FINC6013 Group Assignment:

Examination and Discussions on international portfolio allocation and multicurrency management of the Magellan Flagship Fund

Group members

University of Sydney
Stream: Wednesday 11am
Semester 1, 2013
Lecturer: Dr. Tro Kortian
Due date: 07/06/2013
6/6/2013

Table of Contents

1. EXECUTIVE SUMMARY 2
2. INTRODUCTION TO THE COMPANY 2
2.1 Company description 2
2.2 Investment strategy, objectives and limitations 2
2.3 Investment performance 3
3. LITERATURES AND METHODOLOGIES REVIEW 3
4. EXAMINATION 5
4.1 Time horizon and data 5
4.2 Examination result 5
5. DISCUSSIONS 11
5.1 Discussion on portfolio decisions 11
5.2 Discussion on currency management 13
6. CONCLUSIONS AND RECOMMENDATIONS 15
References: 16

Figures and Tables

Figure 1. Top 20 holdings in MFF portfolio 5
Figure 3. Country weights in portfolio 11
Figure 3.Country weights in benchmark 11
Figure 4. Allocation and Selection effects 12
Figure 6. Industry weights in portfolio 12
Figure 6. Sector weights in benchmark 12
Figure 7. Cash position of the company 13
Figure 8. Forward premium and Currency management effects 14
Figure 9. Effects as the difference between portfolio return and benchmark return 15

Table 1. Normalized country weights inbenchmark index 6
Table 2. Benchmark returns 6
Table 3. Performance and weights of US holdings 7
Table 4. Performance and weights of HK holdings 7
Table 5. Performance and weights of UK holdings 7
Table 6. Performance and weights of Singapore holdings 7
Table 7. Consolidated market returns 7
Table 8.Estimation of Security selection effects 8
Table 9. Country weights of the portfolio 8
Table 10. Estimation of Allocation effects 8
Table 11. Expected forward premium return (against AUD) 9
Table 12. Estimation of Forward premium effects 9
Table 13. Expected currency surprises 10
Table 14. Estimation of Currency management effects 10
Table 15. Weights of companies in portfolio 13

1. EXECUTIVE SUMMARY

This report provide examination and discussions on international portfolio allocation and multicurrency management decisions of the Magellan Flagship Fund (MFF), an ASX listed investment company. We mainly use Multicurrency performance attribution approach –a modification of a performance attribution approach by Brinson and Fachler. There are five main aspects in method that we have used to examine asset allocation and currency risk exposure; (i) Security selection effect, (ii) Market allocation effect, (iii) Currency management effect, (iv) Forward premium effect and (v) Interaction effect.

In discussion session we raise same critical questions regarding the theme, we pursue conveying our answers to those questions. To do so, using our examination findings, we briefly review policies that, the company conducts at present situation, and assess it against the benchmark as represented by MSCI World equity index.

By assessing effectiveness of MFF's decisions on international portfolio allocation and currency management against a common benchmark, using Multicurrency performance attribution, we find that company's excess return of 6% is produced by two factors; optimal security selection and simultaneous interactions of security selection, country allocation and currency management. But the country allocation, currency management and forward contract decisions of the management separately have negative but very small effect on performance.

With examination findings, we emphasize some issues regarding portfolio allocation and currency management decisions as our recommendations;

- Over weighting of US based companies in holdings makes MFF's investment inefficient in terms of exploiting the benefits of international portfolio such as reducing risk by diversification, hedging of investor's consumption basket, participation in growth in frontier markets. (Söhnke and Dufey, 2001)
- Betting on depreciation of AUD and relying on USD may seem reasonable in current economic situation. But the examination reveals that this currency management strategy actually does not contribute positive effect to performance and currency risk exposure increases significantly under present cash position. Therefore, we suggest that it is may be the time to consider currency hedging for MFF.

2. INTRODUCTION TO THE COMPANY

2.1 Company description

Magellan Flagship Fund (MFF) is a company who offers the opportunity for the investors to invest in an ASX-listed investment company (MFF 2013). According to the 2012 annual report, the company saw an increase in net tangible assets (NTA) per share, which excluded deferred tax assets. The rise was recorded as $0.954 per share as at 30 June 2012, which grew about 25.2% compared with $0.762 per share as at 30 June 2011.

2.2 Investment strategy, objectives and limitations

According to introduction of the company (MFF 2013) investment strategies of MFF contain three main points:

1. MFF aims to invest in outstanding companies at prices which are considered to be below the intrinsic value of those companies in Australia and internationally

2. MFF will seek to minimize the risk of permanent capital loss and the establishment of prudent investment parameters
3. MFF will seek to maintain a rational selling discipline to maintain investment portfolio performance.

MFF has three key investment objectives for its investment portfolio. The first one is to 'maximize compound after-tax returns for MFF shareholders by identifying and investing in a portfolio of listed international and Australian companies with outstanding business characteristics, at a discount to their intrinsic values' (MFF 2013). The second one is to gain returns to the shareholders of MFF through dividend payments. The third one is to minimize the risk of permanent capital loss for MFF shareholders (MFF 2013).

MFF is restricted to the investment limitations. First, individual investments in the portfolio will not exceed 10% without the prior approval of its board of directors, and in any event, the individual investments will not exceed a maximum of 20%. Second, MFF will not own more than 10% of any company, which it invests in. Thirdly, permitted investments as defined in the Income Tax Assessment Act makes up 90% of the portfolio value (MFF 2013).

2.3 Investment performance

Based on the Financial Report (2012), it is recorded that the company had a net profit after income tax of $10.74 million for the half year ended 31 December 2012. The directors declared a dividend of 1.0 cent per share on 6 February 2013. It is expected that the amount of the dividend is approximately $3.5 million. The data reflected that 'the impact of changes in the market value of investments'. It could be seen that the company had good performance during the period.

3. LITERATURES AND METHODOLOGIES REVIEW

The project's aim is to evaluate the multicurrency portfolio performance. The evaluation is based on several key elements of the portfolio. Clearly, the portfolio return is the most important figure. And the portfolio's weight for each market/country and for each security is also important. After acquiring these key elements, a benchmark portfolio is necessary to act like control group to draw comparison results.

In this report, the performance attribution is the key measurement that has been identified. According to Bacon (2004), "the performance attribution is a technique used to quantify the excess returns of a portfolio against its benchmark in to the active decisions of the investment management process." However, there is no widely-accepted standard for attribution analysis. On the contrary, there is enormous diversity in the range of methods used for attribution. (Laker, 2005)

The most well-known approach to evaluate the performance attribution is the Brinson method. The idea was formed in 1972. This method use weighted sums, compounding and value-add as tools to perform analysis.
The method used portfolio sector returns, portfolio sector weights, benchmark sector returns and benchmark sector weights as basic data. Then calculate the portfolio returns, benchmark returns, portfolio returns using a benchmark weight (Active Stock Selection Fund) and benchmark returns using a portfolio weight (Active Asset Allocation Fund). Then calculates the following results

- Asset Allocation= Active Asset Allocation Fund – Benchmark returns
- Stock Selection = Active Stock Selection Fund – Benchmark returns

- Interaction = Portfolio returns – Active Asset Allocation Fund – Active Stock Selection Fund +Benchmark returns
- Total Value-Added= Portfolio return – Benchmark return

The method is easy to implement. However, according to Ankrim and Hensel, the model assumed a portfolio that has no direct currency exposure (Ankrim and Hensel, 1994). And they proposed a new model that based on the Brinson's study and considered the currency exposure as a complimentary.
The basic idea is the same, except they separated returns due to currency to two parts. "one part recognizes the opportunity cost of returns achievable in forward-currency markets. Another part measures the currency returns attributable to being less than fully hedged." (Ankrim and Hensel, 1994)
The two part can be expressed as the

- Currency surprise = $(S_{t+1} - F_{t+1})/S_t$
- Forward premium = $(F_{t+1}-S_t)/S_t$

By using those two as adjust factors, the currency-related returns then being eliminated from the raw data.
Like the Brinson's model, they also divided the portfolio attribute into several effects.

- Security Selection Effect
- Allocation Effect
- Forward Premium Effect
- Currency Management Effect

The sum of those effects explains the difference between the selected portfolio return and benchmark returns.

4. EXAMINATION

4.1 Time horizon and data

Since latest Annual report of MFF covers financial year 2011-2012, we conduct our study on that period. Then all data used are those in 30th June 2011 to 29th June 2012.
Main inputs of multicurrency performance attribution model are;

- Return of company's portfolio
- Weights of countries in the portfolio
- Return to the benchmark
- Weights of countries in the benchmark
- Spot rates of currencies at the start and the end of time period
- Forward rates of currencies at the start of time period

More than 97 % of international equity portfolio of MFF consists of top 20 holdings in four major countries. Since other small holdings are not named in available information sources, we take those top 20 holdings as MFF's whole portfolio in examination.

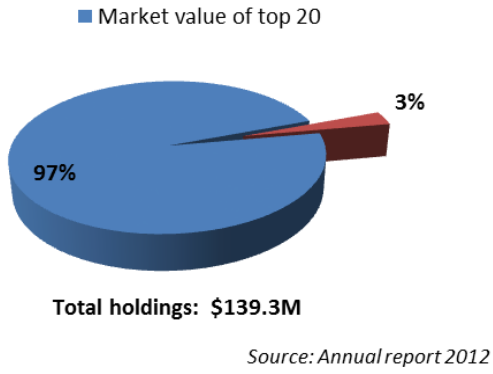


Figure 1. Top 20 holdings in MFF portfolio

For the benchmark, to which MFF's portfolio is compared, we use MSCI World all cap index. However, when we calculate management effects, weights of countries in benchmark index are modified in order to make it comparable to the portfolio. (i.e. normalized the weights of select countries to sum 1)

Due to features of forward market and information availability, it was not able to come with any official forward rates of foreign currencies. Then, as precedents, forward rates are estimated using Covered Interest Parity.
Also, since there is no specific figure in the annual report of MFF shows the return generated from each market, the portfolio returns have been calculated separately generating company returns in each market. Benchmarks for individual markets are represented by MSCI Country indexes for consistency with MSCI World index – the international market benchmark.

4.2 Examination result

Security selection effect

This effect demonstrate the value added to the portfolio by compare to the benchmark portfolio which caused by the securities selection in different market. The MFF fund is a portfolio that consisted of securities selected worldwide. The idea is each market has its own market return. In those stocks, some of them out performed than the market that means those stocks earned return higher than the market return. If those stocks were selected in the MFF portfolio that will lead to a positive result which is value added to the portfolio's performance. The formula is pretty straight forward:

(Portfolio return – benchmark return) * Benchmark weight

By calculating each effect attribute to its market, the sum of all the effects could present a total security selection effect.

The portfolio consists with securities selected from US, United Kingdom, Europe, Hong Kong, Singapore and Australia. The following table shows the benchmark weight for each market (all in $billions).

Market	Weights
United States	71.00%
United Kingdom	12.00%
Singapore	4.00%
Hong Kong	13.00%

Table 1. Normalized country weights inbenchmark index

The MSCI world index also used to be the benchmark returns of each market. Since the project is exam the performance of the MFF fund in 11-12, the benchmark returns were the 1 year return.

Countries	1 Year return
United States	13.17%
United Kingdom	13.00%
Hong Kong	23.10%
Switzerland	17.13%
Europe ex UK	17.96%
Singapore	28.50%
Australia	14.73%

Table 2. Benchmark returns

Since there is no specific figure in the annual report of MFF shows the return generated from each market, the portfolio returns have been calculated separately. The fund has invested in several companies worldwide, for example in the 2011-2012 fiscal year, the funds invested in 15 companies in the US market. The return for each company was calculated using the formula (P1+DIV-P0)/P0. P1 and P0 stands for the end year stock price and the beginning year stock price respectfully. The price and dividends data are all come from Yahoo Finance. The following table shows the returns.

US	DIV	P0	P1	Return	Mkt.Value	Weight
Wells Fargo and Co	0.88	28.67	33.44	19.71%	22,307	18.44%
Visa Inc	0.81	85.54	129.07	51.84%	15,746	13.01%
McDonalds	2.71	86.48	89.36	6.46%	15,502	12.81%
US Bancorp	0.64	18.08	27.48	55.53%	13,826	11.43%
CME Group Inc	2.052	289.19	260.55	-9.19%	11,644	9.62%
Procter & Gamble	2.137	61.49	64.54	8.44%	7,577	6.26%
Google	0	603.69	632.97	4.85%	6,139	5.07%
American Express	0.56	50.04	57.71	16.45%	5,917	4.89%
MasterCard Inc	0.75	303.25	436.57	44.21%	5,071	4.19%
Apple Inc	0	390.48	610.76	56.41%	3,689	3.05%
Lowe’s	0.56	21.58	25.37	20.16%	3,627	3.00%
Bank of America	0.04	9.71	7.34	-24.00%	3,581	2.96%
WalMart Stores	1.526	52.71	74.43	44.10%	3,352	2.77%

HCA Holdings Inc	2	26.68	26.48	6.75%	1,689	1.40%
McGraw-Hill Companies	1.01	41.6	46.96	15.31%	1,317	1.09%
Yum! Brands	1.105	52.85	64.84	0.00%	0	0.00%
eBay	0	32.75	44.3	0.00%	0	0.00%
Coca-Cola	0.98	68.01	80.8	0.00%	0	0.00%
Colgate-Palmolive Co	1.18	84.38	107.36	0.00%	0	0.00%
TOTAL					**120,984**	100.00%

Table 3. Performance and weights of US holdings

According to this table, the US market portfolio return is calculated by return of each company multiply the weight of each company which is 23.20%.

HK	DIV	P0	P1	Return	Mkt.Value	Weight
China Mobile	3.327	77.55	90.95	21.57%	5,841	52.61%
China Telecom	0.0695	5.08	4.04	-19.10%	2,766	24.91%
China Unicom	0.12272	15.52	11.44	-25.50%	2,496	22.48%
TOTAL					11,103	100.00%

Table 4. Performance and weights of HK holdings

By implementing the same method, the portfolio return of HK market is 0.86%

UK	DIV	P0	P1	Return	Mkt.Value	Weight
Tesco	14.76	383.45	318.1	-13.19%	1,614	1.00
TOTAL					1,614	1.00

Table 5. Performance and weights of UK holdings

The portfolio return from UK is -13.19%

Singapore	DIV	P0	P1	Return	Mkt.Value	Weight
Singapore Tech Eng	0.07	3.05	3.3	10.49%	1554	1

Table 6. Performance and weights of Singapore holdings

The portfolio return from Singapore market is 10.49%. After calculating the base return of the portfolio attributes to each markets. The currency appreciation/depreciation needed to be considered as a further adjustment. The changing effect is calculated using (St+1/St-1).

Market	Portfolio market return (adjusted)	Benchmark return (adjusted)
United States	28.58%	18.55%
United Kingdom	-11.08%	15.11%
Singapore	12.53%	30.54%
Hong Kong	6.61%	28.85%

Table 7. Consolidated market returns

After that the results were further adjusted with Forward premium and Currency Surprise After knowing all the data, the security selection effect can be calculated as follow

Market	Forward Premium	Currency Surprise	Portfolio Return	Benchmark Return	SSE
US	2.20%	-7.30%	33.68%	23.65%	7.12%
UK	2.81%	-4.88%	-9.01%	17.18%	-3.14%
Singapore	-0.60%	-1.40%	14.53%	32.54%	-0.72%
Hong Kong	4.23%	-9.66%	12.04%	34.28%	-2.89%

Total	0.37%

Table 8.Estimation of Security selection effects

Referring to the result, MFF's security selection performance is mediocre. Looking deep in the table, it is obviously to find the security selection in the US market is impressive, the portfolio outperformed the market return 10%. Unfortunately, most of the success was used to cover the failures of security selection in the other three markets.

Allocation Effect

The effect measures the manager's decision of invest in each market's proportion differentiate with the benchmark proportion. The formula is;

Allocation effect = (Portfolio weight- Benchmark weight) x (Benchmark Country Return Relative to Total Return).

The following table shows the portfolio weight

Domicile/portfolio weight	2012
United States	0.894
Hong Kong	0.012
United Kingdom	0.012
Singapore	0.082
Switzerland	0
Australia	0

Table 9. Country weights of the portfolio

The benchmark weighted average return was calculated by using the adjusted benchmark market return multiply the benchmark markets weigh which is 0.2461.

Market	Portfolio Weight	Benchmark Weight	Benchmark Return	Benchmark Weighted Average Return	AE
United States	89.40%	71.00%	23.65%	24.61%	-0.18%
United Kingdom	1.2%	12.00%	17.18%	24.61%	0.80%
Singapore	1.2%	4.00%	32.54%	24.61%	-0.22%
Hong Kong	8.2%	13.00%	34.28%	24.61%	-0.46%
Total					-0.06%

Table 10. Estimation of Allocation effects

The negative result -0.06% indicates the manager did not add value to its portfolio by select the investment location as proportions in the portfolio. Looking into the results separately, the only positive number is the UK market that's because the manager avoid the large under average return by assigned very little investment fund to the UK market. However this precious positive result has been offset by others. Since the US market is under performed than the overall world market and took a large proportion in the portfolio that makes the results look bad. Although the Singapore and Hong Kong markets are performed impressively well against the world overall return, the tiny proportion in the portfolio makes it could not help.

Forward premium effect

Forward premium effect is used to demonstrate the value added to the portfolio compare to the benchmark portfolio which caused by the expected currency return relative to average premium. MFF has several different currencies and the return of premium is in different market over the world.

The forward premium effect is based on the comparison of forward-return and the average of benchmark, the assumption of strategy of this forward-return effect is simply based on hedging. More complicated stratagem needs to track the cash flow generated by the currency transactions. As a result, the calculation and description contains the simplifying assumption. In MFF portfolio, the positive forward premium result will lead a greater fraction of portfolio than benchmark for a large forward premium exists.

Another problem need to be clarified for this effect is that any measure of absence of currency exposure to either benchmark or MFF portfolio, hedging has no effect to them. Also the attribute implied forward/spot structure is not related to the management decision to the amount of currency exposure to hedge. This kind of decision will do effect on currency surprise which will be discussed in the next part, but it will have no impact on the forward premium effect.

Forward premium effect = (Portfolio weight – Benchmark weight) x (Expected Currency return – Average Premium)

Domicile\Expected Currency return	2012
USD	0.021951
HKD	0.042289
GBP	0.028120
SGD	-0.005978

Table 11. Expected forward premium return (against AUD)

According to table 2.10 of portfolio weight and benchmark weight, we can calculate the forward premium effect.

Market	FPE
USD/United States	-0.04%
GBP/United Kingdom	-0.04%
SGD/Singapore	0.08%
HKD/Hong Kong	-0.09%
Total	-0.09%

Table 12. Estimation of Forward premium effects

Currency management effect

Currency management effect is basically discuss about the impact on currency exposure compare with the benchmark, to MFF, the currencies are US Dollar, Euro, British pound, Swiss Franc, Hong Kong Dollar and Singapore Dollar. The calculation formula is;

Currency management effect = (Portfolio weight – Benchmark weight) x (Currency surprise – Total benchmark currency surprise) + (Forward currency position – Average position) x Currency surprise

Domicile\Expected Currency surprise	2012
United States	-0.07298
Hong Kong	-0.096619
United Kingdom	-0.048819
Singapore	-0.014016

Table 13. Expected currency surprises

Negative currency surprise return of -0.073 for USA means the management effect is selling currency forward at discount, so the result of currency surprise is less than 0.
According to the formula, we can calculate the currency management affect that:

Market	CME
USD (US)	-1.25%
GBP (UK)	0.49%
SGD (Singapore)	0.04%
HKD (Hong Kong)	0.43%
Total	-0.29%

Table 14. Estimation of Currency management effects

5. DISCUSSIONS

In this session we raise four questions regarding international portfolio and currency management decisions of MFF then, we pursue conveying our answers to those questions. To do so, using our examination findings, we briefly review policies that, the company conducts at present situation, and assess it against the benchmark as represented by MSCI World equity index. Questions to be discussed are below;

Regarding portfolio allocation decisions;

1. How does country allocation of MFF's portfolio differ from international benchmark and how much value was added by this difference?
2. How does industry or stock selection of MFF's portfolio differ from the benchmark and how much value was added by this?

Regarding currency management decisions;

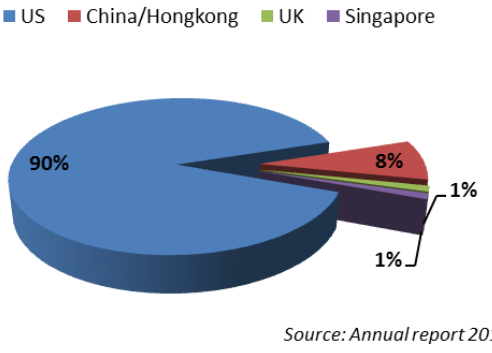
3. What is MFF's currency position by end of financial year 2011-2012 and how would company's profit be affected by currency risk with that position?
4. How much extra value was added by active currency management decisions of the company?

5.1 Discussion on portfolio decisions

Country allocation

First of all, it should be noted that big companies in the portfolio operate multi nationally. However, since their investment features are mostly determined or efficiently implicated in their home markets where they are listed, it is reasonable to conduct country allocation analysis.

Even not in a comparison sense but in an absolute number, MFF's portfolio is heavily



Source: Annual report 2012

Figure 3. Country weights in portfolio

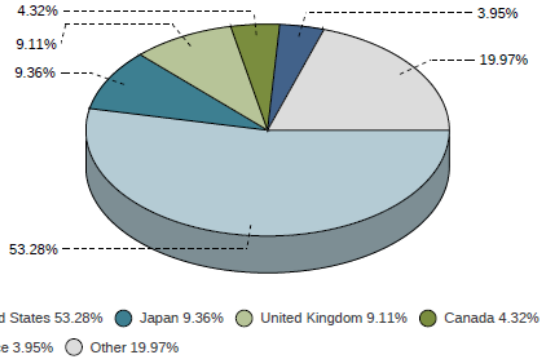


Figure 3.Country weights in benchmark

positioned in US market. The price, paid for this US-bias, could be deemed as the great reduction in UK's proportion mostly. Weights of equities of the companies, based in UK, in MFF portfolio is 10 times smaller than that in benchmark index. Proportion of Singapore in MFF portfolio is slightly bigger than its proportion in benchmark while Hong Kong's share is 5 % smaller in the portfolio.

Our estimation of allocation effect shows that these deviations of country weights make actually inconsiderable but negative effect on MFF's portfolio performance. In particular, extra return added by country allocation decisions of the company is -0.06 % totally. Looking into countries separately, the only positive excess return is in UK market but that positive result is offset by others. Allocation effect by each country is illustrated in Figure__

Though MFF portfolio's overall return is 6 % higher than benchmark return, country allocation does not contribute to this excess. Because, the US market which dominates MFF portfolio is not the best performer in terms of benchmark return in observation period. The market returns of the countries, as represented by MSCI Country indexes, are 18.5 % in US, 15.1 % in UK, 30.5 % in Singapore and 28.8 % in Hong Kong.
In other words, US market is under performed than the overall world market but took a large proportion in the portfolio. Although the Singapore and Hong Kong markets are performed impressively well against the world overall return, the tiny proportion in the portfolio makes it could not help.

Industry/Security selection

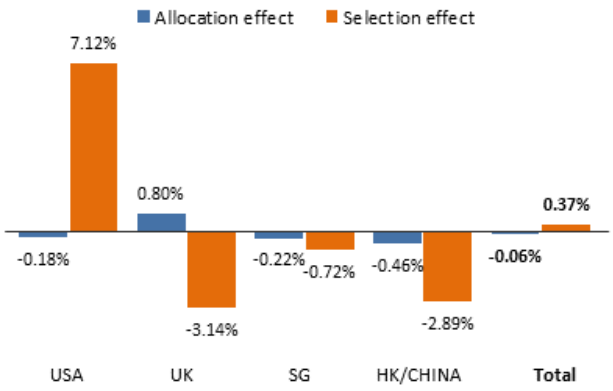


Figure 4. Allocation and Selection effects

Portfolio of MFF's equity holdings can be divided into seven broad industries. Biggest of them is financial industry, followed by information technology and then food and beverage which is a part of consumer discretionary sector in benchmark sectoring. Each of these top 3 industries is somewhat over weighted in the portfolio relative to the benchmark. Especially, nearly 60 % of MFF's investment is allocated into financial sector whereas this sector weighs approximately 21 % in benchmark index. Since the majority of portfolio is concentrated on three industries, all other industries are under weighted consequently.

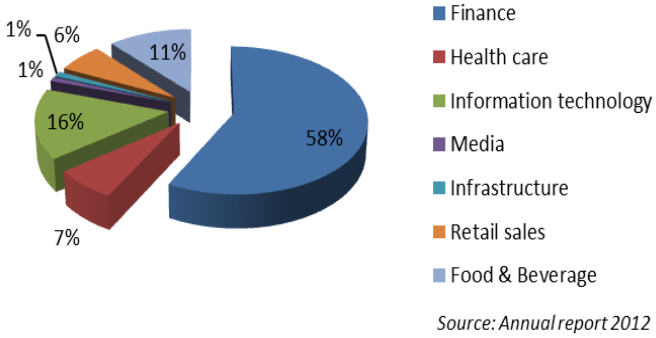


Figure 6. Industry weights in portfolio

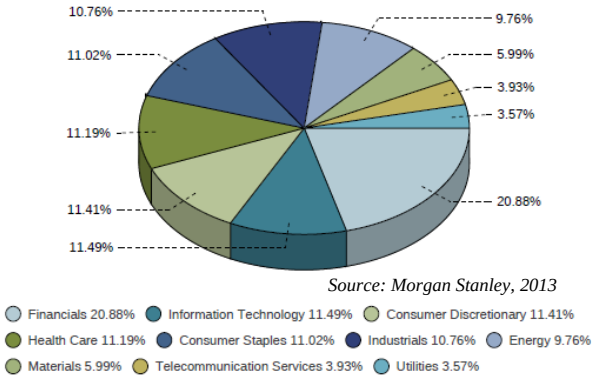


Figure 6. Sector weights in benchmark

As mentioned above, 97 % of MFF's portfolio is composed of biggest 20 stocks. List of those companies and their weights in the portfolio are displayed in Table __.
Then, it is not consistent that comparing weights of each companies in the portfolio and index.

Company	Market value $'ooo	Weight in portfolio	Company	Market value $'ooo	Weight in portfolio
In USA			WalMart Stores	3,352	2.4%
Wells Fargo and Co	22,307	16.0%	HCA Holdings Inc	1,689	1.2%
Visa Inc	15,746	11.3%	McGraw-Hill Companies	1,317	0.9%
McDonalds	15,502	11.1%	In HK/China		
US Bancorp	13,826	9.9%	China Mobile	5,841	4.2%
CME Group Inc	11,644	8.4%	China Telecom	2,766	2.0%
Procter & Gamble	7,577	5.4%	China Unicom	2,496	1.8%
Google	6,139	4.4%	In UK		
American Express	5,917	4.2%	Tesco	1,614	1.2%
MasterCard Inc	5,071	3.6%	In Singapore		
Apple Inc	3,689	2.6%	Singapore Tech Eng	1,554	1.1%
Lowe's	3,627	2.6%	Other companies	4,082	2.9%
Bank of America	3,581	2.6%	**TOTAL**	**139,337**	**100%**

Table 15. Weights of companies in portfolio

The features of MFF's security selection decision are assessed by an indicator, called security selection effect. Referring to the results of examination, MFF's security selection performance is mediocre in total. Looking deep in the table, it is obvious to find the security selection in the US market is impressive; the portfolio outperformed the market return by 7.1%. However, most of the success was used to cover the failures of security selection in the other three markets.

5.2 Discussion on currency management

Currency position and risk exposure

MFF is an equity investment fund that not intended to invest in currency instruments. Though, the company has very strong position in cash which amounts far bigger than market value of its equity investments. By end of financial year 2011-2012, the company holds 51% of its current assets in net cash while market value of investment amounts 42% of current asset. Loads of cashes are in USD and some supplements are in SGD, HKD and CHF.

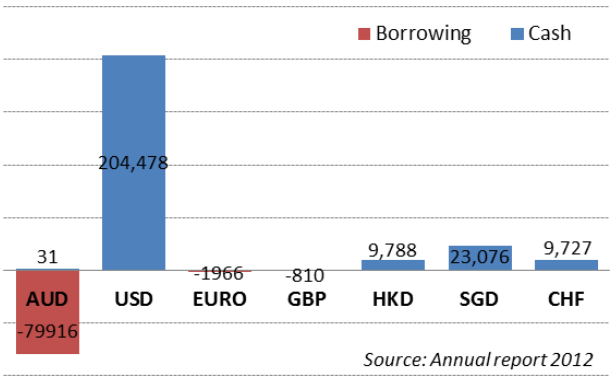


Figure 7. Cash position of the company

Contrary, MFF goes decisively short on AUD with net borrowing of AU$79.9M. It is clear to see that exchange rate movement of AUD and USD against each other and also against other major currencies would be the underpinning determinant of MFF's currency risk exposure.

Within this currency position, if AUD appreciate 10% against USD the net profit decreases by AU$14.3 million and if it appreciate 10% against all currencies in MFF's portfolio the company's net profit falls by AU$17.1 million (MFF, 2012).

The amount of risk in same scenario was AU$1.6 million in previous financial year means that the company became more vulnerable to currency risk.

But both AUD short position and non-Australian dollar nominated cash flows from equity and cash holdings are not hedged. The company explains this strategy that it is not favorable in current exchange rates and economic conditions prevail (MFF, 2013).The company expects that AUD will trade materially lower for at least part of the next decade and they see there are a lot of underlying competitive strengths in the USD (MFF, 2012), this currency allocation and un-hedged strategy is likely to be remain. Nowadays we see in news that there is some evidence of slowdown in Australian economy and RBA responds easing monetary policy by cutting the interest rate to several years' historical low level.

Therefore we share MFF's argument about AUD depreciation. But we are conscious on strength of USD in longer term and MFF's relying on this currency. However, admitting that doing fundamental analysis for USD exchange rate is beyond our capacity, we avoid raising discussion on this issue.

Currency management effect to performance

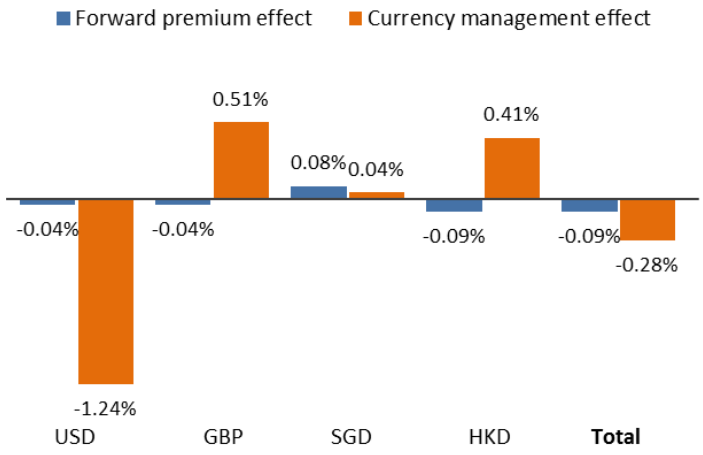


Figure 8. Forward premium and Currency management effects

Our estimation of currency management effect reveals that overweighting of USD negatively affects performance of MFF portfolio. Because of that serious effect of USD, even though holdings of all other currencies affect positively, currency management decision of the company weakens its performance against the benchmark by tiny 0.3%.

6. CONCLUSIONS AND RECOMMENDATIONS

Assessing effectiveness of MFF's decisions on international portfolio allocation and currency management against a common benchmark, using Multicurrency performance attribution, we find that company's excess return of 6% is produced by two factors; optimal security selection and simultaneous interactions of security selection, country allocation and currency management. But the country allocation, currency management and forward contract decisions of the management separately have negative but very small effect on performance.

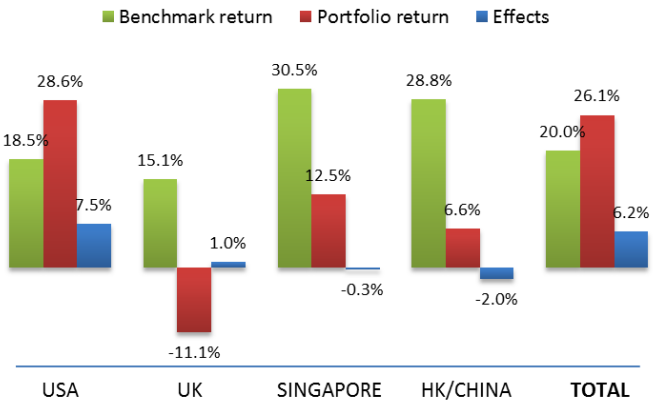


Figure 9. Effects as the difference between portfolio return and benchmark return

With examination findings, we emphasize some issues regarding portfolio allocation and currency management decisions as our recommendations;

- Over weighting of US based companies in holdings makes MFF's investment inefficient in terms of exploiting the benefits of international portfolio such as reducing risk by diversification, hedging of investor's consumption basket, participation in growth in frontier markets. (Söhnke and Dufey, 2001)
- However the company achieves great success in stock selection, industry allocation of the portfolio makes it vulnerable to risks in correlated industries. Then weights of industries in portfolio are needed to be reallocated in order to diversify.
- Betting on depreciation of AUD and relying on USD may seem reasonable in current economic situation. But the examination reveals that this currency management strategy actually does not contribute positive effect to performance and currency risk exposure increases significantly under present cash position. Therefore, we suggest that it is may be the time to consider currency hedging for MFF.

References:

ANKRIM, E. M. & HENSEL, C. R. 1994. Multicurrency performance attribution. *Financial Analysts Journal*, 50.

LAKER, D. 2005. Multicurrency attribution; Not as easy at it looks *JASSA*, Winter, 2005.

MFF 2012. Annual report. Magellan Flagship Fund.

MFF. 2013. *Official web site of Magellan Flagship Fund* [Online]. Available: http://www.magellangroup.com.au/ 2013].

SÖHNKE, M. B. & DUFEY, G. 2001. International Portfolio Investment: Theory, Evidence, and Institutional Framework. *Journal of Economic Literature*.

Financial report of MFF 2012, Auditor: Ernst &Young