

## A summary

"It's hard to find consistency in terms of risk management decisioning across the entire portfolio with our current systems."

Managing Director, Structured Finance Investment, US investment bank with over \$397Bn AUM

Credit analysis, risk oversight, and operational control requirements impose a wide range of due diligence measures upon today's structured finance investors.

The tools to understand ABS and MBS assets on a deal by deal basis are readily available but gaining control consistency and efficiency across a portfolio of assets or a structured finance business creates different challenges.

A consolidated approach is key to implementing the formal policies and procedures required to demonstrate a comprehensive understanding and operational control when investing. While 'due diligence' is second nature for most investors today, regulation demands a unified approach across assets - from initial deal analysis, through ongoing asset and portfolio wide surveillance and into financial reporting.

Implementing a single backbone for structured finance is often challenging because:

- Proprietary and third party data must be integrated and streamlined across assets and the business for investment analysis, risk surveillance and workflow control.
- Consolidating investment analysis and risk management activities across assets, and business units is operationally demanding.
- Controlling, auditing and demonstrating due diligence across deals, portfolios and business lines can be hampered by infrastructure or resource constraints.

The table identifies investor requirements specified by global regulators. A more detailed overview is overleaf.

Comprehensively analyze investments	Perform ongoing surveillance and risk management	Implement operational controls
<p>Know the risk characteristics</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4 (b); 87</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II: EIOPA (CEIOPS), Article 135</li> <li>• AIFMD, Article 17; ESMA, section IV.VI</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>	<p>Monitor, on an ongoing basis and in a timely manner, performance information on the exposures underlying securitization positions</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 5 (b); 87</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II: EIOPA (CEIOPS), Article 135</li> <li>• AIFMD, Article 17: ESMA, IV.VI</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>	<p>Streamline business-wide processes, eliminate spreadsheet reliance and ensure data integrity</p> <ul style="list-style-type: none"> <li>• UK FSA, CP11/9; 3.46 &amp; 5.5</li> <li>• Solvency II: EIOPA (CEIOPS), Article 135</li> </ul>
<p>Know the risk characteristics of underlying exposures</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4 (c); 88</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II and AIFMD (as above)</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>		<p>Impose controls to establish business wide operational control. Implement and manage compliance guidelines and workflow processes within a fully auditable environment</p> <ul style="list-style-type: none"> <li>• AIFMD, Article 17; ESMA Box 25 (c)</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.14</li> <li>• UK FSA: CP11/9; 3.46 &amp; 5.5</li> <li>• Solvency II: EIOPA (CEIOPS), Article 135</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>
<p>Understand the impact of structural features on any given position</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4 (c); 90</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.16</li> <li>• Solvency II and AIFMD (as above)</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>	<p>Deal and portfolio wide risk surveillance and stress testing for independent assessments and reporting</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4; 92 &amp; Para. 5</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.12/13</li> <li>• Solvency II and AIFMD (as above)</li> <li>• OCC's Dodd Frank 939A amends: 12 CFR, 1 &amp; 1.5</li> </ul>	<p>Address regulatory due diligence, reporting and accounting requirements now, and ensure flexibility to rapidly evolve with changing internal and external requirements in the future</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 10</li> <li>• Reg AB II: SEC</li> <li>• AIFMD, Article 17 (2); ESMA VIII.III.</li> <li>• BIS: Report on Asset Securitisation; 3.4.1</li> </ul>
<p>Know the reputation and loss experience of originators related to the position</p> <ul style="list-style-type: none"> <li>• Art. 122a: CEBS, Para. 4 (d)</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II and AIFMD (as above)</li> </ul>		<p>Know an originator or sponsor's net economic interest in a securitization</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4 (d)</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II and AIFMD (as above)</li> </ul>
<p>Understand valuation methodologies of supporting collateral if appropriate</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4 (f)</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.11</li> <li>• Solvency II and AIFMD (as above)</li> </ul>		<p>Ensure independence in your deal and portfolio assessments</p> <ul style="list-style-type: none"> <li>• CRD Article 122a: CEBS, Para. 4; 93 and 94</li> <li>• UK FSA: Art.122a implementation, BIPRU 9.15.13</li> <li>• Solvency II and AIFMD (as above)</li> </ul>

## A single view. Your analysis. Operational control.

Comprehensively analyze investments	Perform ongoing surveillance and risk management	Implement operational controls	
<p>Know the risk characteristics</p> <ul style="list-style-type: none"> <li>• Access and analyze asset specific risk characteristics for each and every securitization position e.g. tranche seniority level, cash flow profile, rating, historical performance of similar tranches, bond covenants or credit enhancements etc</li> <li>• Define and integrate the relevant bond level issuance information into deal by deal and portfolio wide analysis</li> </ul>	<p>Monitor, on an ongoing basis and in a timely manner, performance information on the exposures underlying securitization positions</p> <ul style="list-style-type: none"> <li>• Identify, integrate and monitor the necessary asset specific performance statistics for each class of structured finance asset held</li> <li>• Comprehensively analyze deals and portfolios, querying the most relevant key performance indicators, e.g. 30/60 and 90 day delinquency, default, prepay or foreclosure rates, frequency distribution of credit scores, or other measures of credit worthiness</li> <li>• Perform this analysis across underlying exposures, industry sectors and geographical factors</li> <li>• Resecuritized: Monitor the risk characteristics and the performance statistics of the underlying securitized pools</li> </ul>	<p>Streamline business-wide processes, eliminate spreadsheet reliance and ensure data integrity</p> <ul style="list-style-type: none"> <li>• Consolidate multiple spreadsheets/systems spanning multiple deals, asset classes and business units</li> <li>• Consolidate analysis, risk oversight and operational controls across banking book, trading book and independently managed business units</li> </ul>	
<p>Risk characteristics of underlying exposures</p> <ul style="list-style-type: none"> <li>• Determine the granularity of collateral analysis required e.g. collateral pool performance tables, pool stratifications statistics or, if necessary, loan level drill down</li> <li>• Access, organize and analyze the relevant historical deal performance data and collateral stratification detail necessary for each asset backed deal</li> <li>• Be able to access and analyze loan level information on a case by case basis if a true understanding of the deal demands it</li> </ul>			<p>Impose controls to establish business wide operational control. Implement and manage compliance guidelines and workflow processes within a fully auditable environment</p> <ul style="list-style-type: none"> <li>• Make structured finance policies formal processes to analyze the investment book and prove due diligence activities across the business</li> <li>• Implement business-wide controls to maintain compliance with investment guidelines, risk profile and establish a formal trade workflow process</li> <li>• Implement and audit trade lifecycle paths from inception, through to credit approval and settlement</li> </ul>
<p>Impact of structural features on a position</p> <ul style="list-style-type: none"> <li>• Integrate and analyze accurate, sufficient waterfall models for every deal alongside details of triggers, swaps, liquidity facilities, reserve accounts, guarantees, sponsor support mechanisms etc</li> </ul>			
<p>Reputation and loss experience of originator</p> <ul style="list-style-type: none"> <li>• Highlight and query the performance history and reputation of an originator or sponsor by sector, geography or asset class, assessing internal trade information alongside external sources e.g. downgrade information, outstanding litigation details or past loss experience</li> </ul>	<p>Deal and portfolio wide risk surveillance, stress testing for independent assessments and comprehensive reporting</p> <ul style="list-style-type: none"> <li>• Consolidated view of exposures to analyze by: <ul style="list-style-type: none"> <li>• Business line;</li> <li>• Portfolio exposure parameters (e.g. concentrations by asset, sector, geography or ratings etc);</li> <li>• Performance exposures (e.g. delinquency, default, prepay, foreclosure etc)</li> <li>• All your structured finance assets, alongside your other fixed income assets, hedging derivatives and funding instruments</li> </ul> </li> </ul>	<p>Address regulatory due diligence, reporting and accounting requirements now, and ensure flexibility to rapidly evolve with changing internal and external requirements in the future</p> <ul style="list-style-type: none"> <li>• Implement a fully customizable and scalable infrastructure that is flexible enough to incorporate future regulations and growth</li> <li>• Implement standardized compliance and performance reports dedicated to structured finance, as well as the ability to develop custom reports for: <ul style="list-style-type: none"> <li>• Monitoring ongoing asset performance</li> <li>• Operational compliance</li> <li>• Investment and risk compliance</li> <li>• Regulatory compliance</li> </ul> </li> </ul>	
<p>Originator or sponsor's net economic interest</p> <ul style="list-style-type: none"> <li>• Verify that the minimum risk retention requirement has been met and recorded in your systems. Which of the retention requirement categories has been met?</li> <li>• If applicable, does the originator regularly update information regarding their economic interest and is this recorded?</li> </ul>			
<p>Valuations of supporting collateral</p> <ul style="list-style-type: none"> <li>• Determine whether it is necessary to understand the valuation process behind any individual asset within the deal pool e.g. for non-granular CMBS assets</li> <li>• If so, verify and prove the independence of the valuer</li> </ul>	<ul style="list-style-type: none"> <li>• Stress test valuation assumptions and perform scenario analysis based on your own views of future performance</li> <li>• Validate third party models and demonstrate understanding of methodologies, assumptions and results</li> <li>• Proactively monitor, report and pre-empt risks across the full range of required portfolio, deal, tranche or collateral metrics setting flags, triggers and limits to automate early warning signs and highlight exposures for further analysis.</li> </ul>		
<p>Independence in deal and portfolio assessments</p> <ul style="list-style-type: none"> <li>• Apply your own assumptions to third party cashflow models to forecast cashflows for any given security</li> <li>• Ensure risk assessments for all securitization positions are within your full responsibility and control; not a third party's</li> </ul>			