MERCER MAKE TOMORROW, TODAY

WEALTH

Understanding, Measuring and Managing Portfolio Risk

Don’t Try This at Home!

August 2019

RISK – BE SURE YOU KNOW WHAT YOU ARE DEALING WITH!!

MERCER INVESTMENT PHILOSOPHY
FIVE CORE ELEMENTS

RISK IS MULTI-DIMENSIONAL
MEASURING AND MONITORING RISK

SETTING AND TESTING INVESTMENT STRATEGY
SOPHISTICATED MODELLING TOOLS

CAPITAL MARKETS SIMULATOR
Market aware stochastic modelling

- Determines long term asset class assumptions based on a range of simulated financial and economic data such as economic growth, price inflation, government bond yields, corporate spreads, equity yield and currencies.
- Creates a distribution of returns, risk and correlations for each asset class through a process of 2,000 sets of simulations.
- Produces two sets of capital market assumptions:
  - Steady State: These reflect the long term expectations for markets: up to 20 years
  - Market Aware: These reflect the current pricing of markets and a reversion to the Steady State expectations over a medium term time frame.
- Used for determining the probability of meeting objectives and for strategic portfolio construction.

SETTING AND TESTING INVESTMENT STRATEGY
SOPHISTICATED MODELLING TOOLS

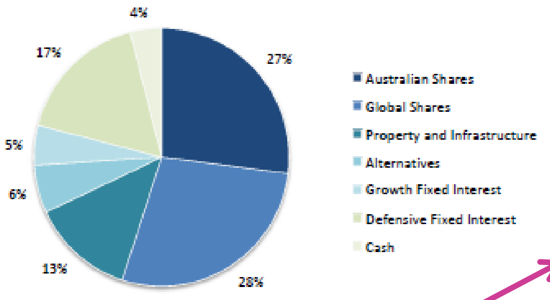
GLOBAL PORTFOLIO TOOLKIT
Risk Factor Analysis

- Measures and apportions risk within a portfolio associated with particular factors such as
  - equity risk premium or small cap premium
  - credit
  - Illiquidity
  - value
  - momentum
- Helps to measure and understand the true correlations within a portfolio.

SETTING AND TESTING INVESTMENT STRATEGY

RISK DASHBOARD

Asset Allocation



FX exposure (%)	17%

Fund Details

Fund Name	New Client A
Description	Investment strategy review

Performance Analysis

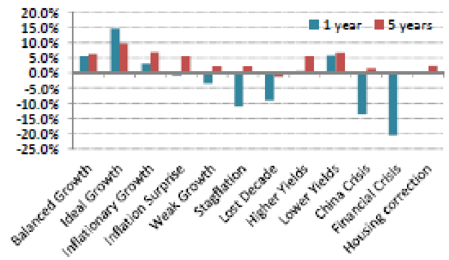
Geometric Return (%)	Standard Deviation (%)	Return/ Risk Ratio
7.6%	10.1%	0.8

Fund Objectives

Type of risk	Description		Target	Calculated
Below return target over time horizon	Probability of meeting target return objective	CPI + 4%pa over 5 yrs	67%	63%
Downside Risk	Negative returns in 20 yrs		< 4	3.7
	Expected Ave Loss (%)*		> -15%	-16.7%
	"Stressed" portfolio return		> -15%	-20%
Absolute Risk	Absolute volatility (Std Dev)		8% - 12%	10.1%
Factor Risk	Max single factor contrib'n		85%	92%
Liquidity Risk	% trade to cash: 7d, 90d, 1yr			73, 77, 86
Fees	Underlying mgr fees (bps)		n/a	n/a

STOCHASTIC ANALYSIS RETURN PROBABILITIES

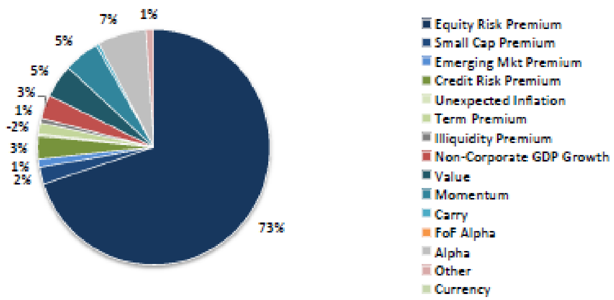
Stress tests & Scenarios



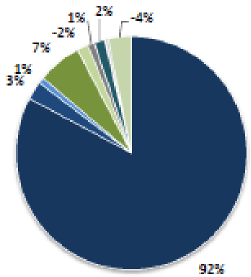
Portfolio

Factor Risk

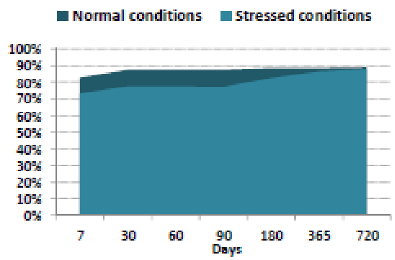
Return Contributions



Risk Contributions



Liquidity risk

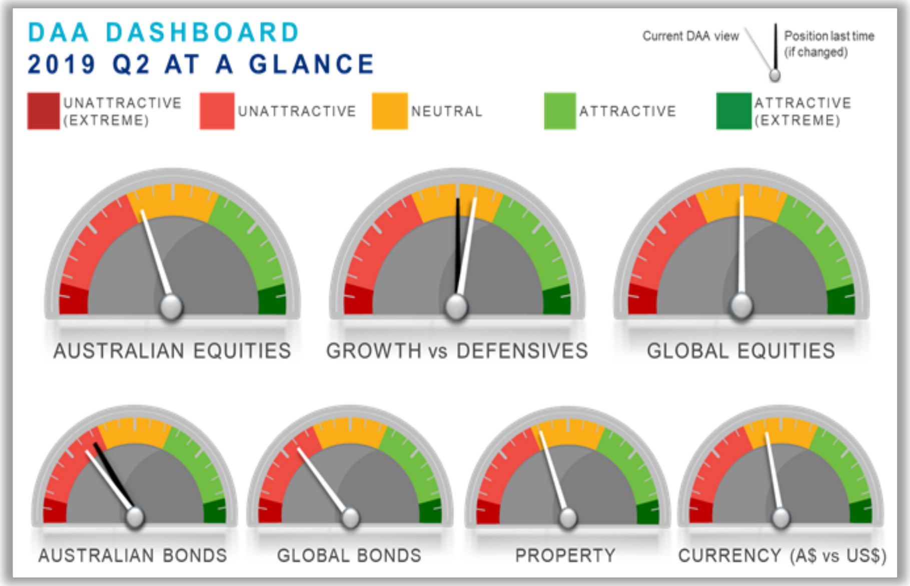


DYNAMIC ASSET ALLOCATION

Mercer's DAA process

MEDIUM-TERM INVESTMENT HORIZON

ECONOMIC OUTLOOK	DEFENSIVE / GROWTH VIEW	ASSET CLASS VIEWS	CUSTOMISED CLIENT RECOMMENDATIONS
• Growth • Inflation and monetary policy	• Market valuations • Risk appetite	• Absolute & relative valuation measures • Momentum	



Asset class views

NEUTRAL	Expected to perform in line with Mercer's long-term return assumption over two years
ATTRACTIVE (Unattractive)	Expected to exceed (lag) Mercer's long-term return assumption over two years
EXTREMELY ATTRACTIVE (Extremely unattractive)	Expected to outperform (underperform) Mercer's long-term assumption substantially over two years *('Substantially' is considered to be outside a range of +/- 15% of the cumulative performance over two years based on Mercer long-term assumptions)*