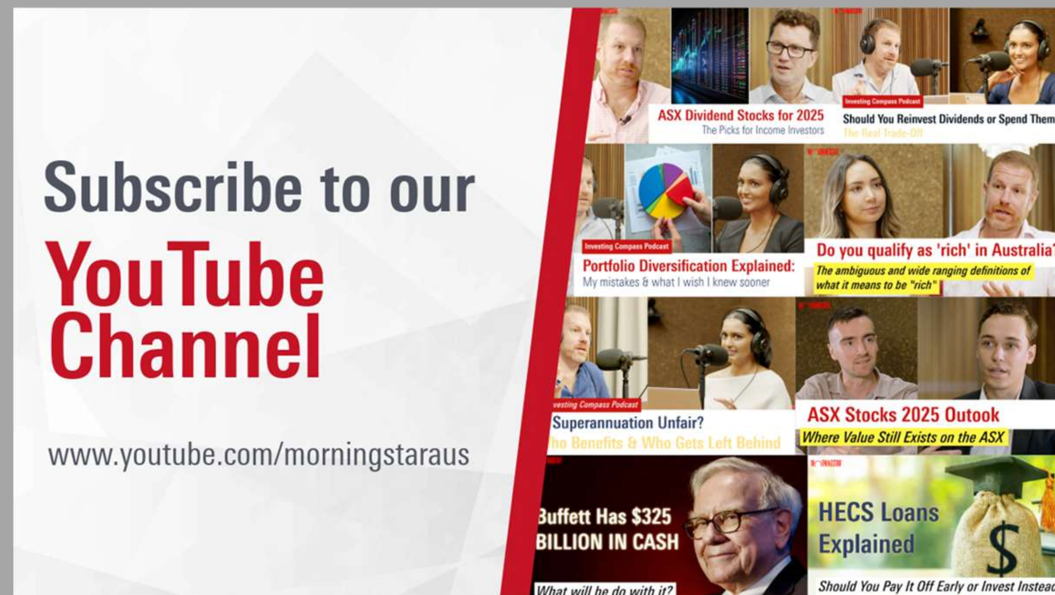


Available on Apple Podcasts, Spotify and Podcast Addict

The webinar will begin shortly

Important Information

Morningstar retirement bootcamp

Webinar 1 - Everything you wanted to know about ETFs and were scared to ask

Webinar 2 - Traditional passive ETFs

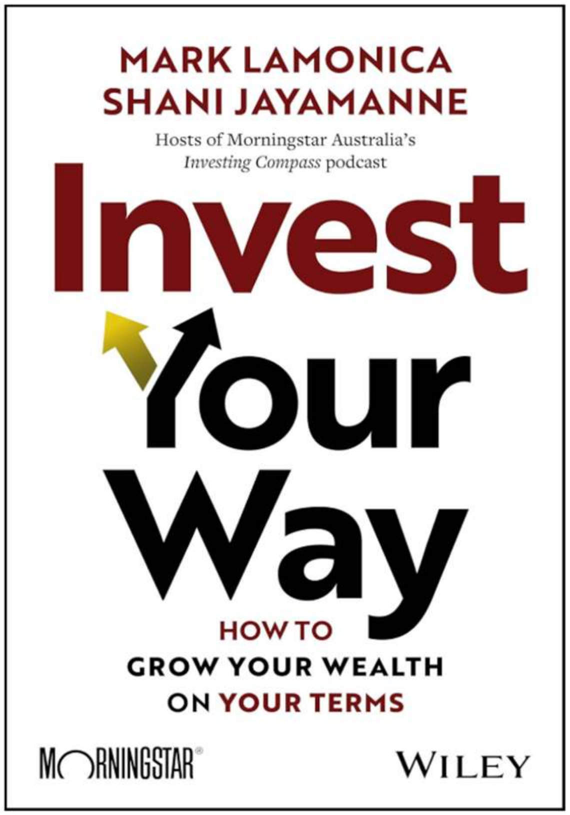
Webinar 3 - Thematic and factor ETFs

Webinar 4 – Building an ETF portfolio

Learning objectives

1. Understand how to evaluate a traditional passive ETF and the different drivers of returns

Getting the foundations right



- The biggest issue many investors face is undermining their own outcomes by letting emotions influence decision making and making mistakes
- ETFs exacerbate these tendencies given the ease of trading, the proliferation of new ETFs and compelling marketing based on recent performance
- The key is adding structure to decision making by establishing goals, setting an investment strategy and developing a process to guide decision making

What is an index

An index measures the performance of a basket of securities intended to replicate a certain area of the market……the problem is that there are lots of indexes.

A traditional index aligns to John Bogle's idea of passive investing:

- Buy and hold a broad index
- Minimise cost
- Minimise tax through low turnover
- Simplicity

This differs from thematic or factor ETF that tracks a specially designed index that is intended to represent a certain investment characteristic or theme.

Are you an actual passive investor?

"ETFs are what happens when you have marketing people instead of investment fiduciaries running money. The ETF is the magic word of the day, the greatest marketing innovation of the 21st century. They are absolutely speculation, and they have hurt a lot of people."

- John Bogle

- In a study called The Dark Side of ETFs they cite data from the Deutsche Borse that showed ETFs were traded just as frequently as stocks by 2009.
- Professor French at Dartmouth did a study that indicated that the typical investor would increase average annual returns by 0.67% over the 1980-2006 period by investing passively in the way Bogle defined it.
- A study conducted by UTS in 2008 explored whether individual investors benefit from the use of ETFs. The study found that portfolio performance when investors used ETFs was lower than when they didn't. It wasn't a small loss. The study found that ETF portfolios underperformed non-ETF portfolios by 2.3 per cent a year.

Four step process for researching an ETF

1. **Identify the exposure that you are interested in and a hypothesis of how this will help you achieve your goals:** You are answering the 'what' and 'why'. Ideally you define and understand your goal for investing to find investments that align with your goal.

2. **Assess the ETF to determine if it provides the desired exposure:** This involves going beyond the name and high-level description of an ETF and understanding the underlying index rules (passive) or the investment process (active) and how those rules are implemented by exploring current holdings.

3. **Review the drivers of end investor returns:** Fees and taxes play an underappreciated role in the end outcome for investors. Fees can be the tie breaker for two similar ETFs. Tax outcomes are driven by high turnover and should be considered based on tax circumstances.

4. **Distill the ETF performance drivers:** This will help you understand why this ETF will perform in a certain way going forward and can be compared to your original hypothesis.

Example: Assess the ETF to determine if it provides the desired exposure

1. Identify underlying index on ETF provider website

2. Go to index website to review index selection criteria which generally is based on company size or certain fundamental / thematic criteria.

3. Review index weighting and rebalancing criteria. These are often related and come in three categories:

   - Market capitalization weighted meaning the proportion of each constituent is based on the size of the company (share price multiplied by shares outstanding). Constituents will be replaced as market capitalization varies but no rebalancing and generally low turnover.

   - Equal weighted where each constituent has the same weight. Rebalancing occurs at set intervals which means higher turnover as shares with relative outperformance are sold for share with relative underperformance.

   - Fundamental weighted index where each constituent is weighted by a desired characteristic such as dividend yield, valuation, etc. Rebalancing occurs at set intervals which may mean high turnover.

Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Identify the exposure that you are interested in and a hypothesis of how this will help you achieve your goals:

The goal is to earn the market return on global shares to diversify into companies, sectors and markets that are not available from the narrowly focused Australian share market. The hypothesis is that the diversification will be beneficial, and returns may be higher globally than in Australia given the different mix of companies.

Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Assess the ETF to determine if it provides the desired exposure:

IVV tracks the S&P 500 index which is the 500 largest companies in the US weighted by market capitalization.

VGS tracks the MSCI World ex-Australian Index which is the 1341 largest companies across 22 developed market countries.

On the surface these look to be very different exposure, but we need to dig deeper to see the results of the implementation.

Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Assess the ETF to determine if it provides the desired exposure:

IVV country exposure

VGS country exposure

Country	Investment %	Index %	Cat %
United States	73.61	73.45	65.52
Japan	5.81	5.79	4.49
Canada	3.45	3.40	2.61
United Kingdom	3.42	3.37	4.01
Switzerland	2.61	2.67	2.59
Germany	2.20	2.14	2.05
France	1.98	2.18	2.71
Netherlands	1.52	1.70	1.96
Spain	0.91	0.94	0.94
Sweden	0.85	0.82	0.53

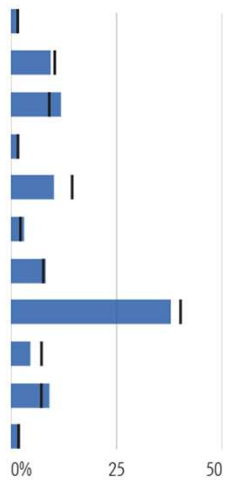
Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Assess the ETF to determine if it provides the desired exposure:

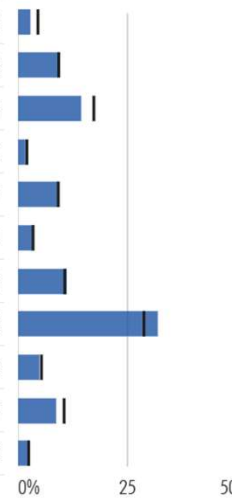
IVV sector exposure

	Sectors	Investment %	Cat %
Cyclical	Basic Materials	1.64	1.29
	Consumer Cyclical	9.41	10.06
	Financial Services	11.85	8.75
	Real Estate	1.84	1.36
Sensitive	Comm. Services	10.17	14.17
	Energy	3.12	1.92
	Industrials	8.21	7.36
	Technology	37.84	39.80
Defensive	Consumer Def.	4.61	6.92
	Healthcare	9.11	6.88
	Utilities	2.20	1.48



VGS sector exposure

	Sectors	Investment %	Cat %
Cyclical	Basic Materials	2.84	4.22
	Consumer Cyclical	9.27	8.98
	Financial Services	14.42	16.99
	Real Estate	1.66	1.70
Sensitive	Comm. Services	9.07	8.87
	Energy	3.64	3.11
	Industrials	11.12	10.35
	Technology	31.93	28.43
Defensive	Consumer Def.	4.87	5.03
	Healthcare	8.71	10.19
	Utilities	2.48	2.12



Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Assess the ETF to determine if it provides the desired exposure:

IVV top 10 holdings

Holdings	% Portfolio Weight
NVIDIA Corp	7.83
Apple Inc	7.09
Microsoft Corp	4.38
Amazon.com Inc	3.68
Alphabet Inc Class A	3.21
Broadcom Inc	2.90
Alphabet Inc Class C	2.57
Meta Platforms Inc Class A	2.25
Tesla Inc	1.76
Micron Technology Inc	1.69

VGS top 10 holdings (31/1)

Holdings	% Portfolio Weight
NVIDIA Corp	5.50
Apple Inc	5.17
Microsoft Corp	3.58
Amazon.com Inc	2.95
Alphabet Inc Class A	2.44
Broadcom Inc	2.27
Alphabet Inc Class C	2.03
Meta Platforms Inc Class A	1.56
Tesla Inc	1.38
Micron Technology Inc	1.24

Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Review the drivers of end investor returns: Neither ETF will have significant turnover given the market capitalization weighted nature of the index. VGS charges 0.18% and IVV charges 0.04%.

If an investor started with $10,000 and invested $10,000 a year for 20 years and earned an 8% pre-fee return they would end up with $957,459 in IVV and $942,273.99 in VGS.

Example: Global ETFs

iShares S&P 500 ETF IVV vs Vanguard MSCI International ETF VGS

Distill the ETF performance drivers:

Morningstar Gold Medallist Rated passive ETFs

ETF	Category
iShares Core Composite Bond ETF (ASX: IAF)	Australian Bonds
iShares S&P 500 AUD Hedged ETF (ASX: IHVV)	US Shares
iShares S&P 500 ETF (ASX: IVV)	US Shares
iShares S&P Mid-Cap ETF (ASX: IJH)	US Shares
State Street SPDR S&P 500 ETF (ASX: SPY)	US Shares
State Street SPDR S&P/ASX 200 Listed Property (ASX: SLF)	Australian Real Estate
Vanguard Australian Fixed Interest ETF (ASX: VAF)	Australian Bonds
Vanguard Australian Property ETF (ASX: VAP)	Australian Real Estate
Vanguard MSCI International ETF (ASX: VGS)	Global Shares
Vanguard MSCI International (hedged) ETF (ASX: VGAD)	Global Shares
Vanguard MSCI International Small Cap ETF (ASX: VISM)	Global Small-cap Shares
Vanguard US Total Market Shares ETF (ASX: VGTS)	US Shares

Morningstar Silver Medallist Rated passive ETFs

ETF	Category
iShares S&P Small-Cap ETF (ASX: IJR)	US Small-cap Shares
iShares US Treasury Bonds (hedged) ETF (ASX: IUSG)	Global Bonds

Morningstar Bronze Medallist Rated passive ETFs

ETF	Category
BetaShares Australia 200 ETF (ASX: A200)	Australian Shares
BetaShares MSCI Emerging Market Complex ETF (ASX: BEMG)	Emerging Market Shares
iShares Core Global Corp Bond (hedged) ETF (ASX: IHCB)	Diversified Credit
iShares Core S&P/ASX 200 ETF (ASX: IQZ)	Australian Shares
iShares MSCI EAFE ETF (ASX: IVE)	Global Equity
iShares S&P/ASX 20 ETF (ASX: ILC)	Australian Shares
State Street SPDR S&P/ASX 200 ETF (ASX: STW)	Australian Shares
State Street SPDR S&P/ASX 50 ETF (ASX: SFY)	Australian Shares
VanEck FTSE Global Infrastructure (hedged) ETF(ASX: IFRA)	Global Infrastructure
VanEck FTSE International Property (hedged) ETF (ASX: REIT)	Global Real Estate
VanEck S&P/ASX MidCap ETF (ASX: MVE)	Australian Equity
Vanguard All-World ex-US Shares ETF (ASX: VEU)	Global Equity

Morningstar Bronze Medallist Rated passive ETFs

ETF	Category
Vanguard Australian Corporate Fixed Interest ETF (ASX: VACF)	Diversified Credit
Vanguard Australian Government Bond ETF (ASX: VGB)	Australian Bonds
Vanguard Australian Shares ETF (ASX: VAS)	Australian Shares
Vanguard FTSE Asia ex-Japan Shares ETF (ASX: VAE)	Global Shares
Vanguard FTSE Emerging Markets Shares ETF (ASX: VGE)	Emerging Markets Shares
Vanguard Global Aggregate Bond (hedged) ETF (ASX: VBND)	Global Bonds
Vanguard Global Infrastructure ETF (ASX: VBLD)	Global Infrastructure
Vanguard International Credit Securities (hedged) ETF (ASX: VCF)	Diversified Credit
Vanguard International Fixed Interest (hedged) ETF (ASX: VIF)	Global Bonds
Vanguard MSCI Australian Large Coms ETF (ASX: VLC)	Australian Shares