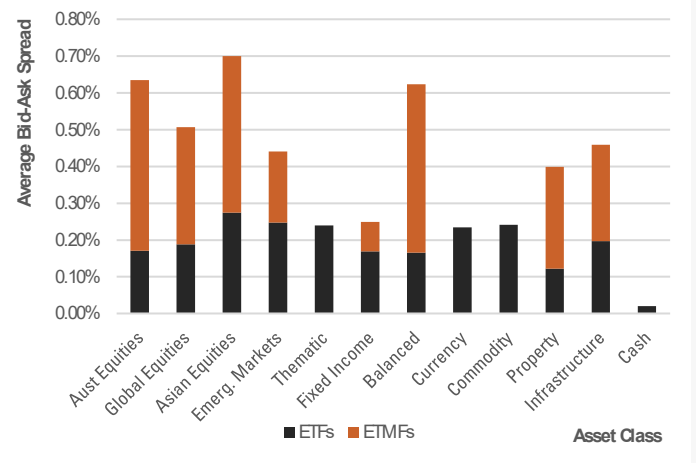
Bid-Ask Spreads by all 233 ASX-listed ETFs / ETMFs



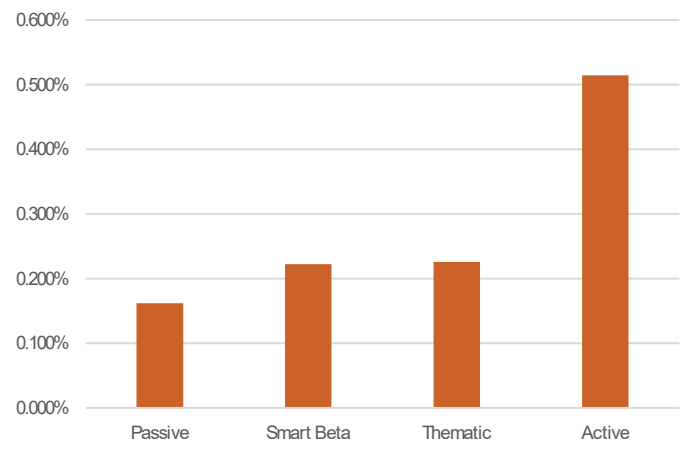
The chart below highlights two key patterns: 1) Australian based ETFs (i.e., ETFs based on Australian securities) are characterised by the thinnest bid-ask spreads and in equities they are largest for Asian and Emerging Markets mandates (some underlying

markets are relatively illiquid), and; 2) ETMFs are characterised by materially higher bid-ask spreads.

Bid-Ask Spreads by Sector



Average Bid-Ask Spreads by ETF / ETMF Style



There are a range of drivers that determines a bid-ask spread as we discuss below, and which investors may wish to consider when evaluating an ETF, just as one should do in relation to MERs. For example, at 120 bps, the highest bid-ask spread is approaching the MER that applies to the particular ETF.

In short, the key drivers include:

- **Intra-day timing** – Be conscience of when you trade;
- **Internal or External Market Making** – ETMFs versus ETFs;
- **Activity** - The traded volume of the ETF,
- **Risk and Information** - The nature of the underlying portfolio; ;
- **Competition** - The number of market makers present.

Bid/Ask Spreads - Timing is Everything

In the ETF world, average bid/ask spread is one of the most widely quoted metrics for liquidity. And average bid/ask spread is indeed important when evaluating ETFs. Despite its usefulness, average bid/ask spread cannot entirely capture the complexity of the ETF markets. One of its major downfalls is that it obscures the significant intraday variation that can exist in an ETF's bid/ask spread. Bid/ask spread is far from constant throughout the course of the day. Good or bad timing can lead to a major variation in spreads incurred.

While supply and demand vagaries will impact actual intra-day levels, there is a distinct U-shaped pattern in ETF bid-ask spreads during the trading day for ETFs based on Australian equities. Specifically, there are elevated bid-ask spreads at the opening of the trading day (10:00 to circa 10:09am) and then taper during the trading day and then increase again in the after-market close 'auction' (circa 4:00 to 4:10pm).

For Australian equities based ETFs, during the opening of the trading day ASX stocks open progressively from 10:00am to 10:09am based on ASX ticker alphabetical order. Until all stocks in a given Australian equities based portfolio are open and have traded, APs / market makers are 'flying blind' to a degree on the NAV of the ETF portfolio and this additional risk is reflected in wider bid and ask offers (spreads) from these market participants.

A similar dynamic exists for Asian equities based ETFs, with spreads typically being wider during Australian trading AM hours while Asian markets are pre-open and then typically taper as Asian equities markets open.

For broad global equities mandates and/or Europe or US specific equities ETFs the intra-day pattern is less distinct (or not materially present at all) as these markets are generally closed for the duration of ASX trading hours. ETFs are priced by the AP / market maker by way of appropriate futures contracts.

Internal Market Making – ETMFs (Active ETFs)

Product issuers generally appoint an independent third party that is a market participant to act as lead market maker in order to fulfil their liquidity obligations. However, in very specific circumstances, licensed exchanges may allow the issuer to adopt the role of market maker (i.e. an internal market-making arrangement) on the fund's behalf rather than using an independent third-party trading participant.

Issuers typically seek internal market making arrangements if there is a concern others will use their portfolio IP, for example, by replicating the investment strategy to the ETF's detriment. In all cases, internal market making arrangements have been used for ETMFs (Active ETFs).

In July 2019, ASIC placed an official suspension on new ASX listings of Active ETFs that do not disclose their daily portfolio holdings and have internal market makers. A subsequent ASIC six-month review of the industry was conducted, which identified market integrity issues stemming from certain internal market making models (where a market maker uses non-public information as part of its pricing methodology) and non-disclosure of daily holdings.

The review ultimately resulted in ASIC lifting the suspension, and publication of the updated INFO 230. Ultimately the updated INFO 230 was designed to manage market integrity risks associated with internal market making.

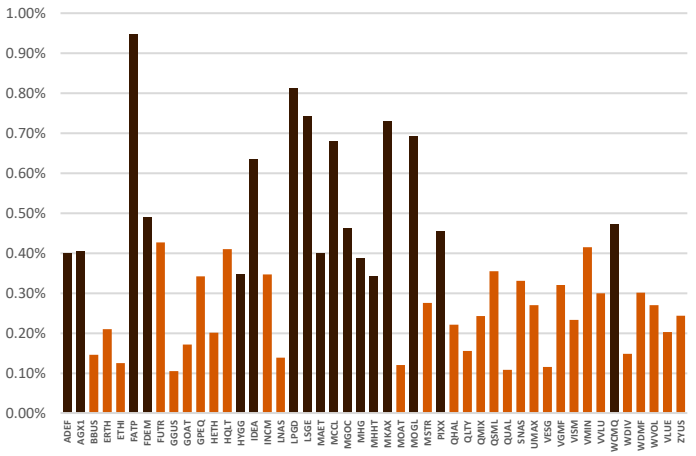
While ETMFs typically have materially higher bid-ask spreads, investors should note that the profit & loss from such activities are channelled back into the NAV of the ETMF.

Profit and loss from the use of internal market making represents the difference between the amount an investor traded at based on the ASX price and the amount an investor could have applied or redeemed at based on the vehicless unit price (application/ entry price and redemption/exit price for that same trade date). Therefore, the profit/loss is attributed to the ETMF's NAV but nevertheless it remains a cost to the particular investor that is trading.

It should also be noted that the applicable average bid-ask spreads in ETMFs may well be approximately comparable to a fund manager's unlisted unit trust version of the trading strategy. A cynic might be tempted to say that a fund manager may widen spreads at certain times as a disincentive for investors to redeem. However, it should be noted this is a conflict of interest that ASIC requires product issuers to disclose and manage.

The chart below details bid-ask spreads in the Global Strategy sector, a sector that has a significant number of ETMFs (which is why we have used this sector to illustrate the variation). The ETMFs are coloured red, the ETFs blue.

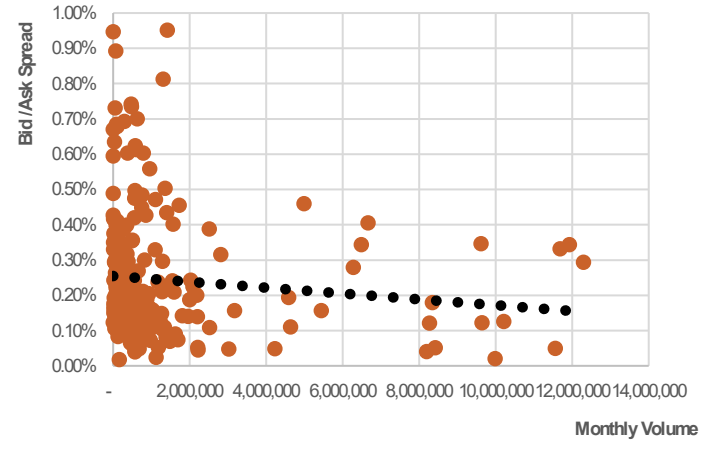
Bid-Ask Spreads - Global Strategy Sector



Activity - Trading Volumes

If the ETF is popular and trades with robust volume, then bid/ask spreads tend to be narrower. But if the ETF is thinly traded, or if the underlying securities of the fund are highly illiquid, that can also lead to wider spreads.

Bid-Ask Spreads by Monthly Trading Volume



Market makers prefer larger ETFs with larger trading volumes. Ironically however it is in the less traded ETFs that investors are most requiring of a contracted market maker. VanEck, which has a contracted market maker for all its ETFs and ETMFs, suggests for smaller ETFs advisors check whether there is a contracted market maker and whether the ETF issuer monitors the spreads on a intra-day basis (a simply phone call to the ETF issuer).

The chart above details bid-ask spreads by monthly trading volumes. The correlation is somewhat thrown askew by the inclusion of ETMFs but it is apparent that there is a positive correlation between higher volumes and lower bid-ask spreads.

Risk and Information – the Underlying Portfolio

Risk and information relates to the pricing transparency on the underlying portfolio constituents. In a nutshell, if a market is not open during a part or all of ASX trading hours, then there is a lesser degree of pricing transparency on the constituent stocks (notwithstanding the ability of a market maker to partly hedge through the use of futures). This lack of transparency tends to be greatest in more illiquid emerging markets.

Nevertheless, the use of futures is a proxy and implicitly creates an additional level of risk for market makers and which is reflected in broader spreads. Investors should not consider this a weakness of international equities ETFs or more niche based thematic ETFs, rather simply a practical reality relating to the additional risk taken by market makers.

Competition

Competition simply relates to the number of contracted market makers present (the latter of which are not contracted and under no obligation to be present 'in the screen'). A contracted market maker (external or internal) must be present "in the screen" at least 80% of the time between 10:15am and 4pm on a trading day.. Contracted APs are also bound by a maximum bid-ask spread.

The more contracted market makers, the greater the assurance an investor has that spreads will not blow out. There has been occasions where a contracted market maker has had an IT glitch that has prevented it from fulfilling its contracted requirements.

The ASX provides a very useful page at: https://www2.asx.com.au/markets/market-resources/market-maker-arrangements/etps---market-maker-arrangements

And which details the number of market makers present in each particular ETF / ETMF and a Schedule that details: 1) the minimum volume they must offer in the screen; and, 2) the maximum bid-ask spreads. These maximum spreads relate to all market conditions, capturing differences in volatility (spreads will generally widen in more volatile market environments) and trading volumes. It is generally regarded by product issuers that the maximum levels will very rarely, if ever, come to bear in practice.

But what is evident in these Schedules is that maximum volumes decrease and maximum spreads increase as you move away from ETFs / ETMfs that are based on Australian securities. There is also fewer contracted market makers too in such vehicles.

About Risk Return Metrics

Risk Return Metrics Pty Ltd (ABN 98 642 969 819) was established by the company's principal Rodney Lay in June 2020 with the express intention to provide institutional grade absolute and relative performance analysis and ratings for retail and wholesale investors, IFAs and investment managers. The primary focus is on the managed investment sectors, both LICs/LITs and Active and Passive ETFs listed on the Australian market. A secondary focus is on the provision of select quantitative based profiles on select Australian domiciled unlisted managed funds. In total, RRM is expected to provide monthly updates on approximately 550 Australian domiciled investment strategies across the full asset class spectrum.

The investment product reports produced by RRM contain a number of differentiating factors to which have and are currently available in the Australian market, with the most notable being 1) HTML-based sub-reports for each strategy and 2) the emphasis on peer group benchmarking for comparative analysis as opposed to the industry standard of utilising industry benchmarks.

The former function enables the provision of detailed metrics regarding returns, risk/capital preservation, performance path, and efficiency, but does so by way of the sub-report feature without comprising the conciseness and readability of the primary report. Less is More, and More is More. The latter is viewed as a superior comparative basis in terms of facilitating investor choice regarding competing investment strategies in a particular (sub-)asset class.

Rodney Lay has 25 years' experience in investment analysis, first starting as an equities analyst at BZW / ABN Amro. Subsequently, he specialised in structured products in the lead up to the GFC and then moved to a dedicated focus on listed and unlisted managed investments. Rodney has had a long involvement in the listed space of the market, both LICs/LITs and ETFs.

Asset class experience is broad, including equities (long-only, long/short, market neutral, enhanced income), global listed infrastructure and property, alternative strategies (hedge funds, global macro, quantitative strategies), retirement solution products, private assets, and public and private debt. Public and private debt strategies have been a particular focus over the last three years, reflecting growing retail and wholesale client demand.

Rodney has a strong understanding of the nuances of different investment structures, including LICs/LITs, Active ETFs, SMAs/ IMAs and the recently launched dual listed/unlisted structure. Rodney has undertaken investment analysis on behalf of some of the most recognised global and domestic fund managers in both the listed and unlisted investment strategy sectors.

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