Pensions Audit Sub Committee

2.30p.m., Monday, 22 September 2014

Audit of Foreign Exchange Transaction Costs

Item number	5.5
Report number	
Executive/routine	
Wards	All

Executive summary

This report considers the audit of foreign exchange (FX) transaction costs for the period 1 April 2013 to 31 March 2014. The company carrying out the audit considers the overall costs to be satisfactory and in line with typical market ranges.

In addition the audit report includes recommendations on possible future actions to further improve the control of costs. The internal team has consulted with its independent investment adviser to determine the appropriate approach to trade as efficiently as possible.

Links

Coalition pledges	
Council outcomes	CO26 – The Council engages with stakeholders and works in partnerships to improve services and deliver agreed objectives
Single Outcome Agreement	

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Report

Audit of Foreign Exchange Transaction Costs

Recommendations

1.1 That the Committee notes the contents of this report and highlights any points it would like to raise at the Pensions Committee on 23 September 2014.

Background

2.1 Over half of the Funds' investments are in overseas markets and as a result significant FX transactions are an inevitable part of the investment process.

2.2 A review of the Fund's FX trading was undertaken by Mercer Limited in 2012, covering transactions executed during the 2011 calendar year.

2.3 As part of the comprehensive review of investment operations which the Fund commissioned in late 2013, coverage of "FX trading arrangements and aspects of the service from the Fund's global custodian" was specified. In February 2014, the "Operational Gap Analysis" report by Mercer Limited concluded that "Lothian Pension Fund do(es) not undertake Transaction Cost Analysis (TCA) of their trades with brokers, and only review FX execution costs infrequently. Market practice is to undertake regular analysis of broker performance and foreign exchange trading, and challenge execution results against market indicators. .....We also recommend this TCA is extended to FX and results challenged with external managers and Northern Trust.TCA results can be summarised and reported to the Audit Committee."

Main report

3.1 Following competitive procurement, the Fund engaged Mercer Limited to analyse foreign currency exchange execution by its investment managers and global custodian, Northern Trust. The review covered transactions executed between 1 April 2013 and 31 March 2014.

3.2 The full report by the consultants is shown at Appendix 1.

3.3 The report's conclusion is that "overall costs (are considered) to be satisfactory and in line with typical market ranges".

3.4 Whilst the conclusion is reassuring and consistent with expectations, the methodology of the quantitative analysis produces results that are approximate. The transaction data does not include the time it was undertaken. This is a common issue in the industry. Without a full set of time-stamped data, Mercer evaluated individual trades against the mid-price for the day as well as the daily high-low range. As a result, the findings are imprecise.

3.5 This is exemplified by the estimated cost of the currency transactions in the Fund's Transition account. Mercer's methodology indicates an excess monetary cost of £558,000 for a very large transaction (in the context of total excess monetary cost of £607,000 for the year for the Fund). In reality, the £558,000 solely reflects the imprecise measurement methodology - there was no excess monetary cost as the transactions were completed at the WM/Reuters 4pm benchmark, not at the mid-price of the day.

3.6 Nevertheless, some recommendations for potential improvement in the trading arrangements were made, specifically regarding:

a. "proactive trading" of larger trades through direct market dealing rather than a standing instruction with the custodian;

b. any "out of day range trades" to be queried with the custodian;

c. periodic verification of trade rates on currency overlays.

3.7 The internal team has considered the recommendations and consulted with its independent investment advisor Gordon Bagot, who is an expert on foreign exchange pricing having been a pioneer in creating greater transparency in the foreign exchange markets.

3.8 The Fund has now adopted a more proactive trading approach for all trades to ensure the greatest transparency of execution possible. Mercer has confirmed that the new arrangements are sensible, cost effective and may allow for more precise analysis of costs in the future. In addition, the out-of-day range trades have been queried with the custodian and comfort has been gained. All currency overlay trades are already checked on the day of the transaction.

Measures of success

4.1 The measure of success is for the independent assessor to confirm the overall cost of FX transactions is satisfactory and in line with typical market ranges. This has been attained.

Financial impact

5.1 There are no direct financial implications as a result of this report.

Risk, policy, compliance and governance impact

6.1 The purpose of the audit is to minimise the risk of the Funds incurring excessive FX transaction costs. The regular assessment of the Funds' operating costs is an important element of good governance.

Equalities impact

7.1 There are no equalities implications as result of this report.

Sustainability impact

8.1 There are no sustainability implications as result of this report.

Consultation and engagement

9.1 The Consultative Panel for the Lothian Pension Funds, comprising employer and member representatives, is integral to the governance of the Funds.

Background reading/external references

None

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Links

Coalition pledges	
Council outcomes	CO26 – The Council engages with stakeholders and works in partnerships to improve services and deliver agreed objectives
Single Outcome Agreement	
Appendices	Foreign Exchange Transaction Cost Analysis for Lothian Pension Fund by Mercer, dated July 2014

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FOREIGN EXCHANGE TRANSACTION COST ANALYSIS

LOTHIAN PENSION FUND

JULY 2014

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Introduction

1.1. Scope

The City of Edinburgh Council as administering authority for the Lothian Pension Fund (the Fund) has engaged Mercer to analyse foreign currency exchange (FX) execution by its investment managers and custodian, Northern Trust (Northern). This review covers transactions executed between 1 April 2013 and 31 March 2014. Mercer has previously undertaken a similar review in 2012 for the Fund, covering transactions executed during the 2011 calendar year.

1.2. Background

Investment managers have three main reasons for exchanging foreign currencies: 1) asset sales/purchases, 2) income repatriation, and 3) exposure management (using currency to express their investment views or to maintain a hedge).

- Asset transactions – When buying an asset in one country, the manager will need that country's currency to settle the purchase. Investment managers will use the excess currencies supplied by securities sales to buy the required currency to settle purchases.
- Income repatriation – FX transactions also arise when income, such as dividend or interest payments, are repatriated. The manager may bring all cash flows back to the base currency (e.g. £) or use the cash flow to make a purchase in another country. In either case, FX trades takes place.
- Exposure management – The motivations associated with maintaining a hedge can be materially different from the immediate considerations surrounding an individual asset transaction. Accordingly, the trading characteristics of individual components taken out of context can appear sub-optimal. For example, many hedges will require a "contract roll" to extend the existing exposure. Typically, a roll will involve the purchase (sale) of a forward and the simultaneous sale (purchase) of a spot contract. Either side of this paired transaction may show extreme cost (or gain) in isolation; whereas the complete pair may show a fairly neutral cost result.

FX is priced and dealt on a (bid-offer) basis. The difference between the bid and offer price is known as the spread, which is the market cost of trading. Execution outside the prevailing bid-offer range suggests that the Fund is paying an excess cost. There are many reasons why excess expense may be incurred; however, one should be aware of the magnitude and drivers of costs that result from pricing outside the bid-offer spread, in order to assess the reasonableness of the Fund's expenses.

A bid-offer market means those trading FX using a bank intermediary cannot easily identify or measure the potential excess cost or benefit on a given deal. As a result, the only way to assess whether a particular FX transaction is in line with the market is to review the posted bid-offer spreads across market makers on the day in question. Preferably such analysis will be done using time-stamped trade information. In the absence of time-stamped trade information, trade cost analysis can use the high offer and low bid of a trading day as a proxy (the day-range methodology).

1.3. Sources

Northern did not provide time-stamped transaction data (i.e., the actual time of day when each trade was executed). Time-stamped data benchmarking evaluates execution performance within the intra-day trading ranges of the currencies traded, the price at which each trade was executed, and the volume of each trade executed. In the absence of time-stamped data, we base our analysis on intra-day market price ranges (the highest and lowest execution of the day). Based on these prices, we calculate the day's midpoint from the high offer and low bid. We then compare the actual execution price against the midpoint and the daily range.

Note: *Northern do provide the Fund with time stamped information for trades that are instructed via standing instruction only. Whilst this information is beneficial for verification of rates, the day-range analysis methodology is required given the lack of a complete data set. Mercer are aware of other Northern clients who receive similar data. Generally, the availability of time stamps from other custodians is very limited.*

Our analysis is based on foreign exchange transaction data supplied by Northern, containing all transactions executed by Northern, and the Fund's investment managers over the period from (1 April 2013) to 31 March 2014. Mercer has run reasonability checks on the data, but we cannot verify the data's accuracy or completeness. ***The analysis undertaken places reliance on the accuracy and completeness of the data provided by Northern.***

We have utilised Bloomberg data as the primary benchmarking source.

1.4. Methodology

Mercer utilises in-house software to compute all trade costs, classify transactions, and generate summary analyses. As Northern did not provide time-stamped trade data, our analysis evaluates individual trades against the mid-price for the day as well as the daily high-low range, and then uses statistical principles to aggregate those individual results into meaningful cumulative results. A fundamental assumption underlying our analysis methodology is that foreign currency trades are normally distributed around the mid-price for the day. "Mid-price" is defined as the average of the recorded high and low prices.

Mercer analyses trades according to trade size, direction (buys and sells), currency pairs, and execution method or contract types. the Fund's data has sufficient observations to draw statistically significant conclusions for all commonly used ways of assessing the data.
The cost/benefit figures in this report have been adjusted for estimated prevailing bid/ask spreads. Typically, Mercer will evaluate a transaction price relative to the mid-point of the day's trading range with an "imputed spread" adjustment, which varies based upon the currency pair in question. Actively traded currency pairs typically have narrow bid/ask spreads; illiquid or restricted currencies may have wider spreads.

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Executive Summary

2.1. Findings

Table 2.1 below provides the overall results of our benchmark analysis, for all managers excluding the Fund's Currency Overlay. Given the highly specialised nature of the Overlay mandate, the results are discussed separately in Section 5.

Table 2.1: All Trades excluding currency overlay

Value of FX traded, £	2,206,471,472
Number of FX trades	3,679
Excess benefit/(cost) on FX trading, £	(607,149)
Excess benefit/(cost), bps	(2.75)

In Mercer's review in 2012, the trade results excluding the dedicated FX managers produced a 2.3bps excess cost against benchmark. The results above for 2013/14 show a very similar result with an excess cost of 2.75 bps. Whilst a monetary cost, Mercer believe the result is within market expectation. Mercer considers the overall costs to be satisfactory and in line with typical market ranges.

By far the largest driver of excess monetary cost was observed on the LPF Transition account, accounting for over £558,000 of excess cost on £700m of trade volume. In particular, Mercer observed a single, very large GBPUSD trade on the account on which an estimated £330,000 of excess cost was estimated. However, it should be noted that the trades in the transition account were executed against the WM/Reuters 4pm benchmark, against which there were no excess costs observed, and therefore the £558,000 of excess cost can be attributed to daily market movements. Table 2.2 below shows a comparison of cost impact for 74 of the 77 trades on the account (WM data was not available for 3 trades) against both benchmarks, and clearly evidences market movements were the largest source of cost for the account.

Table 2.2: Transition Account trades

Manager	Volume, £	Trades	Day mid-point impact, £	4pm Impact, £
LPF Transition Account	698,976,853	74	(550,795)	38,238

Showing an improvement from the 2012 review, we observed 112 trades executed outside the day's prevalent trading range, representing less than 1% of all trade value (135 trades in 2012). Of the 112, 14 were "market" sized trades, 9 of which were on the Harris portfolio (£6.1m principal, £17,900 cost). We suspect the results of these Harris trades may be due to a timezone issue, and given Harris' wider, satisfactory results, do not believe there is an immediate cause for concern and details have been provided to Fund staff for further investigation.

Currency Overlay

Table 2.3a below shows the six trades executed by Northern benchmarked against the prevailing 12pm WM/Reuters rate plus the applicable forward points and a small fixed basis point spread. As the near-neutral cost results show, we can confirm Northern traded in line with their instruction and applied the appropriate benchmark rate and spreads. However, the Fund should note that Mercer believe best practice for currency hedge trades is to verify execution as and when the overlay "rolls" to promptly identify any issues, especially given the manual nature of Northern's hedging calculation.

Table 2.3a: Currency overlay trades - benchmark rate available

Value of FX traded, £	673,053,002
Number of FX trades	6
Excess benefit/(cost) on FX trading, £	33,477
Excess benefit/(cost), bps	0.49

Table 2.3b: Currency overlay trades – trading day mid-point benchmark

Value of FX traded, £	320,369,697
Number of FX trades	8
Excess benefit/(cost) on FX trading, £	(108,834)
Excess benefit/(cost), bps	(3.4)

The results above in Table 2.3b show the remaining 8 currency hedge trades benchmarked against the mid-point of the trading day. The results appear satisfactory; however the very limited sample size reduces the ability to draw meaningful conclusions. However going forward, we understand <u>all</u> trades will be executed against the 12pm WM/Reuters rate.

Northern had reported a further 10 currency overlay trades to Mercer with value £322m, which were predominantly GBPAUD trades. However, upon querying the execution results of these trades, Northern stated they were in fact trade novations from their take-on of the currency hedge. As such, the trade date was reported as the date of novation rather than the original execution date, thereby giving incorrect results.

2.2. Recommendations

- The excess costs were driven by trading on the LPF Transition Account. However, as noted below, Mercer understands the trading for the accounts were undertaken using the prevailing WM/Reuters 4pm rates (against which the results were favourable). As such, the costs can be attributed to market movements. However, we believe very large trades (e.g. over £5m) could be traded more “proactively”. We understand the Fund does not have access to an FX trading platform such as FX All or FX Connect, but as a potential interim solution could trade directly with the Northern trading desk using indicative quotes from Bloomberg as a guide. In Mercer’s experience, clients have often reported more favourable transaction rates simply by dealing direct with an FX desk compared to deferring to a standing instruction arrangement. Nevertheless, the Fund’s current trading procedure of utilising the WM/Reuters 4pm rate is transparent and costs easily verifiable.
- The Fund currently have an arrangement in place with Northern whereby all standing instructions are priced at the WM/Reuters 4pm rate plus small fixed basis point spread. Mercer believes this is reasonable, but as observed above, would recommend managers are encouraged to proactively seek favourable quotes in the market when dealing larger trades.
- Mercer also considered potential solutions to improve FX efficiency. Given the results observed from the Fund’s trading, which appear slightly atypical to Mercer’s experience (i.e. more favourable results for smaller trades), we do not believe there is a firm basis for immediate implementation of any new solution. However, the Fund could further consult with Northern with respect to any solution that could be easily implemented, albeit such discussions would not be deemed high priority.
- Although showing a significant improvement from the 2012 review, the Fund may also wish to query the out of day range trades. At a minimum, investors can expect in-day range execution or a clear reasoning if there is a reporting issue. Mercer has provided further to the Fund staff.
- Analysis of the currency overlay was very limited due to constraints with trade data. Given the size and potential impact of the currency overlay trades, Mercer recommend the Fund perform a simple verification of the trade rates each month/quarter as reported by Northern, ensuring any errors are immediately spotted and can be rectified more efficiently. A simple “eyeball” comparison to Bloomberg or Reuters should be sufficient to identify incorrect or misreported trade rates. Northern provide this data to the Fund therefore a simple check should be straightforward.
    - For the limited trade information provided to Mercer, we can confirm the trades executed in September 2013 and January 2014 were priced in line with the time stamp and spreads agreed.

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