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TPG SOFTWARE

TPG

Executive Overview

As developers of investment software that make the complex simple, TPG's mission encompasses providing software tools that support the complicated securities created by Wall Street, maintain solutions to comply with regulatory guidelines, and deliver products built on industry-standard software platforms such as Microsoft.

Company

Founded in 1991, TPG Software leads the way in developing creative software solutions for the financial industry. Banks, credit unions, thrifts, broker/dealer firms, municipalities, REITs, and financial advisors across the nation have turned to TPG's software package to support trading, comprehensive investment analysis, investment and derivative accounting, client safekeeping, and risk and collateral management.

In 1999, TPG began its migration from a DOS platform to a Microsoft Windows-based platform, using Microsoft SQL and Visual Basic, and Crystal Reports as the reporting engine. The first product developed in this new environment was *Derivative Genius®*, released in early 2000. With years of proven performance in the Windows-based environment, *Derivative Genius® System*, *Portfolio Genius® System* and *TPG Trader®* have emerged as the premier tools to effectively trade, account for and manage investments and derivative products.

Approach

We apply the power of the newest technologies to the financial spectrum. The installation and operation of our software applications result in a system that enables our clients to dramatically:

- Strengthen the accuracy of their accounting and reporting
- Improve operating efficiency
- Increase decision support capability

Future

TPG continually strives to provide our clients with comprehensive software solutions that keep current with changes in regulations and the market delivered on the latest technology platforms. We update our software solutions providing new features and functionality to stay ahead of the curve.

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Developers of Investment software that make the complex simple   www.tpgsoftware.com

Family of Products

Providing you software solutions to meet the challenges of today and the opportunities for tomorrow

Portfolio Genius® System

TPG's *Portfolio Genius* is the leading investment management and accounting software solution for assets and liabilities. The objectives of the Portfolio Genius system are to provide: **accuracy in accrual, accretion and amortization**, complying with the interpretation of Generally Accepted Accounting Principles (GAAP) for OTTI securities accounting, concessions on debt, fees, premiums, discounts and accrued interest (calculated using various day count methods); **accuracy in the maintenance, tracking and projection** of the financial terms of fixed-income securities related to principal and interest payments, coupon rates, rate resets, call dates, MBS and CMO factors, prepayment speeds, and maturities; and **automated back office functions** such as portfolio and business calendar maintenance, principal and interest payment calculations, and reconciliation.

Core Modules:

- **Application Security** provides a logon validation process and works in conjunction with Microsoft Windows and Microsoft SQL Server security implementations.

- **General Ledger** to manage the chart of accounts, with no limit to the number of line items for either the balance sheet or the income statement.

- **Mark to Market Adjustment** to perform backdated mark to market adjustments on your portfolios, tracking the adjustments in an audit log.

- **Payment Reconciliation** to reconcile the amount of actual cash (principal and interest) received for a holding against anticipated amounts calculated on the holding and CUSIP data.

- **Pledge/Safekeeping and Collateral Tracking** to manage pledge and safekeeping information and track collateral on repurchase agreements and reverse repurchase agreements.

- **Regulatory Reporting** to support the various reporting requirements of the different regulatory agencies for banks, savings institutions, and credit unions.

- **Report Manager** to apply filters and set date parameters, create batches, roll reports into holding company reporting, create consolidated reports, create graphs, add custom reports, and more. Report Manager uses Crystal as the report writer.

Optional Modules That Work With Portfolio Genius

Trader® Module

The *Trader Module* was developed through collaboration with our clients, and with the unique challenges and requirements facing the financial industry in mind, the Trader system offers straight through processing of your fixed-income and derivative portfolios. Trader is fully integrated with our core products: our portfolio management and accounting system, Portfolio Genius; and our derivative accounting system, Derivative Genius. It easily accommodates the wide array of security instruments and structures available to sophisticated investment professionals.

Family of Products

Risk Management Module

The *Risk Management Module* works with the *Trader* Module to provide the ability to better control risk through user-specified risk calculations. Users can apply soft and hard limits to control trade entry.

Sweep Module

The *Sweep Module* provides the ability to upload a file of overnight sweep repo transactions and auto-assign collateral based on user-configured requirements. Customer will provide a sweep file containing at least customer name, customer DDA account, sweep balance and repo rate and TPG will build the import to the customer file specifications.

Interface to DDA Module

The *Interface to DDA Module* provides the ability to customize a daily file extract of data from the Portfolio Genius application to upload into the DDA.

Analytics Module

The *Analytics Module* incorporates advanced analytics such as total return, projected cash flows, stressing a portfolio or position, and an internal Pricing Matrix model to price securities.

ePortfolio® Module

The *ePortfolio Module* drives a Web-based application empowering your customers to manage their portfolios via the Internet. Your clients can enter trade transactions, update pledge and safekeeping information, view their portfolio holdings information online, and manage and print reports.

Data Vendor Interfaces

Custodial Reconciliation Interface

The *Custodial Reconciliation Interface* provides a link to your custodian (Bank of New York, Citibank, JP Chase, Bloomberg, etc.) to import data payments into Portfolio Genius, reconcile position information such as par and original face amount, and reconcile payments.

Data Link provides the ability to import position, conversion, and disposition data from spreadsheets as well as third-party data from Bloomberg Data License and/or Interactive Data Corporation's "Remote Plus".

Bloomberg Data License Interfaces

- **Monthly Data Updates** retrieves the data required for monthly updates for factors, rates, market prices, etc.
- **CUSIP Builder** retrieves data to build CUSIP-descriptive information for positions.

Family of Products

Interactive Data Corporation's "Remote Plus" Interfaces

- **Monthly Data Updates** retrieves CUSIP factor, price, and rate information for positions.

- **CUSIP Builder** retrieves data to build CUSIP-descriptive information for positions.

Interface to Bloomberg Trading

The *Interface to Bloomberg Trading* provides the ability to retrieve transaction data (buys/sells) from Bloomberg Trading's Trade Order Management System (TOMS) and Asset and Investment Manager (AIM).

Interface to Yield Book

The *Interface to Yield Book* allows for the upload/download of data electronically through the Internet for factors, rates, market prices, etc.

Interface to Cash Flow Providers

The *Interface to Cash Flow Providers* provides a convenient tool to import the vectored speeds used to generate cash flow data for Portfolio Genius from providers such as Intex, BondEdge and Andrew Davidson.

TPG Utilities

Automation Tool Kit

The *Automation Tool Kit* provides the ability to generate sweep customer confirmations via email, snail mail or can be integrated / customized with your fax utility and contains four utilities that aid in automating and streamlining your workflows:

- **eReport Batch Wizard** provides the ability to group and export reports by portfolio/customer from Report Manager to PDF and Excel formats for ease of distribution, and allows users to create groups of reports based on departmental or customer needs.

- **Application Queue** provides the ability to manage and automate data imports, batch processing, data exports, and reporting from Export, eReportBatch, PG Processor and MRS Reporting Tool, and allows users to sequentially organize the other Automation Toolkit utilities for automated workflows.

- **Export** provides the ability to create and manage data import and export jobs, and allows users to organize pre-process data import and post-process data export jobs.

- **MRS Reporting Tool** provides the ability to manage MRS reports and email templates, and allows users to create report jobs.

Export Builder

Export Builder is a unique data export utility providing the ability to create your own custom extracts files to save and use repeatedly for your specific needs.

Family of Products

TPG Data Excel Add-in Tool

The *TPG Data Excel Add-in Tool* provides the ability to download real-time data from the entire SQL database (PG, DG, and Trader). The tool includes a dashboard and predefined templates for analytics and reports, allowing you to create reports on the fly in Excel that can be saved and reused.

NEW! SharePoint Add-in Tool

The *SharePoint Add-in Tool* is a document storage and linkage depository that enables users to save files to specific records types created in our software solutions such as Portfolio Genius, Trader, and other sources

Derivative Genius® System

TPG's *Derivative Genius* system, a solution for derivative accounting, provides matchless back office processing and support for a variety of products, including interest rate swaps, caps, floors, collars, options, futures, etc. Its flexible scheduling capabilities enable it to support a wide variety of swap structures—including swaps amortizing and accreting by an index, and having any number of legs. Derivative Genius produces daily accounting and sub ledger accounting for all derivative instruments and processing for counterparty payments. A flexible design accommodating any type of derivative instrument—even those yet to be created.

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- **Report Manager** to apply filters and set date parameters, create batches, roll reports into holding company reporting, create consolidated reports, create graphs, add custom reports, and more. Report Manager uses Crystal as the report writer.

Optional Modules That Work With Derivative Genius

Pricing Module Using Numerix CrossAsset

The *Pricing Module Using Numerix CrossAsset* provides the tools to price any derivative—from vanilla to the most exotic—using Numerix CrossAsset's analytics and infinitely flexible deal-structuring architecture. The module uses Numerix to simplify the computation of complex derivatives' pricing and to generate Greeks for any instrument. Numerix also provides support for Credit and Market Risk, including CVA, PFE and VaR calculations. Traders, structurers and risk managers can leverage the most comprehensive cross-asset library of industry-vetted models and proprietary numerical methods with Numerix CrossAsset.

Family of Products

Hedge Accounting Module

The *Hedge Accounting Module* provides compliance with regulations described in FAS 133. Assigns portions of assets/liabilities to derivatives, link the underlying security to the derivative, calculate hedge effectiveness per FAS 133, and document hedge strategy. Tracks fair value and cash flow hedges and their impact on unrealized gains, losses, and comprehensive income, and includes posting to the general ledger and reporting mechanisms.

Safekeeping Genius® System

TPG's *Safekeeping Genius* provides a real-time processing solution for the maintenance of customer accounts: split holdings between multiple locations and safekeeping statuses; forecast payment projections; designate pledges; and generate month-to-date and quarter-to-date billing schedules. Reporting functionality includes client activity statements, internal management reporting; 1099 reporting, etc. Payment reconciliation functionality provides a means to manage and report on your clients' accounts; forecast projections; manage interest and principle payments, match income automatically; process mortgage-backed and variable rate securities with automatic dividend processing using external feed information and automatic adjustments to payments. TPG's Safekeeping Genius is also fully integrated with Portfolio Genius and Trader.

Core Modules:

- **Application Security** provides a logon validation process and works in conjunction with Microsoft Windows and Microsoft SQL Server security implementations.

- **P&I Reconciliation** provides the ability to reconcile the payments calculated by the system with those actually received.

- **Report Manager** to apply filters and set date parameters, create batches, roll reports into holding company reporting, create consolidated reports, create graphs, add custom reports, and more. Report Manager uses Microsoft Reporting Services (MRS) as the report writer.

Optional Modules That Work With Safekeeping Genius

Interface to DDA Module

The *Interface to DDA Module* allows the user to customize a daily file extract of data from the Safekeeping Genius application to upload into the DDA.

Family of Products

Data Vendor Interfaces to Safekeeping Genius

Custodial Reconciliation Interface

The *Custodial Reconciliation Interface* provides a link to your custodian (Bank of New York, Citibank, JP Chase, Bloomberg, etc.) to import data payments into Portfolio Genius, reconcile position information such as par and original face amount, and reconcile payments

Data Link provides the ability to import position, conversion, and disposition data from spreadsheets as well as third-party data from Bloomberg Data License and/or Interactive Data Corporation's "Remote Plus".

Bloomberg Data License Interfaces

- **Monthly Data Updates** retrieves the data required for monthly updates for factors, rates, market prices, etc.

- **CUSIP Builder** retrieves data to build CUSIP-descriptive information for positions.

Interactive Data Corporation's "Remote Plus" Interfaces

- **Monthly Data Updates** retrieves CUSIP factor, price, and rate information for positions.

- **CUSIP Builder** retrieves data to build CUSIP-descriptive information for positions.

Making an Informed Decision

With more than 20 years of experience, TPG has responded to numerous requests for proposal and a consistent pattern has emerged with regard to selection criteria. Your institution may rank the selection criteria differently, but each category should be evaluated and play a role in your decision. We believe our experience with this process can assist you in evaluating TPG's software solution against those of our competitors.

Some suggestions to help you qualify systems include:

- Making sure the system you select not only meets but improves your *business*, *functiona*l, and *technical* requirements.

- Selecting a *flexible* and *extensible* system that *easily integrates* with other software applications in your environment. The system should provide the capability to adapt to changing business requirements. You should be able to extend the product's capabilities through your own efforts as opportunities present themselves.

- Confirming the vendor you select has an ongoing and active research and development effort, committed to improving its product offerings.

- Verifying the vendor's commitment to providing a high level of support and maintaining a good customer satisfaction rating.

- Evaluating the product life cycle, and how the vendor implements upgrades and bug fixes. Put the vendor through testing and "test drive" the product if you can.

Finally, don't be afraid to *look behind the curtain*. Investigate whether or not the product uses industry-standard tools, libraries and databases—support for cryptic non-standard software packages introduce s complexity and excessive cost for maintenance.

Making an Informed Decision

Broad Functionality Provided by TPG's Software Solutions Include:

Core System Securities	Core System Transactions

Core System Securities

Assets

- Corporates
- MBS Securities
- Asset Backed Securities
- CMOs, CDOs, CLOs
- Municipal Bonds
- Equities
- Tax-Exempt Money Markets
- Taxable Money Markets
- Reverse Repos
- Exchange Traded Funds
- Foreign

Liabilities

- FHLB Borrowings and Advances
- Issued CDs
- Loans and Commitments
- Repos (Overnight and Term)
- Agency Notes & Bonds
- Structured Agencies
- Federal Funds Purchased
- Issued Bankers Acceptance
- Redeemable Preferred Stock
- Commercial Paper

Derivatives

- Interest Rate Swaps, Caps, Collars, & Floors
- Swaptions
- Futures & Options
- Foreign Currency
- FX

Core System Transactions

Trade Entry Processing

- Automated Feeds
- Real Time Processing
- Buys & Sells
- Maturities
- Repo Collateral
- Online Inquiry
- Tax Lot Level Processing
- Pledge & Safekeeping (Unlimited)

Cash Processing

- Cash Flow Projections
- Cash Reconcilement (P&I)

Interest/Yield/Book Value/Fair Value

- FAS 91 Accretion and Amortization
- Interest and Dividends
- Principal Amortization

Mortgage Backed and CMO Processing

- Automated Paydowns
- TBA Processing

Pricing and Corporate Actions

- Automated Pricing Feeds
- Manual Pricing
- FAS 115 Mark-to-Market

Liabilities Processing

- Internet Update Capability

Hedge Accounting

- Hedge Linking
- Hedge Documentation
- Measure Hedge Effectiveness
- FAS 133 Compliant Reporting

Making an Informed Decision

Core System Reporting

Standard Reports
- More than 300 Provided
- Accounting (Daily, Weekly, Monthly, etc.)
- Management
- Inventory
- Activity
- Executive/Board Reports & Graphs
- Regulatory/Call Reports/CMR Reports
- Exception, Balancing, etc.)

Custom Reports
- Third Party Report Writer
- Accessible Data/Data Dictionary
- Graph Capabilities

Core System Integration

Interfaces to Third Party Data Suppliers & Systems
- Data Suppliers (Bloomberg Data License, Interactive Data, Yield Book, etc.)
- Analytic Software (Bloomberg API, CMS, etc.)
- Trade Front End (Bloomberg Trading)
- Custodial Interfaces
- A/LM Systems
- GL Systems
- Custodial Interfaces
- Internal Data Warehouse

System Utilities to Import/Export Data
- Standard Data Query (Access, Excel, etc.)
- Internet Connectivity
- User-Defined Data Export

Technology Platform

Operating System
- Industry Standard (Microsoft)
- MS Windows Server
- Win64
- MS Workstation (Windows 7 / 8)
- Relational Data Model (MS SQL 2008 and newer)

Hardware
- Industry Standard
- Minimum Specifications (Server & Workstation)
- Network Enabled (LAN, WAN, Internet)

Implementation and Consulting Services

Product Implementation
- Project Management
- Structured Plan for Implementation
- System Integration

Data Conversion
- Structured Conversion Plan
- Data Reconciliation

Training
- Onsite Training
- Web-Based Training
- Additional Training

Company

History
- References
- Active Research & Development
- Built on Industry Standards (Tools, Libraries, Databases)
- Financial Stability & Strength
- Deliverable Track Record (Modifications & Enhancements)
- Support Track Record

Making an Informed Decision

No one wants to "overpay" for a system; however, no one wants to endure a difficult implementation or experience poor support and training. TPG will meet your business needs, ensure a smooth implementation, and provide support for your ongoing system needs.

Summary

Purchasing a portfolio accounting software system can be an arduous task. An ideal solution is to find an integrated portfolio management and accounting solution that *does it all* in a seamless flow that works for all your financial departments and participants—a system built on using current technology that meets your business, functional, and technical requirements while linking all your other systems (front office, middle office, and back office) to a common database and a universal data source. The importance of these factors in overall cost of implementation and operation quickly becomes apparent.