THE SETTLEMENT MATRIX

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THE MORE THINGS CHANGE...

In my working life few things have changed as much as settlements. If you cannot remember how settlements were processed in the 1980s then I am not sure if I could describe this to you. Imagine an office with few PCs or monitors, with more ashtrays than phones. The staff received poorly handwritten tickets from traders, transferred information manually between systems and sent out tested telexes (if you know what they are) to their agents. There were still some physical ledgers, card systems and both bearer and registered securities. None of this was anything like 'straight through processing' (STP) and many settlements were not really 'delivery versus payment' (DVP).

By today's standards, the cost per settlement was huge. Not just the internal costs; agent banks often charged between USD 75 and USD 125 per settlement even in the major European markets. Much more if a physical transfer were required.

Settlement followed a different cycle in each country. And some counties had different cycles for different instruments. Settlement was often at month end. Sometimes it was on a rolling cycle, maybe seven or fourteen days after the trade date. In the UK it was every fortnight. There was not much standardisation.

Below a haze of cigarette smoke a lot of noisy work was fuelled by endless coffees from vending machines. Tension increased as cut-offs approached. There was never quite enough time.

Settlement volumes and values were always increasing. New markets and instruments kept appearing. Asia, Eastern Europe, LatAm, eurobonds, convertibles, warrants, commercial paper. There was much to do.

The staff may have been busy but they were well paid. There were jobs aplenty. Staff turnover was high as new opportunities arose. Settlements was the entry point for many careers in financial services.

In the decades that followed the processing of settlements was transformed. Volumes and values continued to increase hugely. The accompanying increases in risks and costs were checked by the introduction of DVP settlement, clearing houses, shortened settlement periods, SWIFT messaging and STP. And of course immobilisation, dematerialisation and the introduction of the Euro. Processes were standardised, centralised and off-shored. Progress was almost unbelievable.

However, many of those involved think that more should have been achieved. Although much has changed, the parties involved and the processes are essentially the same, just streamlined, standardised and accelerated. The more things change, the more they stay the same. Surely, more could have been achieved.

The annual global cost of settlement has been estimated to be circa USD 20 billion. At BNP Paribas Securities Services we settle circa 100 million transactions per annum. These are big numbers. It is a subject that we care about. Making settlement more efficient would be a huge step towards more efficient capital markets. This would benefit us all.

However, is there really much more that can be done to improve settlements? There are certainly a bewildering number of initiatives and issues to consider. A two by two matrix is helpful to order our thoughts.

THE SILENT MAJORITY AND THE NOISY MINORITY

One dimension of our matrix is divided between the silent majority and the noisy minority.

Most settlements follow STP and settle on time. These are the silent majority. We want to increase their number and decrease their costs. They make up something like 95% of all settlements. We would like this to be 100%. The silent majority is so large that any serious attempt to decrease the USD 20 billion per annum settlement cost has to start there.

Then there is the noisy minority. These are the trades which are not processed STP or do not settle on time. They are much fewer in number but they demand attention as they increase costs and risks. In a perfect world we would eliminate them altogether. We certainly want to decrease their number.

The second dimension of our matrix considers whether we can improve either the silent majority or the noisy minority 'just' by our own action or whether we need to do so in conjunction with other market participants or infrastructures. Is the required action predominantly within our control? Is it internal or external?

Our settlement matrix is below. I will address each quadrant in turn.

THE SETTLEMENT MATRIX	SILENT MAJORITY	NOISY MINORITY
EXTERNAL ACTION	Constructive engagement	Selective implementation
INTERNAL ACTION	Seeking scale	Improve processes

QUADRANT 1: THE SILENT MAJORITY AND EXTERNAL ACTION – THE FUTURE IS TO BE DECIDED, IT IS TIME FOR CONSTRUCTIVE ENGAGEMENT

Influence infrastructures

We need our market infrastructures to settle transactions. These include CCPs, CSDs and payment systems. They have improved dramatically. Introducing CCPs has reduced risk and increased netting. The efficiencies and increased harmonisation brought by T2S have been most welcome. Many good things have happened within our infrastructures.

However, the cost of using CSDs has not fallen in the way that clearing and other transaction banking fees have. There are good reasons for this as our CSDs have had to adapt to new regulations and payment systems, increase their capital and invest in technology. This all comes at a cost. However, our infrastructures have been able to protect their revenues. Hence, if we are going to see their fees decrease we need more interoperability to foster competition. It was hoped that T2S would bring competition amongst CSDs.

Most users of the post-trade infrastructures think that there are simply too many of them. So if increased competition leads to some consolidation, so much the better.

In Europe, a Capital Markets Union is the stated goal of the EU. It is not yet clear what this means for post-trade. More immediately, we still need many of our CSDs to offer the full range of T2S capabilities. Globally we would like standardised communication. Progress is being made, but it is not always co-ordinated. Although there are numerous commendable CSD initiatives, particularly in Asia with DLT, there is no overall industry strategy for our global infrastructures.

This is not necessarily a problem. It may lead to innovation. However, as there is no big picture we are, quite literally, making it up as we go along. And if we leave their development only to the infrastructures themselves, we will have a post-trade world that will look as if it was designed by the team that brought you Spaghetti Junction. The future will not only be complex, it will be complicated. Lots of unconnected initiatives may be launched without a practical timetable for adoption.

Spaghetti Junction - The Gravelly Hill M6 interchange near Birmingham was the crowning glory of Britain's 1960s motorway expansion

So market participants must work together through organisations like AFME and ISSA to influence infrastructures, foster harmonisation and encourage best practices. This is key to driving down the cost of processing the silent majority.

Prepare for tokenisation.

With depository receipts we are familiar with the idea of issuing new securities in one environment to represent existing ones in a different environment. It is an old concept in the securities industry. This is tokenisation.

However, new digital assets and DLT now offer new ways of achieving both verification and centralisation. Hence, the settlement cycle can become more efficient as participants instantly reconcile transactions and share information. Furthermore, this new breed of financial assets can be programmed to initiate and undertake transactions, such as dividend payments or stock splits, in response to specific triggers from trusted sources. Hence, many believe that tokenisation now has the potential to completely change our capital markets.

This should reduce the complexity, cost and risk of settlement. New technical capabilities like atomic settlement, smart and hashtag timelock contracts may allow DVP settlement without involving the standard market infrastructures and procedures.

However, for tokenisation to fulfil its potential, it requires a 'network' effect which may be impeded by the number of initiatives which are currently underway. No firm can contribute to them all. So choosing wisely when selecting which ones to engage with is key.

There is a growing number of market participants who believe that tokenisation can revolutionise the way we settle 'the silent majority'.

QUADRANT 2: THE SILENT MAJORITY AND INTERNAL ACTION – IT IS ALL ABOUT SEEKING SCALE

Understanding costs

Understanding the costs involved in settling transactions is crucial to managing the silent majority. This is much harder than you might think. The largest component of settlement costs for most firms nowadays is usually technology, then operations, followed by fees for agents (including CSDs). In many businesses technology costs are allocated out as a cost per settlement. This misleads many into thinking that they are a marginal cost. However, when volumes decrease, the technology spend does not diminish much and it becomes readily apparent that they are more fixed than was thought.

Similarly agent bank and CSD fees need scrutiny to ensure that they offer value. With some institutions there can be a surprising difference between the headline settlement fee quoted and the fully loaded fee per settlement once many additional line items are taken in to account.

It is also important to understand the capital used in settlements. This has increased and become much clearer since the financial crisis. It is certainly worth spending time ensuring that this is calculated correctly. Not just the capital used to provide liquidity itself, but also that held notionally as regulatory capital to support liquidity provided by agents.

Understanding the costs of the silent majority is certainly the first step to managing them.

Operating model

Many firms question if they have found their optimum post-trade operating model. If it was optimum a few years ago, it is unlikely to be so today. Firms are less keen to build their own systems, join infrastructures directly or undertake asset servicing by themselves.

Most asset managers decided years ago that they could not differentiate their clients' post-trade experience positively. It was better to outsource their post-trade activities to banks with scale which were willing to build world-leading services.

Now banks and brokers are following. Albeit slowly. Gradually the post-trade world is moving to outsourcing. The two main challenges faced are 'who to outsource to' and 'how to get it done'.

When considering 'who to outsource to' most discover that there is a supply constraint. CSDs, agent banks, fintechs and BPO firms all offer quite different propositions and none offer everything A to Z. Certainly not globally. Furthermore, it is not a case of 'one size fits all', so much thought has to go into the partners selected for the chosen operating model.

'How to get it done' is equally challenging. Whilst a large scale 'lift and shift' sounds attractive, it can only really be contemplated for an operation that is already running smoothly. Anything else spells trouble.

So the outsourcing of post-trade is happening slowly. Piece by piece. New capabilities can be hard to fund so they are often built in conjunction with agents. This can be easier than moving existing capabilities. Settlement is a process that is already partly outsourced and hence easier to outsource than other post-trade activities.

QUADRANT 3: THE NOISY MINORITY AND EXTERNAL ACTION – IT IS TIME FOR SELECTIVE IMPLEMENTATION

Settlement discipline.

There are a lot of good things about the Central Securities Depositary Regulation (CSDR). Having a clear regulatory regime for such vital market infrastructures is more than welcome.

CSDR's Settlement Discipline Regime (SDR) is extensive. It sets standards for allocations, confirmations, tolerance levels, the population and matching of settlement instructions, cancellations, hold and release, partialling and recycling. SDR addresses many of the reasons for settlement failure by improving the interaction between participants. Complying with its requirements may be onerous, but doing so should dramatically reduce the noisy minority.

However, getting ready for SDR was always a challenge. Not just for custodians, for the whole market. That is without having to also prepare for Shareholder Rights Directive II (SRDII) and even before the disruption resulting from Covid-19. So, it is no surprise that much of the post-trade industry was struggling to be ready for SDR's February 2021 implementation and welcomes a further one year delay to February 2022.

To learn more about CSDR and SDR you can read BNP Paribas Securities Services' handbook and toolkit or listen to our podcasts. Although SDR 'only' applies to settlements within the EU's CSDs, it set standards which will be adopted elsewhere. SDR, and particularly increasing partial settlements, will have a dramatic impact on the noisy minority.

Data management

There is increasing interest in using settlement data more impactfully. There are interesting initiatives both from independent fintech firms and from within established entities, sometimes infrastructures. Cloud technology has allowed economic access to scale without impeding agility. Many, but not all, of the systems developed utilise distributed ledger technology.

Some of these fintechs aim to collate the huge amount of settlement data that an institution gets from its numerous (in some cases, hundreds of) commercial relationships providing custody. This data often comes via multiple communication channels and arrives in different formats. The fintechs will analyse the data and report settlement problems. Both those that have happened and those which they will be able to predict. Furthermore, the fintechs will recommend the most effective actions to remediate settlement issues. They aim to standardise the way an institution deals with its custodians, process data and recommend action.

The next stage of their development could be even more interesting. Individual institutions can only see information about their own settlements. Yet each settlement is part of a chain. If a number of institutions used the same fintech system then a 'common view of the truth' could be established and the optimal action to minimise failing settlements across multiple participants could be recommended. We are already seeing communication tools such as Symphony being used with bots and automation to transform everyday workflows. This could dramatically minimise the noisy minority.

QUADRANT 4: THE NOISY MINORITY AND INTERNAL ACTION – UTILISE AGENTS TO IMPROVE PROCESSES

Inventory management

Although securities are usually held in their Issuer CSD they can be moved to and held in other CSDs. This is often the case when securities are being used to raise finance through the tri-party financing programmes provided by the International CSDs - Euroclear Bank and Clearstream International. This can lead to settlement problems. Sometimes securities are sold with the expected settlement being in an Issuer CSD whilst the securities have been moved into an International CSD. Even though it is not difficult to move them back to the Issuer CSD to allow settlement, misaligned inventory is a recurring cause of settlement failure.

Putting a robust inventory management process in place to ensure that securities are always in the right CSD for settlement can be challenging. At BNP Paribas Securities Services we have developed a securities inventory management service which spots potential fails and automates the realignment of securities required. Today, this is available for global custody clients. We are developing a similar service for our direct custody services.

Clearly, this problem is much diminished by using a triparty agent, such as ourselves, which will finance securities whilst they are held in their issuer CSD.

Fails coverage

Utilising fails coverage programmes is an obvious way to decrease settlement failure. If you have undertaken a turnaround trade and cannot make your delivery because you have not received some, or all, of the stock that you were meant to, a fails coverage programme allows you to borrow the stock you are short of to make good your delivery. Sometimes borrowing a small amount of stock can allow a much larger delivery.

Most agent banks offer such programmes. They have developed greatly over the last few years. At BNP Paribas Securities Services fails coverage is available with lending to avoid a fail either being automatic or with the client's prior validation being required. In fact, bespoke combinations can be set per market.

Checking that you are utilising such programmes effectively is a simple step to reducing the noisy minority.

CONCLUSION

THE SETTLEMENT MATRIX	SILENT MAJORITY	NOISY MINORITY
EXTERNAL ACTION	Constructive engagement to influence infrastructures and prepare for tokenisation	Selective implementation to prepare for settlement discipline and improve data mangement
INTERNAL ACTION	Seeking scale through new operating models focused on costs	Improve processes such as inventory management and fails coverage

As always, there is lots happening in settlements. I have mentioned just a couple of the more interesting examples from each quadrant of our matrix. They are more an illustration than an inventory. There are some interesting developments that will impact all four quadrants such as automation and self-service.

What is important is to have somebody within your firm responsible for each quadrant. Right now, with SDR on the horizon, the noisy minority is getting a great deal of attention.

It was President Nixon who first introduced us to his silent majority. He knew they were important. However, he did not really understand them as well as he thought he did. He underestimated their capacity for change. This is a common error in many walks of life. Let's not make it with settlements. If we are really to substantially reduce settlement costs we will soon need to turn our attention once more to understanding 'the silent majority' and addressing their issues.