

Treasury
Strategies

The Power of Experience®

Web-based Trading Platforms: Improving Efficiency and Control for Users



PNC Corporate Overview

"PNC is a highly diversified and growing financial services organization spanning the retail, business and corporate markets. With more than \$139 billion in assets, PNC is one of the largest financial services companies in the country.

PNC's corporate & institutional banking business is a dominant player with middle market companies in its eight-state primary region. Underpinning PNC's success is its outstanding set of credit, treasury management and capital markets products and services delivered by highly experienced relationship managers."

SVB Financial Group

SVB Financial Group Overview

For 25 years, SVB Financial Group and its subsidiaries, including SVB Securities, have been dedicated to helping entrepreneurs succeed. SVB Financial Group is a financial holding company that serves companies in the technology, life science, venture capital/private equity and premium wine industries. Offering diversified financial services, SVB Financial Group provides clients with commercial, investment, international and private banking services. The company also offers funds management, broker-dealer services through SVB Securities and asset management through registered investment advisor SVB Asset Management as well as the added value of its knowledge and networks worldwide. Headquartered in Santa Clara, Calif., SVB Financial Group (Nasdaq: SIVB).

Cachematrix helps banks and other financial institutions meet their corporate clients' increasing demands for improved controls over their money market mutual funds while streamlining their own trade and reporting processes

OVERVIEW OF THE WEB-BASED TRADING PLATFORMS – TWO APPROACHES

This dual case study examines the benefits that on-line trading platforms have provided to PNC and SVB Securities. While both institutions selected the same financial software provider – Cachematrix – to provide the development and implementation of the on-line trading platform, each provider has a unique and versatile product.

Though each organization has taken a different approach to offering clients an on-line trading platform, both have realized significant benefits.

PNC

PNC offers clients an on-line trading platform that functions as a portal through which its corporate clients can trade money market mutual funds of multiple providers. The platform is fully integrated with its on-line banking platform – PINACLE®.

SVB Securities

SVB Securities offers its clients an on-line trading platform through which they access money market mutual fund and fixed income investments. This product is integrated with its custodial and banking systems, allowing for straight through processing (STP).



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THE DECISION TO IMPLEMENT AN ON-LINE TRADING PLATFORM

PNC and SVB Securities are both committed to meeting their clients' needs, and each organization has specific objectives in meeting those needs with their on-line trading platforms.

PNC Focuses on Integration

PNC wanted to ensure that its trading portal was fully integrated with PINACLE, its existing on-line banking platform, from the start.

PNC wanted to provide Corporate and Institutional clients with a single access point to a broad range of PNC services and also be able to leverage the infrastructure and robust controls already built into the PINACLE platform.

"We recognized the added value our clients would realize by our providing them a complete view of their liquidity in one place. The addition of an on-line trading portal to PINACLE allows our clients' relationships with PNC to be integrated in a meaningful way."

Strategically, PNC targeted liquidity management products and services as a key area of focus, and the on-line trading portal added even more capabilities to PNC's liquidity offering. The integrated PINACLE platform now allows clients to see a more consolidated view of their liquidity portfolio that includes bank account balances, short-term credit facilities and, with the adoption of the Cachematrix trading solution, money market mutual funds held with multiple providers.

SVB Securities Focuses on Customization

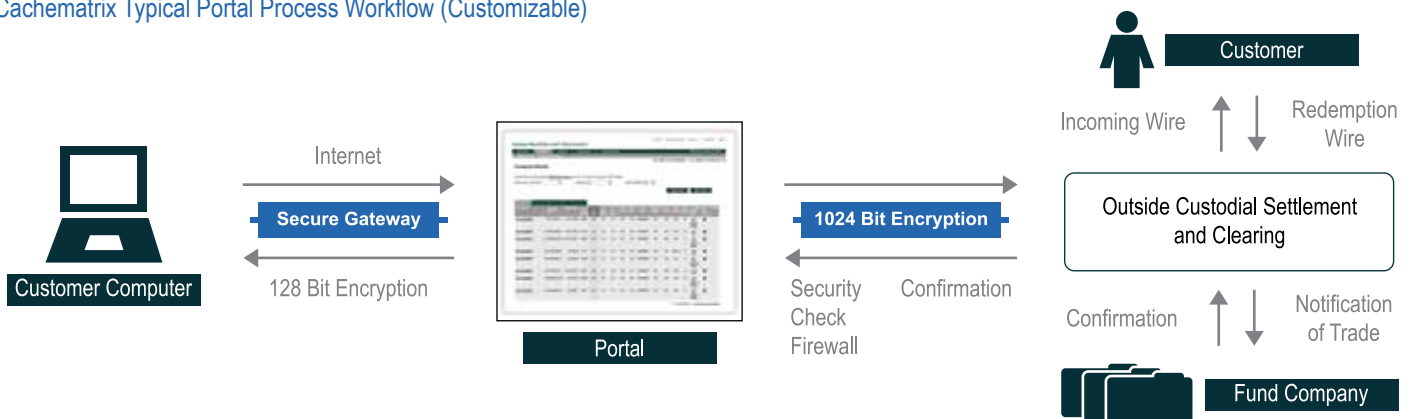
SVB Securities wanted to ensure that its platform was state-of-the-art, and that it could satisfy the critical needs of its diverse corporate client base as well as the efficiency needs of its internal operations.

SVB Securities recognized that it could add additional value to its clients by improving its existing on-line trading capabilities. It wanted to add convenient automation and provide its client the ability to customize their account with the value-added features they wanted.

"We focused on ensuring the functionality and user experience of our new on-line trading platform was first-class. We also needed to focus on keeping our internal operations streamlined by ensuring straight through processing (STP) with all the various systems involved."

One key requirement SVB Securities had for its solution was the ability to provide clients with real-time access and research tools for both their money market fund and fixed income portfolios. SVB Securities was able to customize its Cachematrix software solution to provide clients with the real-time access and the advanced features they desired.

Cachematrix Typical Portal Process Workflow (Customizable)





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MEETING CLIENTS' NEEDS FOR CONTROL AND EFFICIENCY

Meeting the needs of their clients is clearly a focus for both PNC and SVB Securities, and the offering of an on-line trading platform supports each organization's continued efforts to do so.

PNC and SVB Securities implemented their on-line trading platforms independently of specific market or economic events. However, recent events have underscored the benefits their clients gain from using these platforms.

Several key factors continue to impact corporate liquidity management in 2008: the tightening of the credit markets, the sub-prime mortgage fallout, declining interest rates and problems within some money market mutual fund instruments. Additionally, for the first time, headline risk has become very real for corporations' liquidity managers.

Under mounting scrutiny from internal and external parties, corporate investors are seeking greater control, transparency and efficiency in managing liquidity. On-line trading platforms offer banks and other financial institutions an additional tool to address these needs. Additionally, they are able to strengthen client relationships by helping clients optimize their processes and not just focus on straight investment execution.

PNC

"Added efficiency and control were clearly the greatest needs our clients had in managing liquidity."

PNC's trading portal allows clients to gain efficiencies in managing their liquidity by integrating short-term investment activity with other financial activities, and by providing clients with a single access point to multiple providers.

With the adoption of the portal, PNC is able to easily offer clients an expanded inventory of mutual fund providers. To do so, PNC established new relationships with third party investment providers. Cachematrix had already established systems connectivity to all the major investment companies, which facilitated implementation for PNC.

The integration of the trading portal with the PINACLE platform clearly added efficiency for clients, but also gives clients greater control in managing liquidity. Because access to the portal is through PINACLE, clients are able to leverage PINACLE'S security and security administration features. The trading portal's compliance module allows clients to automate the rules and limits defined in their investment policies, providing even greater control around short-term investments.

"Another benefit to our customers is the ability to look across a broad spectrum of mutual funds and make decisions based upon criteria that are important to them."

SVB Securities

SVB Securities' clients sought greater controls and transparency around their liquidity portfolios and processes. SVB Securities utilized the on-line trading platform to meet these needs in several key ways:

- Real-time access to portfolio holdings and trading activity.
- Automated DDA balance validation on all purchase transactions.
- Comprehensive money market mutual fund analysis tools and flexible reporting capabilities.

SVB Securities had more than 5,000 institutional users immediately converting over to this new system when it was released. It was critical that the migration to the new system was seamless and that they were able to immediately take advantage of the easy-to-use trading functions and reporting capabilities.

The trading platform provides clients with an additional level of control and servicing. The system has the ability to monitor customer trades in real-time and notify the trading desk of high-dollar trades or specially flagged accounts. The system can also notify the client directly of any trading activity occurring on their accounts since most institutions have numerous internal traders.

"The reporting, analysis and control features of our on-line trading platform is an essential tool for our company since it allows our clients to support their investment strategies based upon their defined risk and liquidity profile."



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ADDITIONAL BENEFITS FOR CLIENTS

Both PNC and SVB Securities saw the addition of an on-line trading platform as an expansion of client options, not as a replacement for more traditional ways of doing business.

PNC

“We wanted to give our clients options for executing trades so that they can do business how they want to do business.”

SVB Securities

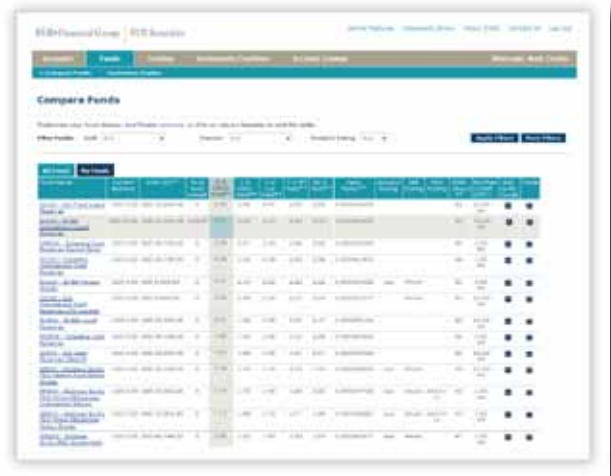
“Our clients want to trade in two main ways – on-line and by phone. We want to offer our clients both these options, but we wanted to enhance clients’ experience with the on-line option.”

The on-line trading platform allows clients to realize additional benefits such as:

- **Ease of Use:** Clients can easily and quickly view investment options and then execute trades directly through the platform.
- **Improved Investment Transparency:** Fund data and analytics (e.g., expense ratios, daily factors, average weighted maturities of funds, fund ratings) are immediately accessible in one location and can be downloaded for easier reporting. Additionally, investment providers can post changes in holdings via the platforms, quickly notifying clients.
- **SOX Compliance Support:** Internal control features such as limited access and passwords, automation of the maintenance and application of investment policies, and a traceable audit trail around investment transactions can be utilized and tested as part of Company’s overall SOX compliance program.
- **Integrated Treasury Management:** The Cachematrix solution meets the internal needs for integration or STP of trading data within treasury workstations. SunGard, Thomson Financial and Wall Street Systems are a few of the treasury workstation providers that Cachematrix has worked with in developing these capabilities.



PNC Portal - Account View



SVB Securities Portal - Fund Research View



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LIQUIDITY PROVIDERS GAIN INTERNAL EFFICIENCIES

On-line trading platforms allow banks and other financial institutions to realize efficiencies in their internal processes, saving money and freeing up resources.

PNC

Streamlining Trades with Third Party Providers

Providing clients web-based access to third party investments was new to PNC Capital Markets, and the adoption of the Cachematrix trading software helped ease this transition through streamlined connectivity with the third party providers.

“Trading with our investor clients through a single portal provides us with enhanced front and back office efficiency. We receive trade order requests required for mutual fund trade processing in one place”

SVB Securities

Traders Have More Time to Support Clients

At SVB Securities, client adoption of the on-line trading platforms allows traders to spend more time supporting clients' needs and less time executing trades.

“We want our trading desk to be available to clients when needed. Now with the on-line trading platform, we expect most of our trades will be done via the portal. This frees up our trading desk to be more productive and responsive to our clients' needs. It also allows us more time to build relationships and provide more value-add services.”

ADDITIONAL FINANCIAL BENEFITS FROM ON-LINE TRADING PLATFORMS

Banks and other financial institutions will realize additional, quantifiable benefits from their on-line trading platform. These specific benefits for PNC and SVB Securities are proprietary, but providers often realize additional revenues from several sources:

- Revenue Share on Trade Flows - For multi-family trading portals, the portal host will have revenue share agreements in place with investment providers whose products are available via the portal. These arrangements generally range between five and ten basis points on the dollar value of investments traded via the portal.
- New Client Acquisition - The availability of an on-line trading platform can help attract new clients.
- Client Retention – Offering current clients a robust, yet easy-to-use, on-line trading platform and the additional services that come with it, such as flexible reporting and trading features and comprehensive fund information, will help firms retain these clients.
- Cross-sell Opportunities – The on-line platform can be used as a tool for selling additional products and services to current clients.

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WHY THE CACHEMATRIX SOLUTION: FLEXIBILITY SUPPORTS FUTURE GROWTH

PNC

“The Cachematrix product offers us the flexibility we need. As we continually evolve PINACLE, Cachematrix is nimble enough to grow with us.”

A key reason PNC selected the Cachematrix solution was the flexibility embedded not only in the solution, but within the company.

Additionally, the Cachematrix team brought extensive, practical experience in trading technology to the solution. Cachematrix had the staff and the knowledge to work effectively with multiple areas of PNC during systems integration. Integration was a key measure of success, both internally and client-facing via the PINACLE platform, and Cachematrix was able to deliver on both fronts.

Controls and security were also major decision criteria for PNC, and Cachematrix's systematic development approach to its software as a service (SaaS) and security procedures was able to deliver state of the art controls.

Access via an ASP solution was also a critical factor. As an ASP application, Cachematrix offered benefits such as simplified deployment, seamless updates and lower start-up and administrative costs.

SVB Securities

“Cachematrix was able to work with all of our customized requests to produce a system based upon our specifications”

SVB Securities' decision to partner with Cachematrix is consistent with its goal to provide its clients with the best on-line trading platform available. To do this, SVB Securities needed a solution that they could customize to meet clients' most pressing and advanced needs.

The idea exchange between SVB Securities and Cachematrix was crucial to developing customized functionality, and Cachematrix was able to bring new ideas to the table that helped SVB Securities realize its vision.

“The team at Cachematrix clearly knows the software industry, but also has deep knowledge of the money market fund business - many of the Cachematrix folks worked in the industry prior to joining Cachematrix. It is this combination of expertise that benefits Cachematrix's relationship with SVB Securities.”

Ease of ongoing maintenance and enhancements to the solution were also factors SVB Securities considered when choosing Cachematrix, as SVB Securities wants its trading platform to remain best in class. SVB Securities finds Cachematrix to be a nimble platform and organization – one that can quickly adopt changes and upgrades.

About Cachematrix

Cachematrix is a premium Software as a Service (SaaS) firm that powers custom trading solutions for many of the world's largest banks and financial institutions. Cachematrix is an independent company founded in 2003, built and owned by its employees who have focused their careers on institutional trading technologies.

As a leading provider of institutional trading technology, Cachematrix offers a total technology solution for banks and global financial institutions. Cachematrix's private-label trading platform is “plug and play,” adding a new corporate service – and a potential revenue stream – to banks and financial institutions operations with unmatched rapid speed to market.

With a combined expertise in asset management and software and systems development for financial services, Cachematrix brings an unprecedented level of expertise to every client relationship. Cachematrix's goal is to not just deliver a technology product. Our approach is consultative and we work extremely close with our partners, providing them support and solutions to their business models.

We have built our technology on a foundation of knowledge, and a passion for client service.