PPG Risk Solution

Solution Overview and Discussion

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PPG Risk Solution

- Multi-user, real-time event driven, portfolio simulation portal and data platform
- Comprised of server-based and web-portal modules
- Used for portfolio management and simulation-based regulatory calculations
- Works with existing front office, market and static data systems
- Provides a transparent and version controlled environment for all supporting transaction, market and static data
- Drives a range of simulations and reports

Common System Functionality

- Market, static, counterparty, and transaction data model
- Underlying market data viewer
- Custom portfolio definitions manager for range of portfolio, transaction and customer attributes
- Macro level portfolio breakdown based on customer, currency, product, and transaction weightings
- Multiple scheduled portfolio simulation timings
- Submitted simulation monitor
- Simulated results viewer, drill-down, and data store
- Report generator for post-simulation results aggregation
- Error logging

Differentiating Approaches

- Trade Management
  - Daily repricing of trade population
  - Invalid trade messages manager
  - Event driven transaction warehouse
  - Trade reconciliation
- Business Workflow Support
  - Counterparty and transaction unmapped and non-simulated default profile management and reporting
  - Business rule driven handling for dependent market/static data failures
  - Supports multiple parallel portfolio simulations from multiple users
  - Dynamic portfolio CVA pricing / usable for trading and risk deployments
- Real-time Event Driven Business Functions
  - Trade dashboard for status of new and re-valued trades
  - Incremental/marginal portfolio revaluation
  - Daily new trade pool trader charge reconciliation report
  - Incremental/full/marginal re-simulation based on new trade flow
- Data Management
  - Full data download for all supporting data types and reports for offline review and results calculation
  - Self contained portfolio and associated netting data download files
  - Public and private portfolio definitions
  - Daily data snapshots and feed/real-time event monitoring

Differentiating Functionality

- Attribution Support
  - Portfolio, market and static data versioning and comparison
  - Market and transaction risk attribution for simulations across combinations of market, counterparty, and portfolio dates
- System Management
  - Trade mapping / model uploads, streamlining production reconciliation and instrument on-boarding framework
  - Remote based production service management for maintenance and monitoring of system without production login requirements
  - Multiple batch schedule and dynamic runs maximising use of calculation capacity throughout day
  - Streamlined support processes by multiple banking groups
- Architecture
  - Trade system and calculation engine independent
  - Built with framework-based accelerators allowing for a bespoke implementation
  - Supports local, group of local, and distributed calculations
  - Desktop, XL-based, version for use with CVA inception pricing, portfolio what-if construction, and offline testing
  - Supports 2 levels of portfolio breakdown maximising flexibility in deployment, results governance, and performance tuning
  - Automated regression testing framework
  - Service architecture provides APIs for other systems

Solution Benefits

- PPG Risk Solution Benefits
  - Provides transparency and management to underlying data, key to streamlining traditional production support issues
  - Reduces multi-system feed adoption
  - Reduces instrumentation on-boarding projects
  - Multi-user & parallel simulation environment key to running overnight, multi-region and multi-user simulations
  - Supports interaction with desktop version that has proven key for trader research, trade quotes (CVA), system testing and support
  - Risk management frameworks proven in front-office environment

Risk Management Proven in Front Office

Data	• Pricing-level quality data • Full reconciliation to front-office MtMs
Modelling	• Can adopt a range of modelling assumptions {BGM, implied, historic, etc..} • Can be used for external strategies for contingent credit trading • Manage changes associated with EC and RC alignment • Full simulation on scenario and time step (path dep't, collateral, netting)
Speed	• For broad reporting across all simulation (portfolio wide, ind. cptys) • Can adopt a range of scenario sets {1K, 5K, 10K, 50K+} • Baseline and perturbations need to run in 6hr window
Accuracy	• Can adopt a wide range of perts required for full hedge sensitivity analysis • Model can evolve to incorporate stochastic spreads, skew, and smile
Scalability	• Can adopt additional instrumentation and increase portfolio volumes • Flexible to change, reduction in IT overhead and involvement • Increase sims, trades, instruments, risk factors, perturbations, etc.
Flexibility	• Allows users to have full transparency to underlying data and results • Ability to model overrides to meet specific trading practices

PPG Risk Solution Availability

- Consulting
  - System deployment consulting and contracting
  - Portfolio Simulation, credit risk, and CVA
- Accelerators for Bespoke Development
  - Reuse of scalable risk/workflow/model frameworks to speed up a bespoke/internal build solution
- Packaged Software Solution
  - Configurable and packaged server and portal solution
  - Scalable based on multi-company/user solution offering
- ASP Optional Availability
  - Service offering with optional internal deployment
  - Based on proven finance-industry ASP platform / multi-company / user solution offering

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For More Information:

info@productpointgroup.com