

Equity Post-Transition Implementation Shortfall Analysis
Kent County Council

Base Currency: GBP

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Prepared for Kent County Council

February 27, 2014

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Executive Summary

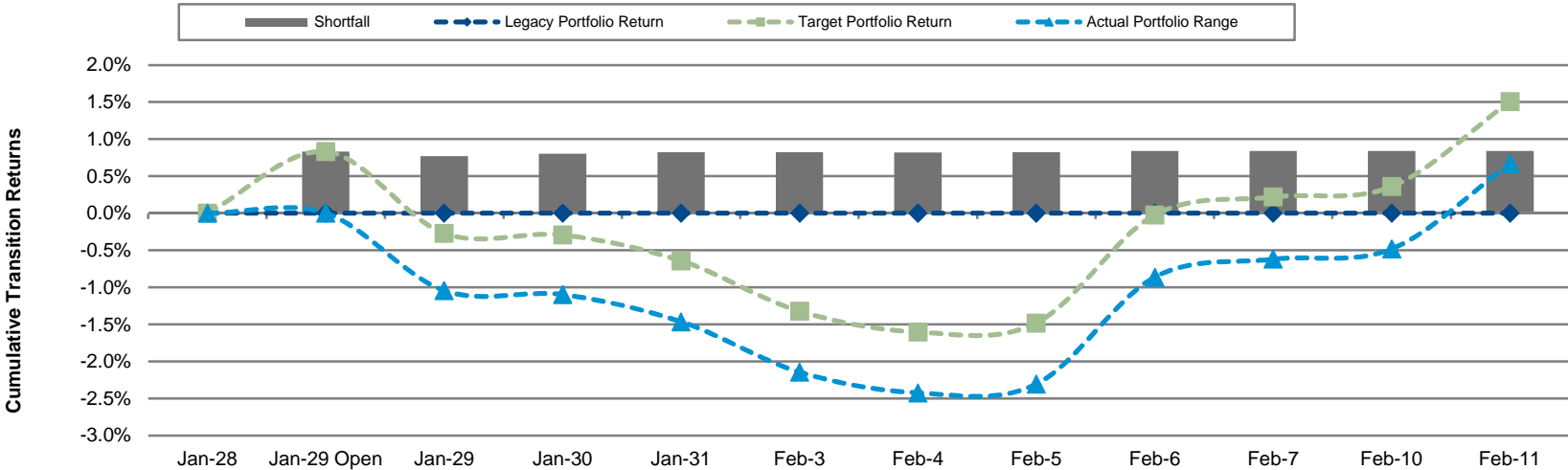
State Street Global Markets ("State Street") was appointed to manage the transition for Kent County Council where a legacy cash disinvestment was transitioned to SSgA. Transition trading began on Jan 29, 2014 and was managed at SSGM until the close on Feb 10, 2014. State Street has provided this report to detail the cost of the transition, the returns of the portfolios involved, the trading strategies utilized and the market conditions that took place during the transition. We have also reconciled the actual transition activity to the estimated results in our pre trade analysis. * Trades that fall outside the transition period may not be reflected in this report.

Implementation Shortfall Summary

Implementation Shortfall, or IS, calculates the cost of a transition event as the amount of performance slippage incurred as a result of the move. Performance slippage is defined as the actual transition return achieved versus the return of the target portfolios, assuming the transition occurred instantaneously without any costs.

Implementation Shortfall Summary

	Starting Value	Ending Value	Gain/Loss	Performance
Kent County Council Portfolio	528,412,748	531,936,234	3,523,485	0.67%
Target Portfolio	528,412,748	536,375,951	7,963,203	1.51%
Legacy Portfolio	528,412,748	528,412,748	-	0.00%
Implementation Shortfall (Target Return - Kent County C				0.84%



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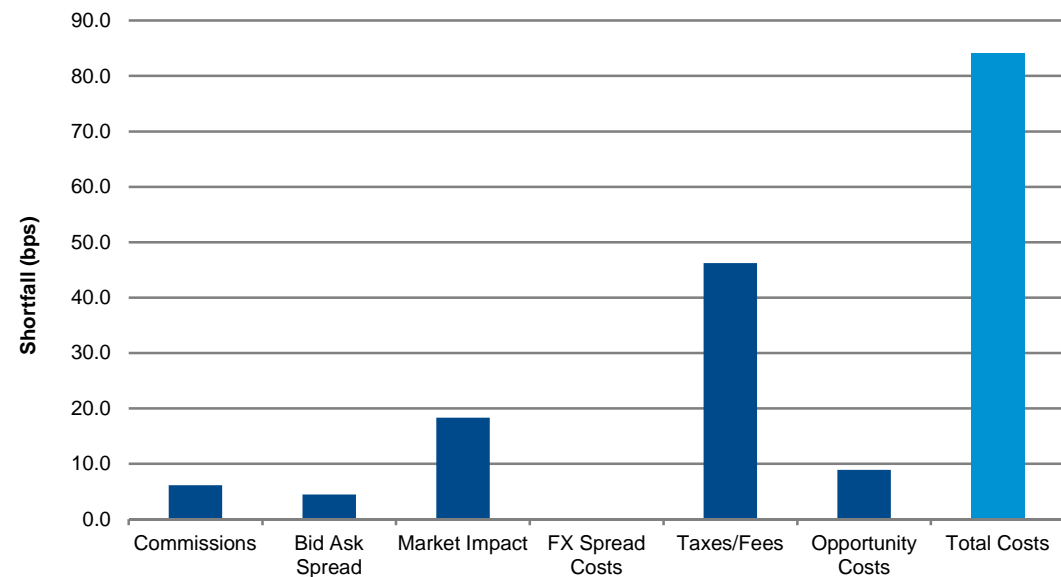
Implementation Shortfall Attribution

In this section, we attribute the costs to their various sources. A summary of these costs and how they are calculated are as follows:

1. **Commissions** – The total amount of commissions charged for all trades in the transition. [Calc: sum of all commissions]
2. **Bid Ask Spread** – The difference between the mid-point of the bid and ask for each security versus the actual execution price. [Calc: Each Execution Price vs. Mid point at that time]
3. **Market Impact** – The cost associated with accessing liquidity for larger orders. [Calc: k-coefficient * (Relative Trade Size) ^ Exponent]
4. **FX Spread Costs** – The estimated spread cost associated with reallocating currency. [Calc: FX execution price vs. WM Mid Rate]
5. **Taxes/Fees** - The total local taxes/fees paid to execute all trading. [Calc: sum of all taxes/fees]
6. **Opportunity Costs** – The timing cost of the transition due to tracking error between buys and sells. [Calc: Total Shortfall for each name less commissions, bid ask spread, market impact, FX spread costs and taxes/fees]

Implementation Shortfall Attribution

	Actual Cost	Basis Points
Commissions	324,346	6.14
Bid Ask Spread	235,726	4.46
Market Impact	967,588	18.31
FX Spread Costs	-	-
Taxes/Fees	2,442,817	46.23
Opportunity Costs	469,239	8.88
Total Costs	4,439,718	84.02



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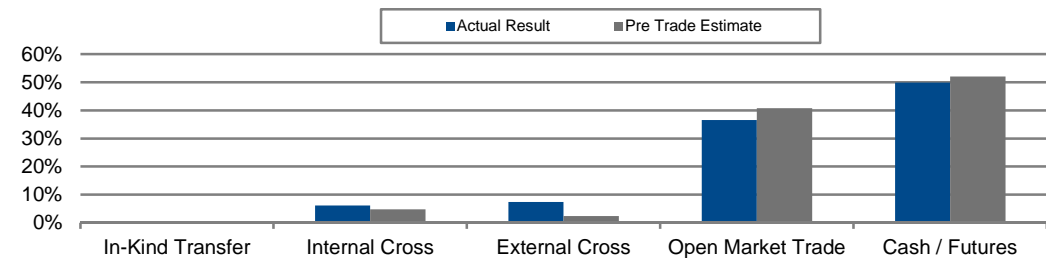
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Reconciliation to Pre Trade Analysis

State Street provided a pre trade analysis that estimated the cost of the transition prior to the start of the trade. In addition we estimated the allocation of trading across different execution methods. In the graphs and tables below we have compared the actual results to our pre trade estimates.

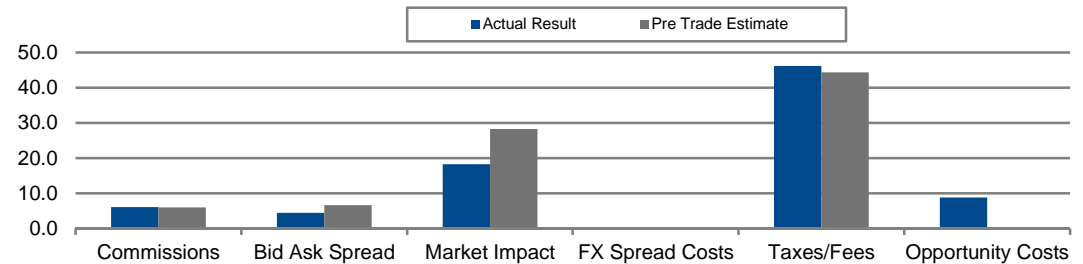
Trading By Execution Method

	Actual Result	Pre Trade Estimate	Variance
In-Kind Transfer	0.0%	0.0%	0.0%
Internal Cross	6.1%	4.8%	1.4%
External Cross	7.4%	2.4%	5.0%
Open Market Trade	36.6%	40.7%	-4.2%
Cash / Futures	49.9%	52.1%	-2.2%



Cost Attribution in bps

	Actual Result	Pre Trade Estimate	Variance
Commissions	6.14	5.98	0.16
Bid Ask Spread	4.46	6.65	(2.19)
Market Impact	18.31	28.25	(9.94)
FX Spread Costs	-	-	-
Taxes/Fees	46.23	44.33	1.90
Opportunity Costs	8.88	-	8.88
Total Costs	84.02	85.22	(1.20)



Trading Costs Distribution

Actual Cost of Transition	84.02
Pre-Trade Estimates	
Mean Cost of Transition (bps)	85.22
One Standard Deviation Event +/- bps from mean	44.43
Two Standard Deviation Event +/- bps from mean	88.87

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Implementation Shortfall Attribution - Target Portfolio

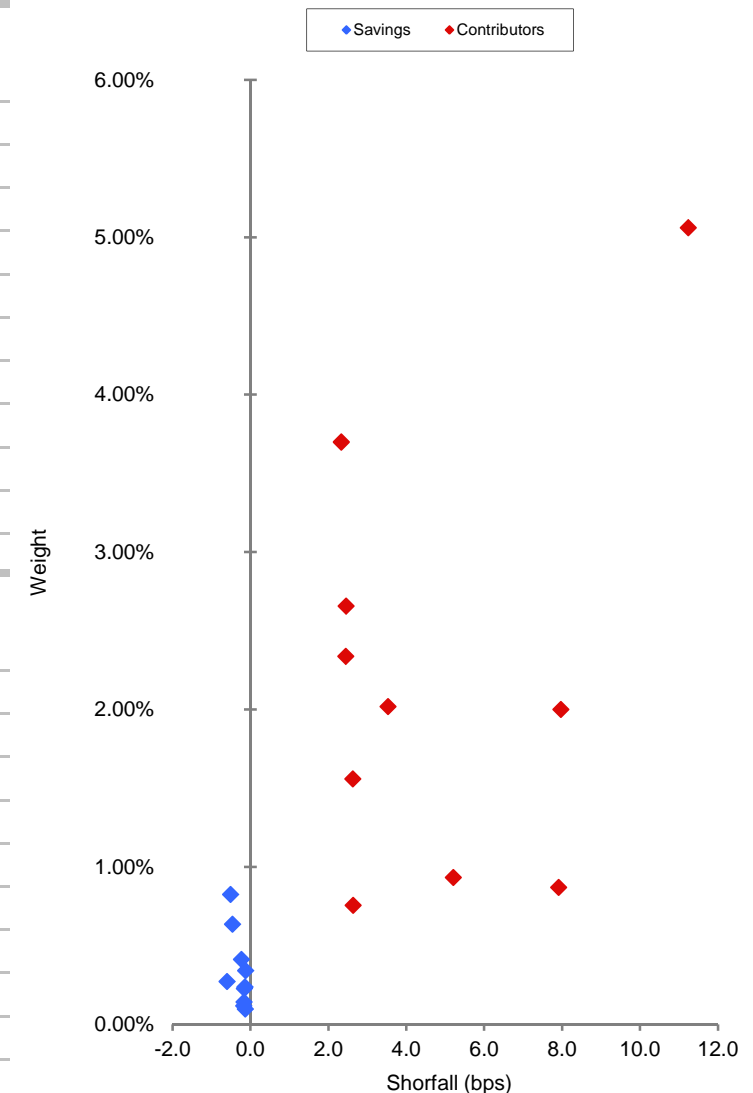
In this section, we detail the actual securities that contributed most to the total implementation shortfall of the transition. This section deals solely with the target portfolio.

Target Portfolio - Largest Savings to Shortfall

Name	Value Traded	Weight	Shortfall	Shortfall (bps)
GREENCOAT UK WIND PLC	1,480,387	0.27%	(31,733)	(0.60)
SHIRE PLC	4,225,413	0.83%	(26,951)	(0.51)
AVIVA PLC	3,376,790	0.64%	(24,172)	(0.46)
BRITISH SKY BROADCASTING GRO	2,124,399	0.41%	(12,236)	(0.23)
PENNON GROUP PLC	636,477	0.12%	(9,160)	(0.17)
COCA-COLA HBC AG-CDI	811,655	0.14%	(8,707)	(0.16)
SAINSBURY (J) PLC	1,241,938	0.23%	(8,153)	(0.15)
UNITED UTILITIES GROUP PLC	1,241,204	0.24%	(7,377)	(0.14)
BTG PLC	528,261	0.10%	(6,983)	(0.13)
BACIT LTD	1,803,292	0.34%	(6,673)	(0.13)

Target Portfolio - Largest Contributors to Shortfall

Name	Value Traded	Weight	Shortfall	Shortfall (bps)
VODAFONE GROUP PLC	27,955,706	5.06%	593,596	11.23
BARCLAYS PLC	11,500,288	2.00%	420,900	7.97
CARPHONE WAREHOUSE GROUP PLC	4,713,382	0.87%	418,103	7.91
ANGLO AMERICAN PLC	4,679,865	0.93%	275,334	5.21
RIO TINTO PLC	10,241,890	2.02%	186,646	3.53
ENTERTAINMENT ONE LTD	3,726,672	0.76%	139,448	2.64
PRUDENTIAL PLC	8,276,648	1.56%	139,075	2.63
ROYAL DUTCH SHELL PLC-B SHS	14,108,826	2.66%	129,839	2.46
ASTRAZENECA PLC	12,318,826	2.34%	129,350	2.45
ROYAL DUTCH SHELL PLC-A SHS	19,775,269	3.70%	123,359	2.33



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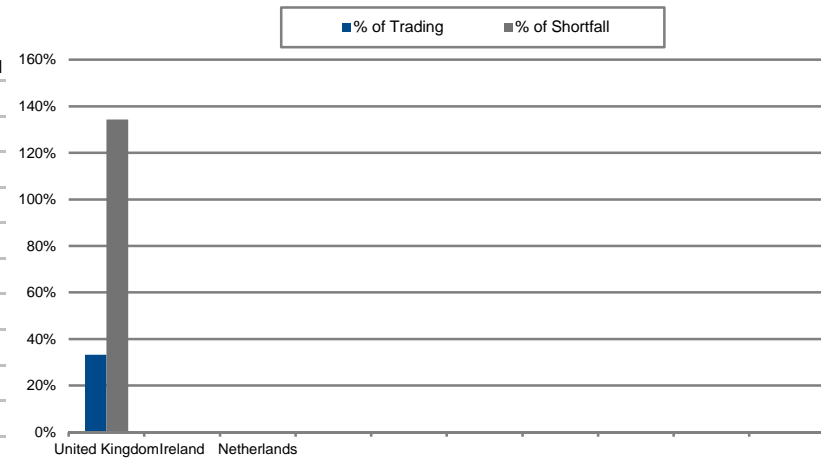
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Implementation Shortfall Attribution - Country and Sector

In this section we detail the countries who had the largest contribution to shortfall as well as the sectors and their contribution to shortfall. In addition we graphically detail each country's weight of trading and its corresponding contribution to shortfall.

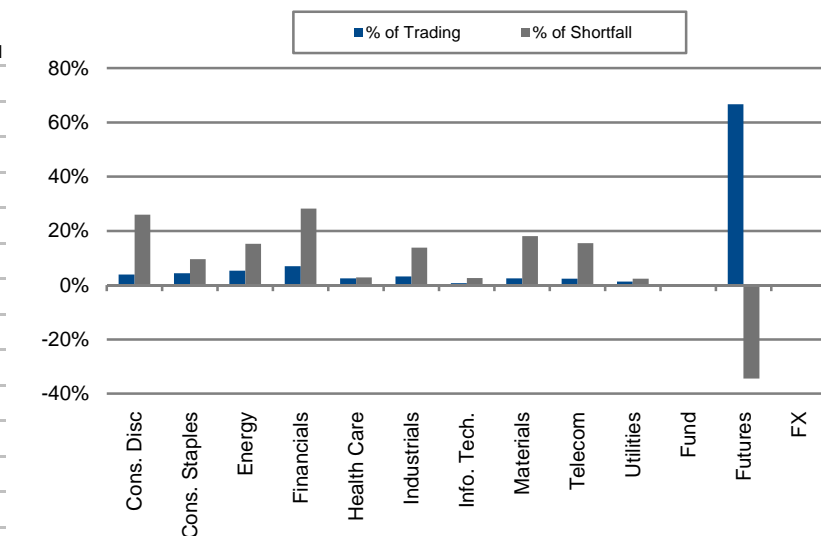
Top 10 Countries with largest Contribution to Shortfall

Country	Total Trading	Shortfall	% of Trading	% of Shortfall
United Kingdom	528,606,229	5,961,593	33.28%	134.28%
Ireland	149,218	3,867	0.01%	0.09%
Netherlands	950,493	3,238	0.06%	0.07%
		-		
		-		
		-		
		-		
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Implementation Shortfall by Sector

Sector	Total Trading	Shortfall	% of Trading	% of Shortfall
Consumer Discretionary	61,822,450	1,154,631	3.89%	26.01%
Consumer Staples	69,212,296	424,503	4.36%	9.56%
Energy	84,104,280	676,072	5.30%	15.23%
Financials	110,685,449	1,253,842	6.97%	28.24%
Health Care	40,113,640	124,344	2.53%	2.80%
Industrials	50,841,909	615,823	3.20%	13.87%
Information Technology	10,815,725	115,686	0.68%	2.61%
Materials	38,882,972	800,210	2.45%	18.02%
Telecommunication Services	37,302,488	685,004	2.35%	15.43%
Utilities	20,396,604	103,151	1.28%	2.32%
Fund	5,528,127	15,432	0.35%	0.35%
Futures	1,058,578,628	(1,528,960)	66.65%	-34.44%
FX	-	(20)	0.00%	-0.00%



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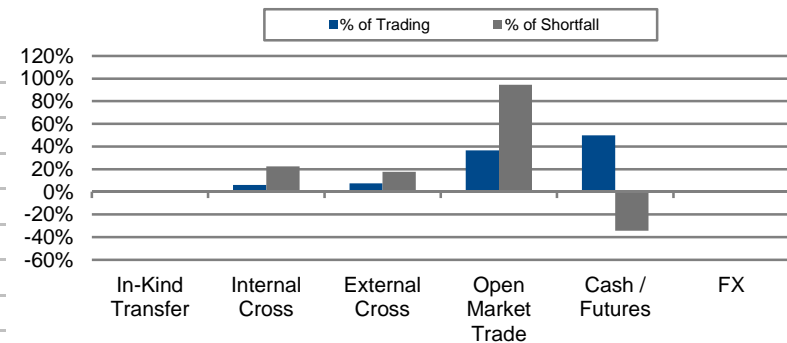
Trading Methodology

State Street utilizes four major sources of liquidity when executing transitions. We have detailed what these execution sources are below and also detailed what we allocated to each one of these categories:

1. **In-Kind Transfer** – Assets that are common to the legacy portfolio and the target portfolio. There are no costs associated with these trades.
2. **Internal Cross** – Assets that are crossed internally at State Street. These trades are crossed against other State Street clients and SSgA Index funds.
3. **External Cross** – Assets that are executed on blind external crossing networks, BlockCross or dark pools.
4. **Open Market Trading** – Assets that are executed in the market with State Street acting as agent.

Implementation Shortfall by Execution Method

	Securities	Shares	Market Value	% of Trading	Explicit Cost (bps)	Implicit Cost (bps)
In-Kind Transfer	-	-	-	0.00%	-	-
Internal Cross	95	9,816,498	64,974,100	6.15%	5.80	13.14
External Cross	303	13,631,381	78,311,370	7.41%	7.63	7.10
Open Market Trade	615	85,606,978	386,420,470	36.56%	36.79	42.50
Cash / Futures	-	-	527,119,577	49.88%	2.15	(31.08)
FX	-	-	-	0.00%	-	(0.00)
Totals	1,013	109,054,857	1,056,825,517	100.00%	52.37	31.65



Implementation Shortfall by Day

Date	In-Kind Transfer	Internal Cross	ExternalCross	Open Market Trading	Futures	Total Shortfall
Before Jan-31	-	61,495,261	78,298,922	376,467,762	(1,569,492)	4,346,089
03-Feb	-	1,824,405	7,530	1,114,031	(1,508,041)	4,342,168
04-Feb	-	588,194	1,328	347,177	(1,496,288)	4,335,101
05-Feb	-	299,602	-	260,318	(1,508,248)	4,358,920
06-Feb	-	766,637	3,590	8,231,181	(1,528,960)	4,439,718
07-Feb	-	-	-	-	(1,528,960)	4,439,718
10-Feb	-	-	-	-	(1,528,960)	4,439,718
11-Feb	-	-	-	-	(1,528,960)	4,439,718

