WATSON WHEATLEY

THE DIRECTION OF RECONCILIATION SYSTEMS

A white paper presenting the views of Duncan Wheatley, CTO, Watson Wheatley

INTRODUCTION

As a relatively young company with a sole purpose of delivering reconciliation solutions we have perhaps a unique perspective on the role of reconciliation in securities operations and the direction that these systems should be taking. Our presence in the market confirms this and our future depends on this perspective being approximately right! It is with this perspective that we offer this view of the direction of reconciliation systems for securities trading.

HISTORY OF IRECS

iRecs, the core of our reconciliation system, grew out of an in-house system built 10 years ago for GLG Partners; at that time the largest hedge fund in Europe. The ideas that went into what was then "T-Recs" came, not just from the perceived needs of GLG, but from a long involvement in managing operations, and being at the receiving end of inadequate reconciliation processes. The company was Scudder Kemper; Zurich's asset management arm where I was responsible for global investment operations. At that time, some 15 years ago, the only tool used by the company for reconciliation was Excel; there was no investment in reconciliation technology. With a requirement to reconcile trades and cash transactions daily for institutional, private and mutual fund assets valued in excess of $350bn it is easy to see why the process was wholly inadequate. 150 staff were engaged in this process, not fully, but for a meaningful portion of their day. It was ineffective and horribly expensive.

We implemented a tactical solution. Excel was replaced by Access. Whilst this sounds like a cosmetic change, it had an immediate impact. The introduction of a database enforced a common process across all users, delivered consolidated results to management and revolutionised the process. It was undoubtedly the wrong technology, but was cheap, efficient and very effective.

Whilst the company had invested millions in a new portfolio accounting system, it had ignored reconciliation completely, paid the price and recovered with almost no investment.

Roll forward 5 years to GLG. Once again, a newly implemented portfolio accounting system failed to deliver any worthwhile reconciliation capability; reconciliation was an afterthought; something to tack on the end of another process; "surely it can't be that hard to write a script to match these things?". Fortunately, at GLG, there was recognition of the problem and the funding needed to invest in building a proper solution and that's what we set out to do. T-Recs successfully delivered GLG's post trade reconciliation needs for a number of years processing around 30,000 transactions a day across all asset classes. It was far from perfect but it provided the much needed control to mitigate operational risk.

What was built for GLG became iRecs and we now provide this as a product to the marketplace. Some of our clients are hedge funds, and the system characteristics that worked for GLG are now helping other similar organisations. Other clients include long only asset managers and commodity traders; they do things more simply, but usually with much higher volumes.

OUR RATIONALE

To have the confidence to launch a business venture of an "all in one basket" product where the market was not short of competition, and thus far, to make a reasonable success of it no doubt takes a little explaining.

Firstly we believe there is a need for post trade reconciliation at the most granular level; the trade or the transaction (or the price or the rate etc.). This is a key component of managing operational risk given the nature of the data processing in the market. There is little disputing the need, perhaps more the nature of how this is delivered.

STAND ALONE OR INTEGRATED?

We know there is a market specifically for stand-alone reconciliation solutions. We have found that most solutions attached to other systems, most obviously, portfolio accounting systems, cannot compete. Imports may have to be hard coded by the supplier (costly and inflexible). Rules are hard coded; so you cannot tune the process. There is no meaningful workflow, so your research and remedial activity is significantly hindered. There are no risk metrics to prioritise breaks. More fundamentally, the portfolio accounting system is working hard to deliver real time positions and P&L, somewhat at odds with the needs of reconciliation that requires a cut off process for proper auditing.

A portfolio accounting system is, we believe, the wrong place to house this function. It needs and warrants an external stand-alone solution.

EXCEL

We do not think Excel is a viable solution for reconciliation for any securities trading operation. This is pretty apparent given the history above, but we have seen many examples of what firms are doing with Excel as we replace them with iRecs. Works of art for definite, but nowhere near a viable solution; too person dependent, no audit trail, too error prone etc.

Excel is a truly wonderful product, but not as a permanent solution in this domain.

DATA AGGREGATION

We know that the asset management industry and in particular the hedge fund world is characterised by "ad-hoc" data flowing between the key participants (manager, administrators, prime brokers, clearers etc.). Standardised formats and transport mechanisms do exist, but the uptake, particularly at the smaller end of the business is almost non-existent. A reconciliation solution has to have a powerful and robust data retrieval, parsing, aggregation, normalisation and validation capability.

Successfully managing data delivered by internal or remote systems into the reconciliation system is probably in excess of 50% of the problem.

Solve this and the reconciliation process itself becomes relatively straightforward; fail and there is no point starting the reconciliation at all.

A solution to handle the data processing must be user configurable and not require any hard coding. Ideally those that understand the data and handle the reconciliation should take responsibility for using the configuration tool, and this places high demands on its usability. We often find it is IT staff who are part of Operations that take on this responsibility, or indeed the system supplier.

DATA INTEGRITY

Given that source data is often of poor quality and the complexity of correctly parsing and normalising it we cannot stress more strongly the importance of automated data validation checks by the reconciliation system.

Whilst the matching process will help identify poor data, this should not be the primary means of identifying duplicate, missing or wrong data.

For a reconciliation system to be able to do this, it must understand the accounting nature of the data it is reconciling. Ideally it should understand all the logic of the accounting systems that data was received from. Most reconciliation systems do not understand this at all, and cannot meaningfully identify accounting integrity issues.

MATCHING RULES

It is quite easy to build rules into a system to handle most of the common reconciliation needs. Many of our installations have no more that 10 to 15 rules to handle trade reconciliation. Again, these rules rarely change. The argument for user definable match/assignment rules is because tuning the system to deliver high match rates requires many more rules to tease out specific situations that the general rules skip over, and with a good user interface, it enables those that understand the data to formulate the rule. Over time, it becomes very clear that the same scenarios recur. A system that can identify these events and help the user construct rules to deal with them is going to be more successful than one that cannot.

Using rules to match data is far more efficient and less prone to error than any manual process. It is therefore essential to have a system that encourages user defined rule development, verification and deployment.

In short, the system must be adaptable and capable of being tuned.

WORKFLOW

Most reconciliation systems incorporate a workflow capability to assist with break research and remedial action. We do not think this needs to be "enterprise wide" for most asset management organisations, but we do think the reconciliation should be able to update other systems, notably portfolio management or trading systems, with the status of the reconciliation process and corrections. It is certainly incumbent on investment operations to manage the reconciliation process, but the impact is primarily elsewhere, and a closed system neglects this opportunity.

IMPACT ANALYSIS

We believe the next area for development of reconciliation systems is in “impact analysis”. Because of the nature of the market and the timings of reconciliation data delivery, the reconciliation will never be in balance, more a state of dynamic equilibrium.

There will always be differences between source systems and the reconciliation system ticks away monitoring and presenting these. How the system alerts the business to material events and suppresses day to day “normal activity” is a non-trivial exercise. How do you measure the materiality of a security price difference if the system is unable to reflect this in terms of portfolio market value or NAV? If you cannot measure the materiality of a break, how do you prioritise remedial activity, and who do you notify?

To properly manage the data being processed by the reconciliation system and to turn it into meaningful information, we believe it must understand portfolio accounting.

This is an area of active research and development for Watson Wheatley. We have already built a system that understands the fundamentals of portfolio accounting and we are using this to good effect with a number of clients. But there remains much to do.

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RECONCILIATION.

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