

# SMART

**Stable Value Wrap  
Software for Database Management,  
Analytics and Reporting**

*Proprietary and Confidential*



# SMART System

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SMART is a database, analytics, and reporting platform developed by Valerian for providers of book value wraps to stable value funds.

The SMART system automates the import of data from managers and maintains a record of all contract terms and investment guidelines in order to eliminate manual error and support analytics and reporting.

SMART scalability and automation capacity enables in-depth reporting of portfolio characteristics, guideline compliance, underwriting characteristics and other aspects of managing a stable value wrap business.

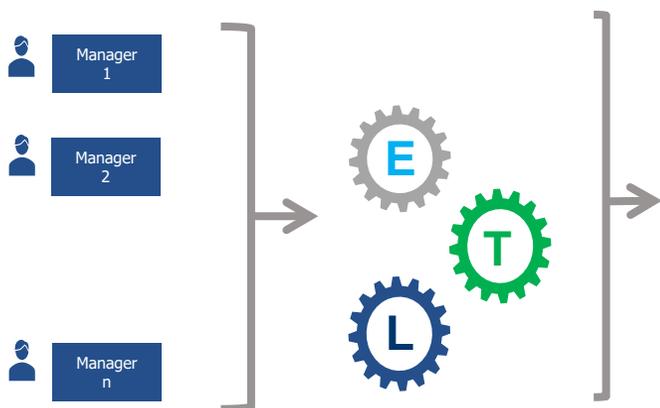
# The SMART Underwriting Analytics Process

Each manager reports the data in its own format, an Extract-Transform-Load (ETL<sup>[1]</sup>) system consolidates the data.

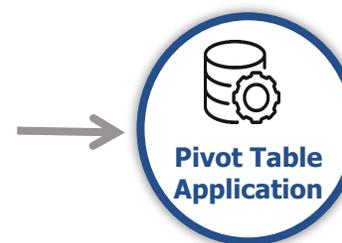
The consolidated database is highly flexible to meet the needs of the wrap provider whether at the contract level, fund level or both. Data is stored in the cloud.<sup>[2]</sup>

Data is validated and analyzed by professionals where adjustments are made and notated to capture the actual impact on the client's book-of-business.

## Extract Data from Managers



## Consolidated Database



- ✓ **Underwriting Analytics**
- ✓ **Other analytics ...**
  - ✓ Risk Reporting
  - ✓ Crediting rate reset
  - ✓ Fund characteristics
  - ✓ Experience studies

[1] ETL is an IT framework for data management ([https://en.wikipedia.org/wiki/Extract,\\_transform,\\_load](https://en.wikipedia.org/wiki/Extract,_transform,_load))

[2] See <https://www.dropbox.com/business/trust/security>

[3] See <https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/UsingWithRDS.html>

# Management Book Overview

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- Purpose:** Detailed overview of outstanding contracts to support book of business growth, risk management and ongoing contract surveillance. All data is at the contract level and the output is highly flexible per client's desire.
- Input:** Client and manager contract data provided per the reporting interval desired. Client data commonly includes contract book value, fee revenue, sub-advisor exposure (if any) per contract and deposits/withdrawals from contracts.
- Managers (or client) supply contract duration, market-to-book ratios and crediting rates.
- Output**
- Book of business overview.
- Exposures to QPAM's, sub-advisor's, sponsor industry and contract type's (IP, 529, CT IO, CT FS).
  - Book of business growth over defined period broken down by contract type.
  - Fee summary by QPAM and contract type.
- Change analysis including key metrics such as market-to-book, crediting rate, duration and fee collection broken out per the client's desire.
- 12 month trending highlighting market-to-book, crediting rate and duration changes.
  - Changes since last reporting period per contract and overall per manager (weighted by contract book value).
- Delivery** 10 working days following receipt of all reports from client and managers. Typical completion within 6 weeks of reporting period (ex. 9/30 reports delivered by mid-November).

# Underwriting Surveillance

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- Purpose:** A re-underwriting of outstanding contracts using fund and contract level data. Outputs are highly flexible per client's desire.
- Input:** Received from manager's but also using contract level data from the Management Book Overview process for comparative purposes if desired (ex. book value wrap exposure).
- Analysis:** Identifying and commenting on corridor and/or other adjustments to fund level cash flows driven by manager reports or discovered anomalies which are discussed between Valerian and managers.
- Output** Client underwriting standards will identify contracts exceeding key metric data, including but not limited to:
- Cash-flows;
  - Demographics (typically annually as managers are depending on recordkeeper delivery);
  - Market-to-book ratio;
  - Crediting rate;
  - Duration; and,
  - ROE, CTE and other risk metrics (if client includes the service).
- Delivery** Depending on manager report deliveries. Typical delivery is within 90-days of a reporting period end. Some managers report cash flows on a one-month lag basis. The actual processing, including validations and cash flow adjustments takes roughly one-month. Report interval is typically semi-annual. Supports timely ad-hoc analysis when requested.

Pooled fund and individual plan surveillance is typically separate (if desired) and will include pooled fund specific data such as put-queue, top 10 holders etc. in addition to the above. Pooled fund reports also break out each contract more extensively with an expanded commentary section.

# Sample Management Reporting

## Management Book Overview

Report Example	See Appendix A
Delivery	Quarterly
Financial Overview	Fee trending
Risk Exposure	QPAM Sub Advisors
Contract Risk	Duration, MBV, CR, BV By contract By manager
# Books of Business	Scaling unlimited

## Collective Trust Overview

Report Example	See Appendix B
Delivery	Semi-annually
Review Type	Contract (CL) and Fund Level (FL)
Risk Exposure	Put queue Top holders Book value trending Cash buffer trending
Contract Risk	Duration, MBV, CR, BV Trending Ranking each metric across book Comparison to average book
Analysis	Commentary on each contract

## Individual Plan and 529 Overview

Report Example	See Appendix C
Delivery	Semi-annually
Review Type	Contract (CL) and Fund Level (FL) Semi-annual change
Risk Exposure	Quarterly book change comparison QPAM transaction summary QPAM performance summary
Contract Risk	Financial stress summary comparison Participant activity Demographic changes Book value and cash buffer changes
Analysis	Commentary on major events

# Summary

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Stable value wrap businesses have unique challenges with data management, analytics and reporting that are not easily met with third party software available for investment management, actuarial or other lines of business.

In order to meet this need, Valerian combined our industry knowledge, IT expertise and financial markets experience to develop SMART allowing customizable, efficient, and automated data capture and reporting for stable value wrap providers.

SMART reports are delivered at the interval desired by the client and supported by ad-hoc inquiries when requests.



**SMART is the only database and reporting system designed specifically for use by stable value wrap providers**

# Appendix A

*Management Overview Report Example*

*Proprietary and Confidential*



# Appendix B

*Collective Trust Overview Report Example*

*Proprietary and Confidential*



# Appendix C

*Individual Plan and 529 Overview Report Example*

*Proprietary and Confidential*



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