

First State - Risk Profile

Report

February 2018



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Executive summary

DT (Distribution Technology) has reviewed and profiled Diversified Growth Fund offered by First State Investments (UK) Limited (“FSI”) within the risk profiles used on Dynamic Planner.

The main objective of the DT risk profiles and fund risk profiling service is to provide financial advisers and their clients with a meaningful measure of the long-term investment risk of fund strategies and a mechanism for selecting solutions appropriate for investor risk appetites and capacity for risk.

We propose that the Diversified Growth Fund be given a DT profile of 4. This report sets out the rationale behind this decision.

The information contained in this report supplements methodologies used on the Platform. The report should be used in the context of these methodologies and advice provided on the Platform and not in isolation.

1 Introduction

This report was commissioned by FSI, who contracted DT to assess the appropriate risk profile for the Fund within the risk profiles used in Dynamic Planner. The following Fund is reviewed in this report:

- Diversified Growth Fund

The profile provided in this report is based on DT's capital market assumptions. The assumptions used are those set for the fourth quarter of 2017, which are given in appendix A. The risk bands based on DT's assumptions are set out in appendix B.

DT provides this analysis on the understanding that investors will access the Fund through a regulated advice process. The recommendation on whether or not to include the Fund in an investor's portfolio and the amount to include should be made by advisers with the necessary Financial Conduct Authority permission to give advice on investments. DT accepts no liability in respect of any advice given to investors relating to investment strategy or the purchase of specific products.

The analysis in this report has been based on data and information provided by FSI and other third parties as set out in the appendices. Data received has been assumed by DT to be correct as of the date of this report.

The following section sets out the results of our analysis and subsequent sections set out the methodology and assumptions in more detail.

2 Investment objectives

A summary of the Fund's investment objectives is set out below. The Fund was launched on 23th June 2015.

Diversified Growth Fund

The fund aims to protect against UK inflation and provide growth by achieving a positive return (gross of fees and charges) of 4% in excess of the UK Retail Price Index over a rolling five year period. The fund will adopt a total return approach by investing in a pool of diversified assets, including shares of companies, bonds, property, commodities, other funds, derivatives and currencies. The fund will invest in assets globally, including emerging markets. The Fund may invest up to 20% either directly or indirectly through other funds. Derivatives may be used for efficient portfolio management and investment purposes. Your capital is at risk and there is no guarantee that positive investment returns will be achieved over any time period.

3 Analysis and methodology

One of the key tasks for an investor is to determine how much investment risk to take on. This decision will depend on psychological, financial and other factors. The investor will want to maximise the reward for taking on this risk through the selection of optimal weights for each asset category included in the investment portfolio.

DT's asset allocation methodology is based on the principles of modern portfolio theory. The risk profiles provided by DT are risk profiles of the long-term asset allocations adopted for a solution. The actual riskiness over the long term will depend on, among other things, the level of flexibility in the manager's mandate and how far any deviations from the long term position are and for how long.

The measure of risk DT has used for each Fund is the estimated volatility as determined using the Fund's internal asset allocations along with the estimates of the returns, volatilities and correlations of the DT primary asset classes. The analysis assumes that the actual holdings in each asset class can be broadly represented by the benchmark adopted for that asset.

The investment assumptions used in this review are those set by DT at the end of the fourth quarter of 2017. Risk bands based on DT's assumptions (as set out in appendix B) were used to ensure that the profile assigned to each Fund is consistent with profiles and practices adopted within the implementation of Dynamic Planner. This ensures that the profile can be used with outputs from psychometric risk profiling instruments used within Dynamic Planner.

For the purposes of constructing the efficient frontier, estimating return distributions and profiling solutions, DT splits the investment universe into the following asset classes, called the primary asset classes:

- Cash
- UK Corporate Bonds
- UK Index Linked Gilts
- International Bonds
- UK Gilts
- Global High Yield Bonds
- UK Equity
- Europe ex UK Equity
- North American Equity
- Japanese Equity
- Asia Pacific ex Japan Equity
- Emerging Markets Equity
- UK Commercial Property
- Commodities
- Absolute Return

For each of these asset classes, DT periodically reviews the appropriate set of investment assumptions for forecasting future returns and risk distributions. The assumptions are derived from historical and market data at each review date. Appendix A provides a summary of the methodology used to derive the investment planning assumptions used on Dynamic Planner. Further details can be found in DT's Capital Market Assumptions report.

For the purpose of this review, we derived additional assumptions for the Fund. These assumptions are also included in appendix A.

4 Results

The risk profiles assigned to the Fund is based on the historical asset allocations and performance as provided by the manager.

4.1 Analysis of asset allocations

FSI provided us with the historical notional weighted and market weighted monthly asset allocations of the Fund from June 2015 to December 2017. We have mapped this to our asset classes and calculated the expected volatility using our DT assumptions. This is summarised in the table below.

Fund	Risk profile based on tactical allocation
Diversified Growth (notional weighted)	3 (11) / 4 (7) / 5 (13)
Diversified Growth (market weighted)	3 (8) / 4 (18) / 5 (5)

Table 1: Historical asset allocation positions

- Since inception, the Fund's composition has fluctuated dynamically with the aim to achieve the targeted return of UK RPI +4%. The fixed income exposure of the Fund has dominated the latest asset allocations. More specifically, the fixed income components of the Fund are comprised of global index-linked bonds, emerging markets debt, UK and global government bonds. A part of the Fund is invested in derivatives, including equity and bond futures along with interest rate swaps. The remaining Fund is held primarily in equities and cash of different currencies which may or may not hedge the existing non-GBP holdings.

The figures from Table 1 are illustrated in Chart 1 below; the chart shows each allocation plotted on the risk-reward spectrum. We also show the location of the standard asset allocations for each DT profile. The vertical gridlines indicate the boundaries of the DT profiles.

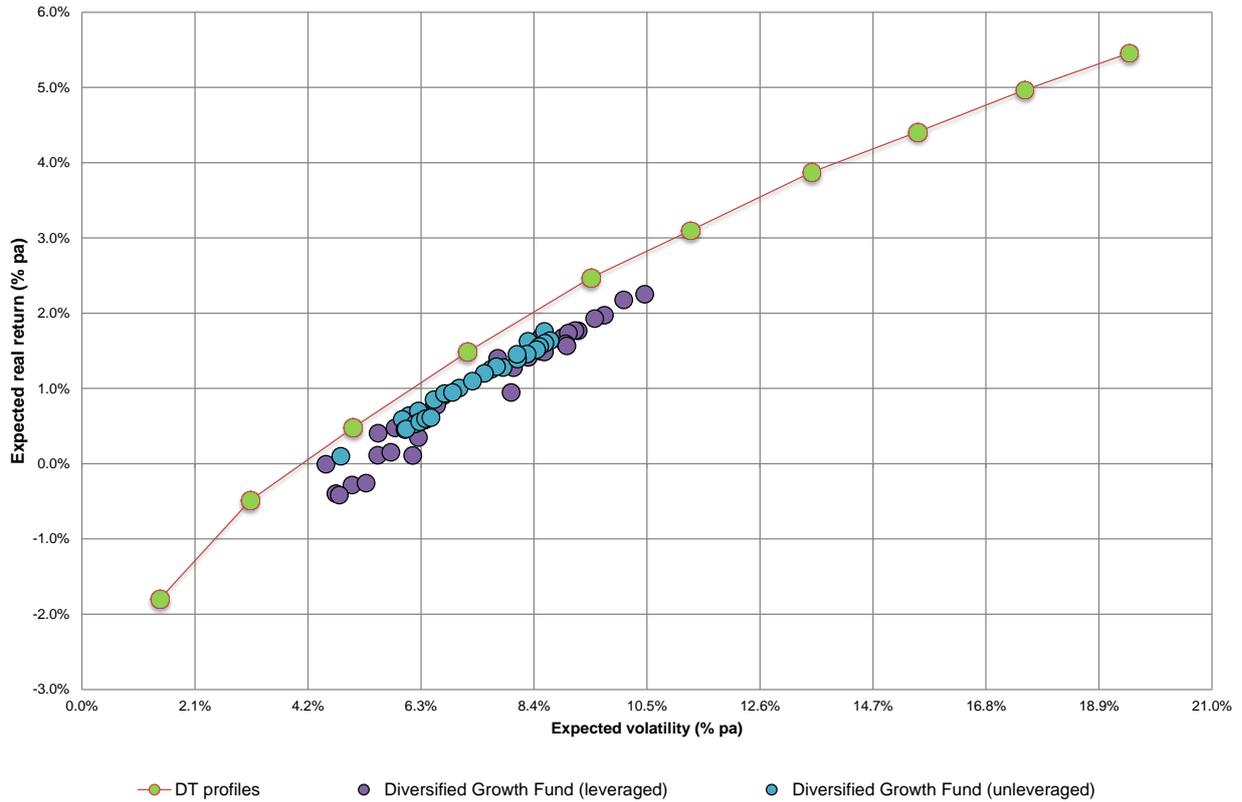


Chart 1: Asset allocations for the Fund against the DT efficient frontier

As illustrated in the chart above, the asset allocations for the Fund have been positioned across the DT 3, DT 4 and DT 5 risk boundaries. This observation is in line considering the absolute return objective of the fund. The dynamic changes of the Fund's composition have a significant impact on the ex-ante volatilities of the historical asset allocations. This is illustrated in the following chart which shows the ex-ante volatilities of each allocation against the DT boundaries over time.

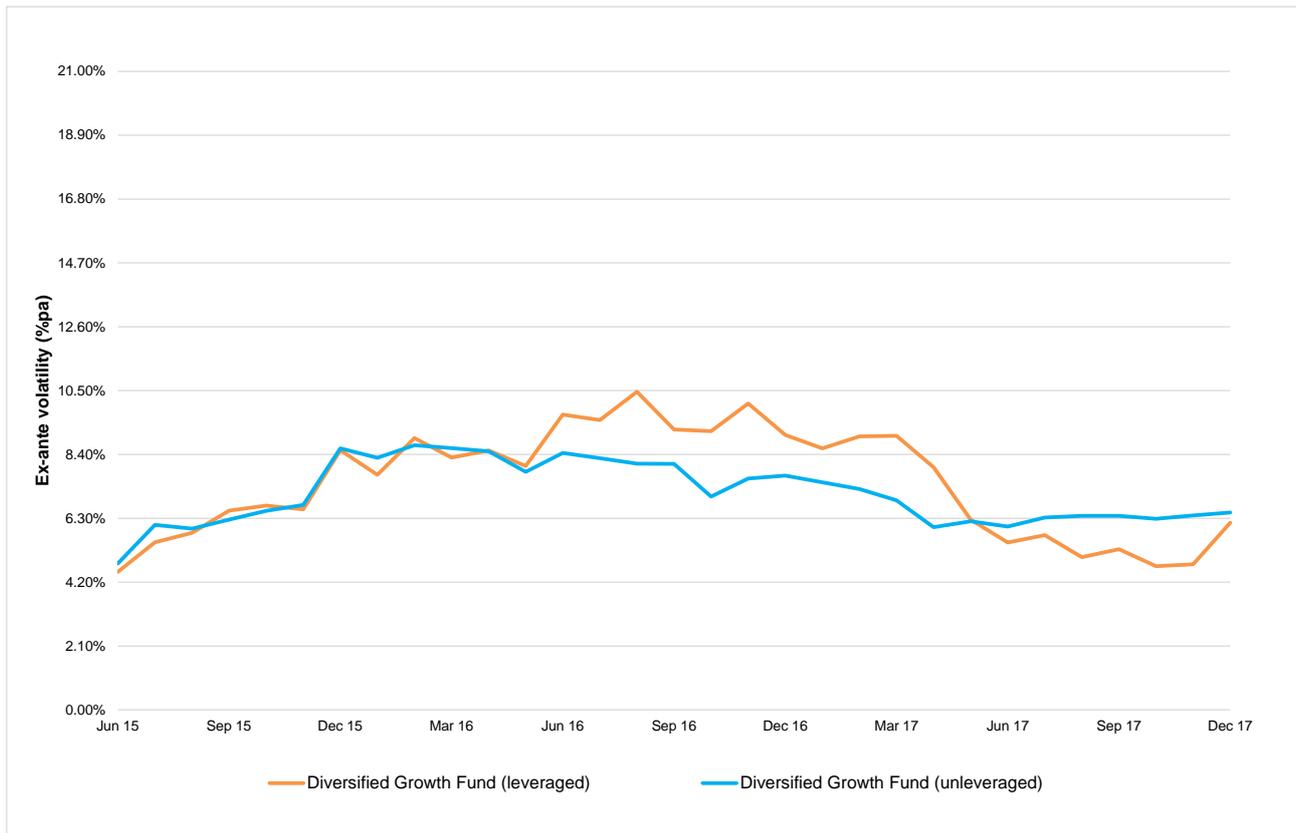


Chart 2: Asset allocations for the Fund against the DT risk boundaries

We note that the notional weighted asset allocations of the Fund have changed significantly since Jun-15. The periods where the cash exposure is reduced in favour of fixed income and equity investments, the ex-ante volatility spikes and is in line with DT 5 risk boundaries. However, when the inverse happens, the notional weighted asset allocations sit within the DT 3 risk profile boundaries. Therefore, we believe that the DT 4 risk profile will be in line with the long term average position of the Fund's asset allocations. Additionally, the majority of the market weighted asset allocations of the Fund have been in line with the DT 4 risk profile boundaries.

4.2 Historical performance

Based on performance figures provided by FSI to the end of December 2017, we analysed the long term performance of the Fund. To show how the Fund corresponds to the DT risk profiles, the rolling 12 month volatility¹ of the Fund and the DT asset allocations (“AA”) have been plotted in Chart 2 below.

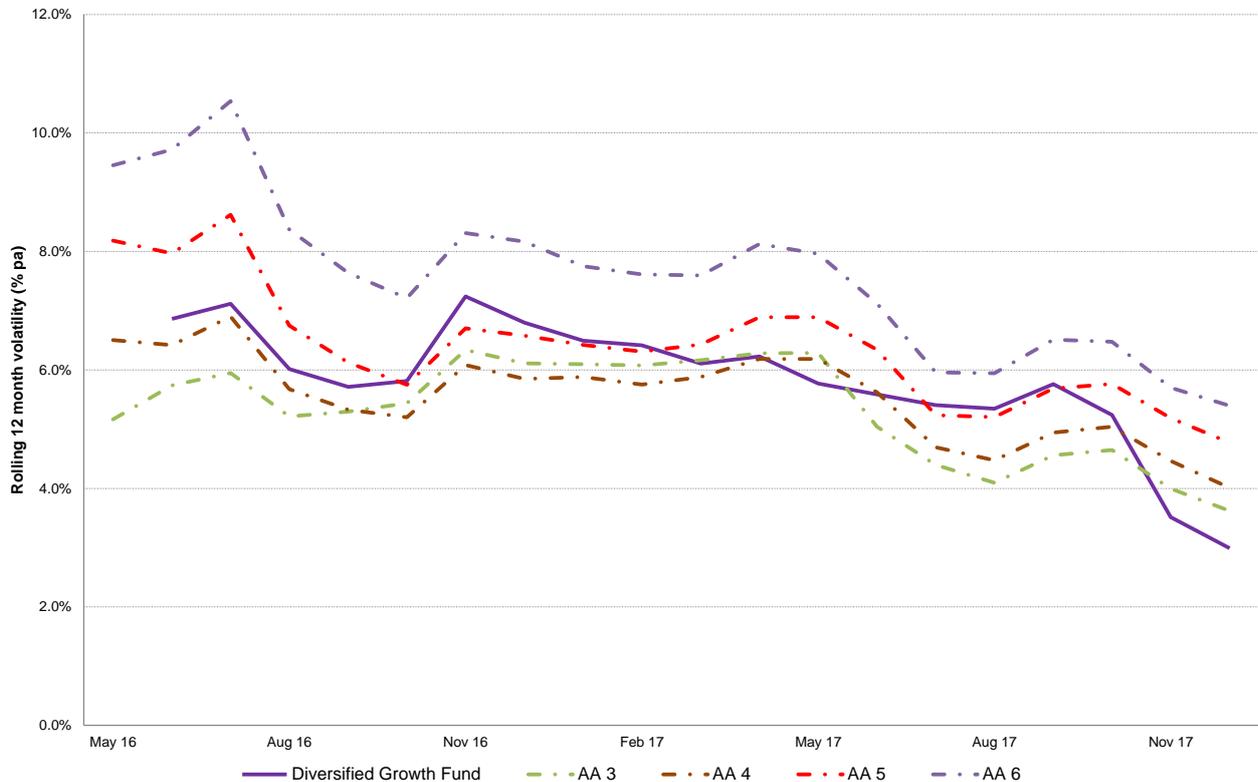


Chart 3: The Fund rolling volatility against DT

- Due to the insufficient performance history of the Fund and the currently low volatility in the markets, the ex-post performance analysis for the Fund hasn't been a primary driver for risk profiling the Fund. We note that the realised rolling volatility of the fund has fluctuated between that achieved by AA 3 and AA 5. Overall the Fund's rolling volatility is aligned to that experienced by the asset allocations of DT 4 Model over the analysed period.

¹ The 12 month volatility at a given date is the annualised volatility of real performance over the previous 12 month period.

5 Summary

In Table 2 below, we summarise the risk profile of the Fund based on the different measures set out above.

Fund	Historical asset allocation	Comparative rolling volatility	DT assigned profile
Diversified Growth	3 - 5	3-5	4

Table 2: Summary of risk profiles

- We note that the Fund is significantly dynamic and flexible in changing its allocations drastically to meet its return target. Due to the nature of the fund, the expected volatilities of the tactical asset allocations have fluctuated remarkably from DT 3 to DT 5 risk boundaries. Considering this, we assess that a DT 4 risk profile is appropriate Fund as a long term risk profile since we expect that the risk of the Fund will be overall in line with the assigned risk profiles boundaries.
- We will monitor the suitability of the assigned profile for the Fund on an on-going basis through our quarterly review process.

Appendix A: Investment assumptions

This appendix sets out the method used to generate the planning assumptions used on the DT platform.

The estimate of returns for equities, property and corporate bonds are calculated as a premium over gilts and then expressed as real returns (i.e. returns in excess of inflation). In addition to analysing historical index data, DT also use the following market data to arrive at expected return assumptions:

- Yields on UK Gilts; conventional and index-linked,
- UK corporate bond yields,
- Yields on global bonds,
- Equity earnings and dividend yields,
- Economic growth forecasts.

Full details of the DT estimation methodology can be found in DT's Capital Market Assumptions report, which is available on request.

Tables 4 and 5 show the real return and volatility assumptions for the fourth quarter of 2017 used to model assets for the DT standard and additional asset classes for the purpose of profiling the Fund.

Asset class	Expected real return	Volatility
Cash	-1.7%	1.4%
UK Corporate Bonds	0.5%	6.3%
UK Index Linked Gilts	-1.5%	6.9%
International Bonds	-0.9%	7.9%
UK Gilts	-0.8%	6.2%
Global High Yield Bonds	1.3%	12.0%
UK Equity	4.1%	14.6%
Europe ex UK Equity	4.1%	19.2%
North American Equity	3.6%	14.6%
Japanese Equity	2.7%	15.8%
Asia Pacific ex Japan Equity	5.1%	19.8%
Emerging Market Equity	6.0%	21.2%
UK Commercial Property	1.6%	11.8%
Commodities	3.7%	20.3%
Absolute Return	0.4%	8.8%
UK Equity Small Cap	4.5%	21.5%
UK Equity Mid Cap	4.3%	16.2%
UK Equity Large Cap	4.1%	14.8%

Table 3: Asset class returns and volatilities

Asset class	Expected real return	Volatility
Europe ex UK Equity Small Cap	4.5%	21.3%
Europe ex UK Equity Mid Cap	4.2%	19.9%
Europe ex UK Equity Large Cap	4.1%	19.2%
North American Equity Small Cap	3.8%	18.7%
North American Equity Mid Cap	3.8%	16.5%
North American Equity Large Cap	3.6%	14.3%
Japanese Equity Small Cap	2.9%	16.6%
Japanese Equity Mid Cap	2.8%	16.3%
Japanese Equity Large Cap	2.7%	15.9%
Global Equity	3.9%	14.6%
REITs	5.4%	17.2%
Global High Yield Corporate Bonds	1.3%	9.8%
Global Investment Grade Corporate Bonds	0.0%	7.8%
Global Investment Grade Sovereign Bonds	-1.3%	8.3%
Emerging Market Debt	0.0%	10.0%
UK Gilts Short Duration	-1.9%	3.5%
UK Gilts Mid Duration	-1.1%	6.5%
UK Index Linked Gilt Mid Duration	-1.0%	6.1%

Table 4: Asset class returns and volatilities (continue)

B: Risk profile boundaries

The following table sets out the lower and upper volatility boundary for each risk profile used in the implementation of DT's Dynamic Planner application.

Risk Profile	Volatility of asset allocation	Lower boundary	Upper boundary
1	1.4%	0.0%	2.1%
2	3.5%	2.1%	4.2%
3	5.5%	4.2%	6.3%
4	7.5%	6.3%	8.4%
5	9.8%	8.4%	10.5%
6	11.9%	10.5%	12.6%
7	14.1%	12.6%	14.7%
8	16.0%	14.7%	16.8%
9	17.9%	16.8%	18.9%
10	19.6%	18.9%	21.0%

Table 5: DT Risk Profile boundaries

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Source of information

First State Investments (UK) Limited, Bank of England, Barclays Capital Inc., Bloomberg LLC, Heriot Watt University Gilt database and Office of National Statistics

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