



# **SERVICE TIME & PRODUCTIVITY:**

**Issues and Obstacles in  
Automating the French Trading Cycle**

**By Frédéric Tixier**



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He worked as a financial journalist for 12 years, on various financial magazines and dailies (Option Finance, MTF Haute Finance, l'Agefi, Les Echos) and investment publications (La Vie Financière), with responsibility for running or editing coverage of equity operations (M&A, private equity, LBOs, etc.), market finance and market institutions (official and professional market bodies, intermediaries, financial institutions, legal and tax specialists, etc.) and collective investment and management companies.

In July 2000, he joined the Zebank project to develop and manage the editorial, educational and commercial content of the website and other communication tools for the online bank, bought by Egg at the end of 2001. At the same time, he helped create and run the magazine NewsBourse, the first financial Sunday paper.

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- **Cross-border orders cost 20-35% more than domestic share trades (1)**
- **Between 20% and 25% of cross-border orders fail (2)**
- **A processing error can be up to ten times more expensive on an international trade than on a home market trade (3)**
- **The number of international trades is doubling every three years (4)**

These four points neatly sum up the problem currently faced by global financial institutions. The explosion in the number of international securities transactions, now estimated at nearly 150 million a day, has not been matched by a rationalisation and harmonisation of trading processes and information exchange. As a result, errors in execution, settlement and delivery have mushroomed, while processing times have lengthened and costs have gone through the roof. According to SWIFT, a lack of automation in the processing cycle could be costing the industry USD 12 billion a year. This, at a time when heavy competition is forcing firms to become more profitable and transparent and the rollout of Basel II is tightening operating constraints on all financial agents.

It is over ten years since the industry took its first tentative steps towards harmonising cross-border trading. Unsurprisingly, the driving force came from the English-speaking markets, particularly the USA. The initiative failed to come up with a global solution but did bequeath us the concept of Straight Through Processing (STP). The idea of a “seamless processing system” requiring no manual intervention through the whole trading cycle (end-to-end from order execution to settlement) is perceived and applied differently by

different countries, professional associations and operators.

To understand the issues bound up in STP for French players in the trading cycle, it must be remembered that while none of these problems (processing errors, delays in execution, etc.) are exclusive to cross-border trades, they become particularly severe once you start trading across borders. The greater complexity of the processing cycle and the technological, legal and linguistic barriers — not least different languages for “security codes” — make international trading more error-prone, tougher to automate and so more expensive.

French institutions only encountered this problem at a late stage. The French stock market architecture is particularly efficient — some would say too efficient — and, safe within a deliberately protectionist regulatory environment, France’s financial players, both large and small, were perhaps happier than those of other countries to restrict their operations to home territory. The euro changed all that.

Operators at all stages of the cycle are now responding to international competition. Back offices, neglected for ten years, are attempting to catch up technologically with their cutting-edge front offices. The priority is to automate, adapting procedures, protocols and systems to the pressing need for interconnectivity. The spirit of STP may not yet have won over all market participants, but few French industry professionals will deny that it is on the cards.

STP, for *Straight Through Processing*: the “official” definition of STP according to the SIA (Securities Industry Association): “STP refers to the seamless integration of systems and processes to automate the trade process from end-to-end—trade execution, confirmation and settlement—without the need for manual intervention or the re-keying of data”.

One thing is certain, the home market is no longer the priority. French players' survival now depends on going global, but most immediately that means operating on a European scale. As operators merge and we see convergence of post-market procedures, regulatory reforms and

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competitive responses, the pressure is on all French professionals in the trading cycle to upgrade their operational efficiency, automate procedures and cut costs.

All very STP.

(1) Comparative analysis of trading costs in Europe and the USA – AFTI/Eurogroup – November 2002 –

(2) Omgeo Benchmarks<sup>SM</sup> for OASYS Global<sup>SM</sup>

(3) SWIFT

(4) IFSE (International Federation of Stock Exchanges)

## STP ORIGINATED WITH ASSET MANAGERS

As with so many things in the financial world, STP began in the US and UK markets. This was nothing out of the ordinary, as the USA and its geo-financial outposts handle more than half of all trades on the world's financial markets, and STP first evolved as a response to the explosion in the volume of cross-border trades.

So, predictably enough, the first investigations of the issue were undertaken in London, at the prompting of one of the US financial management giants. Like most of its peers, the asset manager in question was running into communication problems with its correspondent brokers in the world's financial markets. An ever greater number of cross-border securities transactions were failing and the reason was a lack of precision in the methods for confirming trades.

### FROM FAX TO BABEL

In 1991, worldwide, but particularly in the USA, the soaring financial sophistication of economies was driving a boom in the securities markets, whose weight in the overall economy was growing constantly. As we now know, the worldwide number of securities transactions was to double every three years for the next decade. This meant that the largely unautomated tools for processing and confirming orders were no longer up to the job. And they would prove increasingly inadequate for the task of managing cross-border flows. So what could replace the mail, telex and other fax systems used at the time? The Industry User Group, a first working group set up at the end of 1991 by international brokers and investors, immediately thought of using a system in place since 1973, created by the **Depository Trust Company** (DTC) to handle domestic

trades between brokers and custodian banks: Electronic Trade Confirmation or **ETC**. The group therefore charged four software publishers with transferring the principle of ETC to international trades. A good idea, but one which rapidly proved too parochial in its scope. Despite being the choice of mainly US publishers, the initiative was considered too eurocentric. It also failed to sufficiently involve custodian banks in the design process. The final and main reason for its downfall was that it failed to envisage any reform of the way financial firms operated and so overlooked one of the fundamental problems afflicting international trades, the standardisation of protocols, which is still an issue today.

There is nothing new under the sun. With no omnipotent big brother to enforce conformity, human nature gives free rein to its spirit of bio-diversity. How could anyone imagine that just because we share the same rational thought processes, North American operators would create exactly the same procedures and communication standards as their European and Asian counterparts or spontaneously choose the same symbols for identifying securities? The oft-quoted problem of security codes is an effective illustration of what happened, as the financial industry built itself an electronic Tower of Babel. The Group of Thirty (G30) was already denouncing this complex problem in 1991 in its report "Clearance and settlement systems in the world's securities markets" which recommended, among other things, universal and exclusive use of **ISIN** to identify securities. Only now, more than 20 years later, are local stock markets starting to convert to this international standard.

*DTC, for Depository Trust Company: DTC is a subsidiary of DTCC (Depository Trust and Clearing Corporation), which is the holding company for the USA's central depository (DTC) and clearing house (National Securities Clearing).*

*ETC, for Electronic Trade Confirmation: procedure adopted by US brokers in 1973 on the initiative of the Depository Trust Company.*

ISIN, for *International Securities Identification Numbers*: securities code comprising nine alphanumeric characters, established as a world standard by the Group of Thirty.

SWIFT, for *Society for Worldwide Interbank Financial Telecommunication*. SWIFT is a cooperative of more than 2,000 banks, providing an international financial messaging network used by more than 7,000 entities worldwide. SWIFT was appointed by the ISO (International Organisation for Standardisation) to manage the development of data exchange standards, including ISO 15022.

FIX, for *Financial Information Exchange*: association of brokers and asset managers created in 1992 with the aim of defining messaging protocols between these two categories of market player.

Failed trades are trades which have not been concluded. They are a source of major financial losses for the securities industry (according to SWIFT, every trade failure costs around EUR 220), which is keen to reduce the number of failures by making trades more reliable.

## LESS PAPER, MORE STANDARDS

All the initiatives launched since the partial failure of the Industry User Group have focused on two themes: less paper and more standards. Each, typically, has taken its own distinct approach. ISITC (Industry Standardisation for Institutional Trade Communication), for instance, was set up in 1992 at the instigation of the North American custodian banks to define an area of understanding with asset managers that would allow the standardisation of settlement/delivery instructions. It has achieved some notable successes and greatly facilitated the work of **SWIFT**, appointed by ISO (International Organisation for Standardisation) over the same period to standardise the content of financial messaging. **FIX** (Financial Information Exchange) is another organisation, set up by brokers and asset managers, which was basically pursuing the same aims but in a radically different field. It was trying to automate and standardise the process of confirming orders on trading floors. A little later, in 1998, the GSTPA (Global Straight Through Processing Association) was set up by 90 financial institutions, prompted by among others, FIX and ISITC. Its aims were more lateral — to “manage transaction flows” between brokers, asset managers and custodians. Parallel to these industry initiatives, private companies were also looking to develop responses to this emerging global issue. All the major software publishers came up with their own solutions. These met with greater or lesser degrees of success. Some managed to establish themselves as benchmarks, including Omgeo, a subsidiary of Thomson Financial and the Depository Trust & Clearing Corporation (DTCC) and the current world leader in electronic confirmation of transactions.

## TOWARDS T+1?

But these efforts have been undermined by a lack of co-ordination, and automation of processing cycles is proceeding at a stately pace. When international trading suddenly took off, boosted by the internet bubble and the mirage of the new economy, errors began to multiply. This was all too much for the US authorities, who were afraid their systems would be overwhelmed. Everyone could still remember the crisis of the late 1960s, when financial markets had to close one day a week so institutions could sort out the problem of **failed trades**. And no-one more so than Alan Greenspan, the imperial but irreplaceable chairman of the Federal Reserve who, in late 2000, decided to take the bull by the horns: “The clearance and settlement process for US equities and other corporate securities is still a sequential and repetitive process that involves significant manual intervention. Many fear that, without a complete re-engineering of the process...further increases in trading volumes...will soon result in serious capacity problems”, he warned. The chairman had spoken. On February 23, 2001, Arthur Levitt, chairman of the Securities and Exchange Commission (SEC), weighed in. He wrote a highly official-looking letter to the financial industry, posing a new challenge: to shorten the settlement cycle by bringing forward the settlement date from T+3 to T+1. He set out the ends — to reduce the volume of trades awaiting settlement and so the risk that a trade will fail, to speed up processing procedures and so shorten the time to settlement — and the means — every stage in the settlement cycle must be automated and human intervention cut to a strict minimum. The maths was simple. Moving from T+3 to T+1 would save the financial industry USD 2.7 billion a year, mainly through rationalisation of clearing and settlement

processes. This, at any rate, was the estimate the Securities Industry Association (SIA) made in 2000. It also estimated, and this was the bad news, that it would cost USD 8 billion before the benefits of all-electronic processing began to be felt.

## WAITING FOR GODOT

The deadline was set at June 2005 but has since been put back indefinitely. The market crash, September 11 and a new political climate conspired to thwart the ambitions of the US authorities. IT companies and consultants who had bet on the STP gold rush started scaling back their operating budgets. GSTPA, which specialised in marketing a software solution for electronic trade confirmation, shut up shop at end-2002. Meanwhile, cross-border orders, which had temporarily slowed their explosive growth in line with the financial markets slump, were now costing financial institutions a mere USD 12 billion a year.

STP, despite the collapse of the US project, is still a hot issue. It may, for the moment, be on the back burner in the US and UK markets, but the urgent need to reduce costs, cut risks and increase operating efficiency remains an essentially global problem. And as we said, the root of the problem lies in the development of international trading.

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## TRADES WITHOUT FRONTIERS – THE ROOT OF THE PROBLEM

Let us take a brief survey of the problems afflicting the financial Tower of Babel, particularly where they impact the trading cycle. Contrary to a misconception commonly held by traders a few years ago — before they took to reading the few works that exist on the intricacies of post-market operations — stock market transactions comprise more than just the trading phase.

Financial writings are pretty clear and unanimous on this point. The trading cycle of a security covers “all the operations which contribute to the successful execution of transactions carried out by participants on a financial market” (1). As well as the trading phase, then, we need to consider the clearing phase (receiving and recording transactions, calculating net positions, managing risks, etc.) and the settlement/delivery phase (settling of commitments between buyer and seller, booking of entries in the accounts, etc.), which leads to the respective “securities bank” accounts of the two parties being actioned. Once we include the decisions that the investor has to make before making his or her purchase (the pre-trade

phase), the process of trading securities breaks down into four major stages, themselves divisible into various sub-tasks, all more or less time-consuming, automatable and expensive.

### FROM NURSERY SCHOOL TO THE HOME MARKET...

A stock market trade, carried out on a domestic market between two domestic counterparties trading shares listed on a domestic exchange, is already a relatively complex operation — not in its principle but in its execution.

The principle could be understood by primary school children. Children swapping Harry Potter cards in the playground may not know it, but they have already agreed a price (one for one in the currency they are using), a volume (one or more cards), **settlement/delivery** terms (usually immediate, to avoid risks of the counterparty defaulting, etc.), and using custody services generously provided by the publishers in the shape of an album where they can mount the cards acquired in the swap.

A domestic stock market trade follows identical rules. But for the fundamental difference that the legal terms of the exchange, far from the rough-and-ready jurisprudence of the playground, are clearly marked out by a highly refined legislative and regulatory system. And, where the two children take on all the functions of the trade, a stock market trade involves some dozen different organisations.

In essence, the buyer and seller of securities are not in direct contact. Each sends his or her orders to an authorised intermediary, the broker. The brokers execute the orders of their clients on a stock market. In the simplest case — ignoring for the moment **MTFs** — the market is organised and managed by an exchange such as Euronext in France. Once the order is executed we move into the clearing phase, overseen by a **clearing** house, in France, Clearnet. Then comes the settlement/delivery phase, provided by a market system (Relit or RBV2 in France) under the control of a **central depository** (Euroclear France, the former Sicovam, in France). The central depository is in contact with the holders of the buyer's and seller's securities accounts who, once the trade has been recorded, will credit the buyer's account and debit the seller's account with the number of securities exchanged. Let us be clear that it is no mean task to create a stock market architecture worthy of the name — with an exchange, clearing house, central depository, plus central bank — for all domestic operators, each controlled by their respective regulators, the government and the national parliament.

So we have two counterparties, two brokers, two banks holding securities accounts, an exchange, a clearing house, a central depository, and, to ensure sound management of the cash, a central bank. Completing a

domestic stock market trade is clearly a good deal more involved than swapping Harry Potter cards. But compared to a cross-border trade, it is still child's play.

### FROM NATIONAL TO INTERNATIONAL

Let us consider the case of a French asset manager that wants to acquire some German shares. Its usual French broker is not authorised to trade in Frankfurt and so, to complete the trade, it has to use a German broker, registered as an intermediary with Deutsche Börse AG, the German exchange. Settlement and delivery will be carried out on the local platform (CREATION), overseen by the central depository Clearstream, which is a wholly-owned subsidiary of Deutsche Börse AG. Clearstream is in contact with the local custodian representing the global custodian of the French buyer. The same goes for the seller's local custodian. If the local custodian is not German — it could very well be another French asset manager — it adds two more intermediaries to the cycle, one on the brokerage and one on the custody side.

Those of an optimistic cast of mind, who know little of cross-border trading, may think that these four extra intermediaries involved in cross-border trades (plus, of course, another central bank) would not make much difference. The shift from nine to thirteen participants, even for the superstitious, does not seem that great.

This would be naïve.

**More players mean more multilateral exchanges of information. There are several stages to processing a securities transaction, each requiring interactive communication between the parties. The more numerous the exchanges the greater the risks of errors creeping in and the longer it takes to complete the trade.**

*MTF, for Multilateral Trading Facilities: electronic trading platforms, in competition with the regulated markets. Also known as ECN (Electronic Communication Network).*

*Clearing: process allowing intermediaries to just exchange (securities) or transfer (cash) on the net balance of their stock market transactions.*

*Central depository: market entity entrusted with the custody and administration of securities.*

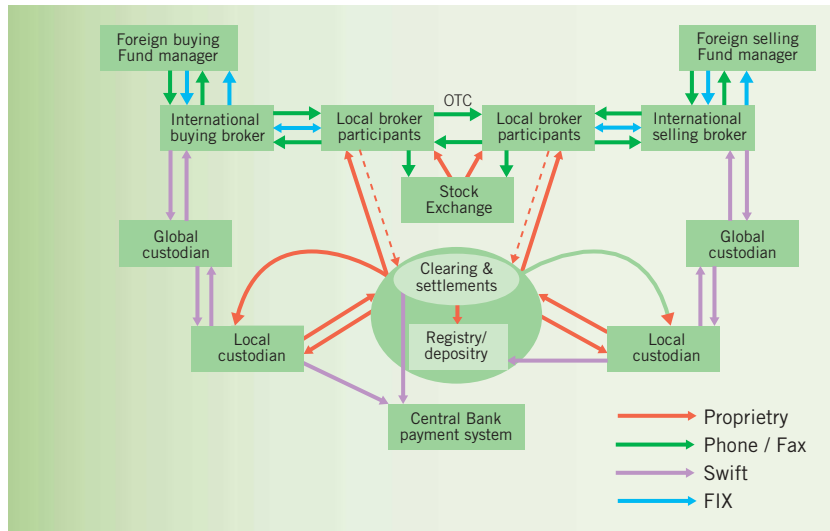
*Settlement/delivery: stage in the processing cycle when a stock market transaction is settled by delivery of the securities and payment of cash.*

## Processing of a Securities Transaction

Pre-Trade	Trade	Post-Trade/Pre-Settlement	Settlement
Investment Management, Decision	Trade Order	Trade Execution	Netting Clearing
Investment Manager & Broker/Dealer Negotiation	Notice of Execution	Trade Allocation	Settlement of Securities
		Trade Confirmation	Reconciliation
		Trade Affirmation	Depository & Custody
		Machining	
		Settlement & Enrichment	
		3rd Party Notification	



## Trade Life-Cycle Events



Source: Capco in "Reference Data: the key to Quality STP and T+1 - Tower Group 2001"

The aim of all players in the trading cycle is to achieve **settlement** of the trade on schedule. For most western countries this means by T+3. The sooner an error is detected, the sooner it can be corrected and the more likely it is that the trade will settle on time. So, the trade data needs to be checked as early as possible in each phase, in particular to establish that all the parties involved have the same data. This is why, at every critical phase in the process, there is a reconciliation of all key data: price, buy or sell, quantity, security code, accounting data for the counterparties, and then once the order is executed, the execution date, settlement/delivery date, stock market and other local taxes, net value, allocation, commission, transaction terms, currency of execution and settlement currency, etc.

This reconciliation is carried out as soon as the order has been executed. In a domestic trade, the local broker sends the buying client the execution details (as communicated by the company operating the market where the trade was executed), and waits to receive an initial confirmation. Most of the time, when the client is an asset manager, it specifies in its response how the order should be allocated, i.e. how the securities bought in the trade should be split between its different portfolios or UCITS. The broker checks that the different allocations add up to the total order executed and that the reference data given for each portfolio or UCITS are in its information systems — a frequent source of difficulties — then returns the allocation to the client with a request for a detailed confirmation. If no errors are detected, the

Settlement: a trade is settled when securities are exchanged for the funds agreed at the time of the trade. Settlement is the end of a stock market transaction.

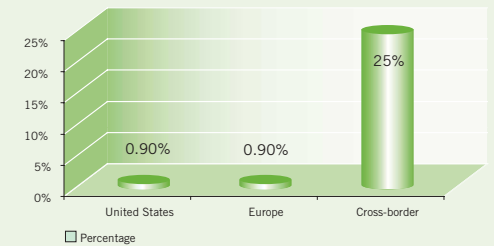
client sends its confirmation to the broker. Once this toing and froing — known in the middle office as the “windshield-wiper” process — is complete, the client and/or broker informs the local custodian that the order has been confirmed. The local broker has, like all market members, been given details of all trades executed on the market that day and compares the reference data of the order confirmed by the client with those from the clearing house. If the data match, the local custodian sends to the clients and/or the broker an affirmation of the trade. The data is then matched and the transaction moves on to its settlement/delivery phase.

It is easy to see how this final agreement on the terms of the trade, already difficult enough in a domestic trade, becomes still trickier when the number of parties involved is doubled. For cross-border transactions, the international broker effectively acts as an interface between his or her client, in our example the French asset manager, and the local broker. This, as one can imagine, may tend to slow down the working of the windshield-wiper. This means it takes longer to confirm trades, errors take longer to detect and the number of failed trades multiplies.

Ideally, this post-trade/pre-settlement phase should end the same day as the trade, to minimise risks of late settlement/delivery. Specialists talk of the **same-day affirmation** (SDA) rate and see this indicator as a way of estimating the operational efficiency of a trading cycle.

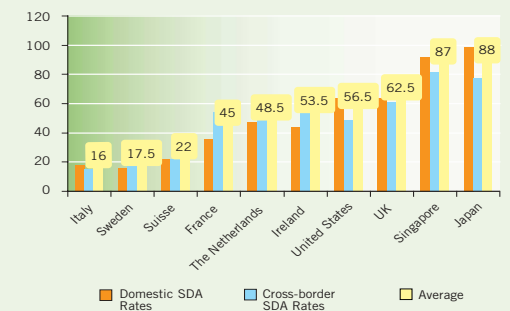
The problem is that the SDA rate is hard to gauge. Few international investors are actually capable of measuring it. The results of a study by Omgeo on the final quarter of 2002 (2) give a fairly mixed picture from country to country.

## Trade Failure Rates in Transaction Processing



Source: Omgeo Benchmarks for OASYS Global<sup>SM</sup>

## SDA Rates by Country



Source: Omgeo

SDA, for Same Day Affirmation: SDA makes it possible to assess how many orders, accompanied by instructions, are exchanged between the asset manager and the broker allowing allocation on the execution date. This minimises risk exposure. The SDA rate is seen as a key element in achieving settlement/delivery on T+1: by identifying the errors at an earlier stage in the reconciliation process, when the trade is confirmed, it enables adjustments to be quickly made, reducing the risk of trade failures.

Financial Middleware: software providing an interface between applications and networks, and between the applications themselves.

Another key point is that when domestic trades are matched through an Electronic Trade Confirmation (ETC) system, the SDA rate can triple.

But, at the risk of repeating ourselves, the degree of automation in international transactions is very low.

**Increasing multilateral relationships means increasing the probability that the IT systems used by the parties are incompatible, or barely compatible. In other words, it makes it less likely that trade processing can be automated.**

Long ago, when the IT departments of financial institutions started to grow in numbers and importance, and where the issue was converting longstanding commercial relationships into electronic formats, the in-vogue solution was to develop proprietary systems. And to create links for clients or suppliers who were worth the effort. This may be something of a caricature, but it neatly sums up the problem confronting the institutions when they wanted to leave their domestic markets for the open seas of

international trading. They quickly realised that these systems were cumbersome and expensive to run, and were far from universally compatible with those used by their foreign counterparties. They were therefore replaced by more standard, but less comprehensive, software. Some functions, particularly the handling of incoming transactions and reconciliation, were no longer available in these packages and this meant integrating a number of specialist applications. And for all these applications to communicate with each other — on average we estimate each institution had close to a hundred — they all needed to be linked up using financial middleware. As ever, the different financial players did not all adapt at the same pace. This time the banks and custodians were quick off the mark and it was the asset managers that dragged their feet. In all cases the efforts required to automate internal procedures were enormous. A May 2003 CityIQ study of 240 international firms, of which nearly a quarter were asset managers, showed a yawning gap between current levels of procedure automation and the level required.

As a result, despite the overwhelming success of computerisation, many exchanges of financial information are still carried out by phone, fax or even telex.

In spring 2002, a study by consultancy firm Cap Gemini Ernst & Young showed that more than a third of 77 international asset managers surveyed still used faxes as their main means of communicating with custodians in the case of equities trades. The figure rose to 50% for currency trading and 70% for derivatives.

In Europe, the results presented by SWIFT are just as telling: half of 50 million orders sent each year by a sample panel of investors, between them managing more than EUR 4.7 trillion, were sent manually. This was costing the institutions concerned a mere EUR 1 billion a year.

This is pricey enough, but we have still not included the cost of rectifying errors and checking risks in a non-secure cross-border environment, estimated by SWIFT at close to EUR 5 billion annually.

The last finding, which will send shivers up the spines of the all-electronic enthusiasts, is that according to SWIFT, 70% of its clients, which include nearly 7,000 institutions worldwide, are planning to maintain their fax interchange methods, even after they have adopted cutting-edge communication standards. But no need to worry — as we shall see, these cutting-edge communication standards are still a long way off.

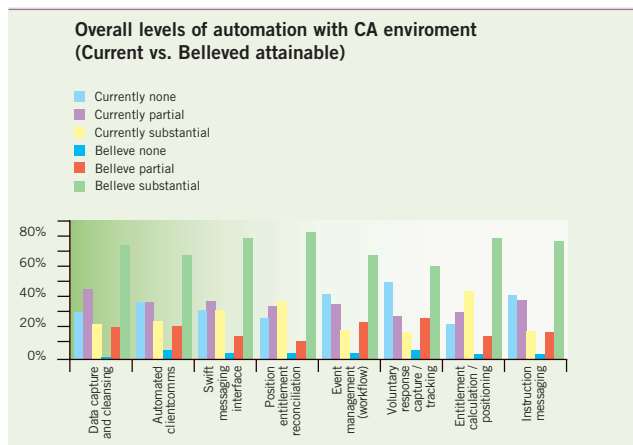
**Dealing with non-resident counterparties increases the risks of misunderstanding and the chances of using non-standard or erroneous reference data.**

Another reason why IT systems have problems communicating — even if they are perfectly compatible technically — is inherent in the financial Tower of Babel — the lack of data standardisation.

This is one of the main problems that the move to STP seeks to address, by making all the reference data used in a transaction compatible, written in the same language, end-to-end through the trading cycle and for all counterparties in the exchange. This is complicated enough, even without working across different languages — English is not yet the official planetary language — and time zones.

This is all the more complicated, as we have seen, in that protocols are not particularly harmonised either. Broadly speaking, the standardisation drives since 1992 have left players towards the upstream end of the trading cycle (the brokers) happier using the FIX protocol while downstream operators (custodians) prefer SWIFT. The recent introduction of the new ISO 15022 standard, on the initiative of ISO but supervised by SWIFT, marks a trend towards better harmonisation. It supports FIX for instance. But the situation is still far from ideal:

- The 15022 Data Dictionary, which is the reference dictionary for ISO 15022, covers only a part of the key reference data used in a transaction. Some data, particularly those relating to the security to be traded, are non-standard. As for security codes, despite the demands made by the G30 since 1991, it is still the law of the jungle and this situation is sustained by competition between the sellers of information, such as



Source: CityIQ Survey - April/May 2003

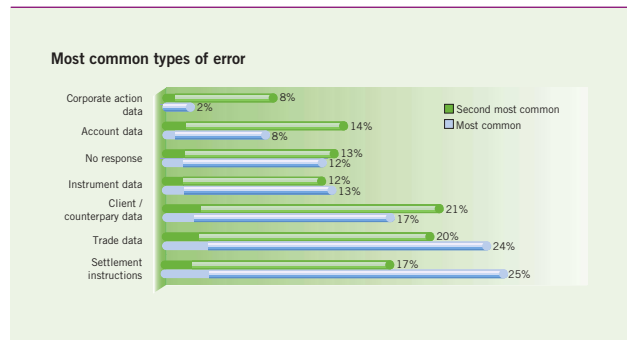
<sup>1</sup>According to Omgeo OASYS Trade Match<sup>SM</sup>

Reuters and Bloomberg in equities, or S&P Funds Service, Morningstar and Lippers in UCITS. And of course there are the central depositories, few of which, as we said, have yet moved over to ISIN codes.

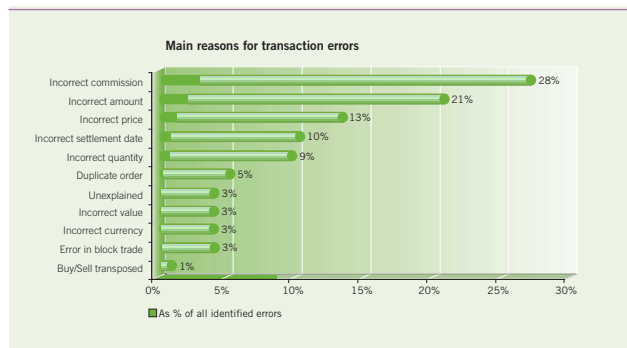
- Few institutions have really adopted the standardised data. According to SWIFT, no more than 3,000 companies worldwide were able, at the end of 2002, to receive messages under ISO 15022. Mind you, only 1,250 could send them. Interestingly, of the 304 asset managers belonging to SWIFT, only 17 have made the change to ISO 15022.

- Last and most importantly, only a minority of operators — a TowerGroup survey in September 2001 estimated 37% — have put in place a real strategy for managing reference data. As a result, even if they use standard external data, it often has to be converted to fit their in-house standard. Capco reckons that each institution manages on average between 20 and 50 internal securities databases.

In these circumstances, it is hardly surprising that the main reason for failed transactions, apart from human errors — which are inversely proportional to automation — have to do with errors in the reference data of the transaction. The latest TowerGroup survey,



Source: TowerGroup, Reuters, Capco survey - September 2001



Source: Omgeo Benchmarks

from September 2002, showed that 45% of failures are caused by incomplete, non-standard or incorrect reference data.

The most common sources of error are mistakes made on commissions and the details of settlement instructions.

It is no coincidence that among the principal reasons for failed trades, we find errors in the actual settlement and delivery cycle, since this is where the risks specific to international transactions are concentrated.

**The move to cross-border trading automatically increases counterparty, credit and custody risk. It also exposes the trader to additional legal and financial risk.**

Let us briefly review the order-processing cycle. In the simple world of domestic transactions, the settlement/delivery cycle is organised by the local system (Relit/RGV2 in France). All local institutions (market institutions, clearing house, central depository) and all those involved in the transactions (investors, brokers, custodians) are subject to the same laws, regulations and tax codes and follow the same market practice. Transactions are carried out in the same currency. Basically, while there are still risks that a domestic transaction might fail, they are not on the same scale as for international trades.

Currency risk also comes into play as an addition to the classic transaction risks. But even the classic risks are exacerbated in international transactions.

- Custody risk — the loss of physical securities, and errors in managing dematerialised securities — rises with the increase in the number of intermediaries. Local custodians, particularly in certain emerging countries, are not wholly reliable. The client's custodian, who will have subcontracted management of local securities to a local custodian, is therefore taking the risk of having to make good any errors by the local custodian. This could mean having to buy back any securities which have supposedly been lost. The risk remains even if using a global custodian, as they will also use the services of either a local custodian or a local central depository. Few financial institutions release information on the risk of default in

settlement and delivery phases of the cycle — only 16% of the world's top 25 banking groups according to a recent survey on financial information (3) — but this is increasingly cited among the activities that contribute to credit risk.

- Legal risk is also an issue. Ownership rights are particularly prone to disputes over interpretation. Some legislative regimes, for instance, consider that ownership is acquired at the moment of the trade. Others consider that it only takes place on delivery. The same goes for the legal procedures governing settlement/delivery systems: some function according to the principle of intra-day irrevocability, others use end-of-day irrevocability. Nor is it always clear which principle or law to apply. This remains true when the transaction is not processed by a central depository, but in the accounts of a global custodian: then, in theory, it is not the legislative regime governing the central depository which applies, but that of the country where the global custodian is domiciled.

- Lastly, financial risk is often perverse and too frequently underestimated. This is particularly so of financial risk in cross-border securities transactions. Whenever a detached coupon, share allocation or capital increase affects a security that has not been delivered on time, the repair costs for the failed trade explode. And differences in laws and tax rules between countries increase the risks of accounting and processing errors. These generate financial losses that are rarely measured: a July 2003 study by GOAL(4) estimated, for instance, that financial institutions failed to recover a large slice of tax withholdings on revenues and dividends from investments in foreign securities. According to GOAL, this costs US investors EUR 830 million, British

Securities transactions: all legal transactions which can apply to a security (coupon stripping, capital increases, takeover bids, public offers of exchange, etc.)

investors EUR 689 million, and French investors EUR 250 million every year. The main reason for the failure to recover these withholdings was an over-reliance on manual processing.

### THE BILL

So what is the result of this combination of unfavourable circumstances for cross-border transactions?

> processing costs are higher than for domestic trades.

> repair costs are also significantly higher.

> processing delays are greater than on domestic transactions.

A survey by Fulcrum Research of a panel of European institutional investors (5) found that they estimated the average cost of an error on an international transaction at EUR 388. This compares to EUR 182 on domestic errors. Interestingly, the back-office heads interviewed took a far bleaker view than their front-office colleagues. Although the front office chiefs saw little difference between the cost of international and domestic errors, at EUR 149 versus EUR 119 respectively, the post-market specialists estimated the ratio as 1:3, EUR 627 versus EUR 233.

What is the real cost? SWIFT estimates that in 2002 the repair cost for a cross-border order was EUR 220. The cost of processing a normal order varies just as widely, depending on whom you ask. Omgeo estimates it costs four times as much to process an order manually (EUR 16) as electronically (EUR 4). SWIFT calculates that the investments by institutions to rationalise and automate their processes have allowed them to cut processing costs for individual client orders by 62%. From 1996-2000, it estimates costs fell from EUR 29 to EUR 12. Other reports, particularly the G30's report on the Global

Securities Markets of January 2003, set some grounds for comparison between the costs of domestic and cross-border orders, and came up with a ratio of 1:10. A report by Eurogroup and AFTI (the French Association of Securities Professionals) from November 2002 (6) came to conclusions that are probably more realistic. The study looked at US, German, French, Italian, Swiss and British professionals and first dispensed with a common misconception: there is no significant difference in cost between a US investor trading on an European market and a European investor trading on a US market. In the first case, prices ranged from EUR 100-115. In the second, from EUR 85-115. Another conclusion was that the cost difference between domestic and cross-border transactions was 20-35%. On average, a domestic order cost some EUR 70-85 and an international order EUR 85-115. Significantly, it seems the cost difference is mainly due to custody costs, which range from EUR 10 for a domestic trade to EUR 25-40 in international transactions, i.e. 2.5-4 times more expensive.

### KNOW YOURSELF...

In summary, cross-border transactions lead to errors and delays in the settlement/delivery cycle. There are three main reasons for these delays and errors.

> problems internal to the financial firms involved, little automation of procedures, low standardisation and, particularly, poor information and reporting. Very few operators have precise figures for the operating costs of processing their trading cycle and the extra costs of settling exceptions. This is one reason it is so hard to get reliable figures in this area. A study of British asset managers by Mercer (7), for instance, found that around half of transaction costs were not just not analysed, they were not even recorded.

> problems of communication between financial firms: these are partly related to the previous point, but are concentrated on the standardisation of IT systems and the references used to describe operating data.

> problems relating to market infrastructure and disparities in regulations. The solution lies in collective action, addressed to and in co-ordination with national and supranational regulatory authorities.

The answer to all these problems? Standardisation, automation, end-to-end interconnectivity across the whole trading cycle. In other words, the introduction of STP, for all players at all levels, individual (internal STP), multilateral (external STP) and collective (standardisation of systems and regulations).

**This approach reads like a self-help book:**

> **know yourself (internal STP)**

> **open up to others (external STP)**

> **live in harmony (harmonisation of systems and regulations)**

But the approach will also require — besides the obvious national and international political will to implement it — some heavy investment. The costs of the project envisaged by the US SIA in the early 1990s — currently on indefinite hold — to cut delivery times to T+1, were estimated at more than USD 8 billion. More recent studies found that to bring players up to a reasonable degree of automation over the next four years, financial institutions would have to pay out USD 10-20 billion.

This is not to be sniffed at. It also explains why different firms, different professional groups and different countries have pushed forward the STP project in their different ways.

(1) European securities settlement systems – 2nd edition – Catherine Karyotis – Revue Banque Edition –

(2) *Omgeo Benchmarks*<sup>SM</sup>, DTCC data, 2002

(3) Deloitte Touche Tohmatsu, Ernst & Young, KPMG, Mazars & Guérard, credit institutions: doctrine and practice, financial information 2001, CPC, 2001.

(4) Global Operations & Administration Limited (GOAL) - European study on income from foreign securities. July 2003

(5) Fulcrum Research – Survey of European Institutional Sentiment Towards Current Issues in European Trading Systems – September 2002 –

(6) Comparative analysis of trading costs in Europe and the USA – AFTI/Eurogroup – November 2002 –

(7) Transactions cost: a survey of major institutions in the UK – William M. Mercer – December 2002 –

AFTI: The French Association of Securities Professionals, created in 1990. Its mission is to bring together post-market securities professionals, and it makes recommendations at national and international level.

## CHAPTER 2

### THE FRENCH EXCEPTION

Gather together a representative panel of French front and back-office professionals working for institutional investors and ask them to tell you why a trade might fail: 9% of them will refuse to give you an answer.(1)

In essence, these professionals believe there is no room for processing errors in the French trading cycle. This "French exception" reflects the confidence that French market professionals have vested in their trading and settlement/delivery systems. Indeed, they are united in their assessment of the reliability of these systems: no French trading professional mentioned computerised system failure as a potential source of error. This is completely at odds with the attitudes of their British, German and Italian colleagues, who rank this potential risk third, immediately after human error and incorrect data.

Why such confidence in trading systems? Very simply, because it is well deserved. After twenty years of reform, the Paris market has set the example throughout Europe, at least from a technical point of view. Though the Paris market's international reach was minimal when the euro was introduced, it has now built a reliable, efficient and centralised processing system for domestic securities transactions. Paradoxically, this efficiency and technological advance have turned into a handicap since international competitors gained access to the French market.

### TWENTY YEARS OF REFORM

First, let us take a historical view. As a concept, the reform process began in 1981 when the so-called Pérouse report was published. Gradually, this process allowed the French market to reach, or even sometimes exceed, international standards. What did the report recommend? Nothing less than

simplifying market transactions by eliminating the double trading system of a cash market and a deferred settlement market and creating an options market; modernising securities safekeeping methods (including dematerialisation); systematically using technology in areas such as information dissemination, instantaneous order transmission and execution (continuous listing); and competition between intermediaries. Considering that gentlemen brokers were still trading by open outcry in the Palais Brongniart pit, and that written orders were still being delivered on paper all the way to the third floor of the same building, a relic of the 19th century, the report marshalled in a revolution. Still, as early as 1984, and hand in hand with the socialist government's change in ideological outlook, the first step toward a new market organisation was taken: the **dematerialisation** of securities. From then on, all securities were registered with (or "admitted to" as specialists would say) a central depository called Sicovam ("Société interprofessionnelle de compensation des valeurs mobilières"). In January 2001, the company changed its name to **Euroclear France**. Physical securities had lost all legal status (2), paper ruled no more and a simple electronic entry was all that mattered. What does that remind us of?

Having ensured the custody, transferability and safety of securities, the market authorities decided to focus on other aspects of the Paris market's electronic transformation. In 1986, the "Cotation Assistée en Continu" ("CAC" or computer-assisted continuous quotation system) replaced trading by open outcry: buy and sell orders were matched automatically in a centralised order book. This CAC system, also

Dematerialisation. Securities are no longer exchanged or held in paper form, but are recorded in the accounts opened by an authorised institution with a central depository (Euroclear France in France).

Euroclear France. Central securities depository on the French market. Formerly owned by Banque de France, Euronext Paris, Caisse des Dépôts et Consignations and credit institutions, the former Sicovam (Société Interprofessionnelle pour la Compensation des Valeurs Mobilières) merged with Euroclear in 2001 and is now a 100% subsidiary of Euroclear Bank, the international system for securities custody and settlement/delivery.

RELIT, a securities settlement/delivery system set up in France in late 1990. It has been enhanced by the addition of RGV ("Relit Grande Vitesse" or High Speed Relit), designed for high-value trades and providing immediate and irrevocable real-time settlement, and Relit + for OTC transactions.

known since 1997 under its new name of NSC ("Nouveau Système Central de Cotation" or new central quotation system), was adapted from CATS, the "Computer Assisted Trading System" used by the Toronto stock market. Unlike its Canadian precursor, however, NSC operates through decentralised terminals. The intermediaries (brokerage firms at the time) installed trading rooms. By 1989, share-trading activities in Paris had been transferred to an all-electronic system. In 1991, the six French regional stock markets closed their doors and the securities traded on these markets were transferred to the CAC system. In parallel, order routing was rationalised. The COCA system ("Connexion CAC" or CAC connection) replaced RONA ("Routage des ordres et des négociations automatisées" or automated order and trade routing), in use between banking institutions and brokerage firms since 1984. The new system provided for the direct transmission of orders to the market without manual intervention, and fostered the development of the first on-line trading services, through Minitel's home terminals.

## FRONT TO BACK

The scouts, however, were too far ahead of the troops. Between 1980 and 1990, trading volumes exploded on all financial markets worldwide. The Paris Bourse was no exception: French share trades alone multiplied by a factor of 16. The front offices, modernised and entirely computerised, absorbed the shock without difficulty. The back offices, however, were swamped. In 1988, it took an average 13 days to settle a transaction. The stock market authorities estimated that failed French securities trades represented 30 billion francs at the time (EUR 4.5 billion, then an enormous amount of money), including fails generated by securities transactions. This situation ushered

in an era of necessary reform for the settlement/delivery systems. The RELIT system was launched at the end of 1990 to replace the 23 existing settlement/delivery systems. From the outset, RELIT targeted simultaneous delivery versus payment (DVP), irrevocability of orders and standardised settlement terms (initially T+5). In 1991, in spite of (or thanks to) the bankruptcies triggered by the settlement of fails, failed trades represented only one billion francs (EUR 150 million). In 1992, to implement the recommendation of the G30, the Paris market decided that trades would be settled in T+3 (except for securities traded on the monthly settlement market, which continued to settle five days after liquidation, until this special market was closed in September 2000). In 1998, RELIT was supplemented with RGV ("Relit Grande Vitesse" or High Speed Relit) for high-value trades and providing immediate and irrevocable real-time settlement, and with Relit + for OTC transactions. For quite a long time now, the percentage of failed trades has been close to 0%. In fact, RGV was the first system to be certified without reservation by the European Central Bank. RGV and Relit + have moved on since 2001: Relit + is now called "RGV2 – Filière révocable" (RGV2 - Revocable channel), while RGV became "RGV2 – Filière irrévocable" (RGV2 - Irrevocable channel).

In parallel, Clearnet SA took over responsibility for the security of settlement and delivery operations, as a centralised counterparty to the Euronext markets. Clearing 21, an electronic clearing system, allows real-time netting of intermediaries' positions. The parties can take advantage of coverage methods offered by RGV (automated securities lending, repurchase agreements) to efficiently manage the liquidity of their securities and cash positions. Once the

parties' cover (securities and cash) has been verified and confirmed, the clearing system (RGV) simultaneously triggers the funds and securities transfers on the day of trading by actioning the parties' accounts at Euroclear France (securities positions) and Banque de France (cash positions). This processing model, automated from start to finish, was indeed a real pioneer.

The Paris market had met its objectives perfectly, under the guidance of the regulatory authorities, professional associations and Euronext and its satellites.

> Trading systems were entirely computerised.

> French post-market processes worked perfectly.

But the devil is in the detail. We should not forget that the market reached its universally recognised level of efficiency at the expense of the various professionals in the trading cycle, who had to devote considerable individual effort to meeting these new technical and regulatory requirements.

## SEGMENTATION AND SPECIALISATION

The intermediaries were the first operators impacted by market modernisation. The 1988 reform of the brokerage profession turned the French intermediation business upside down. Once authorised to open their capital to new shareholders, the new "Bourse member firms" became prime acquisition targets for the banks. The latter turned their trading and research activities over to their newly acquired subsidiaries, while they themselves concentrated on settlement/delivery operations. In 1996, the "MAF" law ("Modernisation des activités financières") to modernise financial operations transposed into French law the 1993 European Directive on investment

services, thus opening the market even more. The last remnants of the brokerage firms' monopoly disappeared for good. From then on, all registered "investment companies", including foreign ones, were allowed to trade on the Bourse. Credit institutions increased their penetration of trading services. Had all boundaries become meaningless? Only partly, since the MAF law requires all investment companies to register under a particular status.

> The "pure broker-dealers" trade only for their own account or for their customers' accounts. This is the most common registration today.

> The "broker-dealer individual clearers" are more or less equivalent to the former Bourse member firms. In addition to trading, these professionals clear trades for their own accounts or for their customers' accounts.

> The "broker-dealer multi-clearers" clear not only their own trades, but also trades by pure broker-dealers. Some banks, having acquired several former brokerage firms, have chosen this type of registration, becoming the behemoths of the French clearing business and, very often, of French custody business too.

> The "multi-clearer non-brokers" clear trades exclusively for the account of third parties.

Little by little, all players in the trading cycle, whether new market participants or repositioned former participants, have had to segment their operations and specialise in one of three possible business lines: stock market intermediation, clearing or custodial services. This reorganisation has come at a price. The changes in firm ownership, the mergers and partnerships, and the changes in registration have wreaked havoc on the trading cycles used by traditional universal

MAF law, the French Monetary and Financial Code: a law dated July 2, 1996, which transposes into French law the European Investments Services Directive (ISD) of May 10, 1993.

banks. The “full integration” logic that used to prevail was steadily turned on its head, including on the investors' side, since the principals on the French securities market, particularly asset managers, did not escape the reforms. Their roles and duties underwent in-depth change due to a variety of rules regulating players in the French savings market. Historically integrated with other financial institutions, asset managers had benefited from joint data processing systems. Subjected to new obligations in 1989, they were forced to incorporate as separate subsidiaries under the MAF law, and ultimately left their corporate parents' nests. Stricter governance rules erected watertight barriers between them and their former "internal" partners, leading them to develop multilateral relationships with new brokers, custodians, valuers and distribution networks.

In fact, these developments signalled the end of vertical integration between end clients (individual investors, institutional investors, businesses) managed by the banking network or by specific institutions, fund managers (internal fund management group or outsourced provider), brokers (Bourse member firms, all of them more or less affiliated to the group) and depositaries, custodians and clearing houses, which used to be federated under the same banner in one way or another. Chinese walls were going up. The segregation of duties was under way.

At the same time, the Paris market's electronic revolution and the industrial approach to order processing that it triggered led to increasingly automated processing in both the front office and the back office. Each player had to adapt by relying on its own resources, using an ever more individualistic approach. The group (or vertical) approach disappeared, to be replaced by the concept of positioning on the trading value chain

(horizontal approach). Each player, according to its positioning, developed relationships with the exchange (Euronext), the central clearing house (Clearnet) or the central depository (Euroclear France). The intermediaries procured their systems from the most logical source: while some developed proprietary systems, most of them relied on services offered by information systems companies primarily comprising ... the specialised subsidiaries of the Paris Bourse or regional French stock markets.

Evidence: most IT investments over the past twenty years have gone towards taking maximum advantage of French market systems, while only a marginal amount has been dedicated to communicating with foreign counterparties.

### **AN OVERDUE INTERNATIONAL STRATEGY**

The reason for this neglect is simple: until recently, French operators had only a peripheral interest in cross-border trading issues.

Institutional investors, who are the main holders of equities, were subject to restrictive rules favouring investment in domestic securities. Individual investors, already hesitant about investing in domestic equities, showed even less interest in diversifying on international markets. This reluctance, explained in part by the lack of information on foreign shares, was reinforced by tax rules favouring French equities. The result: in 1990, French residents held only EUR 27 billion in foreign equities, while non-resident investors had accumulated EUR 40 billion in French shares, representing 15% of the Paris market's capitalisation (EUR 265 billion). In other words, not much!

Twelve years later, the situation is very different. The euro's introduction in 1999 eliminated foreign exchange risk in the new monetary zone. Institutional investors enjoy more flexible risk diversification rules. Portfolios have become more international, particularly within the euro zone. The last annual survey conducted by OFGRI (3) noted that French shares represent only 30% of institutional investor portfolios, while investments in the euro zone (excluding France) account for 57%. Under pressure from their clients, asset managers have followed suit and now offer their individual investors a range of investment tools consistent with this new European approach. Individual investors are, in fact, increasingly invested in foreign equities, since they rely more and more on managed products (indirect equity investment has tripled since 1977, particularly through multi-support contracts). Although only a third of all individual investors held foreign shares directly in 2000 (an average percentage at European level), they are now keener on buying equities across borders and now benefit from a more favourable tax treatment. Since January 1, 2002, French households may invest in European equities through their tax-free "PEAs - Plan d'Épargne en Actions" (long-term savings schemes). As of year-end 2002, 7.3 million PEAs were outstanding. Since January 1, 2003, UCITS invested in European shares may also be acquired through a PEA. The result: it is estimated that French residents held almost EUR 200 billion in foreign equities as of year-end 2002, equivalent to 21% of the French stock market capitalisation (EUR 928 billion as of year-end 2002). Growth in cross-border investment by foreign nationals has been even more dramatic. Today, non-residents are estimated to hold about 37% of French equities, while foreign operators are reckoned to initiate

more than 70% of all trades on the Paris stock market.

The question of standardisation and automation of cross-border trades is no longer an "external" issue.

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(1) Fulcrum Research – Survey of European Institutional Sentiment towards Current Issues in European Trading Systems – September 2002 –

(2) France is, with Sweden and Spain, one of very few countries that have dematerialised all publicly traded securities — another "French exception" that forced it to re-materialise certain securities, in the form of a certificate, to allow transferability abroad.

(3) OFGRI (French institutional investors' reserve management observatory) – 9th annual report, June 2003 –

UCITS (*Undertakings for Collective Investment in Transferable Securities*). UCITS include open-end investment companies (known in France as SICAVs) and mutual funds (in France, Fonds Communs de Placement or FCPs).

## EURONEXT: "BIG IS BEAUTIFUL"

Who would have thought in 1988 that the former *Chambre syndicale des agents de change* (Brokers' professional association) had a European future? Yet, having transformed itself into the *Société des Bourses françaises* (ParisBourse SBF SA), and after merging with the Belgian and Dutch, and later Portuguese, bourses, it was to become the first pan-European stock market operator. Euronext now groups together the French securities exchange (Euronext Paris) and other European exchanges. At the end of 2002 (1), it was European leader in terms of domestic and international equities trading volumes (EUR 1,570 billion), ahead of London (EUR 1,066 billion) and Frankfurt (EUR 870 billion). It was also the second largest European market in 2002 by capitalisation (EUR 1,477 billion), behind London, and had 1,484 companies listed on its various domestic and international segments. The group also controls the world's second largest derivatives exchange, Euronext.Liffe, with 697 million contracts traded in 2002.

The company that was to become Euronext began its quest for growth in 1999 when Matif SA, Monep SA and Société du Nouveau Marché merged with ParisBourse SBF SA. Then, on September 22, 2000, the pan-European merger mentioned above came into effect. Anecdotaly, it is worth noting that the merger was announced on March 22 of the same year at the Savoy in London, an important location symbolically since it was the place where the London Stock Exchange and the Deutsche Börse had announced their own merger project, iX, two years earlier, in July 1998. The German/British project was soon abandoned, as was the ambitious "Alliance" between eight European bourses, including Paris, London and Frankfurt, in May

1999. Euronext took a new step forward in July 2001, when the company went public (on the Euronext Premier Marché, of course!) as a public company with limited liability under Dutch law. The pan-European exchange, valued at EUR 2.8 billion, raised EUR 400 million during its initial public offering. In February 2002, the Lisbon bourse joined Euronext, which had also just acquired Liffe. Clearnet, the French market's traditional clearing house, meanwhile, joined forces with its Belgian and Dutch counterparts in February 2001 before merging with LCH (the clearing house for the London Stock Exchange, among others) in July 2003 to create Europe's largest cross-border clearing house and central counterparty.

What "value-added" did the new structure create for the members of the various combined entities? A common cash trading platform (NSC, already in service with the founding members, and due to be extended to Euronext Lisbon in 2003); a common derivatives trading platform (Liffe.connect, already operational on the Paris, Brussels, and London markets, with roll-out scheduled in Amsterdam by mid-2004); a unified clearing system, Clearing 21, the only one "in the world", according to Euronext, to allow real-time clearing of equities and derivative products, with multilateral netting of trades. This system, already in service on the French, Belgian and Dutch markets, will gradually be expanded to include the other markets.

A solid construction, indeed, particularly considering that few observers would have bet on the small French bourse's chances of success when the first pan-European merger announcements were made by its German and British competitors!

Euronext's apparent success is relative, however. Some doubt that its merger-based development model is the most effective. While it allowed Euronext to reach critical mass, significant capital investment is needed to integrate and standardise the new partners' technical systems. In contrast, the combined infrastructure created by the Germanic triad (Deutsche Börse/Eurex/Clearstream) is already fully integrated in terms of technology and capital structure, enabling it to focus on the interconnectivity of its systems and the development of new services outside its traditional business lines. The Euronext, Clearnet and Euroclear combination is based on cross shareholdings, and as a result, each new acquisition upsets its operational unity. Both combinations however face the same new potential threat: in addition to the competition brought about by the emergence of Multilateral Trading Facilities (MTF), order internalisation could soon be authorised by the new ISD II European directive on investment services, and this could encourage financial institutions (who are members of the said combinations) to capture part of the activities until now performed by market infrastructure operators.

(1) Euronext, "Bourse Information - Annual review supplement - N°51- January 2003".

Euronext's strategy of growing by merger has enabled it to reach a "critical mass". But it has been forced to make significant investment in order to integrate and unify the technical systems of its new partners

## PRACTICAL PROBLEMS AND SOLUTIONS

“To be or not to be”: the increasing exposure of French players to international competition forces them to make drastic choices. To stay in the race, to keep pace with tomorrow’s clients and suppliers — those that were able to adapt — market participants too must embark on the rationalisation, automation and standardisation drive required to improve efficiency and interconnectivity. The challenges, solutions and techniques vary along the trading cycle. The future of these players also depends to a major extent on the response of supervisory authorities to European market harmonisation issues, in respect of both trading and custody.

> Asset managers are without doubt the securities-market players for whom process and mission upgrades are most critical. The French collective fund management industry(1) is the largest in Europe (21.8% market share), with EUR 916.85 billion under management, invested in 11,657 funds. However, like the European asset management industry in general, it suffers from a structurally low level of profitability, due to the fragmentation of its domestic market, which prevents it from achieving significant economies of scale. According to a ZEW study(2), the European asset management industry could save EUR 5 billion each year if it had a single market structure, like the one that exists in the USA, where the average mutual fund portfolio is seven times larger than that of a French UCITS (EUR 699.4 million compared with EUR 106.9 million).(1) There are a large number of very heterogeneous asset managers in France: out of 520 institutions registered with the COB(3) in 2001, 46 controlled 90% of all assets under management, while 252 firms controlled just 1% between them. The result: almost 30% of all asset management

companies recorded operating losses. To survive, asset managers must therefore simultaneously specialise (by management style, asset class or region), improve their transparency and the quality of their reporting (to meet demands from customers who are anxious to improve management of their own operating profitability), and increase their operating efficiency (performance, real-time, product management, process automation, risk measurement, etc.).

Reengineering of this kind requires the outsourcing or subcontracting of some operations or processes that used to be considered core group activities.

Following the transfer of control, centralisation and custody functions to custodians, administrative and accounting functions are now being transferred to **valuers**. These companies must be able to communicate effectively with several institutions, which are themselves in the process of acquiring new systems to ensure the seamless exchange of information. Automation and standardisation levels are far from adequate in this respect. Demonstrating that there is still a long way to go before 100% STP is achieved, Diams, (under the aegis of **AFG**), announced a market initiative in July 2003 to standardise reporting-data transfers (complete listing of all UCITS and funds under management mandates, **XML** messages), thus complementing SWIFT’s trade messaging operations. This process may gain momentum as different billing rates apply depending on the communication method used, a practice that is gaining ground among international brokers as well as global custodians: rates may vary from 1 to 4 depending on whether an asset manager uses standardised protocols or archaic faxes...

The same principles apply to marketing. New forms of product distribution (e-brokers, multi-managers, independent networks, distribution platforms, etc.) compel the promoters of UCITS to manage or develop distinctive ranges, to implement more interactive reporting and performance measurement systems, and to design more effective marketing tools. There is no compelling reason for these functions to be carried out in-house.

The same is true of in-house trading operations, which certain large houses have not hesitated to separate from the financial management function per se, by creating intermediation desks. A full spin-off of these activities is in some cases now on the agenda.

Finally, outsourcing also extends to core operations. To remain competitive while maintaining a product range that meets customer expectations, an increasing number of asset managers have concluded partnership agreements with French or foreign specialists, to whom they subcontract the development of highly sophisticated product lines (structured products, alternative investment, ethical products, etc.).

What is the common objective underlying all these trends? It is the need to adopt a rational multilateral communication approach, both at the front end and at the back end of the trading cycle. Certain market participants have already implemented this STP approach (see Credit Lyonnais Asset Management testimonial, page 30).

> Brokers are under intense pressure due to lower volumes, competition, a squeeze on margins, etc. Their main clients have set up what are in effect buying groups, allocating their orders to brokers using a standardised selection process: by specialism, area of

operations, product, cost, means of transmission, etc. Execution quality is evaluated post-trade in terms of market impact, compliance with deadlines, the day’s average weighted price, etc. For brokers too, the choice of which specialisms to retain in-house and which to outsource, and the ability to offer tailor-made solutions, has become crucial. Some brokers have discontinued their research activities to focus on discount brokerage, and institutional investors that want to outsource their broking function place trading terminals with these new intermediaries. The emergence of on-line brokers at the end of the 1990s also illustrates the trend towards market segmentation. There are now around 40 on-line brokers in France, representing 14% of all trades recorded on the Paris market(4). They offer direct access to the market, with services varying by client category, and are often fully integrated from a technical point of view. Other providers have become multi-market brokers. Their services and their rates are flexible: they offer traditional trading services, **“program trading”** (often subcontracted to specialised providers), dedicated research or pure trading, and direct access to the market through integrated technical solutions. In all cases, process quality and automation, and the ability to transmit data under all market standards, is vital. The brokers are currently focusing on procedure rationalisation and computerisation, to control their costs and adapt to volume fluctuations and changes in the regulatory environment including order internalisation, as envisaged by the proposed new European investment services directive (ISD II). Their objective is to reduce human error, still too prevalent in this section of the trading cycle (see Exane testimonial, page 31).

*Program trading, or programme trading: automated management of stock market purchase/sale orders.*

Valuer: valuers, acting on behalf of asset managers, calculate the net asset value of UCITS, carry out banking reconciliation, monitor regulatory ratios and provide accounting and legal management services for investment funds.

AFG (Association Française de la Gestion financière): formerly known as AFG-ASSFI, AFG is the professional body representing the French asset management industry.

XML, for eXtended Markup Language: standard language created by the World Wide Web Consortium (W3C), which is also responsible for standardising HTML and web style sheets, etc.

ICSD, for *International Central Securities Depository*. The ICSDs (Clearstream and Euroclear in Europe) perform a clearing and custodian role through a network of central depositories. As well as providing these traditional services, ICSDs also manage their clients' pure cash accounts.

> The fate of the custodians will, without a doubt, be played out at European level. The question of critical mass, always essential in this business, is becoming even more important as the promised European post-trade revolution approaches. But those charged with bringing about the revolution are still trying to clarify their ideas at present. Over a two-year period, around a dozen official consultations and reports (and hundreds of private studies) have fed the discussion about the future for European settlement/delivery systems and safekeeping/custody functions: consultations requested by the European Commission, new recommendations by the G30, the CPSS/IOSCO report(6), the Andria report(7), the second Giovannini report(8), the CESR/ESCB report(9), etc. Thousands of pages (more paper?) but still no standard, as no consensus could be reached on the conditions required to foster healthy competition in these activities at European level. What were the stumbling blocks? For one, where to trace the dividing line between custodian banks and ICSDs (International Central Securities Depositories) – in effect Euroclear and Clearstream – the latter having encroached on the high value-added territory of cross-border transactions. Also, more generally, what model to use in dividing up responsibilities between the "essential infrastructures", i.e. the national custodians, currently undergoing consolidation under the ICSDs' supervision, and the competitive market participants? Should the national custodians merge to create a "super" European central depository, like DTCC in the USA? Or should the regulatory authorities simply impose interconnectivity rules and let market forces do the rest? Finally, and most importantly, what definitions and legal obligations should be established at European level to govern all these different securities-

related businesses, the boundaries between which need to be clarified? Also, what kind of harmonisation should apply to the securities themselves (including UCITS)? The answers to these questions will contribute to the market participants' fate. Anxious as these participants may be to know the nature of the European passport under which they will operate, the European Commission is delaying its answers: the idea of a specific Directive addressing post-trade activities is in the air, but no decision or proposed date has been forthcoming as yet.

The French custodians have been subject to fierce competition over the last few years, forcing them to significantly lower their fees. They have therefore limited themselves to pursuing productivity gains through the use of common mass processing tools, essentially at domestic level, or developing new services (securities lending, management of corporate actions, tax management, transfer agency) to increase their revenue. But without ever carrying out any exhaustive restructuring of their trade processing cycle, which, though of course automated, relies too often on proprietary systems and communication tools. Some companies, however — but only a very few — have taken steps to secure their future in a global European environment (see Société Générale Global Securities Services testimonial, page 35).

> Solution providers, finally, are also pursuing interconnectivity as a kind of holy grail. But without partnership agreements with their competitors, they will never be able to develop software with standardised protocols. It is therefore vital for them to belong to industry-wide associations where information can be shared. SWIFT, which aims to become THE communication solution for the financial community (benchmark network, protocol and messaging format), is already well implanted

in the banking industry, and is now multiplying its initiatives to bring on board the other members of the securities-market community, with SWIFTNet — an XML network that should, according to SWIFT, cut messaging costs from the present 17.6 euro cents per message to 8.8 euro cents in 2006 — on the network side, and the new ISO 15002 standard supporting FIX on the protocol side. Securities messages already represent 30.5% of SWIFT messages worldwide. In France, 244 institutions use them (94 million messages were sent in 2002, including 25.6 million to domestic counterparties). But thousands of companies, from pre-trade operators to custodians, are trying to obtain a slice of the STP cake, worth around EUR 2 billion in the European market alone in 2004, according to Datamonitor(10) estimates. Some market participants, such as Sungard, Reuters and Omgeo, have already established dominant positions on some market segments (see Omgeo testimonial, page 36).

(9) CESR/ESCB – Report: "Standards for Securities Clearing and Settlement systems in the European Union" – August 2003.

(10) Datamonitor – "European STP and Risk opportunity and Vendor" – September 2002 -

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(1) FEFSI – Quarterly statistics on European investment funds– March 2003 –

(2) ZEW (Centre for European Economic Research) – Report: "The European Single Market in Investment Funds and Asset Management" – Mannheim, May 2003

(3) COB Annual Report – May 2002

(4) Association Brokers on Line (On-line brokers association) – May 2003

(5) Group of Thirty – Report: "Global Clearing and Settlement/A Plan of Action" – January 2003

(6) CPSS/IOSCO – Report: "Recommendations for securities settlement systems" - January 2001

(7) European Parliament – Report: "Clearing and settlement in the European Union - Main policy issues and future challenges", also referred to as the "Andria report" – December 2002

(8) European Commission: Report: "EU cross-border clearing and settlement arrangements" also referred to as the "Second Giovannini report" - April 2003

## REDUCING OPERATIONAL RISK

### STP in practice — asset managers

In the opinion of their partners, asset managers too often tend to rely on their various providers to “sort out” their processing problems. Crédit Lyonnais Asset Management, a pioneer in STP, has been measuring and reducing its operational risk since the mid-1990s. The results speak volumes: between 1999 and 2002, CLAM doubled the volumes it processed whilst halving its costs...

#### What five principles are essential for implementing an efficient STP strategy?

**Pascal Vigier**<sup>(\*)</sup> – The first stage involves understanding and deciding which specific part of the asset management value chain your business belongs to. Only when this strategic decision has been taken are you in a position to distinguish between internal STP and external STP and to implement dedicated solutions for each category of partner. The second stage is to set up indicators to monitor operational risk. There should not be too many indicators (number of errors, business volume, STP cost, etc.) and they should be measured on the same basis over several years. The third stage is to establish a target architecture so that the rationalisation measures make a full impact. The fourth stage is to win over and bring onboard internal and external partners. The fifth and final stage is to establish STP as a core and integral function in the management structure.

#### Which asset management tasks and functions do you classify as external STP?

**Pascal Vigier** – I believe that the main task of an asset manager is to manage UCITS and management mandates from a decision-making or “intellectual” point of view. Management includes asset allocation, stock-picking and buy-side financial analysis. By extension, the asset manager is involved in carrying out the trades arising from its research and stock-picking activity. This

trading function therefore also falls within the scope of an asset manager’s internal expertise, but must be dealt with in a specific relationship with the custodian.

All other functions, on the other hand, count as “external services”. This category includes pre-trade dealings with market counterparties (brokers and other intermediaries), post-trade dealings with service providers — custodians providing safekeeping services, valuers for the administration of UCITS and the calculation of net asset value — and the entire range of distribution functions. I think this last point is vital, even though, for historical reasons, the banking institution (and its network) that created the asset manager is usually its main distributor. The fact remains that, in view of the growing importance of alternative distribution channels (e-brokers, independent networks, funds of funds, etc.) and the emergence of transfer agents, transparent and standardised procedures must now be adopted with all distributors.

#### What technological solutions has CLAM opted for?

**Pascal Vigier** – In the absence of a universal solution, the protocols and providers vary according to the type of processing to be carried out and the partner. For the pre-trade phase with brokers, involving real-time flows, we have adopted FIX as a reconciliation tool. We have used Omgeo solutions in the post-trade phase since 1999; “Y” flows to the valuer and the custodian are based on SWIFT

technology and an interface developed by Sungard. But we are looking for ways to limit the number of reconciliation tools. This is a major technological issue in our view, and clearly a part of process automation, which will provide additional indicators on operational risk.

#### Does the implementation of STP solutions have any unexpected consequences?

**Pascal Vigier** – Not unexpected, but often difficult to measure. Too often people forget,

for example, that STP ends up amassing vast amounts of electronic information. A typical example would be program trading, which inevitably increases processing volumes and therefore storage requirements, a difficult factor to measure. So the success in controlling operational risk in program trading also involves a need for specially designed modular storage solutions.

(\*) Pascal Vigier is Head of Technology and Development at Crédit Lyonnais Asset Management.

## LIMITING HUMAN ERROR

### STP in practice — brokers

This is the main issue for stock brokers. Implementing STP is a must if they are to satisfy their most demanding clients, with their high automation rates, and be capable of processing larger volumes. Front offices were the first to benefit from electronic trading. Electronic confirmation and reconciliation is gradually making inroads into middle offices, which are seeing their tasks change from simple data input to database and exceptions management. But brokers have their hands tied when it comes to choosing which processes and standards to implement: their systems must be capable of communicating with those of their clients. In the confirmation phase alone, several tools can coexist within the same establishment. At the heart of the trading cycle, brokers are dependent on the equipment standards used by their clients’ custodians and, to an even greater extent, on local settlement/delivery infrastructures. The solution is far from easy: reducing internal errors, speeding up transaction processing, ensuring a T+3 settlement/delivery service, whilst at the same time constantly improving the quality of the client relationship. Exane, France’s leading independent broker, has a practical example of the difficulties encountered in implementing an STP solution.

#### What major measures has Exane taken over the last few months to improve its processing quality?

**Patrick Crésus** (\*) – Two years ago we installed an Order Manager System (OMS) in the front office, which is used for input, execution, brokerage, confirmations, history, etc. As the OMS gained in importance, middle-office operations underwent a noticeable change, benefiting from the upgrade to confirmation systems and the installation of a trade monitoring database. SWIFT has been installed in the back office to

send delivery and settlement instructions to custodians. Automated systems for reconciling deals and stocks on foreign markets have also been implemented in the back office.

#### What were Exane’s objectives in implementing the OMS and what were the results?

**Patrick Crésus** – In particular, we needed to speed up the order-placing process, reduce the errors from manually processing deal

tickets and cut operational costs. In the past, when a client order was received by telephone, it would mean writing out a slip which the sales trader would send to the dealer (the CAC Man), who would carry out the deal and give the sales trader the execution price. A ticket would then be made out and sent to the middle office for input. With the OMS, the order is input straight into the system. The dealer is immediately aware of the order and uses the OMS to execute it in the market. Once executed, the order moves to the next stage in the system. And what is even better, client orders can be received in a file format (FIX standards and others) and integrated into the OMS. Executed orders then feed automatically into the middle-office systems. We cannot put a precise figure on the benefits in financial terms, but we have been able to measure the effect on our business. Between 80% and 85% of middle-office input has been cut out. In the front office, we have saved all the time previously spent writing out tickets, and the quality of our client service has improved.

#### **What percentage of your trades are confirmed electronically?**

**Patrick Crésus** – We estimate that around 30% of trades are confirmed by electronic systems. The remainder are confirmed by fax. ETC (Electronic Trade Confirmation) considerably reduces the risk of error: the client receives its confirmation just a few minutes after execution, reconciles it with its own system, tells us if there are any errors and gives us the allocations. With some of our most advanced clients in this area, using ETC enables us to meet very tight contractual deadlines (less than 2 hours between execution and validation of detailed confirmations). The only remaining risks of delay are, on the asset manager's side, if the initial order is not input in its systems, and on

our side, if we are slow to detect an incorrect allocation. I must say that asset managers in the UK and North America are often more advanced and more efficient than their French counterparts on this point. French asset managers have been slow to implement ETC — they only started about two years ago — and not all of them are using the automated reconciliation function as yet. That said, even in cases where a client manually processes a confirmation sent electronically, we are still able to improve the process and reduce errors.

#### **What new tasks do the middle-office teams now perform?**

**Patrick Crésus** – Managing databases (securities, clients, standard settlement instructions) and exceptions, and monitoring the matching and settlement of trades have definitely become new middle-office tasks. There has been a noticeable reduction in input tasks as such. The monitoring processes we have implemented have also restored the middle office's role in managing trades. We have moved away from a predominantly “incoming” system — the client would ring to advise of a problem — to a predominantly “outgoing” system, in which our teams find an anomaly and call the client to resolve it.

#### **How have you dealt with the problem of managing settlement/delivery instructions?**

**Patrick Crésus** – This is a major problem in cross-border trades.

It involves the real-time management of the database containing all our clients' settlement/delivery instructions (SSIs) for all the custodians they may use. This database is updated every time we enter into a new client relationship. The client specifies its SSIs for each country it intends dealing with. The

database is also updated every time one of our clients changes its SSIs. The problem lies in the time it takes to do the update (how much time the client needs to give us the information), and the means of updating it (electronic, telephone, fax, etc.), which in some cases give rise to the need for exceptions management. Our ideal solution would be to completely outsource management of this SSI database. We would really like to see a global or European database, which would be updated automatically by all operators — who would be fined for non-fulfilment of this duty. Omgeo's **ALERT** database, which we use to feed our internal database, is an interesting venture, but one which unfortunately does not cover the entire market.

#### **You mentioned implementing a trade monitoring database. How is it fed and what problems has it helped to resolve?**

**Patrick Crésus** – The trade monitoring database is fed partly by our middle-office systems, at the time the trades are recorded, and partly by information (files) received from the various custodians on trade status (pending, missing counterparty, matched, different amount, settled, etc.). This database is vital because it enables us to monitor the entire chain of events between T (trade date) and T+3 (theoretical settlement/delivery date) and to take action as soon as a problem arises. This automation makes life easier for our teams, giving us the chance to react a long way upstream, as early as T+1, and not

have to wait for the theoretical settlement date to find out about a problem. Implementing this database in tandem with the OMS and electronic confirmation and reconciliation tools has allowed us to achieve a marked reduction in our settlement/delivery fail rate.

#### **What are the reasons for fails?**

**Patrick Crésus** – Of course our STP still has room for improvement. But a large number of today's fails are due to causes external to Exane. Upstream, it is clear that our success rate will increase as our clients adopt electronic confirmation and reconciliation processes. Downstream, the central counterparty and clearing infrastructures remain the most difficult problem. Our fail rate in the French market is around 4%, but 8% in Germany. The main reason for this discrepancy lies in the differences between regulations and procedures for failure management in the two markets. In France, we have had a central counterparty and penalty and buy-back rules in the case of default for years. In Germany, the CCP (Central Counterparty for Equities) started up in April 2003, and the penalty system is not likely to be in place much before the end of 2003. In order to redress counterparty delivery delays and to honour our commitments to clients on the contractual date, we are therefore obliged to use our custodians' automated securities lending services.

(\*) Patrick Crésus is Operations Manager at EXANE

*Omgeo ALERT<sup>SM</sup> is a global database and standard for the communication of settlement and account instructions. It is populated with more than 4.6 million broker internal account numbers (BIAs) and over 150,000 investment manager accounts.*

## REDUCING SETTLEMENT/DELIVERY TIMES

### STP in practice — custodians

Whatever the sector, it is often at the back end of the production cycle that the problems and delays built up in prior stages come to a head. The securities industry is no exception to this rule. At the end of the cycle, custodians have to manage not only their own functional tasks (settlement/delivery of securities, custody), but also put right any errors their clients (investors) or clients' clients (brokers) have made or not dealt with. Most of their core business procedures have long been automated, thanks to the long-standing use of SWIFT messaging and an excellent domestic settlement/delivery and clearing system, but they are worse off when it comes to cross-border trades, due to regulatory discrepancies, and UCITS management, where STP strategies, if any, are very often still based on proprietary systems. SG Global Securities Services is France's second largest global custodian, with assets in custody of almost EUR 860 billion, mainly for institutional investors. Testimonial.

#### What have been SG GSS's main technical options with STP?

**Hugh Palmer**<sup>(\*)</sup> – We have always favoured the most pragmatic and standardised solutions, since these most directly meet our clients' needs. For example, we obviously use SWIFT as the message format in our local custodian service to foreign investors. What are these investors actually looking for? If they are to manage large volumes on the French market as efficiently as possible, they need to be sure that their settlement/delivery operations are successfully carried out on the theoretical settlement date (T+3 in France). They also want to be able to communicate in a standard way with all their local correspondents, and SWIFT meets this need. The ISO 15022 standard also enables us to manage the processing of corporate actions more efficiently. However, although this solution meets the needs of many of our clients, we have also developed parallel options for clients who have not chosen SWIFT messaging.

#### What about matching?

**Hugh Palmer** – With a domestic deal, even if it is for the account of a foreign investor, and executed via a foreign broker that is a member of Euronext, the matching is carried out by the

central depository — Euroclear France in this instance — and rarely causes any problems. Only in exceptional cases do we have to resolve matching problems directly with our client's counterparty. But when we trade on a foreign market for the account of a French or foreign client, we get our client to send us a copy of its broker's contract note. We developed an internal tool around 10 years ago, which enabled us to pre-match client instructions and broker confirmations. This allowed us to offer our institutional clients a "theoretical settlement" service, where we actioned the client's account as soon as the pre-matching was complete, bearing in mind that the probability of a successful match (in the local settlement/delivery system) was by then close to 100%. Following the arrival of VMU (Virtual Matching Utilities) on the market we took another pragmatic decision, i.e. to adopt the standard solution that most suited the requirements of all our partners – *Omgeo Central Trade Manager*<sup>SM</sup> Settlement Notification Note (*Omgeo CTM*). This had the obvious advantage of being compatible with *Omgeo OASYS Global*<sup>SM</sup>, with which a good number of French and foreign brokerage firms were already equipped. *Omgeo CTM* produces messages to ISO 15022 standard, enabling us to ensure the same level of service as our proprietary system, while our clients no longer

have to send us a copy of the NOE (notices of execution) or contract notes..

#### What is your firm's STP rate?

**Hugh Palmer** – It is clear, and this is confirmed by organisation consultants, that "you cannot manage what you cannot measure". There are a whole series of part-indicators for STP performance, such as the STP rate for incoming instructions, the STP rate for outgoing transactions, the trade failure rate, the ratio of individually processed trades, etc. Our overall STP rate is high, as reflected in the global indicators on which we report, such as independent ratings — measuring the quality of operational processes and management, whether procedures are followed, etc. — and client satisfaction. SG GSS is very well placed in both respects. Moody's has given us a rating of Aa2(MQ) for our Paris custody business, while Fitch has awarded us an aa rating for global custody and our Paris custody control. SG GSS was rated the best global custodian (service quality) by Global Custodian magazine and best global custodian for asset managers by R&M Consultants' global custody survey.

#### Which issues are still presenting problems?

**Hugh Palmer** – The systems in our core business — clearing & custody, custody services, custody control, etc. — are reliable, efficient and able to provide a quality service within the required deadlines. The main difficulties still to be overcome affect two

areas of business. Firstly, corporate actions and taxation, which because of their specific local features (legal, regulatory and organisational differences), require tools with considerable processing capacity and flexibility, in addition to a great deal of expertise. And secondly, liability management, because processing is still very manual and non-standardised, both in relationships with centralising correspondents and between asset managers and distributors. Most of our asset manager clients, whether large or small, have not yet taken the plunge by automating their systems. They do not always have the resources or the desire to invest in SWIFT or VMU type solutions. STP, where it exists in this area, is proprietary. We have also developed a range of internet tools, GLASS, for our institutional clients. One of our services, GLASS Liabilities, enables clients to centralise orders, and monitor commissions with distributors, or other types of instruction specific to UCITS (redemptions, front-load fees, retrocession, etc.). But what we really want to do is promote standardised and exportable solutions. That is why we are actively involved in the SWIFT-led project, which should shortly enable fund orders to be exchanged between entities via the automated and formatted messages that are currently being developed by the Paris market's main centralising correspondents.

(\*) Hugh Palmer is Head of Products at SG Global Securities Services.

## AUTOMATING PROCESSES

### STP in practice — solution providers

The aim of STP users, as opposed to solution providers, is to make the trading cycle as seamless as possible. Omgeo, a subsidiary of Thomson Financial and the DTCC, provides electronic confirmation and reconciliation tools for the post-trade and pre-settlement phases. World leader in this market segment, it has more than 50 clients in France. Interview.

**Your client list includes only a dozen or so French asset managers, a very small portion of the existing players. Why are they so uninterested in your offering?**

**Henri Giacobbi (\*)** - I would start by pointing out that these dozen or so clients include the largest French asset managers by assets managed. On our estimates, this means we cover almost half of assets managed in France. Having said that, it is true that a good number of asset managers are hesitant about automating their processes. The reasons are well known: the strong domestic bias of portfolios, the high-quality national confirmation and settlement/delivery system, historical ownership ties with custodians, and, above all, the large number of players (more than 500). Many of these are small and not all have the resources to make the necessary investment in IT across the whole range of management tools. It is not by chance that the first asset managers to employ electronic confirmation systems, as well as portfolio management systems and other order management systems, were the most active in international asset management. We have noticed that take-up of what we call “Intelligent Trade Management” tools is gradual: asset managers start by integrating an Omgeo solution for international equities, then afterwards they bolt on international fixed-income and domestic equities, before finally adding domestic fixed-income. This has led to a steep increase in the automation of fixed-

income trades over the last few months. We estimate that more than 80% of our clients with *Omgeo OASYS Global*<sup>SM</sup> now use it for both equities and bonds.

**So the asset managers using your products are not necessarily equipped with all automation functionalities. Can you tell us about the various possibilities, and what they usually opt for?**

**Henri Giacobbi** - Without going into detail, I would say that our products allow intervention at several stages of the trading cycle, from post-trade through to pre-settlement. The first stage is the electronic confirmation of the trade. The broker must inform the client — for example, an asset manager — once a trade has been transacted on its behalf. The asset manager must then confirm to its broker that it agrees with all the terms and conditions of the trade. Traditionally, the asset manager and broker exchanged this information by fax or telephone. You can imagine the errors and deadline problems this caused. These errors and delays were multiplied due to the number of partners and the non-standard relationships that existed between brokers and asset managers. With a tool like *Omgeo Central Trade Manager*<sup>SM</sup> (Omgeo CTM), asset managers can receive identically formatted broker confirmations at one point of entry. And they can validate the confirmation by the same route. Almost all our clients have chosen this functionality.

### What are the other stages in automation?

**Henri Giacobbi** - The second stage is to automate reconciliation of the trade. Again in a traditional system, the information would be matched manually (matching of data provided by the broker and the order details sent by the asset manager). With *OASYS Global* or *Omgeo CTM*, the confirmation process is automatic if the asset manager's portfolio management tool is linked to Omgeo's systems. If not, the matching is performed manually but confirmed automatically. Of course, a lot of asset managers have not yet computerised their portfolio management...

The third stage is to electronically transmit the confirmation to the other counterparties, for example the custodian for an asset manager. If the client has installed *OASYS Global*, this automated transmission is by CFI (Copy for Information), while where *Omgeo CTM* is being used, transmission takes place via a SWIFT module.

In practice, there are endless different permutations: an asset manager with the complete range of Omgeo solutions (including enrichment of the settlement/delivery instructions database via the *Omgeo ALERT*<sup>SM</sup> database); an asset manager that has opted for electronic confirmation without matching, but also uses CFI or SWIFT with its custodians; an asset manager with automated confirmation and reconciliation, but which communicates with its custodians via a proprietary link.

The adaptability and modular nature of our solutions is one of Omgeo's strengths.

**You mentioned the ALERT database. How comprehensive and reliable is this tool?**

**Henri Giacobbi** - The principle behind the *ALERT* database is simple: the pooling of all settlement/delivery instructions in an open database. Instead of informing each counterparty

individually, the institution changing or adding instructions enters the details in the *ALERT* database which then sends all the participants an automatic alert, as well as enriching any trades passing through an Omgeo confirmation system. Although greatly valued by our clients, the *ALERT* database can definitely be improved: it centralises the SSIs of 6,000 Omgeo clients worldwide — a large but by no means comprehensive section of the market — and how good it is depends on the quality of the data input. We are in the process of improving this last aspect — we have just finalised a Quality Data Initiative programme which increases data validation controls and thereby prevents data input errors as far as possible. It also systematically corrects any false data detected when a trade is carried out. So while the system is not 100% perfect, it is improving all the time...

**One last question: the development of STP depends, among other things, on the interconnectivity of software solutions. What is Omgeo's viewpoint on this issue?**

**Henri Giacobbi** - Interconnectivity is practically a synonym for STP: from a strictly operational point of view, a fragmented industry is an inefficient industry. Achieving a seamless cycle from start to finish requires all the players in the trading cycle to be linked and able to communicate easily, whatever the messaging standard, protocol or proprietary portfolio management system used. We are very proactive in this area. Through the development of our “STP Partner Program”, we are forming partnerships with other software providers. We have developed around 30 interfaces in conjunction with some 40 software publishers. We are working with SWIFT as a member of the “Securities Market Infrastructure” and have developed an interface that allows FIX messages to be sent via *Omgeo CTM*. We also take the interconnectivity of our solutions with market

*Omgeo OASYS Global: a global service for trade confirmations and the communication of block trade details. It includes a tool for the automated matching of transactions between asset manager and broker.*

*Omgeo Central Trade Manager: a central matching solution for domestic and cross-border trades, which includes real-time settlement instruction enrichment and automated settlement notification messaging.*



systems very seriously. The reason why our services have been easily integrated into the French trading system is that we have developed interfaces with RELIT, the domestic settlement/delivery system, and some of our data feeds into it. But I should add that these external STP systems are not enough to ensure true interconnectivity. Internal STP is almost as important: the main sources of order processing errors often lie at the very heart of an institution, where communication between front office and back office is too often insufficiently standardised. This is another area where Omgeo is striking partnerships to promote more efficient connectivity. So Omgeo is anything but a small, isolated “black box”.

(\*) Henri Giacobbi is regional director of Omgeo France.

### **EVERYTHING MUST CHANGE...**

There is nothing revolutionary about the functions that have been grouped together under the STP “label” — automating trade management systems, harmonising data transfer protocols, reducing operational errors and risks. We should remember that other sectors of the economy were long ago forced to embark on streamlining their production cycles, to meet the challenges of globalisation and the resulting need for standardisation and enhanced productivity. And, in the majority of cases, there was no need to use regulation as a big stick to force the pace of change.

The securities industry often requires an institutional “driver”. Whereas updating their technology became a crucial and unavoidable requirement in early 2001 when the SEC ordered delivery deadlines to be shortened from T+3 to T+1, market players are now more relaxed about the need for further upgrades. The events of September 11, the stock market slump and then the withdrawal of the regulatory ultimatum took the pressure off. But it will only be a short-lived respite.

After all, the natural forces of competition demand that market players harmonise their technology with that of their clients and suppliers. And the regulators are not finished yet. IAS 39 standards and the new McDonough solvability ratio imposed by Basel II are about to increase the management constraints on financial entities. For example, according to the latest results of a survey conducted by the Basel Committee and published in May 2003, execution and process management are the main causes of asset management losses, accounting for more than 50% of the reported total. Implementing an STP approach has been suggested as an obvious way to reduce

process management failures, seen as the main source of operational risk. Although its recommendations do not carry the weight of law, the G30's latest report gave a review of all the issues concerned with improving efficiency in post-market procedures. Three central themes emerged: improved interconnectivity, risk-sharing and better governance. There is no doubt these themes will continue to feature regularly over the next few months.

At a European level, the first natural border for French operators, there will be even stronger incentives. ISD II, the draft directive on investment services, could bring about far-reaching changes in the order cycle. By authorising the “internalisation” of investment services, it could result in a complete shift in the balance of power between regulated markets, electronic trading platforms and investment companies, between now and the end of 2004. A real “splinter bomb” that risks blowing up in our faces. In terms of the European authorities, no one yet knows when and in what form the promised revolution in post-market procedures will take place, but many fundamental changes are already under way at national and international level: new clearing houses springing up, consolidation and concentration of “essential infrastructures”, transformation and strategic refocus of custodians, etc.

In France, where the Paris market's switchover to ISIN codes went without a hitch, the enactment of the Financial Security Act (a watered-down version of the US Sarbanes-Oxley Act) on July 17, 2003 will force market players to take action over the next few months. Investment companies and asset managers will be especially affected. They now come under the supervision of a

single regulator, the new Financial Markets Authority (AMF), which has its own legal personality and financial independence and is the cornerstone of a system designed to increase the transparency of markets and market players.

Whatever the outcome in legal and competitive terms of the changes under way, players are becoming increasingly aware that they need to agree on a common “language”.

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## Whatever the outcome in legal and competitive terms of the changes under way, players are becoming increasingly aware of the need to agree on a common language

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It is to be hoped — given the gradual implementation of a global trading terminology (ISIN codes, etc.) and the emergence of standards and networks that are more efficient (ISO 15002 standard, etc.), potentially cheaper and more universal (XML, etc.) — that more institutions will start to recognise the benefits of interconnectivity and improved international communication.

More transparency, stricter discipline and improved operational efficiency — the future of STP certainly looks very bright. Each player has to realise that their individual future depends on taking on board the rationalisation inherent in these three initials.



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Omgeo LLC is the leading provider of trade management solutions, processing over one million trades per day worldwide and serving 6,000 investment managers, broker/dealers and custodians in more than 40 countries. Omgeo is the result of a global joint venture between the public US securities industry body and the commercial sector. It is therefore industry-owned but has a strong client focus. With its integrated range of Intelligent Trade Management Solutions<sup>SM</sup>, Omgeo helps its clients to migrate from traditional trade processing methods to new unified management solutions. It supports the transition, helping clients adopt an innovative and more efficient approach to trade processing and reduce their operating risks and intrinsic costs, while maintaining their existing technological infrastructures and investments. Omgeo was created out of a 50/50 joint venture between the Depository Trust & Clearing Corporation (DTCC) and Thomson Financial. For more information about Omgeo, go to [www.omgeo.com](http://www.omgeo.com).