

Leveraging FinTech for FX and Payments

Agenda

- What TCC have achieved and key motivation
- Demystifying Electronic FX Workflows
- Issues encountered in implementation and lessons learnt
- Concerns for migrating to e-Trading
- Q & A

What TCC have achieved and key motivation

Leverage FinTech for FX

@ Summary of benefits

- ✓ Better pricing
- ✓ Improved control
- ✓ Lower cost
- ✓ Better relationships
- ✓ Global coverage

Old FX Trade Process
1-to-1 Deal via Phone/ Email

Current FX Trade Process
Multi-bank on-line Trading Platform

Deploy a multi-bank FX trade platform. Examples ...

Relationship banks like ...



#1 Multi-bank rates bid and pick the trading bank

#2 Trade matching & settlement via MT300 (Function availability / mode varies over different FX online platforms)



Gaining Price Transparency

Systemize FX Trade record & reporting

Spread Diff' from best quote

Best quote

	SPOT	15-Sep-09
SELL EUR	116	
1.19519		1.19527
BANK1		
DIFF (USD)		
BANK1	0	1.19519
BANK2	10	1.19518
BANK3	80	1.19511
BANK4	140	1.19505
BANK5	50	1.19514

Quotes from Different banks

Drop Copy Notification: 2
eal@fxall.com
line breaks in this message were removed.
10/04/2015 7:33 AM
kiran.rapelli@thomsonreuters.com

Trade email notification

FXALLAT SOLD EUR 1.00 against USD @ 1.0871318 for value 04/15/2015 [EUR/USD Forward] in account fxallat1 to counterparty BANK4

Trade Ticket

Prov'd Bank	Trade Date	Spot	Pts	AB in	Spot	Pts	AB in	Difference
BANK1	04-Sep-09	1.4252	0.00	1.4252	1.4254	0.00	1.4254	\$500
BANK2	04-Sep-09	1.4253	0.00	1.4253	1.4255	0.00	1.4255	\$0
BANK3	04-Sep-09	1.4251	0.00	1.4251	1.4255	0.00	1.4255	\$1,000
BANK4	04-Sep-09	1.4252	0.00	1.4252	1.4256	0.00	1.4256	\$500
BANK5	04-Sep-09	1.4252	0.00	1.4252	1.4255	0.00	1.4255	\$500
FXall IQ	04-Sep-09	1.1695		1.1695				N/A

Trade Activity Report

Trade Date	FXall Trade ID	Value Date	Spot Date	Product	B/S	Dealt CCY	Dealt Amt	Contra CCY
04-Sep-2009	4588742	09-Nov-2009	08-Sep-2009	FORWARD	Sell	EUR	1,000,000.00	GBP
04-Sep-2009	4588744	16-Sep-2009	08-Sep-2009	FORWARD	Buy	GBP	1,000,000.00	EUR
04-Sep-2009	4588745	16-Sep-2009	08-Sep-2009	FORWARD	Buy	GBP		



TCC GROUP since 1917

Century-old heritage in ship-owning and in-house ship-management



Demystifying Electronic FX Workflows

Demystifying Electronic FX Workflows

- Its not just about executing the Best Price but electronifying to increase productivity and efficiency whilst reducing costs and risks.
- Electronification does not mean replacing relationships but rather complementing them. Optimize workflow, still have complete control over execution selection, just make it efficient.
- No integration necessary, can start and build on integration and complexity as comfort and understanding grows.
- Most clients start with easy, low risk, transactions then transition as they feel comfort and control over the process
- Client consensus of wanting specialist/best of breed solutions for each segment of their workflow, as there are several inherent process risk for single provider covering 2 different processes

Average Spread Cost Savings for E-Trading Corps EUR 150 per EUR 1 million



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- Real live example of a Asian Corporate Treasury costs savings
- Best Practices for Corporates in compliance to FX Global Code of Conduct
- FX transaction costs remains ambiguous and uncertain through phone/voice execution

TEX Market Taker Statistical Analysis Report



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Report Date: 2016-01-10

Company Name:

Start Date: 2015-01-01

End Date: 2015-12-31

Report Currency: EUR

ALL REQUESTS

	Volumes (Million EUR)				Requests								Executed quote (%)			Executed within (%)			What if (EUR)	
	Requested	(%)	Executed	(%)	Total	(%)	Cancelled	(%)	Expired	(%)	Executed	(%)	Best	2nd/3rd	Worse	10 Sec	60 Sec	Later	2nd Best	3rd Best
SUMMARY																				
TOTAL	6,523.0	100.0	5,057.5	77.5	2,083	100.0	256	12.3	209	10.0	1,618	77.7	100.0	0.0	0.0	11.7	61.2	38.8	771,867	1,398,108
BY PRODUCT GROUP																				
FX	6,523.0	100.0	5,057.5	77.5	2,081	99.9	254	12.2	209	10.0	1,618	77.8	100.0	0.0	0.0	11.7	61.2	38.8	771,867	1,398,108
MM	0.0	0.0	0.0	0.0	2	0.1	2	100.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
BY PRODUCT																				
Spot	1,694.8	25.8	1,368.5	81.2	663	31.8	67	10.1	62	9.4	534	80.5	100.0	0.0	0.0	18.7	71.3	28.7	35,730	54,158
Forward	4,052.7	62.1	3,236.7	79.9	1,129	54.2	115	10.2	102	9.0	912	80.8	100.0	0.0	0.0	9.8	66.6	33.4	372,835	755,074
NDF	351.6	5.4	239.3	68.1	142	6.8	23	16.2	19	13.4	100	70.4	100.0	0.0	0.0	0.0	3.0	97.0	149,987	248,059
FxOption	255.0	3.9	213.0	83.5	88	4.2	8	9.1	8	9.1	72	81.8	100.0	0.0	0.0	0.0	0.0	100.0	213,315	338,817
LoanDeposit	0.0	0.0	0.0	0.0	2	0.1	2	100.0	0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
ZeroPremiumRiskReversal	178.9	2.7	0.0	0.0	59	2.8	41	69.5	18	30.5	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0

- Minimum implementation cost and effort (Plug and Play)
- A fully outsourced technology provider for FX and Rates execution
- Step by Step implementation, improve workflows as your business grows (scalable)



The screenshot shows the 'Order Details' and 'Audit Trail' sections of the ESOT interface. The 'Order Details' table lists orders with columns for Trade Date, Actions, Trader, National Amt, Buy Order Owner, Sell Order Owner, Symbol, National Ccy, Matching Rate, Sell Order ID, Buy Order ID, Opposite Ccy, and Opposite Amt. The 'Audit Trail' table provides a detailed log of order execution steps, including order creation, assignment, movement, approval, and execution.

Date	Type	User	Order Status	Negotiation Status	Description
Thu, 14 Apr 2016 00:56:04 GMT	CUSTOM_FIELDS_SET	FMAUser1	Pending		The order custom fields are set.
Thu, 14 Apr 2016 00:56:04 GMT	ORDER_IMPORTED	FMAUser1	Pending		The order is uploaded by FMAUser1.
Thu, 14 Apr 2016 00:56:04 GMT	ORDER_ASSIGNED_TO_ORDERBOOK	FMAUser1	Initialized		The order is assigned to the order book Fund Manager A by FMAUser1.
Thu, 14 Apr 2016 00:56:04 GMT	ORDER_MOVED_IN_WORKFLOW	System-	Initialized		The order is moved to the stage Approved.
Thu, 14 Apr 2016 00:56:04 GMT	ORDER_FULLY_APPROVED	System-	Initialized		The order is fully approved.
Thu, 14 Apr 2016 00:56:04 GMT	AUTOMATIC_RULE_APPLIED	System-	Approved		The automatic workflow rule Everything Approved is applied.
Thu, 14 Apr 2016 00:56:04 GMT	AUTOMATIC_RULE_APPLIED	System-	Approved		The automatic workflow rule FRI / JPY CAD / 3Months / <+5M / Fund DEF is applied.
Thu, 14 Apr 2016 00:56:04 GMT	NEGOTIATION_STARTED	FMAUser1	Approved		The negotiation is started by FMAUser1.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_INITIALIZING	System-	In negotiation	RFS Started	Starting the RFS negotiation EPNH-1000746.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_INITIALIZED	System-	In negotiation	RFS Started	Started the RFS negotiation EPNH-1000746.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_MATCHING_REQUESTED	System-	In negotiation	Sending execution request	Sending a matching request in the RFS negotiation EPNH-1000746.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_MATCHING_INITIATING	System-	In negotiation	Waiting for quote confirmation	Sending matching request to providers in the RFS negotiation EPNH-1000746.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_MATCHING_CONFIRMED	System-	In negotiation	Received execution confirmation	Received a confirmation from SEB.FRA.DEMO for the matching request.
Thu, 14 Apr 2016 00:56:04 GMT	TRADE	System-	In negotiation		The order is matched at the rate of 1.28470.
Thu, 14 Apr 2016 00:56:04 GMT	RFS_NEGOTIATION_MATCHING_SUCCEEDED	System-	In negotiation	Succeeded	The RFS negotiation EPNH-1000746 succeeded.
Thu, 14 Apr 2016 00:56:04 GMT	NEGOTIATION_SUCCEEDED	System-	In negotiation		The negotiation succeeded.
Thu, 14 Apr 2016 00:56:04 GMT	TRADE_ACKNOWLEDGED	FMAUser1	Matched		The trade is acknowledged by FMAUser1.
Thu, 14 Apr 2016 00:56:04 GMT	ORDER_AUDITED	FMAUser1	Matched		The order is audited by FMAUser1.



Data Analytics



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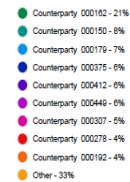
- Identifies panel banks pricing performance and level playing field for all bank partners
- Compliance, Management Oversight and Audit Trail of Treasury FX and Rates execution can be made transparent to shareholders Auditors and Management

Customer 008337

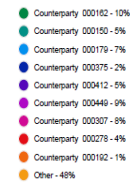
Market Taker Report: RIS Liquidity Overview - FX



Executed Volume by Provider



Executed Tickets by Provider



Provider Ratings

A rating of A, B or C is provided based upon trading activity. Note, this is presented as a visual guide only.

Business Won

The percentage of business won by a liquidity provider based on executed notional.

Rejects

The number of rejections as a percentage of total attempts to execute. A<=3%, 3%<B<=8% or C>8%.

Pricing Quality

The average ranking of the quote, within each deal, highlights the overall quality of the price.

Round Trip Time

The average time taken for a liquidity provider to execute a request. A <= 100, B <= 250 or C > 250.

Provider	Rank		Volume		Tickets					Round Trip Time (RTT)				Pricing		Ratings				
	by Volume		Executed	Requests	Offer	Exec	% of Total	Rejects	Reject Rate	<50ms	<250ms	>250ms	Avg Time	Rank	Speed	Won	Rejects	Quality	RRT	
Counterparty 000162	1	0	1,895.91	711	79.6%	121	10.0%	1	0.8%	5	115	1	70	9	647	A	A	A	A	
Counterparty 000150	2	0	741.44	691	87.8%	63	5.2%	0	0.0%	0	50	0	118	9	2,614	A	A	A	B	
Counterparty 000179	3	+3	653.60	712	85.5%	86	7.1%	3	3.4%	31	34	0	60	10	2,593	A	B	A	A	
Counterparty 000375	4	+4	549.69	574	82.9%	21	1.7%	0	0.0%	1	20	0	65	15	455	A	A	B	A	
Counterparty 000412	5	-1	516.85	659	75.9%	58	4.8%	6	9.4%	64	0	0	29	9	867	A	C	A	A	
Counterparty 000449	6	-3	505.67	711	89.2%	110	9.1%	1	0.9%	47	43	0	58	8	3,077	A	A	A	A	
Counterparty 000307	7	-2	439.26	668	78.7%	92	7.6%	1	1.1%	29	64	0	50	10	543	A	A	A	A	
Counterparty 000278	8	+4	378.27	633	74.2%	51	4.2%	4	7.3%	4	36	8	155	9	2,390	A	B	A	B	
Counterparty 000192	9	+10	353.47	503	72.6%	15	1.2%	0	0.0%	10	5	0	57	12	336	A	A	A	A	
Counterparty 000322	10	+12	346.46	653	60.0%	39	3.2%	0	0.0%	0	0	39	524	14	1,724	A	A	A	C	
Counterparty 000252	11	+3	312.44	597	86.6%	40	3.3%	0	0.0%	37	0	0	23	11	1,114	A	A	A	A	
Counterparty 000473	12	-5	300.20	620	91.3%	89	7.4%	0	0.0%	0	77	5	146	11	1,107	A	A	A	B	
Counterparty 000070	13	+7	217.28	641	62.4%	14	1.2%	11	44.0%	19	3	0	43	17	1,052	B	C	B	A	
Counterparty 000529	14	+3	210.67	583	60.0%	23	1.9%	1	4.2%	7	17	0	57	16	363	B	B	B	A	
Counterparty 000065	15	+11	204.63	628	88.2%	20	1.7%	0	0.0%	0	0	0	-	22	1,735	B	A	B	A	
Counterparty 000328	16	-6	202.87	657	65.3%	45	3.7%	0	0.0%	38	7	0	46	14	535	B	A	A	A	
Counterparty 000168	17	+4	188.05	588	60.0%	14	1.2%	0	0.0%	4	6	4	180	17	468	B	A	B	B	
Counterparty 000494	18	+5	142.22	612	76.0%	30	2.5%	2	6.3%	0	16	16	268	14	754	B	B	A	C	
Counterparty 000125	19	-10	133.45	616	80.5%	45	3.7%	3	6.3%	42	3	0	37	14	1,024	B	B	A	A	
-	20	-	767.08	9,224	74.4%	220	18.2%	22	9.1%	72	93	51	194	16	865	C	C	B	A	

Ranking is determined as the percentage of all total volume won. The ranking for the report month is compared to an average over the previous three months to show relative changes in ranking. Section Pricing provides information on the avg. quote rank and response time in ms. Executed Volume is presented in millions of the report currency. Round Trip Time (RTT) measures the delay between the execution request being sent to the provider and the confirmation being received, it reflects the amount of time the provider holds the request to execute and has the option to reject based on the market. It necessarily includes any latency on the transmission also. Round Trip Time is not available for all workflows/product types and is presented in ms.

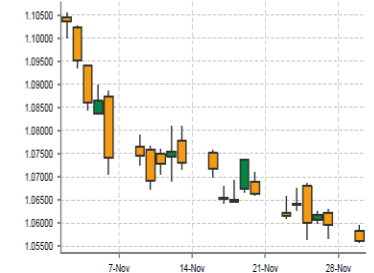
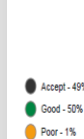
Customer 009847

Post Trade Transaction Cost Analysis



EUR/USD

KPI Value: mean



Benchmark Rates

Performance Against KPI

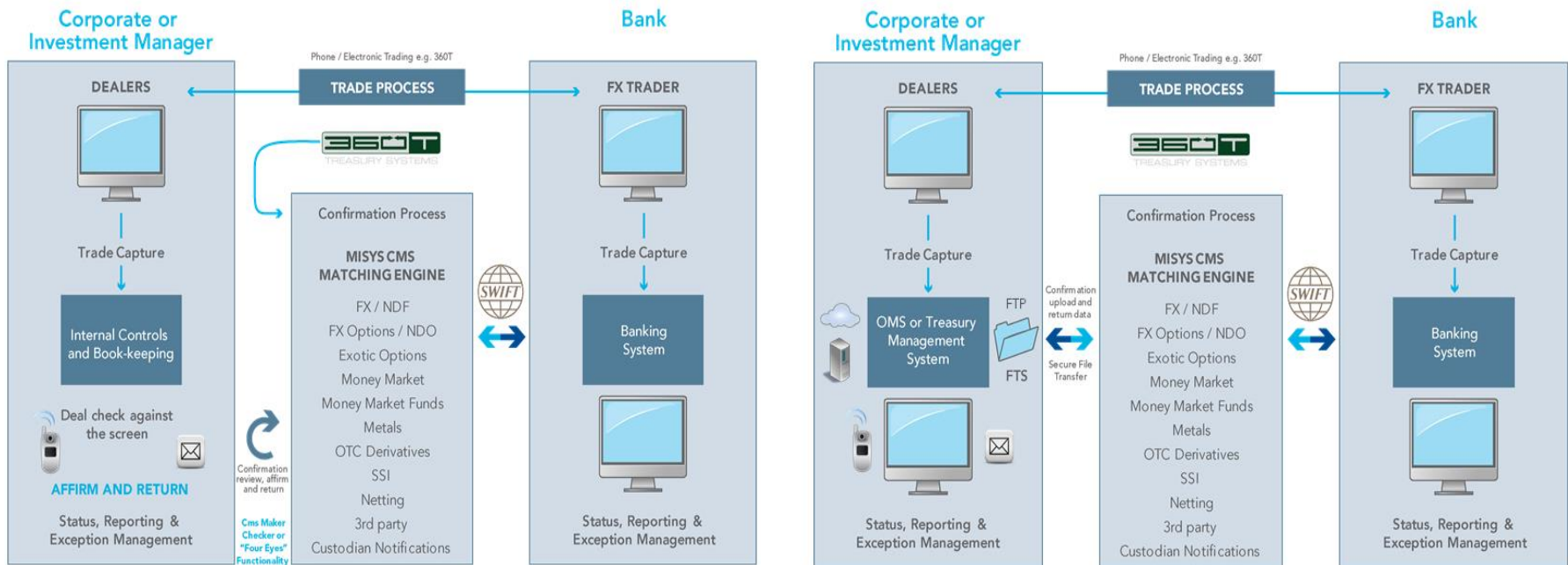
ID	App	Date	Vol (AUD)	Action	Exec Rate	Open	High	Low	Close	Rate	Pips	AUD	Rank
User 008258													
239176886	RIQ	09-11-15	14.52	Buy	1.0776	1.0765	1.0790	1.0727	1.0746	1.0765	(10.90)	(14,694)	Accept
239176928	RIQ	09-11-15	7.14	Buy	1.0777	1.0765	1.0790	1.0727	1.0746	1.0765	(11.70)	(7,757)	Accept
239324459	RIQ	12-11-15	.57	Sell	1.0760	1.0744	1.0807	1.0691	1.0754	1.0731	29.04	1,551	Good
239325302	RIQ	12-11-15	.40	Buy	1.0754	1.0745	1.0809	1.0692	1.0754	1.0731	(22.68)	(853)	Accept
239400633	RIQ	16-11-15	.40	Sell	1.0737	1.0751	1.0757	1.0701	1.0717	1.0727	9.57	361	Good
239506797	RIQ	18-11-15	4.54	Buy	1.0688	1.0651	1.0692	1.0645	1.0647	1.0668	(19.84)	(8,427)	Accept
239516683	RIQ	18-11-15	.20	Buy	1.0665	1.0651	1.0692	1.0645	1.0647	1.0668	3.16	60	Good
239665929	RIQ	23-11-15	.07	Buy	1.0620	1.0623	1.0657	1.0613	1.0615	1.0631	10.98	70	Good
239766195	RIQ	25-11-15	.07	Buy	1.0644	1.0680	1.0686	1.0567	1.0601	1.0606	(37.37)	(237)	Accept
User 008272													
238922696	RIQ	03-11-15	1.89	Sell	1.1009	1.1022	1.1025	1.0936	1.0951	1.0975	33.13	5,683	Good
238970505	RIQ	04-11-15	.67	Sell	1.0948	1.0940	1.0940	1.0845	1.0859	1.0913	35.16	2,166	Good
239029127	RIQ	05-11-15	.81	Sell	1.0863	1.0836	1.0897	1.0836	1.0864	1.0871	(8.17)	(609)	Accept
239032013	RIQ	05-11-15	1.06	Sell	1.0860	1.0836	1.0897	1.0836	1.0864	1.0871	(11.17)	(1,089)	Accept

Confirmation Matching Service (CMS)



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- In the context of EMIR and other regulatory requirements, confirmation matching services have become increasingly important for globally deployed and fully integrated treasury solutions.
- With these changes in requirements it has become a challenge for global and regional treasuries to match their trades with banks or subsidiaries within a narrow time frame.
- There are several inherent process risk for single provider covering 2 different processes.



Fast implementation – Manual Affirm & Return

Compliant Implementation – Full Automation with TMS

Issues encountered in implementation and lessons learnt

Lessons Learned



Shop around – Pick the most suitable platform in your case



Business Case - Benefits are obvious, it's important to

- ☐ Define roles (eg administrator), process (use workflow or not) & Authority limit,
- ☐ Identify Clear Control Points



To bank : Your Goals, Firm to roadmap, Assure relationship



Onboarding :

- ☐ Corporate treasury have to connect vendor & bank and coordinate
- ☐ Take time to understand bank requirements (eg standing instructions, Mini. Order size) which may vary slightly over banks



Concerns for migrating to e-Trading (Panel discussion)

Concerns for migrating to e-trading (objections / rejections / fears)



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- Reluctance to changes
- It will ruin my relationship with my Panel Banks
- Banks do not want to trade off the phone, voice traders can quote better spreads
- Takes a long time to implement new systems (Typically from their bad experience implementing other systems like TMS or OMS.)
- You have to do 100% of everything electronically!!

Thank you!



Q & A