

Software brief

Same-day OTC trade validation achieved with machine learning

Accelerate trade validations, reduce exceptions and drive efficiency

“Misys FusionCapital Detect helps the validation team detect errors faster by raising red flags on probable errors and unusual activities.”

Financial transactions are captured in multiple systems every second. Sometimes they include unfortunate mistakes. Small yet frequent, such mistakes generate lengthy investigations. Spectacular “fat finger” errors can lead to decisions being made on the wrong profit and loss (P&L) information and the production of incorrect end-of-day reports.

Financial institutions have made enormous efforts to recognise and avoid such errors, yet they struggle to prevent them from happening. Neither pre-coded controls used in straight-through processing (STP) nor human validation have proven fit for purpose. And regulatory confirmation timelines are proving ever so difficult to meet.

In addition to the operational risk created by these errors, various regulatory requirements compel institutions to revisit their current operational processes as T+1 trade validation is no longer a viable option. The fundamental review of the trading book (FRTB) requires the

production of daily risk reports, including the day’s trading activity. The European Market Infrastructure Regulation (EMIR) and the Dodd-Frank Act both require trade confirmation to happen at T+1 or T+2 upon execution.

Machine learning (ML) is the science of getting computers to act without being explicitly programmed. As opposed to hard-coded business rules which try to anticipate every possible scenario, ML leverages past transactions to produce rules on its own, evolving over time to follow moving trading patterns.

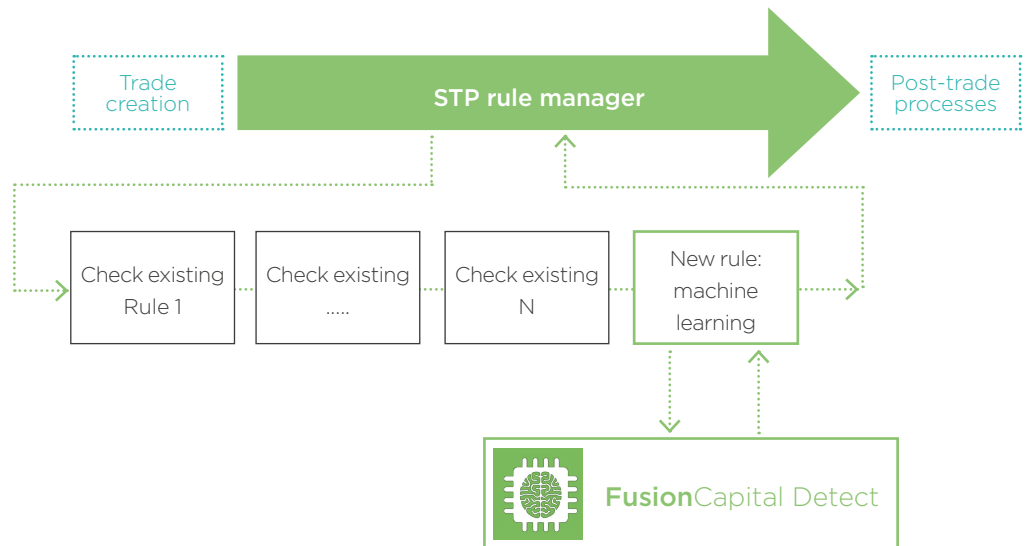
Misys FusionCapital Detect helps financial institution spot anomalies and unusual trading activity. The solution leverages ML to deliver more oversight and control. It behaves as a smart personal assistant to the validation team and helps with the tedious process of error detection. The solution raises red flags on probable errors and unusual activities. In a manual workflow, it gives a priority order for the validation team while it catches more exceptions than existing business rules in an STP workflow.

The solution is designed to work in financial environments where a vast quantity of structured data is available and users present a consistent behavior from which trading patterns can be deduced. Misys FusionCapital Detect has been developed on a mixed of open source algorithms and proprietary developments. It combines random forest supervised algorithms to catch usual mistakes and unsupervised algorithms to spot fat finger errors.

STP workflow report

Trade date	Trade id	Instrument name	Instrument id	Alert level	Alert category	Alert details	Comment
2017-03-03 00:00...	385558896	TRS Accor 35bp 2017	95037939	High	Anomaly	Anomaly on Deal size	
2017-03-02 00:00...	385558876	TRS Accor 35bp 2017	95037939		Valid		
2017-03-01 00:00...	385558878	TRS Accor 35bp 2017	95037939		Valid		
2017-03-01 00:00...	385558864	TRS BNP 45bp 2017	95037937		Valid		
2017-02-28 00:00...	385558877	TRS Accor 35bp 2017	95037939	High	Anomaly	Anomaly on Payment leg	
2016-04-22 00:00...	370836950	DRM_SWP_Autocall_Aviva	93590132	Low	Error	Error on Operator, Rate/Spread pay leg	
2016-03-31 00:00...	384456897	Corp_CLEA ARRANGEMENT FEE ORNAMENT	90046433	High	Anomaly	Anomaly on Price	
2016-03-29 00:00...	385173497	BNP CLOVER TRS_29/03/2016	94997561	High	Anomaly	Anomaly on Rate/Spread pay leg	
2016-03-29 00:00...	385174840	Corp_TRS BPI_DURATION APR16	94997713	High	Anomaly	Anomaly on Frequency pay leg, Adjustment for receive leg, Freque...	
2016-03-24 00:00...	384737437	Swap Autocall Phoenix Japan Fx Leverage	94807918	High	Error	Anomaly on SWAPTYPE, Type receive leg, Currency receive leg, Rate...	
2016-03-24 00:00...	384843339	TRS SG Elvancia Plus N7	94948439	High	Anomaly	Anomaly on Underlying receive leg	
2016-03-22 00:00...	384501049	TRS 7 names SG 22/06/2016 240M	94917750		Valid		
2016-03-21 00:00...	384409313	Swap Opera Patrimoine 3	86752712	High	Anomaly	Anomaly on Rate calculation type pay leg, Type receive leg, Allotme...	
2016-03-18 00:00...	384083879	TRS Relais Monetaire NEW 9	94883881	Low	Error	Error on Rate/Spread receive leg, Rate/Spread pay leg, Operator	
2016-03-18 00:00...	384078615	TRS ECLR PEA NEW 15	94863210	Low	Error	Error on Rate/Spread receive leg, Rate/Spread pay leg, Operator	

STP workflow integration (example)



Misys FusionCapital Detect has analytic capabilities to produce reports which help identify the number of errors that happen throughout the organisation, where, and how long it takes them to be corrected. To do so, the solution reviews the history of transactions to produce analytics on errors that answer these questions.

Designed to catch errors that today's controls let through, Misys FusionCapital Detect produces detailed reports to identify ways to streamline processes. It leverages Misys FusionFabric technology to seamlessly integrate with core trade capture and validation systems. Built on 21st century technology, Misys FusionCapital Detect comes with full flexibility, scalability and openness.

www.misys.com/FusionCapital

About Misys

We provide the broadest, deepest portfolio of financial services software on the market. Our solutions cover retail and corporate banking, lending, treasury, capital markets, investment management and risk management. With more than 2,000 customers across 125 countries our team of domain experts and partners has an unparalleled ability to address industry requirements at both a global and local level. We deliver market leading solutions by putting customer needs at the centre of everything we do. We offer a unique componentised, open architecture to enable our clients to innovate, connect and expand their existing services and increase value faster. To learn more about how our Fusion software portfolio can deliver a holistic view of your operations, and help you to solve your most complex challenges, please visit www.misys.com and follow @MisysFS on Twitter. For the latest news, interviews, videos and features from the financial technology industry visit www.fusionwire.net.

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