



# Building An International Investment Portfolio Using (Mostly) Low-Cost Index Trackers / ETFs

This presentation is intended for global expatriates and other investors with an international perspective.

# Some Topics Briefly Covered

- Evidence-based investing - what it is and what it isn't
- Investing vs Trading
- Diversification & Performance of key asset classes
- What are Bonds?
- How to match your Asset Allocation to your Risk Profile
- Stay relaxed by matching your strategy to your time horizon
- Using a Risk-Return chart to help build your portfolio
- Passive vs Active investing – understanding index-trackers
- Core & Satellite investing
- Criteria for portfolio fund selection
- How to manage currency risk in your portfolio
- Understanding portfolio cost

# This Is Not An Investment Recommendation or Advice

- An 'under the hood' simplified walk-through of a methodology
- All investments mentioned are for illustration only, as an aid for education and discussion
- Portfolio construction illustrated is based solely on the specific situation and requirements of a hypothetical investor and is likely not applicable for you
- Any liability of any kind for, er, anything, is disclaimed in entirety
- Always consult your professional advisor before making any investment decision
- I think that covers it

# Background

- Engineering background, MBA(Fin) in 1992
- Financial Advisor for Expatriates – mostly SE Asia and M.East
- Analytical and process-driven
- *Understanding* is the key to reducing uncertainty and investor stress
- I hope this presentation helps a little

# The Objective



# Calm, Stress-Free Investing

- We want our money to grow, but we *don't want unnecessary risks*
- We want to *understand* how and where our money is invested
- We want to invest internationally and *manage away currency risks*
- We *don't trust fads and fashions*, or this year's superstar fund managers
- We want to be able to *ignore the financial headlines*
- We want to be *relaxed* about the markets' manic fluctuations
- We want a strategy that is *time-proven* and backed by decades of research

# What does 'Evidence-Based' mean?

- Evidence-based practice relies on academic research and scientific evidence for guidance and decision-making.
- Whereas, practices that are not evidence-based may rely on tradition, intuition, or other unproven methods.
- Evidence-based practices have been gaining ground since the formal introduction of evidence-based medicine in 1992, and have spread to the allied health professions, education, management, law, public policy, and other fields – such as investment management.
- Evidence-based practices attempt to encourage, and in some instances to force, professionals to pay more attention to evidence to inform their decision-making.
- The goal of evidence-based practice is eliminate unsound or outdated practices in favour of more effective ones by shifting the basis for decision making from tradition, intuition, and unsystematic experience to firmly grounded scientific research.

# EBI - It's all about what's *proven* to work – But beware of Laziness!

- Does NOT mean index-trackers are always the best investment
- Does NOT mean ETFs (exchange traded funds) are always better than mutual funds and unit trusts
- Does NOT mean low-cost funds are always better than more expensive funds
- Does NOT mean certain famous investment brands are always better than others

Evidence-Based Investing means using research and data to guide a methodology, and is not an excuse to illogically ignore huge sections of the investment universe.

*(In part, a reason why I've created this presentation).*





# What Decades of Evidence Tells Us

- In general, financial *asset prices are 'fair'*, because they reflect the collective expectations of millions of market participants, and information is widely known;
- Therefore, it's *not possible to consistently outguess the market*; hence the vast majority of active fund managers do not beat their benchmark over time;
- The relative performance of any investment portfolio is *mostly determined by the asset allocation*, that is, the proportional split between different asset classes such as government bonds, developed market equity, emerging market equity, etc.;
- *We cannot reliably predict* which will be the best performing asset classes from one year to the next, but through broad diversification we can manage downside risk, smooth out volatility, and gain exposure to opportunities that we otherwise might miss;
- Fund selection should *emphasise low-cost, passive rules-based investments*, ideally tracking market indices that have long performance histories to assist our analysis and portfolio construction;
- *In the long run, markets go up*, but there is no guarantee about investment performance in the short or medium term. By having a long-term time horizon, and not reacting emotionally to market fluctuations, we give our investment strategy the necessary time to deliver the results we seek.

# Global Market Indices are our Benchmark

- A Market Index is ‘Rules-based’
  - Performance cannot be predicted, but is *always consistent* with the investment selection rules – there is no human intervention
- Examples:
  - **S&P 500** – tracks the 500 largest companies listed in USA
  - **FTSE 100** – tracks the 100 largest companies listed in UK
  - **ASX 200** – tracks the 200 largest companies listed in Australia
  - **MSCI World** Index – tracks the combined stock-markets of global developed countries
  - **Bloomberg Global Aggregate** Index - tracks a basket of treasury, government and corporate investment-grade bonds from major currency markets
- We aren’t trying to beat the benchmark – we are *using* the benchmark!

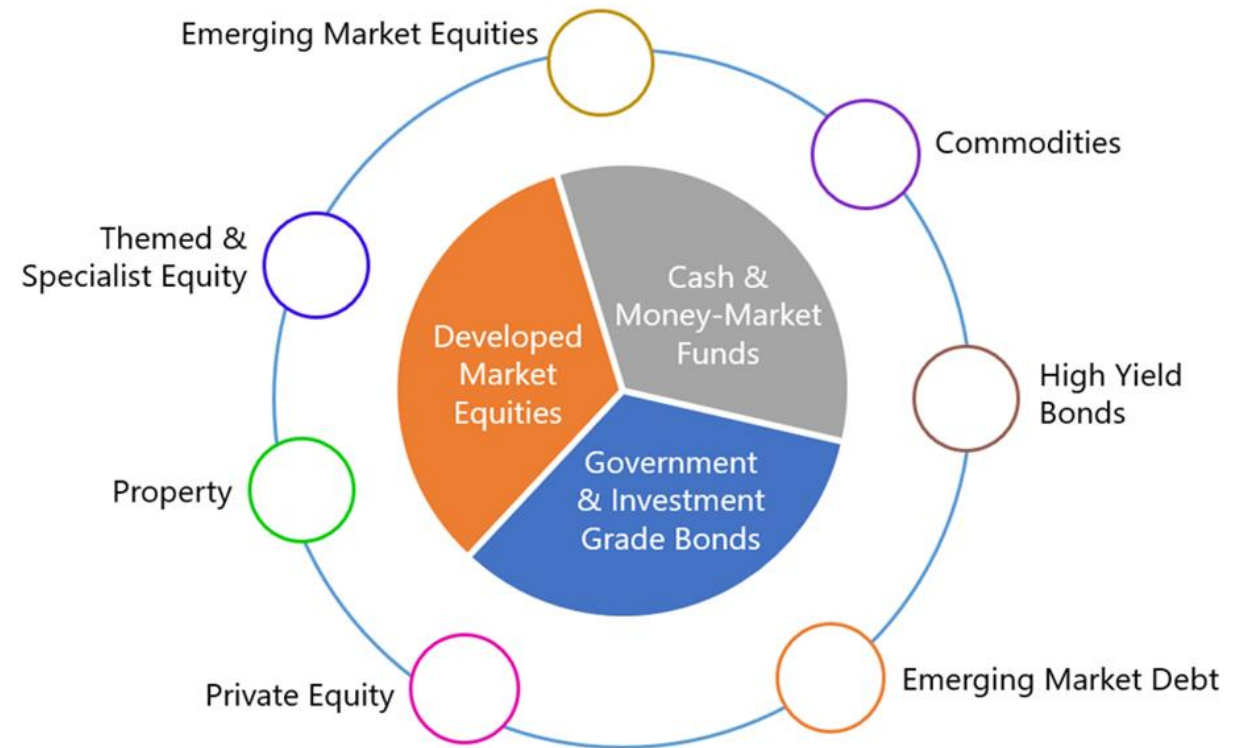
# Passive vs Active Investing

- Passive Funds (*index trackers*)
  - No human intervention in decisions on holdings
  - Performance is consistent with the rules-based index
    - Rules define what holdings, timings on buy and sell, and percentage weighting of the assets within the portfolio
  - Often are ETFs (exchange traded funds), *but not always*
  - Usually low cost and transparent
- Active Funds (*managed funds*)
  - Fund managers make decisions on holdings
  - Performance relies on continued good decisions by the managers
  - But NB some of the best active funds have a decision-making process that is highly rules-based! 🤖
  - Often are traditional investment funds (unit trusts, mutual funds), *but not always*
  - Generally higher cost than passive funds (more salaries to pay)

*NB. Although in general passive funds are preferred for major markets, for certain themes and asset classes there can be justification for a degree of active management (for example, Asia-Pacific and Emerging Market Equity, High Yield Bonds, Ethical Investing, etc.)*

# Core & Satellite Concept

- **Core** - *the long-term foundation of your investment portfolio*
  - Major asset classes
  - Low-cost passive investing
  - Low turnover with periodic rebalancing
  - You can manage the core yourself or use multi-asset funds specifically for that purpose
- **Satellite** - *opportunistic addition of selected other assets*
  - May be asset classes with higher volatility
  - May be specific themes or sectors, or to address identified trends
  - More likely to be adjusted depending on shorter-term economic conditions
  - Somewhat more likely to be actively-managed funds



Example only


# What Is Investing?

- *Not* short term speculation aka ‘trading’
  - We are not trying to outguess or ‘time’ the market
- When you buy shares either directly or indirectly (through funds), you are owning a piece of a business, and entitled to a share of profits (dividends), plus appreciation of capital value
  - The world economy has grown by 649% since 1980
  - Meanwhile the total value of listed companies worldwide has grown by 3610% since 1980
- Economies have cycles of growth and downturns, but long-term global economic growth trends relentlessly upwards
- The S&P500 index (the largest 500 companies in USA) has grown by 2667% since 1980.

Year ending	World		S&P500
	World GDP (US\$ trillion)	Market Cap (US\$ trillion)	
1980	11.305	2.525	135.76
1985	12.871	4.684	211.28
1990	22.717	9.519	330.22
1995	31.132	17.263	615.93
2000	34.178	30.925	1320.28
2005	49.623	40.512	1248.29
2010	73.017	54.259	1257.64
2015	75.100	62.268	2043.94
2020	84.679	93.686	3756.07
<b>Growth</b>	<b>649%</b>	<b>3610%</b>	<b>2667%</b>

Investing means: *to participate in the growth of the global economy*

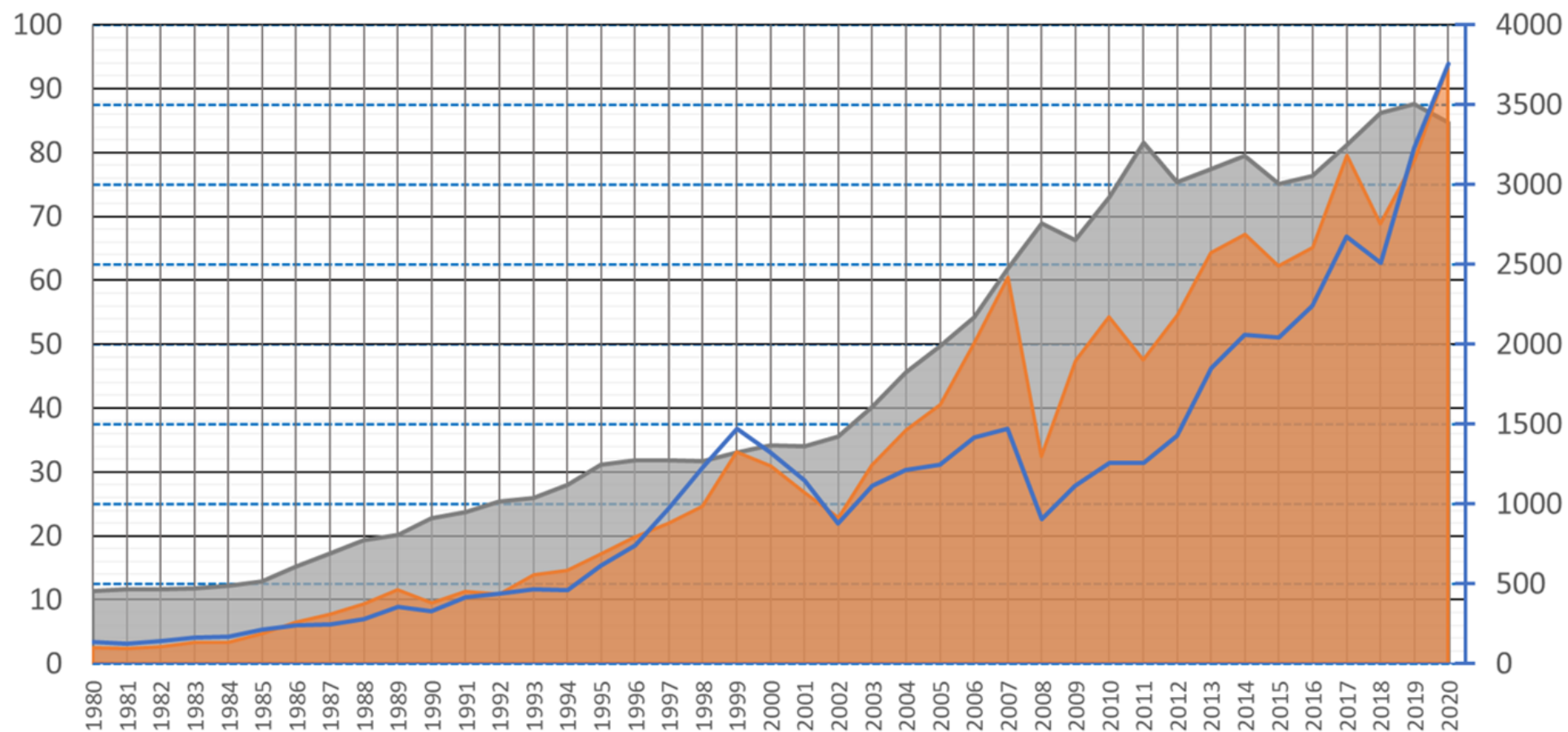
*“This is price only — ignores 40 years of dividends paid out!”*



# Long Term Economic Growth is Relentlessly Upwards

Left axis (USD Trillions): **World GDP & World Market Capitalisation;**  
Right axis: **S&P 500**

■ World GDP   ■ World Market Cap   — S&P 500



# We Diversify because in the Short Term, Performance Fluctuates

Key Asset Classes, Ranked By Percentage Growth, Discrete Years, 2006-2020 (USD %)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Highest return	32.39	39.42	9.26	78.51	26.13	5.84	22.31	32.38	12.99	2.14	14.76	37.28	2.92	30.70	22.44
	32.14	36.45	4.79	73.22	18.88	5.64	19.30	31.55	8.33	1.32	12.71	36.98	2.64	27.67	18.31
	20.06	9.48	3.68	62.21	18.13	2.78	18.22	26.68	4.94	0.75	11.23	22.66	-1.20	26.19	17.75
	17.19	9.04	-27.48	44.12	14.37	2.61	17.55	7.96	2.82	-0.31	11.19	22.40	-3.34	19.16	15.96
	15.13	5.84	-37.45	29.99	13.76	1.47	15.83	3.41	2.54	-0.87	7.51	21.10	-4.94	18.44	15.90
	12.18	4.9	-40.71	25.55	11.76	-5.54	15.22	2.35	1.90	-3.15	6.75	10.18	-8.71	13.73	9.20
	6.63	4.65	-41.88	6.93	5.54	-9.06	4.39	-0.33	0.59	-4.17	3.91	7.39	-13.86	7.20	7.90
	4.77	3.37	-51.93	3.26	3.63	-15.60	4.32	-2.60	-0.09	-9.37	2.09	2.32	-13.92	6.84	5.52
Lowest return	3.36	0.79	-53.33	0.88	3.21	-18.42	1.81	-2.60	-2.19	-14.92	1.83	2.12	-14.58	2.14	0.90

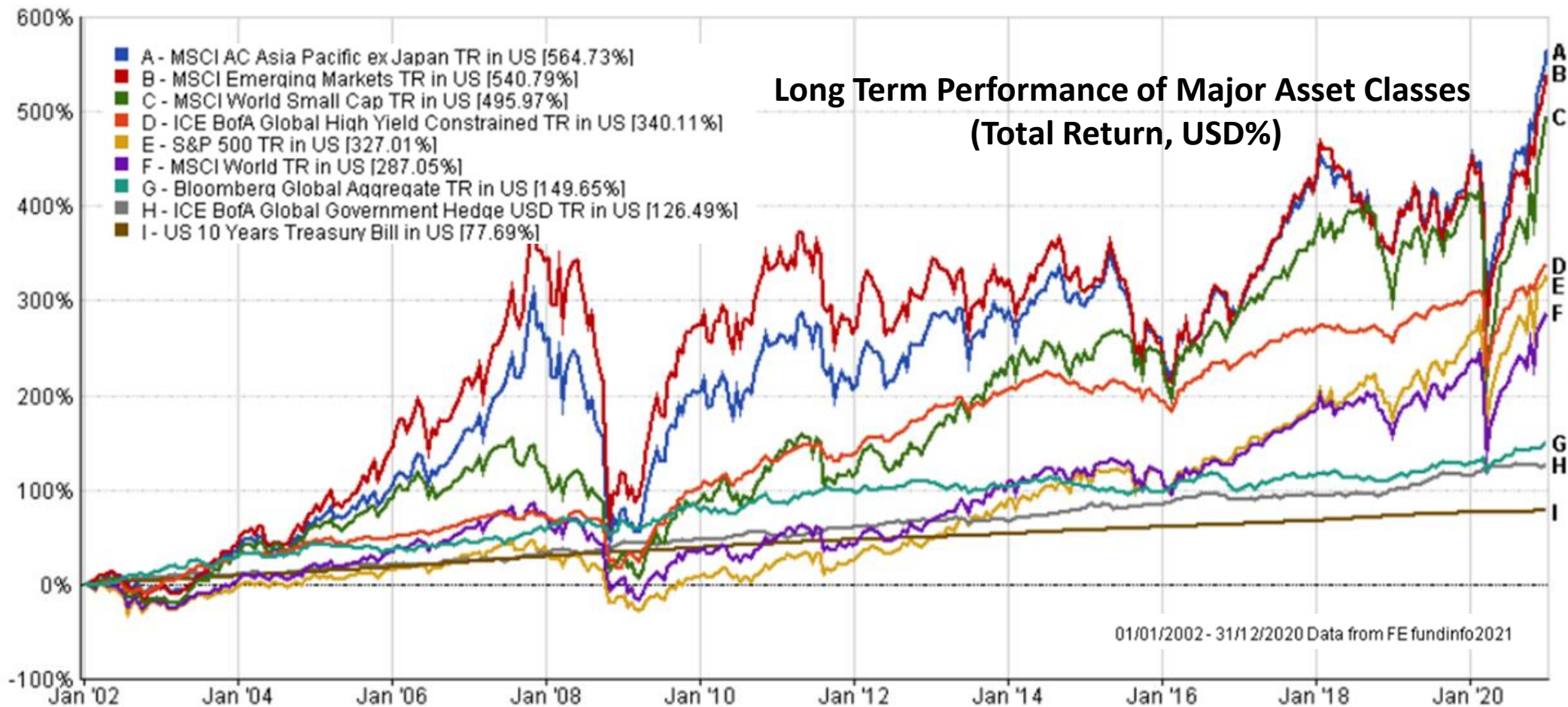
## Equity

■ Global Developed Markets
 ■ Global Emerging Markets
 ■ USA Large Cap
 ■ Global Smaller Companies
 ■ Asia-Pacific

## Bonds/Fixed Income

■ Global High Yield Bonds
 ■ Global Investment Grade Bonds
 ■ Global Government Bonds
 ■ USA Treasury Bills

# Best Returns Tend to Come from the Most Volatile Asset Classes



*Assets are identical to the chart on the previous slide.*

## Equity

■ Global Developed Markets
 ■ Global Emerging Markets
 ■ USA Large Cap
 ■ Global Smaller Companies
 ■ Asia-Pacific

## Bonds/Fixed Income

■ Global High Yield Bonds
 ■ Global Investment Grade Bonds
 ■ Global Government Bonds
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# What Are Bonds?

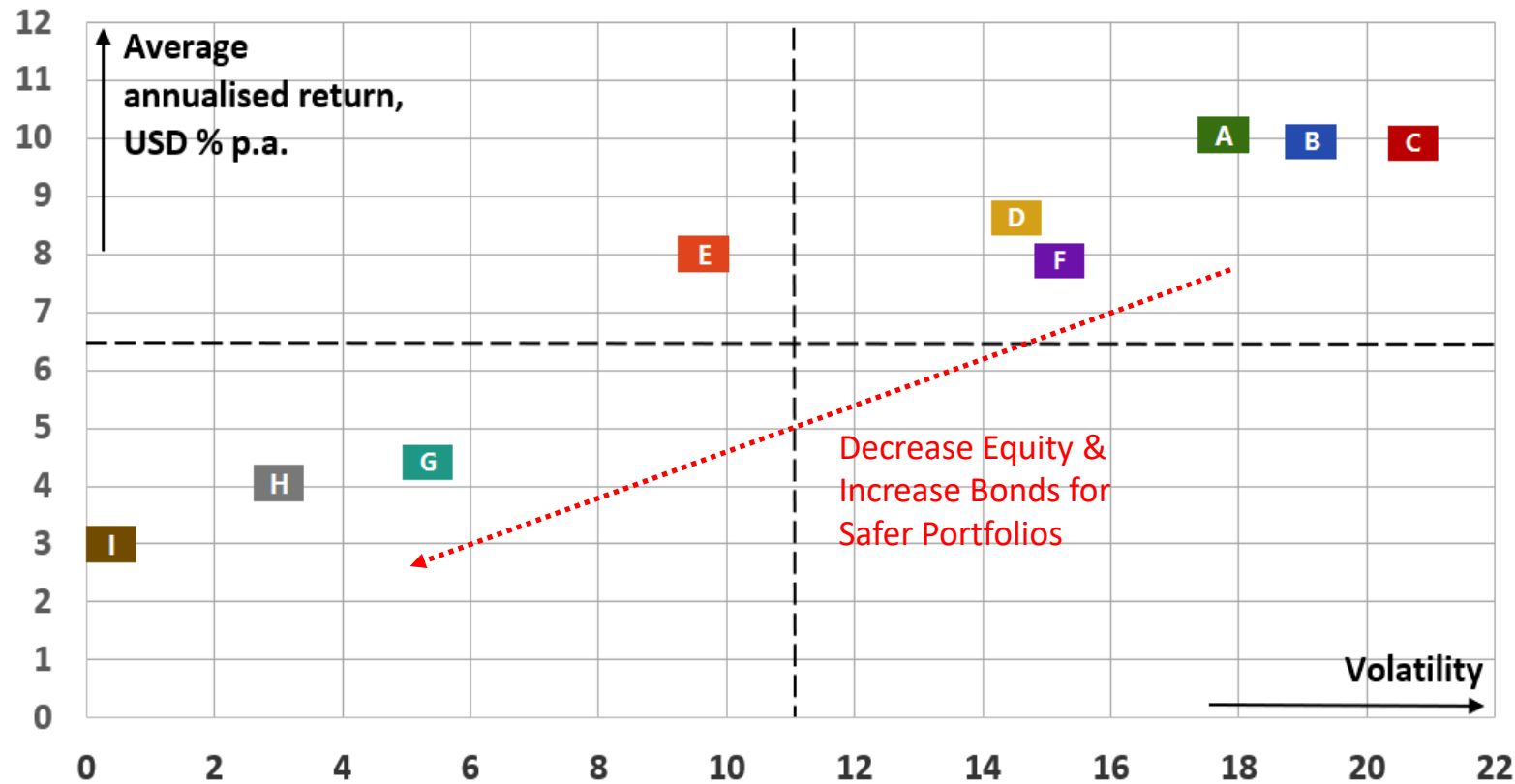
- Equities (shares) and Bonds are the two main sources of business finance
- Imagine you wanted to start a business, but needed some capital
- You could sell shares, and your investors would hope for a future capital gain – but you give away ownership of a part of your firm
- Or you could borrow money, and pay it back later from profits – doesn't dilute existing shareholders
- A 'bond' is a loan to a company or government

# 'Buying Bonds' = Lending Money

- The borrower (bond issuer) promises to pay back the loan at a certain time in the future
- And usually also promises to pay interest (aka 'fixed income') periodically while the loan is outstanding
- Loans to governments of major countries and blue-chip companies are considered safe 'investment grade' bonds – so pay a lower interest rate
- Loans to smaller less secure companies are more risky, so the borrower needs to offer a higher interest rate – 'high yield' bonds

# Basics of Asset Allocation

Annualised Return vs Volatility - Major Asset Classes (20 years to 31/11/2021)



	%pa	Vol	Asset Class
A	10.08	17.85	Global Smaller Companies
B	9.99	19.22	Asia-Pacific ex Japan
C	9.91	20.76	Global Emerging Markets
D	8.68	14.62	USA Large Cap
E	8.04	9.67	High Yield Bonds
F	7.87	15.19	Global Dev'd Markets Equity
G	4.33	5.48	Global Investment Grade Bonds
H	4.06	3.08	Global Government Bonds
I	3.01	0.34	USA Treasury Bills

- 'Asset allocation' means the relative mix of diversified assets in our portfolio.
- To lower expected volatility, simply reduce holdings from the top-right quadrant and re-allocate to the bottom-left.
- And vice-versa, if we seek to increase expected long-run returns and can accept higher volatility.

*Assets and colour-coding are identical to the chart on the earlier slides.*

*Volatility = Annualised Standard Deviation of the Square Root of the Variance = amount of 'up and down-iness'.*

# Creating your Portfolio

<b>Your 'Risk Profile'</b>	Guides the split between Bonds (more cautious and less volatile) and Equities (more growth-oriented but more volatile)
↓	
<b>Asset Allocation</b>	The split between different regions and sectors, eg. Government Bonds, Developed Market Equity, Asia-Pacific Equity, Gold, Cash etc.
↓	
<b>Portfolio Construction</b>	Choice of investments - we emphasise low-cost highly diversified index trackers
↓	
<b>Back-Test and Validate</b>	See how the portfolio has behaved in the past, to give us some comfort about the future

# Stay Relaxed by Matching Strategy to Time Horizon

	Nominal Time Horizon		
	Short	Medium	Long
<b>Investor Imperative</b>	I will definitely need this money back <b>within 3 years.</b>	I <b>might</b> need to access some of this money <b>within 3-10 years.</b>	This is my future wealth. I <b>don't need access for at least 10 years</b> , but I certainly want it to grow nicely.
<b>Investment Solution</b>	Cash, Term Deposits, Government Bonds.	Globally diversified portfolio, with a focus on low-cost index tracking funds; an accent on developed markets over emerging.	Globally diversified portfolio, with a focus on low-cost index tracking funds; more geographic accent on Asia-Pacific and emerging markets.
<b>Risk Control Methodology</b>	Consumer regulation and credit rating of banks and governments.	Select your bonds/equity split in line with your investor risk profile. Allocate enough to high quality bonds to let you sleep at night.	Select your bonds/equity split in line with your investor risk profile. Allocate enough to bonds, but not too much.
<b>Worst Case Scenario In A Market Crash</b>	You get your money back.	Your <b>bond holdings provide the cash withdrawals you need</b> in the near term. With the rest, go shopping for equities - this could be the best market opportunity for decades.	This is money you don't need right now. <b>There is no worst-case scenario.</b> Rebalance your asset allocation to take advantage of the buying opportunity.

# Example – Our Theoretical Expatriate Investor

- Mid-40's international professional
- Australian citizen based overseas
- Likely to return home in a few years
- No plans to access funds within a ten-year time horizon
- Existing assets mostly home-market shares
- Moderately Adventurous risk profile

# Your Investor Risk Profile

Imagine a 7-point scale of risk, where: (1) is very *defensive*, concerned only with capital protection; (4) is *balanced*, accepting a moderate amount of investment risk in return for some gains ahead of inflation, and; (7) is very *adventurous*, seeking returns well above market average but prepared and comfortable to accept high volatility and periods of downside risk to your investments. Where do you place yourself of this scale?

1. Very defensive
2. Defensive
3. Cautious
4. Balanced
5. Moderately Adventurous
6. Adventurous
7. Very Adventurous

*“There are a gazillion different ‘risk profiling’ questionnaires, all with the same aim — to help you assess your personal appetite and ability to take investment risk.”*

# Risk Profile Guides Asset Allocation

Profile	Description	Safety (Bonds & Cash)	Growth (Equities)
<b>1 - Very Defensive</b>	Protecting capital is more important than potential return.	95%	5%
<b>2 - Defensive</b>	A minimal amount of investment risk. Only a limited amount of riskier assets will be included in the portfolio.	80%	20%
<b>3 - Cautious</b>	A small amount of investment risk. Focus on investments providing lower returns but present lower risk to capital.	65%	35%
<b>4 - Balanced</b>	A measured amount of investment risk in order to increase the chances of achieving a positive return, whilst still protecting a sizeable proportion of capital.	50%	50%
<b>5 - Moderately Adventurous</b>	A portfolio suitable for many investors, aiming to generate returns over time, above the rate of inflation.	35%	65%
<b>6 - Adventurous</b>	A high level of investment risk, for the potential of improved longer term returns.	20%	80%
<b>7 - Very Adventurous</b>	Substantial degree of investment risk, in return for the prospect of higher long-term investment performance.	5%	95%

*"NB! The table shows example only splits between bonds and equities."*



# Ok, let's get stuck in!

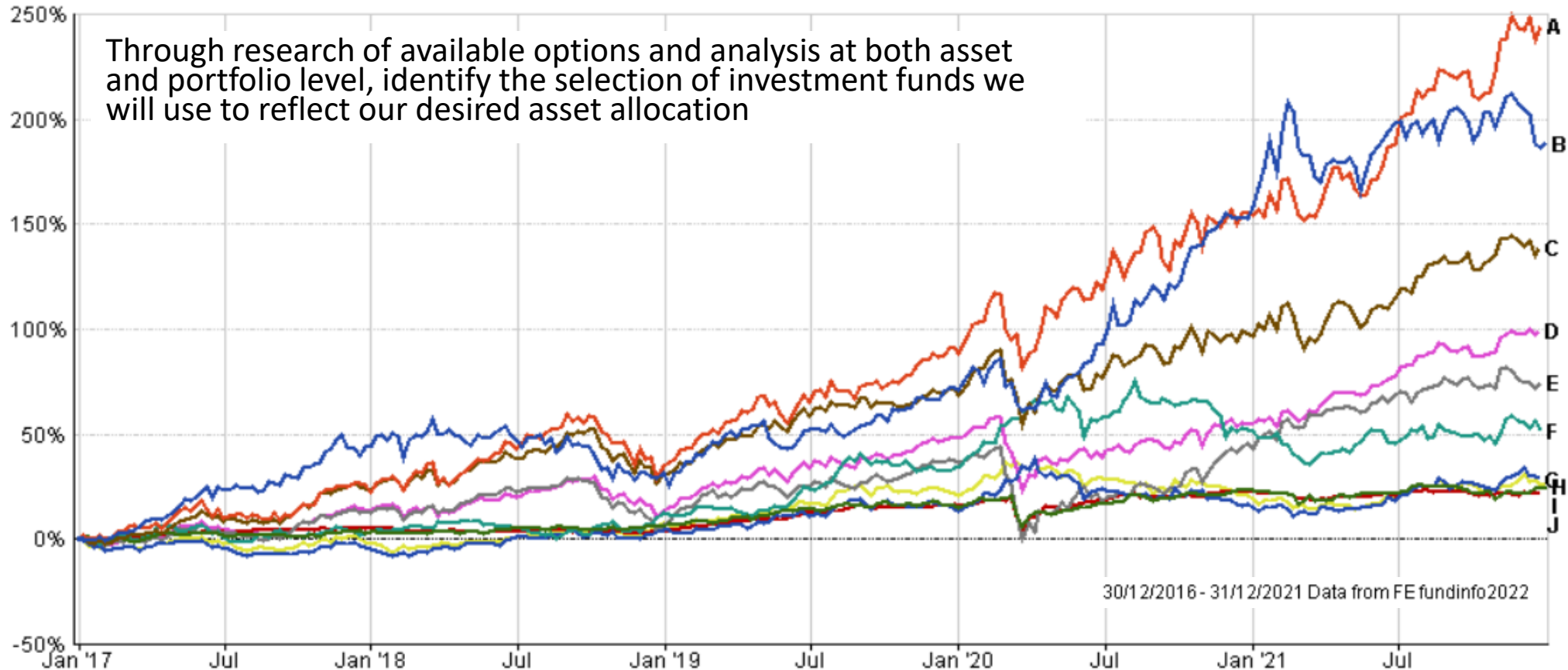
- Selecting the funds we want to use can be a detailed, iterative, and time-consuming exercise
- Finding & researching funds, and analysing their combined role in a portfolio, requires data and tools
- I use mostly “FE Analytics”
  - Research data for circa 300,000 instruments
  - Index & Fund data and historical performances
  - Array of tools for analysis of risk-return, correlation, holdings composition, concentration, efficient frontier, etc
  - Charting & reports
- There are other similar tools



# Some Criteria for Fund Selection

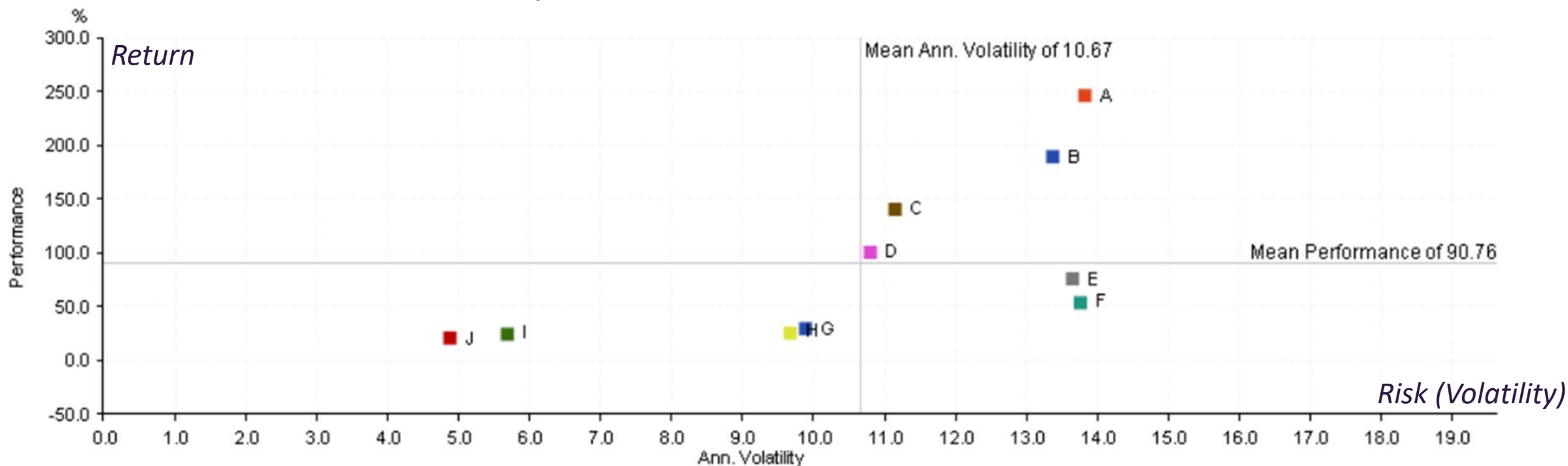
- Reflect our Equity/Bond split, and cover the Major Asset Classes
  - We want our funds to distribute well across the risk-return line (especially for core holdings)
- Genuinely Diversified
  - We seek to reduce concentration risk by making sure our funds don't hold too much of the same assets
  - All else being equal, of two funds we would prefer the one with a wider geographic and sector mix
- Reasonable Size & Established Track Record
  - For passive funds we can see how closely they track the benchmark
  - For active funds we can take both a quantitative and qualitative view
- Lower Volatility
  - All else being equal, of two funds we would prefer the less volatile one
- Lower Cost
  - All else being equal, of two funds we would prefer the lower cost one
- Low Correlation
  - We seek to minimise the extent to which our funds move in lock-step with each other
- Accessible
  - Our chosen funds must be available on our investment platform
- Currency
  - Try to keep funds in a small number of common currencies, to reduce future transaction costs (see later regarding currency risk)

# Our Selected Funds



North America / Technology (passive)	■ A - Invesco - EQQQ Nasdaq 100 UCITS ETF NAV USD TR in AU [244.57%]
Asia-Pacific Equity (active)	■ B - Baillie Gifford - Pacific B Acc TR in AU [189.11%]
Global Developed Market Equity (Momentum Factor) (passive)	■ C - Xtrackers - MSCI World Momentum UCITS ETF 1C USD in AU [138.93%]
Global Developed Market Equity (passive)	■ D - iShares - Developed World Index (IE) D Acc NAV USD TR in AU** [98.94%]
Global Smaller Companies (passive)	■ E - SSGA - SPDR MSCI World Small Cap UCITS ETF NAV USD in AU [74.62%]
Gold (passive)	■ F - Invesco - Physical Gold ETC A USD in AU [52.44%]
US Government Inflation Linked Bonds (passive)	■ G - iShares - \$ TIPS UCITS ETF USD in AU [28.78%]
US Investment Grade Bonds (passive)	■ H - Vanquard - US Investment Grade Credit Index Institutional Acc USD in AU [25.60%]
Australian Government Inflation-Linked Bonds (passive)	■ I - BlackRock - iShares Government Inflation ETF TR in AU [24.46%]
Global Investment Grade Bonds (Hedged to AUD) (passive)	■ J - BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD TR in AU [21.87%]

# Return vs Volatility



31/12/2016 - 31/12/2021 ©FE fundinfo 2022

Key	Name	Performance	Annualised Volatility
A	Invesco - EQQQ Nasdaq 100 UCITS ETF NAV USD TR in AU	246.28	13.82
B	Baillie Gifford - Pacific B Acc TR in AU	189.11	13.37
C	Xtrackers - MSCI World Momentum UCITS ETF 1C USD in AU	140.39	11.15
D	iShares - Developed World Index (IE) D Acc NAV USD TR in AU**	100.57	10.80
E	SSGA - SPDR MSCI World Small Cap UCITS ETF NAV USD in AU	76.09	13.65
F	Invesco - Physical Gold ETC A USD in AU	53.76	13.76
G	iShares - \$ TIPS UCITS ETF USD in AU	29.78	9.89
H	Vanguard - US Investment Grade Credit Index Institutional Acc USD in AU	25.84	9.67
I	BlackRock - iShares Government Inflation ETF TR in AU	24.46	5.69
J	BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD TR in AU	21.27	4.88

# Fund Correlation Table

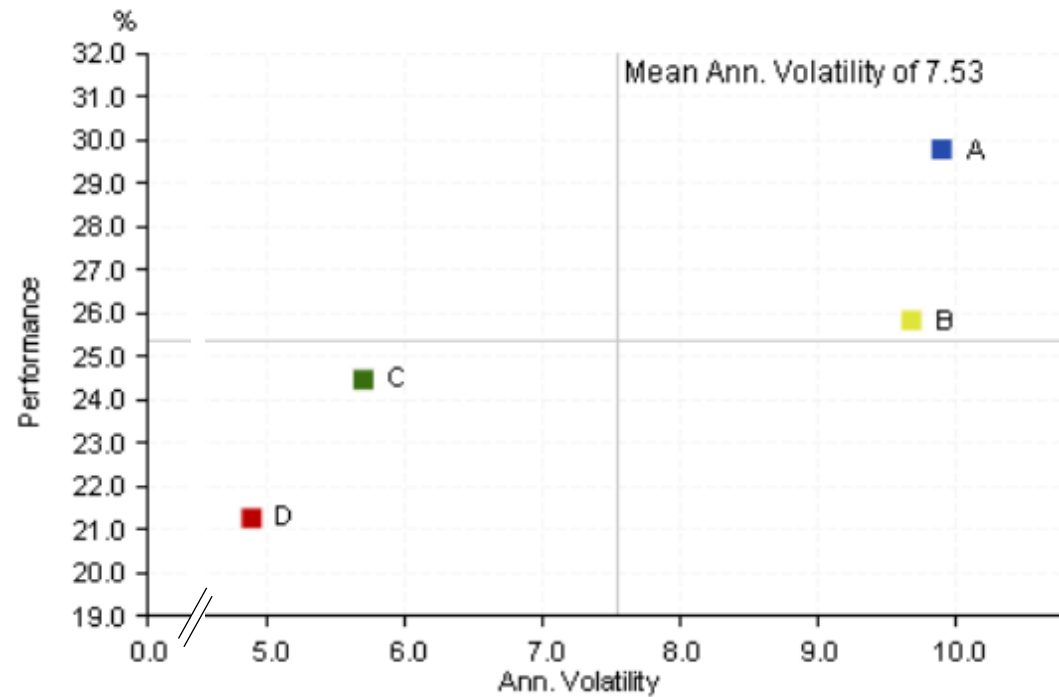
■ Positive Correlation
 ■ Low Correlation
 ■ Negative Correlation

Name	Baillie Gifford - Pacific B Acc TR in AU	BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD TR in AU	BlackRock - iShares Government Inflation ETF TR in AU	Invesco - EQQQ Nasdaq 100 UCITS ETF NAV USD TR in AU	Invesco - Physical Gold ETC A USD in AU	iShares - \$ TIPS UCITS ETF USD in AU	iShares - Developed World Index (IE) D Acc NAV USD TR in AU	SSGA - SPDR MSCI World Small Cap UCITS ETF NAV USD in AU	Vanguard - US Investment Grade Credit Index Institutional Acc USD in AU	Xtrackers - MSCI World Momentum UCITS ETF 1C USD in AU
Baillie Gifford Pacific B Acc TR in AU		0.37	0.05	0.58	-0.20	-0.23	0.51	0.59	-0.10	0.55
BlackRock iShares Core Global Corporate Bond ETF Hedged AUD TR in AU	0.37		0.59	0.37	0.09	-0.07	0.46	0.52	0.15	0.42
BlackRock iShares Government Inflation ETF TR in AU	0.05	0.59		0.28	0.35	0.35	0.34	0.30	0.45	0.36
Invesco EQQQ Nasdaq 100 UCITS ETF NAV USD TR in AU	0.58	0.37	0.28		-0.04	0.11	0.82	0.66	0.16	0.89
Invesco Physical Gold ETC A USD in AU	-0.20	0.09	0.35	-0.04		0.61	-0.20	-0.33	0.56	-0.02
iShares \$ TIPS UCITS ETF USD in AU	-0.23	-0.07	0.35	0.11	0.61		0.00	-0.14	0.94	0.16
iShares Developed World Index (IE) D Acc NAV USD TR in AU	0.51	0.46	0.34	0.82	-0.20	0.00		0.90	0.10	0.86
SSGA SPDR MSCI World Small Cap UCITS ETF NAV USD in AU	0.59	0.52	0.30	0.66	-0.33	-0.14	0.90		0.01	0.74
Vanguard US Investment Grade Credit Index Institutional Acc USD in AU	-0.10	0.15	0.45	0.16	0.56	0.94	0.10	0.01		0.24
Xtrackers MSCI World Momentum UCITS ETF 1C USD in AU	0.55	0.42	0.36	0.89	-0.02	0.16	0.86	0.74	0.24	

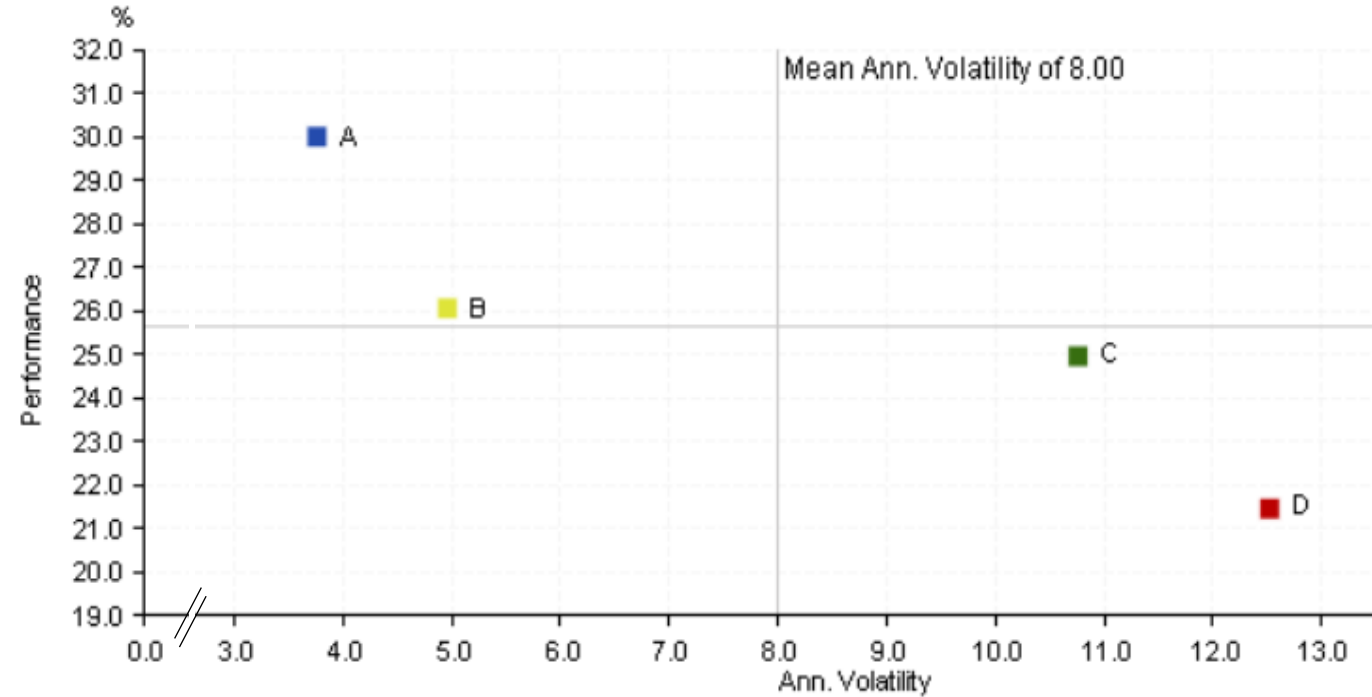
Period: 5 years • Currency: Australian Dollars

# Diversification of Bond Currencies – AUD & USD

When based in AUD



When based in USD



Key	Name
A	iShares - \$ TIPS UCITS ETF USD
B	Vanguard - US Investment Grade Credit Index Institutional Acc USD
C	BlackRock - iShares Government Inflation ETF TR
D	BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD TR

# Movement of AUD vs USD over 5 years

Price of AUD \$1 quoted in USD, % change



\* Corrected after video – 5 years to 6-Jan-2022.

# Managing Currency Risk

- Often misunderstood by international investors (and sometimes advisors!).
- Your *reference currency* is the primary currency of your future expenses (typically your home-country currency).
- Currency risk arises from potential FX variations between your reference currency and the *valuation* currency of the underlying assets you hold in your portfolio.
  - E.g. A regular unhedged Asia-Pacific fund will give currency risk against the basket of Asia-Pacific currencies, NOT the currency of the fund (regardless whether it's USD, AUD, etc..)
  - E.g. A world equity fund will introduce currency risk against a huge mix of international currencies, in proportion to the major holdings – such as USD in the case of a fund with larger exposure to USA.
- For Equity Funds
  - Relax and let your asset allocation diversify out the risk.
  - Just pick the best / most suitable funds you can find, regardless of fund currency.
  - Generally speaking, 'currency-hedging' equity funds isn't helpful
- For Bond Funds
  - Remember, Bonds are 'cash-like', so make sure to hold enough funds denominated in your reference currency.
  - E.g. An Australian returning home in a few years *should have a relevant portion of bond holdings denominated in AUD* (and considering increasing as you approach the return-home date).
  - Currency-hedged bond funds can sometimes be useful (but with care)



# Build Sample Portfolio Versions

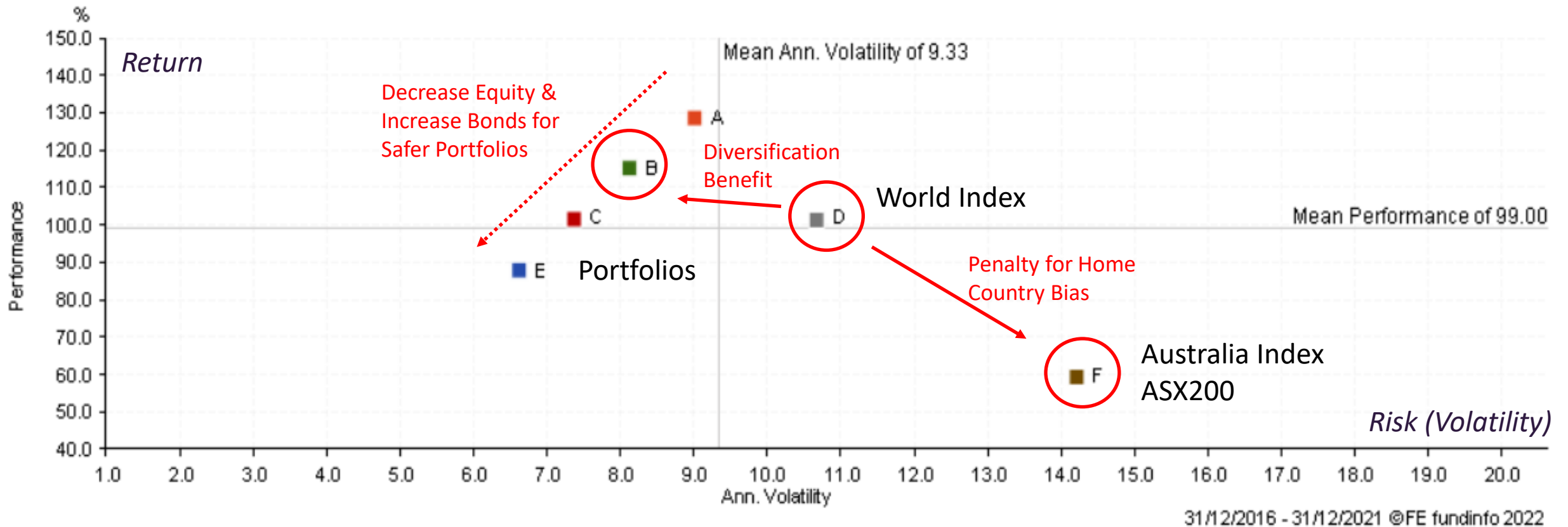
Let's illustrate four versions with different allocations to equities – 50%, 60%, 70%, 80%

More adventurous ←→ More cautious

	80E	70E	60E	50E		
	<b>61%</b>	<b>53%</b>	<b>45%</b>	<b>37%</b>	<b>Global Equity</b>	
	12%	10%	8%	6%	SPDR MSCI World Small Cap UCITS ETF USD	<i>Small and medium sized companies in developed markets</i>
	19%	17%	15%	13%	Invesco EQQQ Nasdaq 100 UCITS ETF USD	<i>Top 100 companies listed on Nasdaq, exc. Financials</i>
	14%	12%	10%	8%	Xtrackers MSCI World Momentum UCITS ETF 1C USD	<i>Companies with historically high price movement</i>
	16%	14%	12%	10%	iShares Developed World Index (IE) D Acc USD	<i>Index of companies from global developed markets</i>
	<b>19%</b>	<b>17%</b>	<b>15%</b>	<b>13%</b>	<b>Asia-Pacific &amp; Emerging Markets</b>	
	19%	17%	15%	13%	Baillie Gifford - Pacific B Acc GBP	<i>Asia-Pacific developed and emerging markets exc. Japan</i>
	<b>16%</b>	<b>25%</b>	<b>35%</b>	<b>45%</b>	<b>Bonds &amp; Fixed Income</b>	
	4%	5%	8%	9%	iShares Core Global Corporate Bond ETF Dis H-AUD	<i>Global investment grade bonds (hedged to AUD)</i>
	4%	4%	7%	9%	iShares Government Inflation Bond ETF Dis AUD	<i>Australian government inflation-linked bonds</i>
	4%	8%	10%	11%	iShares \$ TIPS UCITS ETF USD	<i>Inflation-linked US government bonds</i>
	4%	8%	10%	11%	Vanguard US Investment Grade Credit Index Inst Acc USD	<i>High quality bonds from large corporates</i>
	<b>4%</b>	<b>5%</b>	<b>5%</b>	<b>5%</b>	<b>Gold</b>	
	4%	5%	5%	5%	Invesco Physical Gold ETC USD	<i>Fund holds actual physical gold</i>
	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>		

<b>Growth</b>	80%	70%	60%	50%
<b>Safety</b>	20%	30%	40%	50%

# Let's look at historical Returns vs Volatility



Key	Name	Performance	Annualised Volatility
■ A	Portfolio 80E - 80% Equity (AUD) TR in AU	128.63	9.01
■ B	Portfolio 70E - 70% Equity (AUD) TR in AU	115.24	8.12
■ C	Portfolio 60E - 60% Equity (AUD) TR in AU	101.52	7.37
■ D	MSCI World TR in AU	101.39	10.67
■ E	Portfolio 50E - 50% Equity (AUD) TR in AU	87.91	6.62
■ F	S&P ASX 200 GTR in AU	59.33	14.21

Circled Portfolio

## Now, Select the Portfolio Version we feel most comfortable with

Charts show historical performance *after* all fees of the underlying investments, but exclude any other costs such as dealing fees, platform charges etc.

Past performance may not be indicative of future returns. Investment values can go down as well as up. Returns are not guaranteed. But you knew that, right?

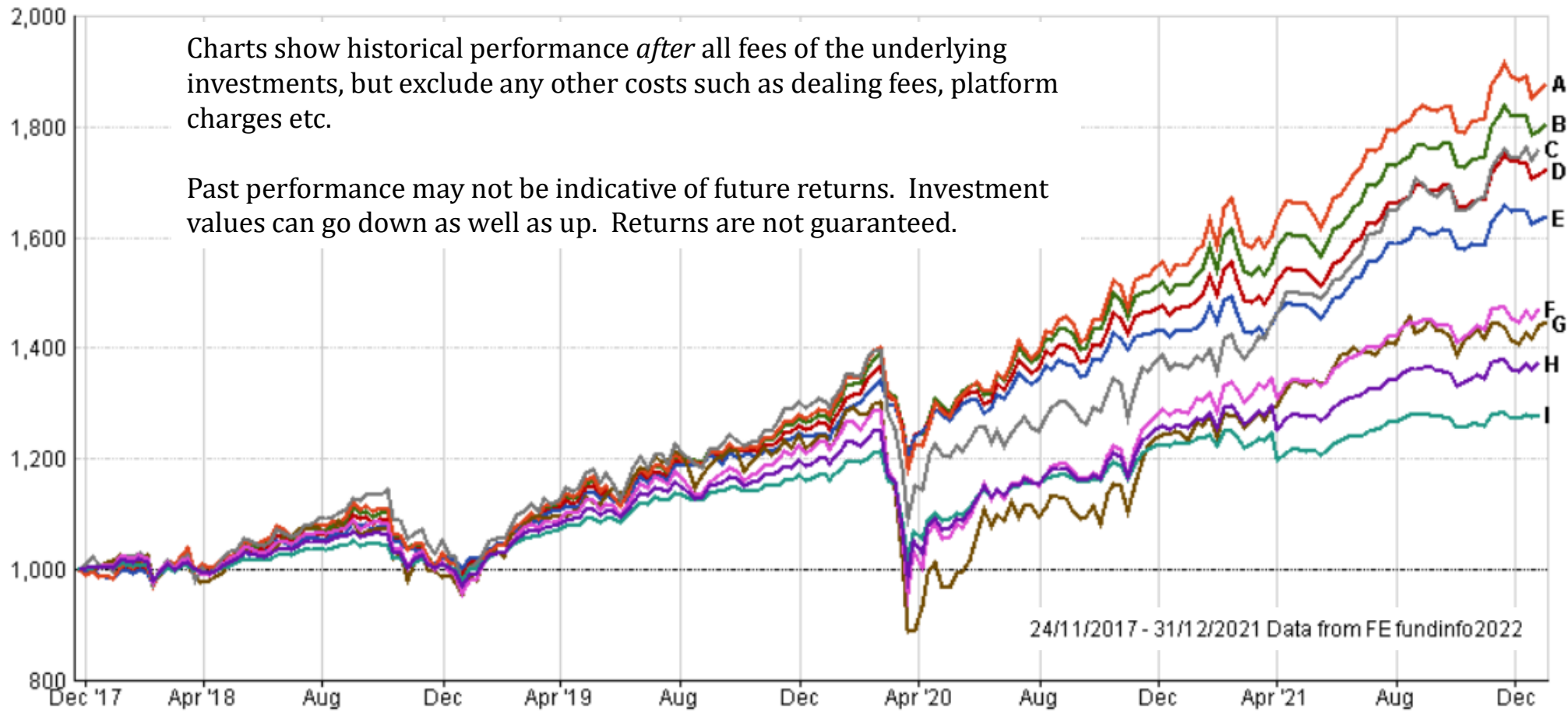


- A - Portfolio 80E - 80% Equity (AUD) 09/12/2015 TR in AU [2286.28]
- B - Portfolio 70E - 70% Equity (AUD) 09/12/2015 TR in AU [2152.37]
- C - Portfolio 60E - 60% Equity (AUD) 09/12/2015 TR in AU [2015.22]
- D - MSCI World TR in AU [1999.60]
- E - Portfolio 50E - 50% Equity (AUD) 09/12/2015 TR in AU [1879.06]
- F - S&P ASX 200 GTR in AU [1593.30]

### **Example – 70% Equities Portfolio (25% Bonds, 5% Gold)**

AUD \$1000 invested 5 years ago would have grown to \$2152 today; an **annualised rate of 16.57%**.

# Comparison with Vanguard Australia Diversified ETFs



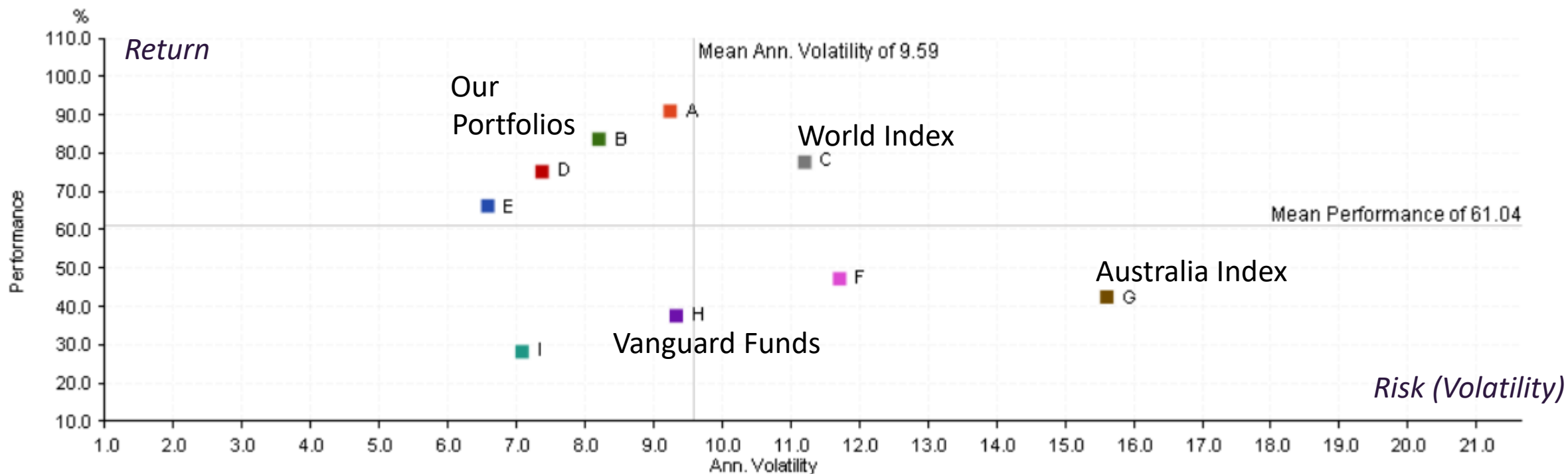
- A - Portfolio 80E - 80% Equity (AUD) 09/12/2015 TR in AU [1877.11]
- B - Portfolio 70E - 70% Equity (AUD) 09/12/2015 TR in AU [1804.47]
- C - MSCI World TR in AU [1758.61]
- D - Portfolio 60E - 60% Equity (AUD) 09/12/2015 TR in AU [1722.61]
- E - Portfolio 50E - 50% Equity (AUD) 09/12/2015 TR in AU [1637.19]
- F - Vanguard - High Growth Index ETF TR in AU [1469.92]
- G - S&P ASX 200 GTR in AU [1448.01]
- H - Vanguard - Growth Index ETF TR in AU [1374.35]
- I - Vanguard - Balanced Index ETF TR in AU [1281.29]

Vanguard 'Balanced' = 50% Equity

Vanguard 'Growth' = 70% Equity

Vanguard 'High Growth' = 90% Equity

# Comparison vs Vanguard Australia Diversified ETFs



31/12/2017 - 31/12/2021 ©FE fundinfo 2022

Key	Name	Performance	Annualised Volatility
A	Portfolio 80E - 80% Equity (AUD) TR in AU	90.95	9.24
B	Portfolio 70E - 70% Equity (AUD) TR in AU	83.60	8.20
C	MSCI World TR in AU	77.73	11.20
D	Portfolio 60E - 60% Equity (AUD) TR in AU	75.14	7.37
E	Portfolio 50E - 50% Equity (AUD) TR in AU	66.32	6.58
F	Vanguard - High Growth Index ETF TR in AU	47.24	11.71
G	S&P ASX 200 GTR in AU	42.52	15.61
H	Vanguard - Growth Index ETF TR in AU	37.60	9.33
I	Vanguard - Balanced Index ETF TR in AU	28.24	7.08

# Performance of Individual Holdings

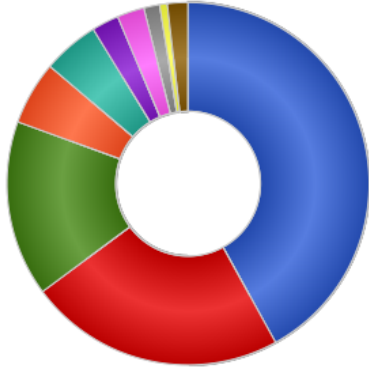
## Cumulative Performance of Portfolio Holdings

Portfolio Holdings	% Weight	3 mths	6 mths	1 yr	3 yrs	5 yrs
Baillie Gifford - Pacific B Acc	17.00	-1.92	-4.09	11.96	119.81	189.11
Invesco - EQQQ Nasdaq 100 UCITS ETF NAV USD	17.00	11.45	16.98	35.99	155.38	246.28
iShares - Developed World Index (IE) D Acc NAV USD**	14.00	7.50	11.72	29.49	76.32	100.57
Xtrackers - MSCI World Momentum UCITS ETF 1C USD	12.00	5.50	10.70	22.03	83.38	140.39
SSGA - SPDR MSCI World Small Cap UCITS ETF NAV USD	10.00	1.86	4.27	22.80	63.54	76.09
iShares - \$ TIPS UCITS ETF USD	8.00	2.16	8.06	12.77	24.30	29.78
Vanguard - US Investment Grade Credit Index Institutional Acc USD	8.00	-0.45	3.52	5.32	17.49	25.84
BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD	5.00	-0.09	-0.37	-1.50	16.61	21.27
Invesco - Physical Gold ETC A USD	5.00	3.15	5.93	1.44	35.98	53.76
BlackRock - iShares Government Inflation ETF	4.00	2.25	1.72	0.94	16.66	24.46
<b>Total Portfolio</b>	<b>100.00</b>	<b>4.12</b>	<b>6.99</b>	<b>19.14</b>	<b>78.06</b>	<b>115.24</b>

Historical performances to end of Dec 2021.

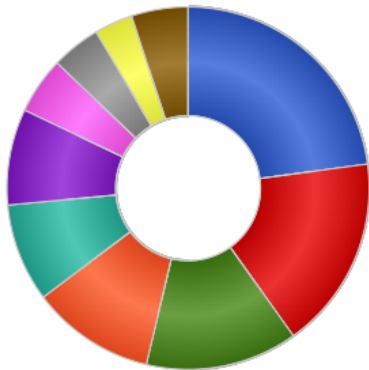
# Portfolio Breakdown

## Asset Allocation



Name	% Weight
North American Equities	41.73
Global Fixed Interest	22.74
Asia Pacific Emerging Equities	15.59
European Equities	5.63
Commodity & Energy	5.00
Asia Pacific Equities	2.40
Japanese Equities	2.39
UK Equities	1.42
Other International Equities	0.68
Other	1.82

## Sector Allocation



Name	% Weight
Telecom, Media & Technology	22.52
Undisclosed	17.00
Government Bonds	13.37
Consumer Products	10.86
Industrials	8.64
Financials	8.42
Precious Metals & Stones	5.00
Health Care	4.32
Basic Materials	3.37
Others	4.96

# 70E Portfolio Cost – Just 0.32%

## Composition

Portfolio Holdings	% Weight	AMC	TER	OCF	FMF	Fund Size	Fund Size Currency
Baillie Gifford - Pacific B Acc	17.00	0.65%	-	0.71%	-	3,987.34M	GBP
Invesco - EQQQ Nasdaq 100 UCITS ETF NAV USD	17.00	0.30%	-	0.30%	-	7,396.64M	USD
iShares - Developed World Index (IE) D Acc NAV USD	14.00	0.10%	-	0.12%	-	16,393.46M	EUR
Xtrackers - MSCI World Momentum UCITS ETF 1C USD	12.00	0.15%	-	0.25%	0.25%	857.63M	USD
SSGA - SPDR MSCI World Small Cap UCITS ETF NAV USD	10.00	0.45%	-	0.45%	0.45%	886.06M	USD
iShares - \$ TIPS UCITS ETF USD	8.00	0.10%	-	0.10%	0.25%	6,051.09M	USD
Vanguard - US Investment Grade Credit Index Institutional Acc USD	8.00	0.12%	-	0.12%	0.12%	1,592.00M	USD
BlackRock - iShares Core Global Corporate Bond ETF Hedged AUD	5.00	0.26%	-	0.26%	-	308.51M	AUD
Invesco - Physical Gold ETC A USD	5.00	0.12%	-	0.12%	-	14,112.84M	GBP
BlackRock - iShares Government Inflation ETF	4.00	0.18%	-	0.26%	-	152.65M	AUD
<b>Total Portfolio</b>	<b>100.00</b>			<b>^0.32%</b>			

^Portfolio Expense - The portfolio expense is calculated using the weighted value of the Ongoing Costs Ex Ante of the portfolio constituents. Where the Ongoing Costs Ex Ante is not available the OCF is used, and where this is not available the TER is used. If an underlying instrument has no Ongoing Costs Ex Ante or OCF or TER figure, the portfolio expense cannot be calculated.



# Some FAQ

- Why not 'High Yield' bonds?
- Why gold?
- How often should we adjust holdings?

# Conclusion

Thanks for your time and attention

I hope it's been useful!

Please get in touch with any questions

**ADVERT!**

# Please Get In Touch!

If you think I might be able to help you, or if you have any questions at all, please reach out at [roy@roywalkerwealth.com](mailto:roy@roywalkerwealth.com) or via my website [www.roywalkerwealth.com](http://www.roywalkerwealth.com).

*I work with expatriate clients of every nationality, with specialist expertise for citizens of UK, Australia, and South Africa amongst others. I'm based in UAE and have clients all over the world.*