

Quality of Execution Study

Forex Capital Markets LTD* Order Execution Compared to FX

Futures and the Interbank Spot FX Market

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Purpose of Study

- The purpose of this study was to compare quality of execution for FXCM Retail Client¹ orders versus the Futures market and the Interbank market for FX. Specifically analyzing the pricing of orders executed at FXCM versus 3 venues: CME, EBS, and Reuters.
- These are 3 of the largest trading venues and are considered the benchmark for FX pricing in the industry.
- The quality of execution advantage provided by FXCM is defined as the difference between the actual
 price at which the FXCM client's order was executed versus the quoted price at which the same order
 could have been executed on the Futures or Interbank market.
- This study is not to suggest that FXCM is better than any one venue. To their credit institutional venues such as the CME, Reuters, EBS provide a valued service in the FX industry and are excellent trading venues.
- Instead this study is meant to show how different customer segments are better suited for different venues.
- Institutional Clients are best suited to compete with each other at the large venues like CME, EBS, and Reuters
- Retail Clients² are better suited for our trading environment and platforms where liquidity providers are able to offer <u>lower pricing</u>³. In fact evidence suggest low percentage of retail volume at these benchmark venues.
- 1. FXCM's Retail Clients are defined as individual, joint, and corporate accounts trading on our retail price stream
- 2. Ibid.
- 3. Fees that a participant would pay on the Futures or Interbank market, such as CME Exchange Fees, NFA Fees, FCM Fees, Clearing Fees, and other commissions, were excluded from this study. Similarly, FXCM Commissions were excluded from this study.



- The quality of execution for FXCM <u>Retail Client</u> orders is <u>better</u> than the Futures Market and the Interbank Market for FX⁴.
- The results show FXCM's execution of orders with significant advantages to the Futures and Interbank market for FX with:
 - FXCM equal to or better than the futures price 81.34% of the time
 - FXCM equal to or better than the Interbank price 94.84% of the time
- Why is FXCM's Pricing Better for Retail Clients?
 - Very Important is that our liquidity providers/market makers are <u>only</u> allowed to be price makers for our Retail Clients. Thus only our Retail Clients can take a price from the liquidity provider.
 - This leads to a trading environment in which liquidity providers are able to give better price
 execution. Liquidity providers have the ability to make a market based on quality of price and
 liquidity rather than speed to protect against being picked off by predatory trading from other
 liquidity providers.
 - This trading environment is very different in futures and Interbank markets where high frequency trading can impact quality of execution.
 - Read more details in FAQ #1
- 4. The study does not in away way attempt to represent that FXCM maintains a particular capacity or performance level. Past results are not indicative of future performance



Assumptions and Methodology

Time Period

This study covers the period from October 1, 2014 to March 31, 2016.

Client Coverage

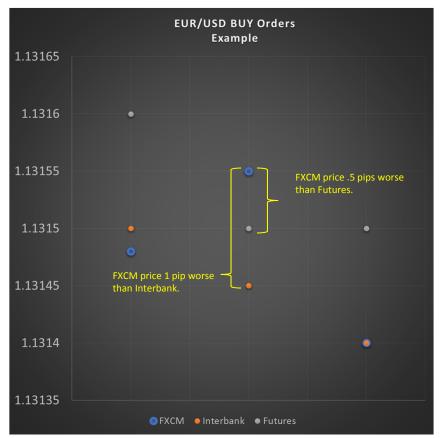
This study is based on the trade data of FXCM LTD clients on NDD forex execution.

Assumption and Methodology

Assumptions made during the course of this study were designed to favor the Futures market or Interbank market in their comparison to FXCM order execution. A more indepth description of the methodology and assumptions made is included at the end of this presentation.

Fees that a participant would pay on the Futures or Interbank market, such as CME Exchange Fees, NFA Fees, FCM Fees, Clearing Fees, and other commissions, were excluded from this study. Similarly, FXCM Commissions were excluded from this study.



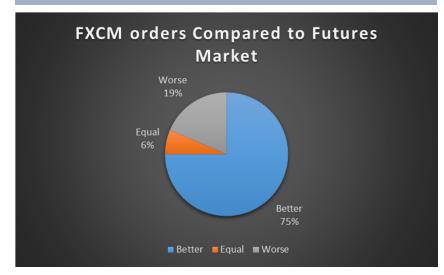


Order	Amount	FXCM	Interbank	Futures	\$ Saved vs. Futures	\$ Saved vs. Interbank
Order 1	120,000	1.13148	1.1315	1.1316	\$ 14.40	\$ 2.40
Order 2	300,000	1.13155	1.13145	1.1315	\$ (15.00)	\$ (30.00)
Order 3	250,000	1.1314	1.1314	1.1315	\$ 25.00	\$ -

Comparison	% orders Better	% orders Equal		\$ Savings to FXCM LLC clients
Interbank	33.33%	33.33%	33.33%	\$ (27.60)
Futures	66.67%	0.00%	33.33%	\$ 24.40

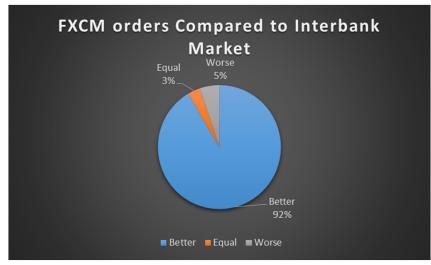


FUTURES



Estimated savings to FXCM clients: \$42,529,156

INTERBANK



Estimated savings to FXCM clients: \$114,588,455

Part 1

Futures Pricing vs. FXCM Pricing



Results – Futures Market Comparison

Percent of orders where FXCM order price was:

Better than the quoted⁵ Futures price: 74.97%

Equal to the quoted Futures price: 6.37%

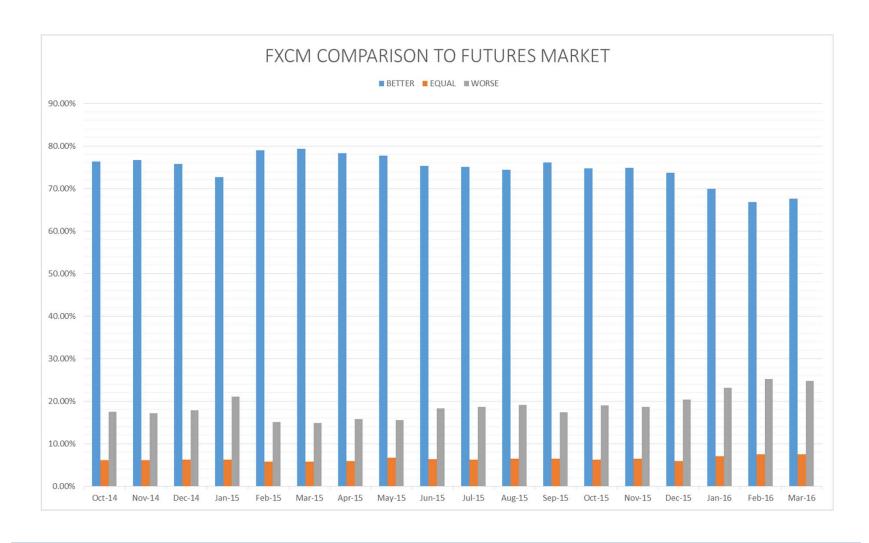
Worse than the quoted Futures price: 18.61%

- FXCM was equal to or better than the Futures price 81.34% of the time
- Estimated savings to FXCM clients: \$42,529,156
- Average savings per Order: \$1.02
- Number of orders included in the study: 41,559,576

^{5.} The comparison to each of the Futures and Interbank data is made at the time that the FXCM client order is executed. Normal market slippage and slippage due to rejections by liquidity providers are already included by the time the FXCM client order is executed.



Results – Futures Market Monthly Comparison





Results – Futures Market Monthly Comparison Continued

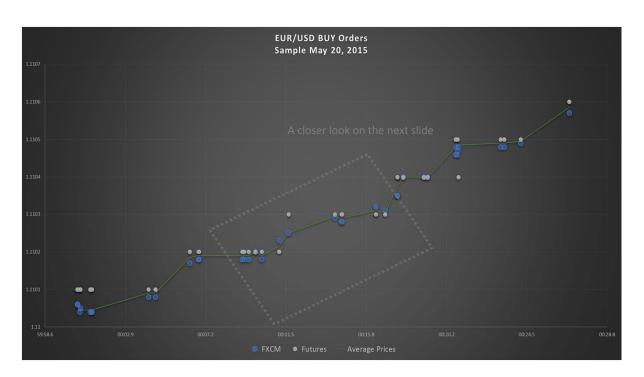
	TOTAL	BETTEI	2	EQU	JAL	WOR	SE	
Month	Orders	Orders	Pct.	Orders	Pct.	Orders	Pct.	ESTIMATED \$ SAVINGS
Oct-14	2,977,289	2,274,286	76.39%	182,137	6.12%	520,499	17.48%	\$ 3,518,624.33
Nov-14	2,828,975	2,168,836	76.67%	173,075	6.12%	486,278	17.19%	\$ 3,474,931.46
Dec-14	2,918,241	2,211,645	75.79%	183,293	6.28%	521,325	17.86%	\$ 3,040,698.82
Jan-15	2,275,640	1,653,830	72.68%	143,312	6.30%	478,433	21.02%	\$ 1,910,664.92
Feb-15	2,240,315	1,770,560	79.03%	130,143	5.81%	339,270	15.14%	\$ 2,287,487.38
Mar-15	3,280,452	2,601,617	79.31%	189,249	5.77%	489,443	14.92%	\$ 3,640,150.47
Apr-15	3,141,506	2,460,001	78.31%	185,000	5.89%	496,248	15.80%	\$ 3,279,198.79
May-15	2,326,423	1,807,739	77.70%	156,131	6.71%	362,338	15.57%	\$ 2,084,692.99
Jun-15	2,520,243	1,896,458	75.25%	160,507	6.37%	462,033	18.33%	\$ 2,267,333.19
Jul-15	2,273,853	1,706,570	75.05%	142,618	6.27%	424,570	18.67%	\$ 2,092,303.57
Aug-15	2,182,671	1,623,329	74.37%	142,283	6.52%	416,757	19.09%	\$ 2,129,746.03
Sep-15	1,466,629	1,115,361	76.05%	94,537	6.45%	254,509	17.35%	\$ 1,913,320.93
Oct-15	1,581,757	1,181,891	74.72%	98,975	6.26%	300,845	19.02%	\$ 2,046,179.43
Nov-15	1,452,315	1,086,816	74.83%	93,488	6.44%	270,875	18.65%	\$ 2,207,775.29
Dec-15	1,592,428	1,172,929	73.66%	94,611	5.94%	324,736	20.39%	\$ 1,874,887.30
Jan-16	1,984,481	1,387,043	69.89%	138,945	7.00%	458,452	23.10%	\$ 1,637,173.38
Feb-16	2,039,243	1,362,748	66.83%	153,019	7.50%	513,689	25.19%	\$ 1,486,266.20
Mar-16	2,477,115	1,675,224	67.63%	187,388	7.56%	614,417	24.80%	\$ 1,637,721.93
Total	41,559,576	31,156,883	74.97%	2,648,711	6.37%	7,734,717	18.61%	\$ 42,529,156.41



		% FXCM Better or	\$ Savings to FXCM	Average Savings per
Instrument	Total Orders	Equal	Clients	Order
AUD/USD	4,070,440	73.96%	3,364,204	\$ 0.83
EUR/USD	18,931,680	75.34%	19,946,052	\$ 1.05
GBP/USD	6,614,327	71.96%	5,493,762	\$ 0.83
NZD/USD	1,916,538	70.71%	1,478,579	\$ 0.77
USD/CAD	3,444,830	80.49%	4,729,761	\$ 1.37
USD/CHF	835,921	71.59%	684,516	\$ 0.82
USD/JPY	5,745,840	76.53%	6,832,282	\$ 1.19
Grand Total	41,559,576	74.97%	\$42,529,156.41	\$ 1.02



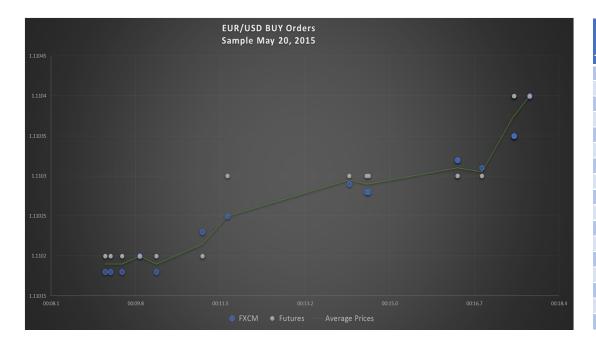
Examples – Futures Comparison, Data Sample EUR/USD



- This chart displays a selected set of EUR/USD Buy Orders during a 28 second period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 63 orders in a 28 second period
- The FXCM price was better on 77.8% of the orders
- The quoted Futures price was better on 15.9% of the orders.
- The total amount saved was \$27.04, or \$0.43 per order.
- The largest amount saved on a single order was \$5.00.
- The largest amount lost on a single order was \$1.60.



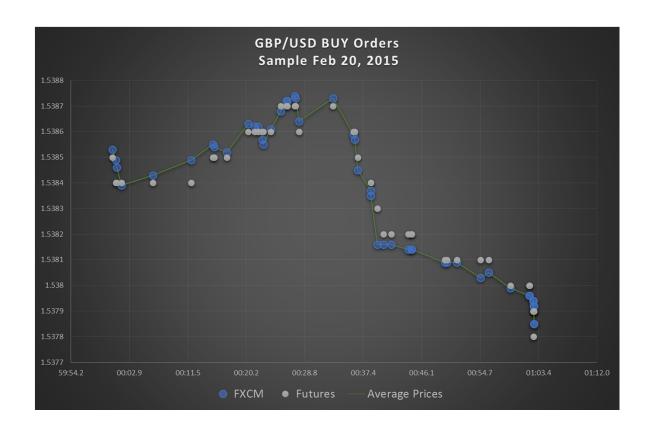


				\$ S	aved
				vs.	
Time	Amount	FXCM	Futures	Fut	ures
00:09.2	5000	1.11018	1.1102	\$	0.10
00:09.3	1000	1.11018	1.1102	\$	0.02
00:09.5	1000	1.11018	1.1102	\$	0.02
00:09.9	10000	1.1102	1.1102	\$	-
00:10.2	10000	1.11018	1.1102	\$	0.20
00:11.2	1000	1.11023	1.1102	\$	(0.03)
00:11.7	100000	1.11025	1.1103	\$	5.00
00:14.1	1000	1.11029	1.1103	\$	0.01
00:14.5	1000	1.11028	1.1103	\$	0.02
00:14.5	1000	1.11028	1.1103	\$	0.02
00:16.4	24000	1.11032	1.1103	\$	(0.48)
00:16.4	3000	1.11032	1.1103	\$	(0.06)
00:16.9	1000	1.11031	1.1103	\$	(0.01)
00:17.5	3000	1.11035	1.1104	\$	0.15
00:17.5	12000	1.11035	1.1104	\$	0.60
00:17.5	1000	1.11035	1.1104	\$	0.05
00:17.8	1000	1.1104	1.1104	\$	-

17 Orders in 8.6 Seconds TOTAL SAVINGS: **\$5.61**



Examples – Futures Comparison, Data Sample GBP/USD

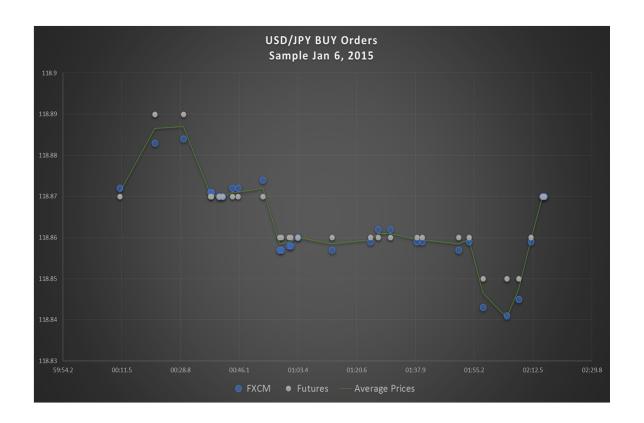


- This chart displays a selected set of GBP/USD Buy Orders during a 1 minute period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 72 orders in a 1 minute period
- The FXCM price was better on 68% of the orders.
- The quoted Futures price was better on 32% of the orders.
- The total amount saved was \$2.54, or \$0.04 per order.
- The largest amount saved on a single order was \$7.00.
- The largest amount lost on a single order was \$5.40.



Examples – Futures Comparison, Data Sample USD/JPY



- This chart displays a selected set of USD/JPY Buy Orders during a 3 minute period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 46 orders in a 3 minute period
- The FXCM price was better on 48% of the orders
- The quoted Futures price was better on 30% of the orders.
- The total amount saved was \$4.33, or \$0.09 per order.
- The largest amount saved on a single order was \$2.96.
- The largest amount lost on a single order was \$1.69.



Futures Summary

- FXCM order price was equal to or better than the spot equivalent quoted futures prices on the CME **81.34%** of the time leading to potential savings of **\$42,529,156** for FXCM clients.
- FXCM's liquidity providers provide better pricing to our Retail Clients because our liquidity providers (also known as market makers) are only allowed to be price makers on our Retail Client stream, and only a Retail Client can take a price from the liquidity provider.
- This gives our liquidity providers the ability to make a market based on quality of price and liquidity rather than speed to protect against being picked off by predatory trading from other liquidity providers.



Frequently Asked Questions

Frequently Asked Questions: Visit the <u>Execution Study FAQ</u> for detailed answers to the following questions and more

- Exactly how is FXCM able to be more competitive than the futures & institutional market?
- How does the commission and spread cost at FXCM compare to the futures market?
- How do you take into account the fact that it is possible to avoid paying the spread in the futures market?
- How were futures prices converted to spot prices for comparison?
- What does the study mean by liquidity normalization?

Part 2

Interbank Pricing vs. FXCM Pricing



Results – Interbank Market Comparison

Percent of orders where FXCM order price was:

Better than the quoted⁶ Interbank price: 91.56%

Equal to the quoted Interbank price: 3.27%

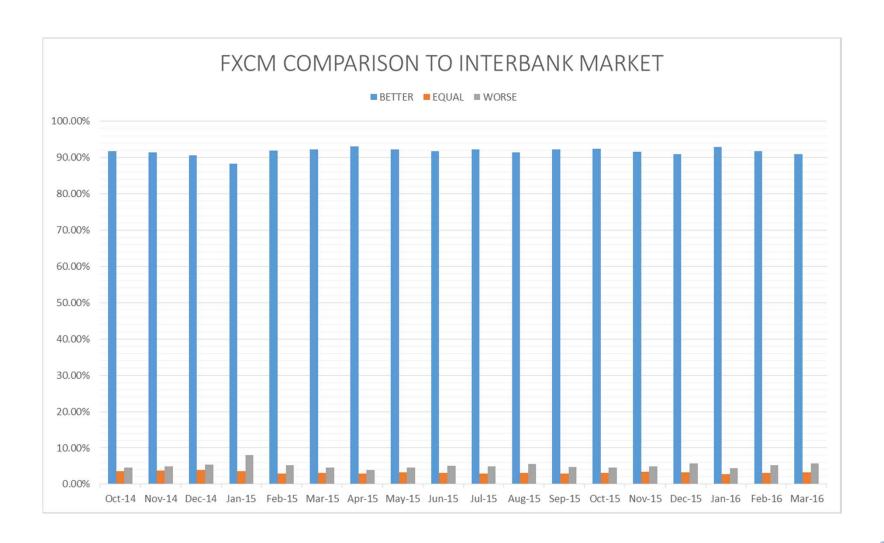
Worse than the quoted Interbank price: 5.16%

- FXCM was equal to or better than the Interbank price 94.84% of the time
- Estimated savings to FXCM clients: \$114,588,455
- Average savings per Order: \$1.85
- Number of orders included in the study: 61,853,010

^{6.} The comparison to each of the Futures and Interbank data is made at the time that the FXCM client order is executed. Normal market slippage and slippage due to rejections by liquidity providers are already included by the time the FXCM client order is



Results – Interbank Market Monthly Comparison





Results – Interbank Market Monthly Comparison Continued

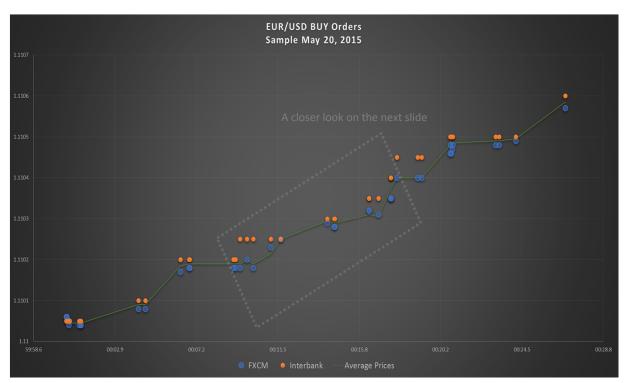
	TOTAL	BETT	ER	EQUA	AL	WOR	SE	
Month	Orders	Orders	Pct.	Orders	Pct.	Orders	Pct.	ESTIMATED \$ SAVINGS
Oct-14	4,301,714	3,947,401	91.76%	157,513	3.66%	196,800	4.57%	\$ 7,992,520.36
Nov-14	4,065,439	3,714,341	91.36%	151,191	3.72%	199,907	4.92%	\$ 7,367,999.13
Dec-14	4,304,150	3,901,879	90.65%	168,654	3.92%	233,617	5.43%	\$ 7,592,407.53
Jan-15	4,675,297	4,128,236	88.30%	171,253	3.66%	375,808	8.04%	\$ 7,055,649.75
Feb-15	3,284,883	3,016,778	91.84%	94,178	2.87%	173,927	5.29%	\$ 5,696,593.35
Mar-15	4,534,861	4,180,422	92.18%	144,266	3.18%	210,173	4.63%	\$ 7,787,445.03
Apr-15	4,167,041	3,880,565	93.13%	121,615	2.92%	164,861	3.96%	\$ 7,650,329.85
May-15	3,576,376	3,297,550	92.20%	117,116	3.27%	161,710	4.52%	\$ 6,183,520.47
Jun-15	3,611,519	3,315,590	91.81%	112,001	3.10%	183,928	5.09%	\$ 6,287,302.02
Jul-15	3,301,981	3,043,989	92.19%	95,796	2.90%	162,196	4.91%	\$ 5,868,404.60
Aug-15	3,065,208	2,800,983	91.38%	93,123	3.04%	171,102	5.58%	\$ 5,667,302.34
Sep-15	2,751,604	2,538,155	92.24%	82,879	3.01%	130,570	4.75%	\$ 5,985,999.89
Oct-15	2,321,743	2,144,161	92.35%	72,426	3.12%	105,156	4.53%	\$ 6,098,970.06
Nov-15	2,079,097	1,904,135	91.58%	72,261	3.48%	102,701	4.94%	\$ 5,329,781.32
Dec-15	2,192,346	1,993,870	90.95%	73,078	3.33%	125,398	5.72%	\$ 4,483,111.68
Jan-16	2,820,621	2,618,200	92.82%	79,068	2.80%	123,353	4.37%	\$ 5,488,638.95
Feb-16	3,457,904	3,169,875	91.67%	107,273	3.10%	180,756	5.23%	\$ 6,428,509.76
Mar-16	3,341,226	3,038,433	90.94%	111,745	3.34%	191,048	5.72%	\$ 5,623,969.33
Total	61,853,010	56,634,563	91.56%	2,025,436	3.27%	3,193,011	5.16%	\$ 114,588,455.43



					Average	
		% FXCM Better	\$5	Savings to FXCM	Savings p	er
Instrument	Total Orders	or Equal	Cli	ents	Order	
AUD/CAD	495,365	96.53%	\$	828,347.25	\$	1.67
AUD/CHF	120,395	96.24%	\$	181,894.54	\$	1.51
AUD/JPY	881,650	98.10%	\$	1,898,179.84	\$	2.15
AUD/NZD	542,175	97.04%	\$	1,932,119.15	\$	3.56
AUD/USD	4,464,403	91.27%	\$	7,368,673.25	\$	1.65
CAD/CHF	84,415	95.54%	\$	145,473.58	\$	1.72
CAD/JPY	421,346	97.70%	\$	625,757.78	\$	1.49
CHF/JPY	237,593	95.70%	\$	263,945.13	\$	1.11
EUR/AUD	1,227,249	97.89%	\$	3,369,510.06	\$	2.75
EUR/CAD	656,537	97.32%	\$	1,494,499.52	\$	2.28
EUR/CHF	360,403	77.80%	\$	520,258.06	\$	1.44
EUR/GBP	1,733,104	83.48%	\$	2,183,403.18	\$	1.26
EUR/JPY	2,279,766	97.09%	\$	4,757,483.76	\$	2.09
EUR/NZD	476,240	95.65%	\$	1,309,152.55	\$	2.75
EUR/USD	20,673,957	88.58%	\$	27,514,614.42	\$	1.33
GBP/AUD	1,056,212	98.24%	\$	3,651,261.26	\$	3.46
GBP/CAD	522,584	97.72%	\$	1,543,065.54	\$	2.95
GBP/CHF	244,913	97.44%	\$	623,041.00	\$	2.54
GBP/JPY	3,461,698	97.88%	\$	12,223,621.45	\$	3.53
GBP/NZD	667,037	96.06%	\$	2,075,921.45	\$	3.11
GBP/USD	7,184,769	93.15%	\$	17,776,079.53	\$	2.47
NZD/CAD	212,669	95.27%	\$	491,760.12	\$	2.31
NZD/CHF	66,979	95.18%	\$	79,065.08	\$	1.18
NZD/JPY	570,975	96.29%	\$	811,239.24	\$	1.42
NZD/USD	2,119,272	90.42%	\$	3,857,745.50	\$	1.82
USD/CAD	3,742,649	92.11%	\$	7,558,227.15	\$	2.02
USD/CHF	954,550	90.22%	\$	1,318,473.60	\$	1.38
USD/JPY	6,394,105	90.03%	\$	8,185,642.44	\$	1.28
Grand Total	61,853,010	91.56%	\$	114,588,455.43	\$	1.85



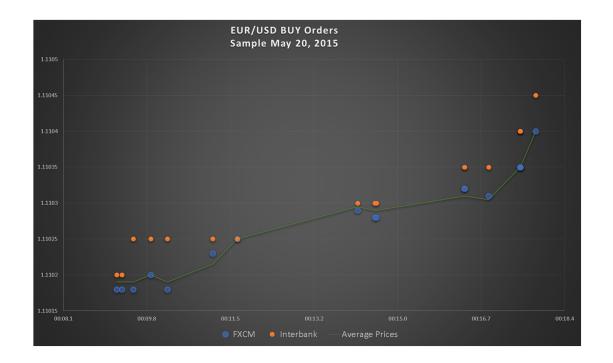
Examples – Interbank Comparison, Data Sample EUR/USD



- This chart displays a selected set of EUR/USD Buy Orders during a 28 second period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 63 orders in a 28 second period
- The FXCM price was better on 93.7% of the orders
- The quoted Interbank Price was better on 3.2% of the orders.
- The total amount saved was \$20.19, or \$0.32 per order.
- The largest amount saved on a single order was \$5.25.
- The largest amount lost on a single order was \$0.32.



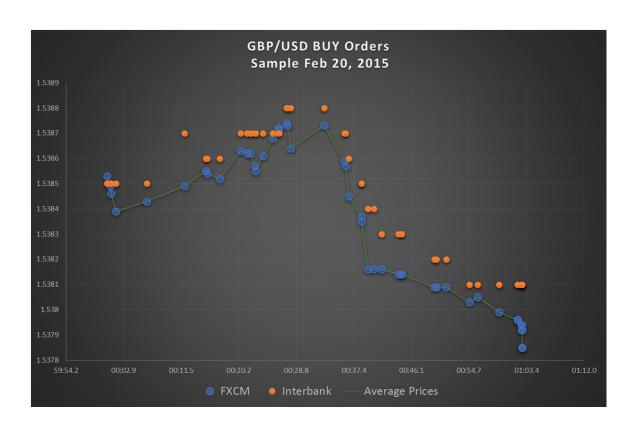


Time Amount FXCM Interbank \$ Saved vs. Interbank 00:09.2 5000 1.11018 1.1102 \$ 0.10 00:09.3 1000 1.11018 1.1102 \$ 0.02 00:09.5 1000 1.11018 1.11025 \$ 0.07 00:09.9 10000 1.1102 1.11025 \$ 0.50 00:10.2 10000 1.11018 1.11025 \$ 0.70 00:11.2 1000 1.11023 1.11025 \$ 0.02
Time Amount FXCM Interbank vs. Interbank 00:09.2 5000 1.11018 1.1102 \$ 0.10 00:09.3 1000 1.11018 1.1102 \$ 0.02 00:09.5 1000 1.11018 1.11025 \$ 0.07 00:09.9 10000 1.1102 1.11025 \$ 0.50 00:10.2 10000 1.11018 1.11025 \$ 0.70 00:11.2 1000 1.11023 1.11025 \$ 0.02
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00:09.9 10000 1.1102 1.11025 \$ 0.50 00:10.2 10000 1.11018 1.11025 \$ 0.70 00:11.2 1000 1.11023 1.11025 \$ 0.02
00:10.2 10000 1.11018 1.11025 \$ 0.70 00:11.2 1000 1.11023 1.11025 \$ 0.02
00:11.2 1000 1.11023 1.11025 \$ 0.02
00:11.7 100000 1.11025 1.11025 \$ -
00:14.1 1000 1.11029 1.1103 \$ 0.01
00:14.5 1000 1.11028 1.1103 \$ 0.02
00:14.5 1000 1.11028 1.1103 \$ 0.02
00:16.4 24000 1.11032 1.11035 \$ 0.72
00:16.4 3000 1.11032 1.11035 \$ 0.09
00:16.9 1000 1.11031 1.11035 \$ 0.04
00:17.5 3000 1.11035 1.1104 \$ 0.15
00:17.5 12000 1.11035 1.1104 \$ 0.60
00:17.5 1000 1.11035 1.1104 \$ 0.05
00:17.8 1000 1.1104 1.11045 \$ 0.05

17 Orders in 8.6 Seconds TOTAL SAVINGS: \$3.16



Examples – Interbank Comparison, Data Sample GBP/USD

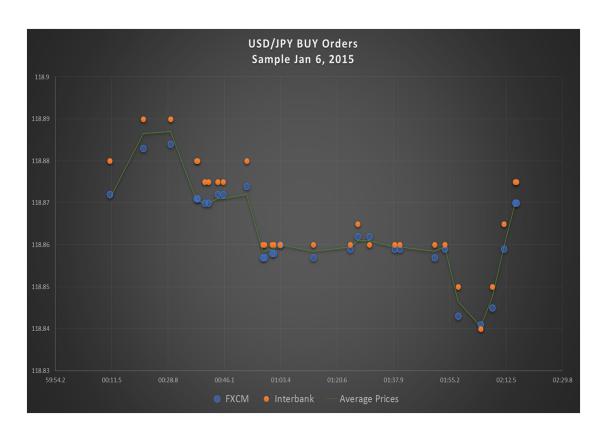


- This chart displays a selected set of GBP/USD Buy Orders during a 1 minute period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 72 orders in a 1 minute period
- The FXCM price was better on 96% of the orders
- The quoted Interbank price was better on 4% of the orders.
- The total amount saved was \$171.74 or \$2.39 per order.
- The largest amount saved on a single order was \$45.00.
- The largest amount lost on a single order was \$0.20.



Examples – Interbank Comparison, Data Sample USD/JPY



- This chart displays a selected set of USD/JPY Buy Orders during a 3 minute period.
- The LOWER the dot, the BETTER the execution price of the order.
- The green line indicates the trend in the market prices at the time.

- 46 orders in a 3 minute period
- The FXCM price was better on 87% of the orders
- The quoted Interbank price was better on 7% of the orders.
- The total amount saved was \$19.36, or \$0.42 per order.
- The largest amount saved on a single order was \$2.96.
- The largest amount lost on a single order was \$1.69.



Interbank Summary and Related Questions

- FXCM order price was equal to or better than the quoted Interbank price 94.84% of the time compared to the spot equivalent quoted futures prices on the CME leading to potential savings of \$114,588,455 for FXCM clients.
- FXCM's liquidity providers provide better pricing to our Retail Clients because our liquidity providers (also known as market makers) are only allowed to be price makers on our Retail Client stream, and only a Retail Client can take a price from the liquidity provider.
- This gives our liquidity providers the ability to make a market based on quality of price and liquidity rather than speed to protect against being picked off by predatory trading from other liquidity providers.



Frequently Asked Questions

Frequently Asked Questions: Visit the <u>Execution Study FAQ</u> for detailed answers to the following questions and more

- How is FXCM able to be more competitive than the futures & institutional market?
- If FXCM's liquidity providers are also participants in the institutional market, why would they give better pricing to retail traders compared to the institutional market?
- How is 'last look' being considered in this study and how would it impact execution?
- If FXCM's pricing is so much better, why don't institutional clients use the platform?
- Would larger trade sizes execute at a better price on futures/institutional market vs. FXCM pricing?



- Differences in Market Dynamics at the Institutional level impact the quality of pricing and execution in the Futures and Interbank market for FX versus the spot retail FX Market.
- It's a speed race at the institutional level. Institutional customers competing with each other to gain the slightest advantage. ex. HFT's placing trades in microseconds
- This creates a very predatory trading environment where mistakes for liquidity providers are costly.
- Thus the safer route for liquidity providers is to quote smaller trade sizes at wider prices to manage the risk of being picked off.
- AT FXCM, liquidity providers on our retail client stream are only allowed to be price makers, and only a Retail Client can take a price from the liquidity provider. This gives them the ability to make a market based on quality of price and liquidity for our Retail Clients rather than speed to protect against predatory trading from other liquidity providers.

Conclusion: The quality of execution for FXCM client's orders is <u>better</u> than the Futures Market and the Interbank Market for FX.

Methodology and Assumptions



Methodology and Assumptions

General Assumptions

- The comparison to each of the Futures and Interbank data is made at the time that the FXCM client order is executed. Normal market slippage and slippage due to rejections by liquidity providers are already included in the FXCM client order execution price. However, there is an assumption that there is no slippage on the Futures or Interbank quoted price against which it was compared. Accordingly, actual results likely would have been even more favorable to FXCM clients.
- Furthermore, retail market participants in the Futures or Interbank market would be competing with High Frequency Trading firms and other financial institutions. It is more likely that there would be slippage for the average retail client than for those participants on those venues.
- Fees that a participant would pay on the Futures or Interbank market, such as CME Exchange Fees, NFA Fees, FCM Fees, Clearing Fees, and other commissions, are also excluded from this study. Similarly, FXCM Commissions are excluded from this study.
- Exchange membership fees, fixed connectivity fees, and data charges were excluded from this study. Co-location or any other fixed fees that FXCM API clients pay were also excluded from this study.



Futures Market Comparison - Data & Methodology

Data and Assumptions

- The Futures market data used includes only the following currency pairs/contracts:
 - EURUSD, GBPUSD, AUDUSD, NZDUSD, USDCAD, USDCHF, and USDJPY
- The conversion of the Futures price to a Spot price was based on Basis data received from a 3rd party major international bank
- In some cases, the Basis may not have been available or its application may have resulted in erroneous prices. In those cases, it was assumed that accurate Spot market data could not be derived from the Futures price. Accordingly, the corresponding FXCM client orders for those time periods were excluded from the study.
 - The removal of those orders does not materially impact the statistical validity of this study. In fact, in most cases where the Basis may have been inaccurate, the result was that the FXCM price was better than the corresponding derived Futures spot-equivalent price.



Futures Market Comparison - Data & Methodology cont'd

Liquidity

These are the equivalent amounts of each standard spot contract traded on the CME:

- 125,000 EURUSD
- 62,500 GBPUSD

• 100,000 NZDUSD

125,000 USDJPY

- 100,000 AUDUSD
- 100,000 USDCAD

- 125,000 USDCHF
- The average minimum quote size for an FXCM Liquidity Provider is 1,000,000 units of the base currency. The comparison of each order was based on the price of the executed FXCM order versus the best quoted price from the CME.
- In normal circumstances, the aggregate amount of liquidity available at the best price to FXCM clients is greater than 1,000,000 because more than one liquidity provider is quoting that price.



Futures Market Comparison - Data & Methodology cont'd

Acceptable Ranges

As previously mentioned, there were some cases in which the calculation of the Spot price, based on the Futures price and the Basis received from a 3rd party, resulted in erroneous results. Those records were excluded from the study. Furthermore, in order to ensure the integrity of the findings, FXCM tried to exclude outliers from the study based on an acceptable difference in price between FXCM and the Futures market.

The summary of findings is based on the assumption that the maximum acceptable difference between the FXCM price and the Spot price based on the Futures rate is 5 pips in either direction. Including the excluded data in the study which fell outside the set pip range would have resulted in FXCM clients benefiting by an additional \$15.4 million.



Interbank Market Comparison - Data & Methodology

Data and Assumptions

The Interbank market data used includes was based on the following "direct" currency pairs:

EURUSD, GBPUSD, AUDUSD, NZDUSD, USDCAD, USDCHF, and USDJPY

Market data for currency crosses were derived from the direct currency pairs. In some cases, the Interbank market data was not captured due to technical reasons. For those cases, the corresponding FXCM client orders were excluded from this study.

Acceptable Ranges

In order to maintain consistency with the Futures Market Data, the same acceptable ranges were applied for Interbank market trades. The summary of findings is based on the assumption that the maximum acceptable difference between the FXCM price and the Interbank market price is 5 pips in either direction. However, in order to exhibit that a wider range could have been used, there are some relevant statistics to note:

- There were just over 63 million orders that could have been included in the study.
- There were just over 83,000 orders that were excluded because a lack of an Interbank market price.
- Of the remaining 62.8 million orders, approximately 1,000,000 orders showed differences that were greater than 5 pips. As previously mentioned, those orders were excluded from this study.



- Visit the **Execution Study FAQ** for detailed answers on the following topics:
 - Market Dynamics & Why FXCM's Pricing is Better
 - Study Methodology & Data Questions
 - **Futures Related Questions**
 - FXCM Account/Execution Specific Questions

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