Executive Summary

Reconciliation departments across securities firms are at a crossroads. For a function long buffeted by increasing volumes, complexity of traded products and suboptimal IT infrastructure, recent high-profile trading scandals were the proverbial last straw. These scandals served as a painful reminder to the securities industry of the fragility of their vaunted risk management systems. With regulators swooping in, securities firms are re-examining the role of reconciliation, an internal control function long considered to be the last bastion of the trade lifecycle.

As pressure mounts for reconciliation departments across firms to do more with less, department heads are grappling with questions that could fundamentally redraw the contours of this function and re-architect the post-trade lifecycle.

- The mandate for the reconciliation function will materially change. With numerous trading scandals and rogue elements infiltrating trade, the scope, scale and character of reconciliation as a control function is fast changing. From a post-settlement internal audit function, reconciliation will move upstream as a proactive controller of risk.

- A changed reconciliation mandate will necessitate rewiring of this function. These changes in the reconciliation function will impose material demands on an already stressed post-trade reconciliation infrastructure. Standardizing and farming out the material portion of traditional reconciliation activities to trusted partners – including intersystem, intercompany, nostro and depot and customer/prime broker reconciliation – will amplify the reconciliation team’s bandwidth to focus on the new role of proactive risk controller.

- A stressed post-trade reconciliation infrastructure will give impetus to rewiring and
industrializing efforts. The securities industry’s rapid growth in the first decade of the 21st century led to an asymmetric evolution of front-office, middle-office and back-office capabilities. While the revenue-centric front office was primed with the best of systems and platforms to play the volume game, slick reconciliation platforms that were asset class agnostic bypassed the middle and back offices, as firms adopted an attitude of benign neglect toward these cost centers.

Custom-built IT reconciliation solutions, which have rippled across securities firms, catering to specific reconciliation needs, have compounded the problem of inter-system reconciliation within firms. The pain is felt across the industry, in the form of low auto-match rates and heightened operational risk from unmatched items, long expectations in turnaround time, communications breakdowns and errors that cripple portfolio managers’ trading agility, thanks to an inaccurate picture of the cash and securities position.

- **Securities firms and service providers must jointly work to create a vibrant reconciliation utilities market.** As reconciliation departments across securities firms prepare to take a more proactive risk controller role, it is imperative to create scalable capacities with service providers, which can carry out “tick the box” reconciliation at scale, effectively and efficiently.

Specifically, securities firms must leverage their heft to take a leadership role in creating a vibrant supplier market by doing the following:

- **Playing the incubator role.** Given the care innovative models need and the unique nature of utilities industry-like models, capital market firms would do well to join hands to let the approach take root (through their roles as market makers) and sustain by taking a cue from other industries.
- **Standardizing processes to ensure seamless transition,** obviating or minimizing the cost and disruption in terms of time and service resulting from switching providers.
- **Partnering with service providers** through joint ventures to build reconciliation utilities, an asset-heavy, capital-intensive business.

Service providers, for their part, must do the following:

- **Shed the traditional “lift and deliver as-is at low cost” mindset** and move toward building cutting-edge technology and delivery platforms.
- **Deliver reconciliation as a service** and price it per transaction, like any other utility, thus helping to lower and variabilize clients’ overall reconciliation spend.
- **Set return expectations** at a low but steady rate, like any other utility business.

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### The Case for Cushions

Rogue-trading losses as percent of common equity.

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<td>Sept. 2011</td>
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Source: The Economist

Figure 1

* As % of shareholders’ funds
† Alleged
The Reconciliation Function Makeover
Trading scandals over the last 20 years support the same fundamental truth with which counter-terrorism experts grapple: The terrorist needs to get lucky once, while the counter-terrorism machinery must be lucky every time. These high-profile, repeated trading scandals have bared the fault lines in firms’ vaunted risk management practices. With rogue elements infiltrating the trade (see Figure 1, previous page), the scope, scale and character of reconciliation as a control function must rightfully change. From a post-settlement internal audit function, then, reconciliation will move upstream as a proactive controller of risk.

Reconciling trades in the complex securities market, with its multiple participants and non-standard processes, requires firms to overcome the challenge of dealing with a range of products, across asset classes. Not only are there multiple types of reconciliations (see sidebar, below), but when reconciliation processes are underpinned by multiple IT applications — tailor-made to handle distinct products — the challenge is elevated to a Sisyphean task.

Rewire and Industrialize
The forces that amplify the reconciliation challenges include exponential volume growth in traded products, suboptimal reconciliation infrastructure, IT application silos that dot the landscape of securities firms and the growing complexity of products (see Figure 2).

The Anatomy of Trade Reconciliation
Typically, securities firms conduct the following four common types of reconciliation to grease the wheels of trade:

- **Intersystem reconciliation**, to resolve breaks that arise due to feed issues between the front-office and back-office systems.
- **Intercompany reconciliation**, to resolve breaks due to feed issues/incorrect bookings between the different legal entities of the firm.
- **Customer and prime broker reconciliation**, to resolve post-settlement breaks on all customer and prime accounts.
- **Broker dealer controls**, to resolve all depot and nostro post-settlement breaks.

Today, reconciliation managers are asked to provide reports of breaks in pre-settlement date positions, AVI, cancel and re-book, etc. In essence, they are expected to assume the role of risk mitigator in the firm. This expectation is compounded by the recent fraud events at several large broker-dealers.

Forces Exposing the Fault Lines in Trade Reconciliation

<table>
<thead>
<tr>
<th>Forces</th>
<th>Description</th>
<th>Implications</th>
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<tbody>
<tr>
<td>Large securities market</td>
<td>Many players; disparate processes and systems within each firm.</td>
<td>▪ Communications breakdown both within the firm and among counterparties.</td>
</tr>
<tr>
<td>Exponential trade growth</td>
<td>Rapid volume growth across products (cash and derivatives) and asset classes.</td>
<td>▪ Low auto-match rates; heightened operational risk from unmatched items.</td>
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<tr>
<td>Growing product complexity</td>
<td>Rapid growth of over-the-counter derivatives trades — equities, rates, currency and fixed income.</td>
<td>▪ Decrease in trading agility, thanks to an inaccurate picture of the securities and cash position.</td>
</tr>
<tr>
<td>IT application silos</td>
<td>Implementation of different reconciliation solutions for different needs (e.g., systems for reconciling front- and back-office trade records).</td>
<td>▪ Trades based on dated data, due to a month-end reconciliation cycle.</td>
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<td>▪ Errors due to multiple hand-off points, thanks to multiple reconciliation solutions.</td>
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<td>▪ Valuable staff time spent on reconciliation.</td>
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Source: Cognizant Research Center analysis
Figure 2
The pain is felt across the industry, in the form of low auto-match rates and heightened operational risk from unmatched items, long expectations in turnaround time, communications breakdowns, a month-end reconciliation cycle that forces day-to-day investment decisions to be made with dated data, inaccurate breaks numbers that amplify compliance risks and valuable staff time spent reconciling that could be spent on risk control work.

**Fast Growth, Complexity-Induced Stress**

While explosive volume growth continues to strain the post-trade processing infrastructure across the securities industry, the increasing complexity of traded products has exposed the fault lines in these systems, most of which are tailored to handle cash equities and fixed income securities.

The securities trade is underpinned and intermediated by a large number of players – market facilitators, buy-side firms, trade service providers and issuers such as sovereigns, government agencies and corporate institutions. While the $130 trillion of total assets under management at the end of 2011 highlights the scale of the buy side (see Figure 3), the composition of traded funds underlines the industry’s complexity.

While traditional equity assets doubled in the first decade of the 21st century, alternative asset classes like exchange traded funds, hedge funds and OTC derivative trades grew exponentially. Millions of daily trades executed by these market participants – across asset classes and on exchanges like NYSE and over the counter (OTC) – amplify the scale and complexity of the modern securities trade and the intermediation process.

**Application Silos Amplify Challenges**

As most securities firms already had a basic bank account reconciliation solution, their instincts led them to build custom solutions to address growing reconciliation needs – from internal account, treasury and securities, through portfolio and cash management (see Figure 4, next page).

This has created a portfolio of reconciliation system silos within each firm, thereby creating a “reconcile-the-reconciliation” scenario. Just as dikes, bunds and culverts are added to serve as ad hoc substitutes to a dam to aid in flood control efforts, securities firms keep applying...
band-aid remedies in the absence of a dam-like enterprise-wide reconciliation solution.

This silo approach has resulted in multiple systems to build, operate and maintain, resulting in disparate exception management processes. Meanwhile, the absence of an integrated cash management solution severed the link between transaction matching and account reconciliation processes and caused a spike in reconciliation management overhead.

With today’s heightened regulatory scrutiny, reconciliation and exception matching is no longer just a business issue but has a material compliance angle to it. Securities firms have strong incentives to rationalize the number of separate reconciliation systems in house and replace them with an automated enterprise-wide system. The upshot of doing that is to realize material benefits in the form of increased productivity, greater scalability, streamlined reconciliation processes, enhanced compliance and improved client service.

Product Complexity Bares Fault Lines

Reconciliation issues are symptomatic of a larger malaise — a suboptimal post-trade infrastructure. While firms continue to make material investments in their electronic trading platforms, price feeds, advanced analytics and specialist staff to bolster their front, middle and back offices, the post-trade processing guts of any firm suffer benign neglect. The biggest casualty of this neglect is the reconciliation function.

Asset classes such as derivatives introduce complicated trade structures involving more than two counterparties — for example, a prime broker, an executing broker and a buy-side firm. All these firms, with their disparate systems, internal workflows and variations in terminology, pose formidable challenges to the existing systems and the processes they manage. Reconciling these trades requires numerous sequential, nonstandard communications across multiple parties. In the absence of a flexible post-trade reconciliation infrastructure, one that is asset-class and message agnostic, firms have resorted to temporary solutions such as Microsoft Excel-based manual workarounds in most cases and shoehorned amendments to legacy applications in others — leading to suboptimal efficiency and effectiveness outcomes.

According to the International Swaps and Derivatives Association’s (ISDA) 2011 operations benchmarking survey, roughly 10% of trade records contain errors across interest rate, credit, equity, currency and commodity derivatives. The survey also attributes 50% of trade capture errors to the front office. The sources of error range from counterparty name to legal agreement date, and these errors plague all the commonly traded derivatives. No doubt, portfolio reconciliation is a challenge, and 10% of trades fail to settle, leading to material losses for securities firms.

A Plethora of Reconciliation Requirements
Industrialize Reconciliations via Service Utilities

The securities industry is reconciled to ever-increasing transaction volumes across multiple asset classes and the complexity of traded products and regulations, which relentlessly alter the rules of engagement. Firms are seized by increasing operating costs wrought by these forces and the need to rein them in. Today, nearly every firm is exploring a utility-like solution to reconcile all trades and resolve all exceptions in a cost-efficient manner, a non-negotiable need that has not changed, if RFP activity in the space is any indication.

By reconciliation utility, we mean a platform designed for scale to handle reconciliation and exceptions management. This should take the form of a centralized, enterprise-wide system with the ability to handle different products across asset classes, including reconciliation and exception handling of trades in a timely, accurate and cost-effective manner. This utility model will be technically and commercially feasible if and only if securities firms and service providers partner to shape a vibrant utility market.

What has changed is the rapidly evolving base of service providers with maturing reconciliation platforms and business services offered through multiple delivery models. Today, four types of solutions are commonly implemented, depending on the size and complexity of traded assets (see Figure 5, next page):

- Homegrown Microsoft Excel- or Access-based solutions.
- On-site vendor applications.
- Hosted solutions that provide remote access to specialist reconciliation systems.
- Quasi-enterprise-wide reconciliation solutions.

An Aite Group study estimates securities firms’ IT spending on reconciliation systems to be USD $520 million by 2014.²

What is missing, however, is the securities industry’s equivalent of a foundry model for the reconciliation utility, similar to that found in the semiconductor industry. This model led to the separation of a semiconductor fabrication plant operation (foundry) from an integrated circuit design operation, into separate companies or business units (see sidebar, below). In our assessment, while all the necessary conditions to fuel demand for a reconciliation utility exist, a robust supply-side ecosystem is still taking shape.

Partnering to Create a Vibrant Reconciliation Utilities Market

Specifically, we believe securities firms should leverage their scale and take a leadership role in creating a vibrant supplier market. They can do this by:

- Playing market maker. As the market for a reconciliation utility takes shape, securities firms must demonstrate commitment to a

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Formulating a Foundry Model

A fabless (fabrication-less) semiconductor company specializes in the design and sale of hardware devices and semiconductor chips, while outsourcing the fabrication or "fab" of the devices to a specialized manufacturer called a semiconductor foundry.

Prior to the 1980s, the semiconductor industry was vertically integrated; owning a captive semiconductor fabrication facility was a must for chip manufacturers. Semiconductor companies owned and operated their own silicon wafer fabrication facilities and developed their own process technology for manufacturing their chips. They also carried out the assembly and testing of their chips and fabrication.

But this asset-heavy business model came at a price. Today, it costs over USD $3 billion to own a captive fabrication facility, which is affordable for only a few manufacturers like Intel and Samsung.¹ Players such as Taiwan Semiconductor Manufacturing Company (TSMC) were, therefore, incented to turn economic disadvantage into an opportunity. TSMC and others today build semiconductor foundries and manufacture chips for players like NVIDIA, whose value proposition lays in innovative chip design but lack the capital to own and maintain a captive fabrication facility.
utility model by running material portions of inter-system, inter-company, nostro and depot reconciliations in a third-party utility platform. This will send positive signals to service providers and other firms that want to test the utility waters.

This critical confidence-building measure will materially allay the fears of service providers and skepticism of new firms looking at a utility model. The nascent utility market urgently needs market makers – leaders that can look beyond the conventional, which is a role that securities firms alone can adopt to build scalable and a commercially viable reconciliation service delivery models. A demonstrable, credible story will go a long way toward creating a robust utility market. This will help service providers attract new clients and ratchet up scale, upon which the commercial viability of utility model is predicated.

- **Standardizing processes to minimize switching costs.** The hallmark of any utility model is reduced switching costs in terms of time and service disruption for clients. Over time, as the market matures, securities firms must standardize their products and processes and demand the same from service utilities to make switching between utilities as seamless as possible. This will help shape a competitive reconciliation utilities market and make it an operating reality.

In the case of OTC derivatives, the securities industry is fully committed to increasing the levels of product and process standardization across asset classes, which will reduce operational risk and promote efficiency. Also, the large broker-dealers have committed to partner CCPs, trade repositories and infrastructure providers to redesign and automate processes and electronic platforms for key business functions like matching and confirmation, affirmation, managing lifecycle events and the calculation and effecting of settlements. The results of these commitments will largely determine the feasibility and success of the utility model.

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### Reconciliation Solution Variants

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<thead>
<tr>
<th>Reconciliation Solutions</th>
<th>Description</th>
<th>Advantages</th>
<th>Disadvantages</th>
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</table>
| In-house reconciliation solution | A Microsoft Excel or Access-based application. | • 100% control.  
• No license costs.  
• Customization. | • Ongoing maintenance.  
• Lack of scalability.  
• Limited functionality. |
| Vendor application | A specialist reconciliation application installed on-site. | • Robust functionality.  
• Access to periodic functional updates.  
• Automatic system maintenance. | • License fee.  
• Reliance on vendor.  
• Time-consuming implementation. |
| Hosted solution | Remote access to specialist software developed and maintained by a vendor at an off-site location. | • Rapid implementation.  
• All connectivity managed by the vendor.  
• Automatic system maintenance and upgrades. | • One-size-fits-all solution.  
• Control and accountability concerns.  
• Hosting fee. |
| Enterprise solution | Integrated solution incorporated in the core banking application. | • All reconciliation covered, internal and external.  
• Single investigation and exception management solution across the entire organization.  
• Greater automation and straight-through processing. | • Generic solutions.  
• High-volume dependency. |

*Source: Advent  
Figure 5*
• **Partnering with service providers through joint ventures to build reconciliation utilities.** Building and running a scalable, polished and updated reconciliation platform is capital intensive. Today, most capable and proven service providers may either not have the balance sheet strength or the risk appetite to go it alone and build these platforms. Securities firms can address this by picking up material stakes in the service utility. This move will also create a positive sensibility about service utilities and help deepen the market.

Service providers, for their part, must do the following:

• **Rewire service models.** Service providers must shed the conventional “lift and deliver as-is at a low cost” mindset and move to deliver reconciliation as a platform-based service. It is imperative for service providers to partner with securities firms to structure commercially viable business models in a way that makes reconciliation delivered as a utility workable. Anecdotal evidence points to deep IT budget cuts across securities firms. Firms are increasingly looking to monetize their current platforms – in short, they are looking for partners with strong balance sheets and risk appetites to overhaul their current systems, deploy reengineered solutions and/or offer reconciliation as a service.

• **Offer transaction-based pricing for reconciliation services.** Service providers need to move away from the full-time equivalent (FTE)-based pricing model and toward transaction-based pricing like any other utility service. For the clients to benefit from a service utility, transaction-based pricing that variabilizes and reduces overall reconciliation spend is non-negotiable.

• **Reset return expectations.** Low but steady returns characterize most of the utilities business, and reconciliation utilities are no exception. This is a capital-intensive business, and service providers have grown reliant on high margins by playing the cost arbitrage game and need to reset their return expectations. Winners in this business will be long-term players that continuously invest in platform updates and domain excellence to offer reconciliation as a service – cheaper, faster and better.

**Road Ahead**

In our view, winning securities firms should partner with service providers and help build commercially viable utilities to bolster their long-term competitive advantage. We see an opportunity to rewire the reconciliation function in a way that enables industry players to focus on what they do best and rely on trusted partners to perform non-core tasks, as we’ve seen in the semiconductor industry. Not only will this lighten the current asset-heavy model, but it will prepare these companies’ business models for the future.

**Footnotes**

1 Trading scandals include UBS (September 2011); Société Générale (January 2008); Allied Irish Banks (February 2002); Sumitomo (June 1996); Daiwa Bank (July 1995); Barings Bank (February 1995).


References


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