

# South Africa Webinar Series: Collaborative Credit Decisioning and Early Warning Capabilities

6

# Presenting QUIQspread™

# What is QUIQspread™?



Machine Learning



Intuitive User Interface



Spreading Expertise

QUIQspread

Help ▾ mmas-qa-se@example.com ▾

Balance Sheets  
December 31, 2016 and 2015

Assets

	2016	2015
<b>Current Assets</b>		
Cash and cash equivalents	\$ 1,623,677	\$ 1,562,189
Cash - restricted for collateral	145,276	145,058
Accounts receivable - trade, net	56,537	80,802
Accounts receivable - related party	3,766	5,771
Unbilled revenue receivable	2,961,643	3,557,923
Prepaid expenses	417,760	450,204
Total current assets	5,208,659	5,801,947
<b>Fixed Assets, net</b>		
Total assets	\$ 5,952,614	\$ 5,996,363
<b>Liabilities and Stockholder's Equity</b>		
<b>Current Liabilities</b>		
Accounts payable	\$ 112,043	\$ 70,756
Current maturities of long-term debt	352,632	341,136
Current maturities of capital lease obligation	8,880	7,541
Accrued expenses		
Salaries and wages	2,655,191	3,135,832
Payroll taxes and payroll taxes withheld	1,357,824	1,281,018
Other expenses and payroll withholding	318,389	325,452
Total current liabilities	4,804,959	5,181,735
<b>Long-term Liabilities</b>		
Long-term debt, less current portion	287,002	591,395
Capital lease obligation, less current portion	35,205	4,384
Total liabilities	5,127,166	5,777,514
<b>Stockholder's Equity</b>		
Common stock, no par value; authorized 10,000 shares; issued 5 shares, 995 shares outstanding	15,500	15,500
Retained earnings	4,349,948	3,743,349
Treasury stock, 9,000 shares at cost	(3,540,000)	(3,540,000)
Total stockholder's equity	825,448	218,849
Total liabilities and stockholder's equity	\$ 5,952,614	\$ 5,996,363

The accompanying notes are an integral part of these financial statements.

- 4 -

Abc Life Insurance Co. Ltd - 31 December 2016.pdf

In Review MARK AS COMPLETE

BALANCE SHEET INCOME STATEMENT

12/31/2016

Total Assets ▾ \$5,952,614

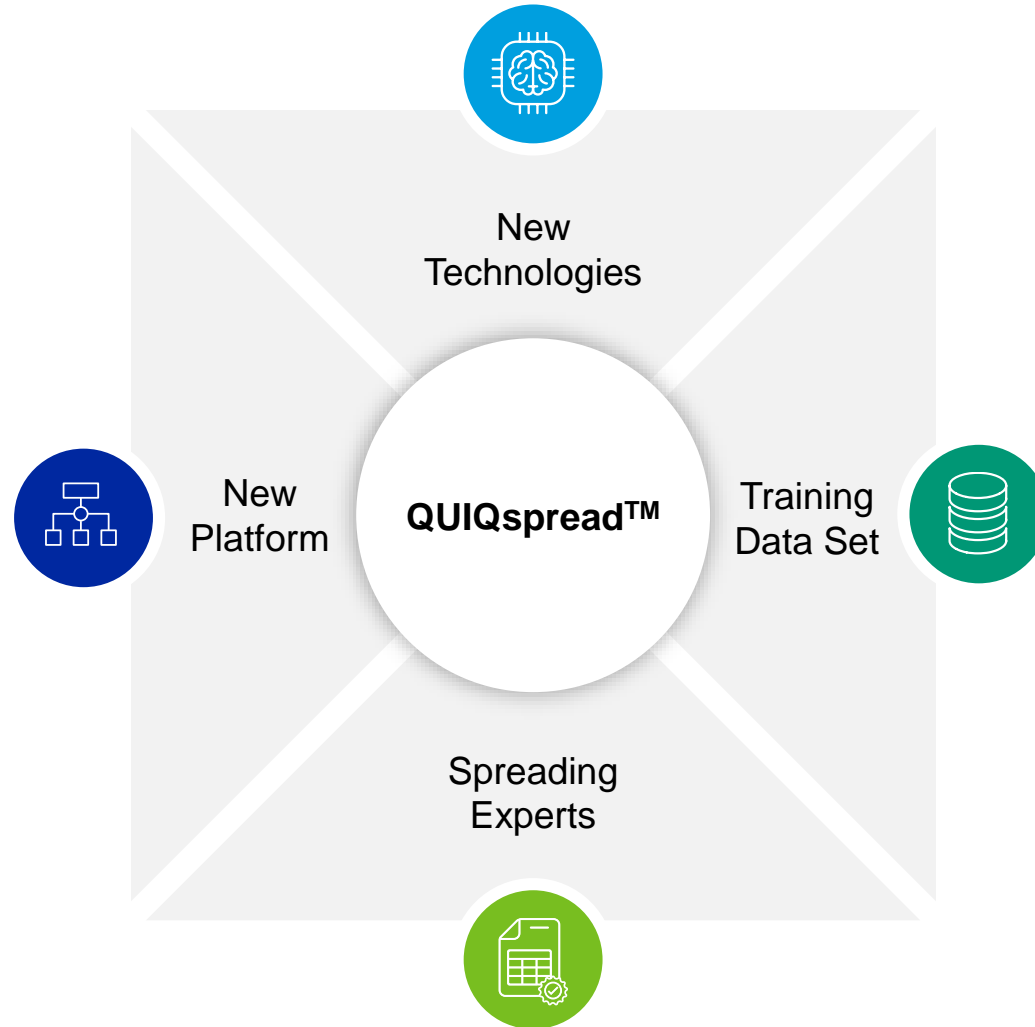
Total Current Assets ▾ \$5,063,383 TOTAL CURRENT ASSETS

Cash	...	\$1,623,677	2016 Calculated:	\$5,063,383
Time Deposits			2016 Reported:	\$5,208,659
Marketable Securities			Difference:	\$145,276
Accts/Notes Rec-Trade ▾		\$56,537		
Total Accts/Rec-Net	...	\$56,537		
Bad Debt Reserve (-)				
Loans to Related Co - CP				
Due from Related Co - CP		\$3,766		
Accts/Notes Rec-Other	...	\$2,961,643		

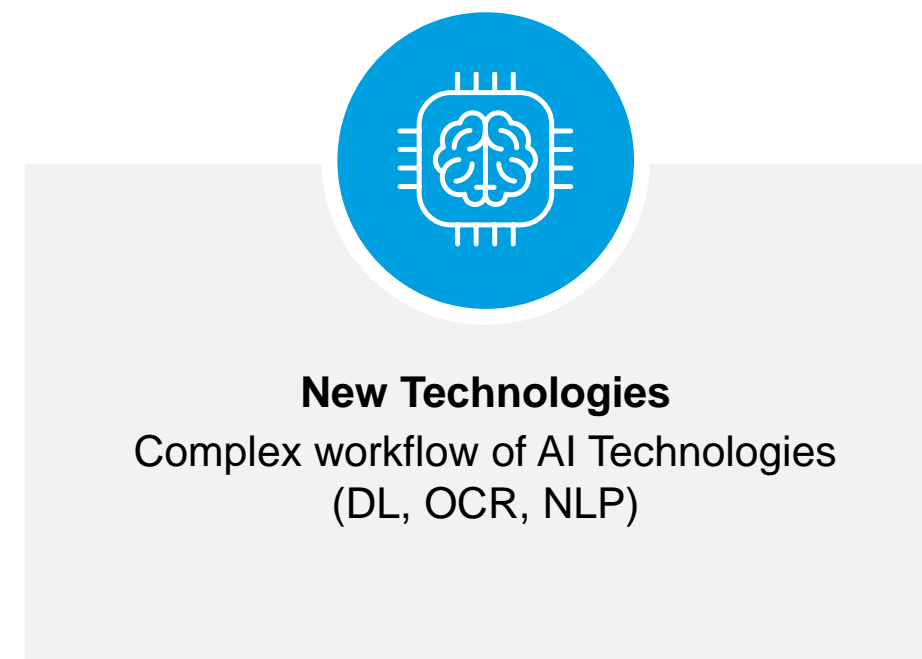
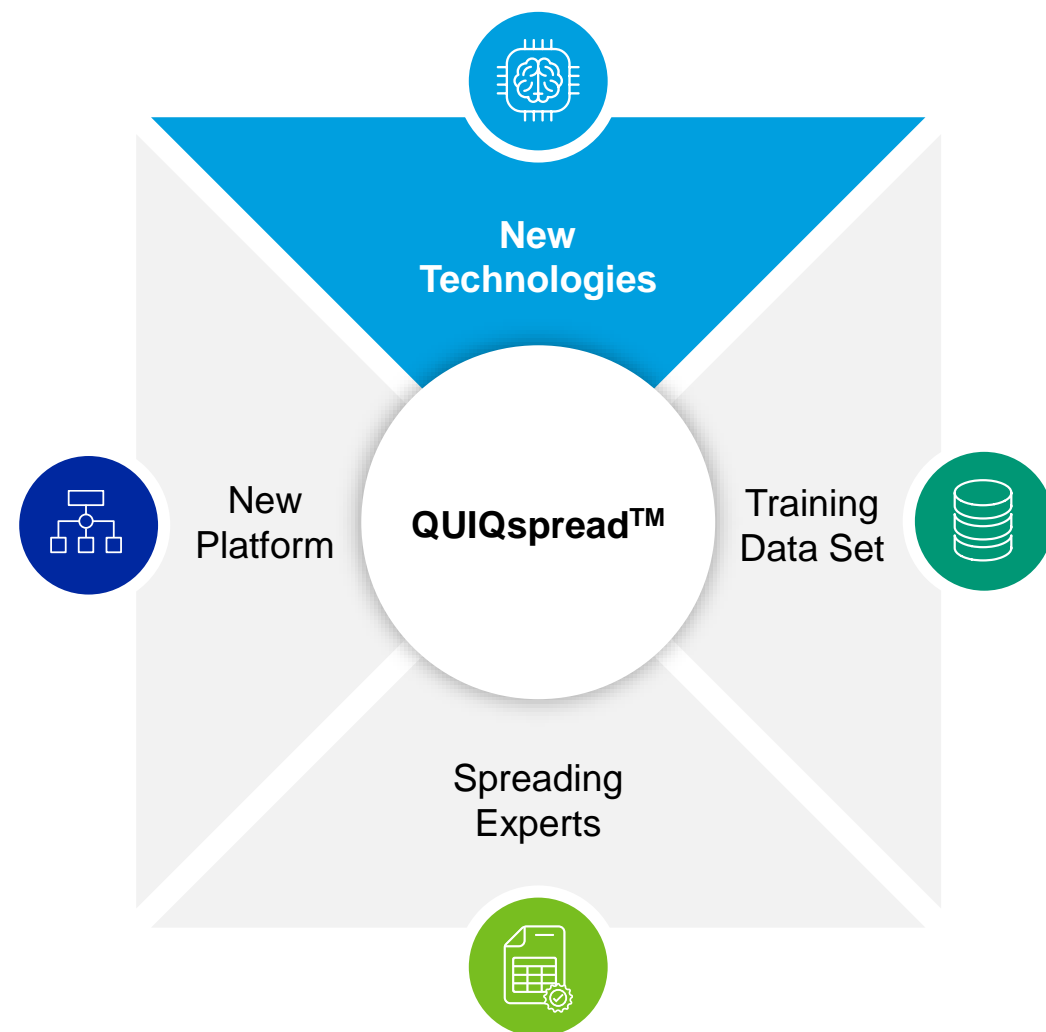
2016

	2016	2015	Difference
TOTAL ASSETS	\$5,952,614	\$5,952,614	\$0

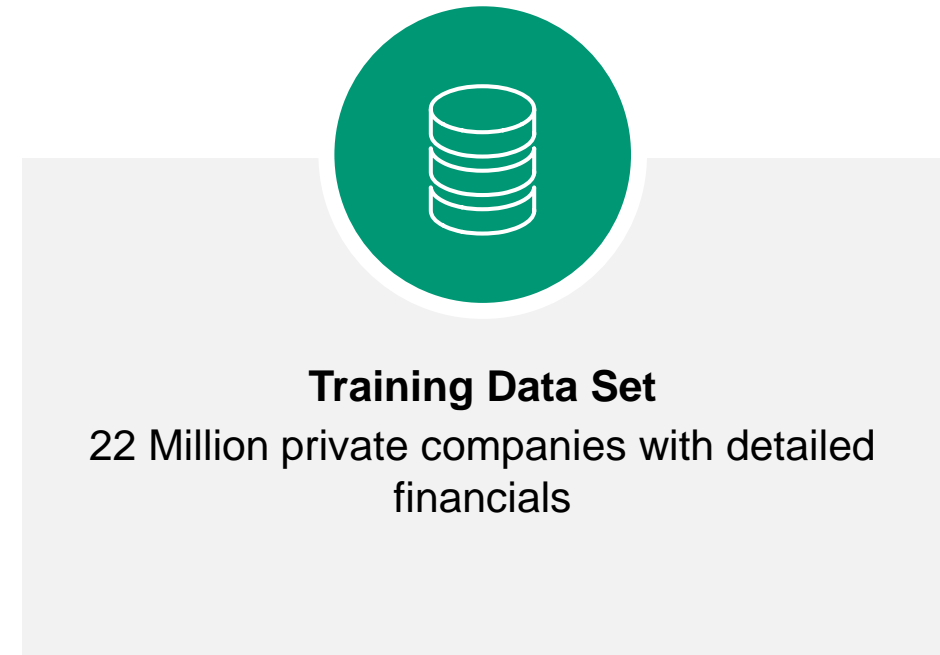
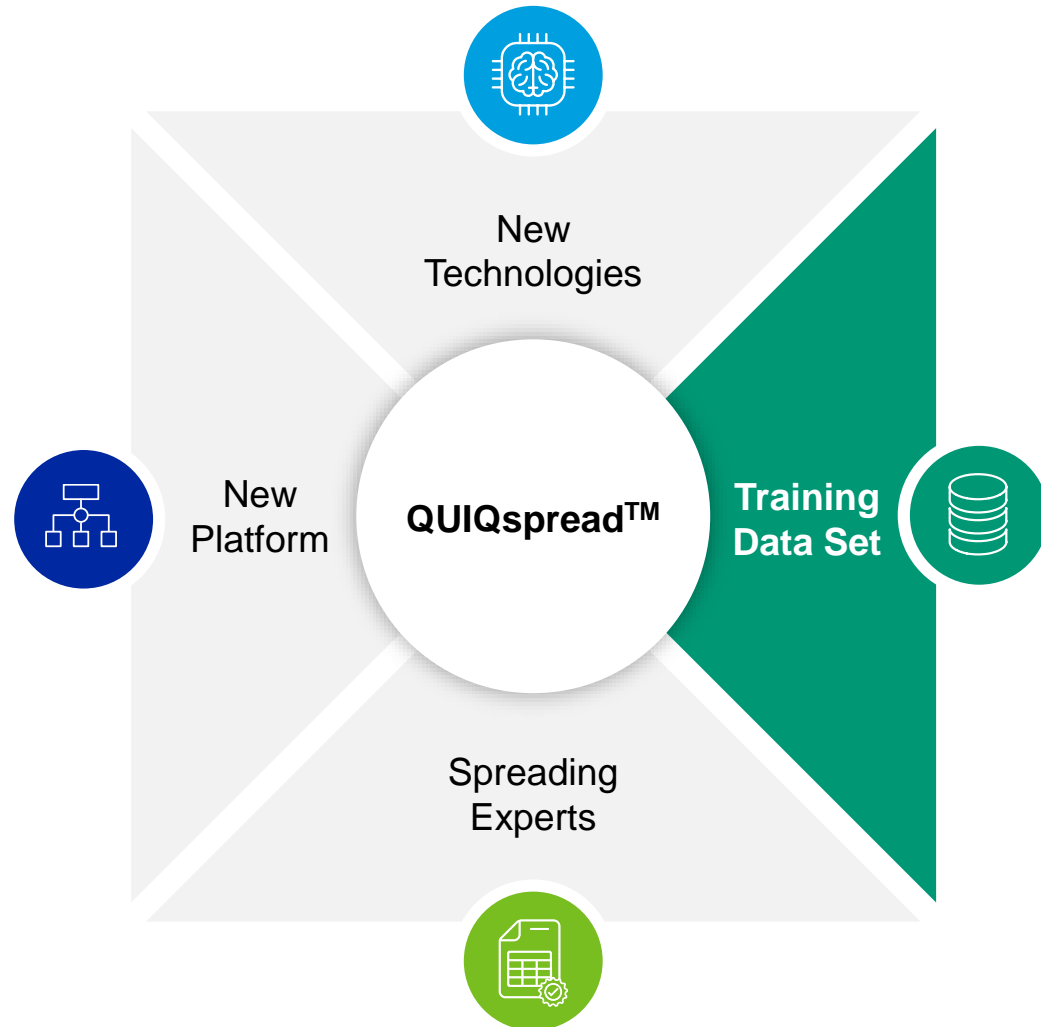
# QUIQspread™: Automated spreading for faster, better decisions



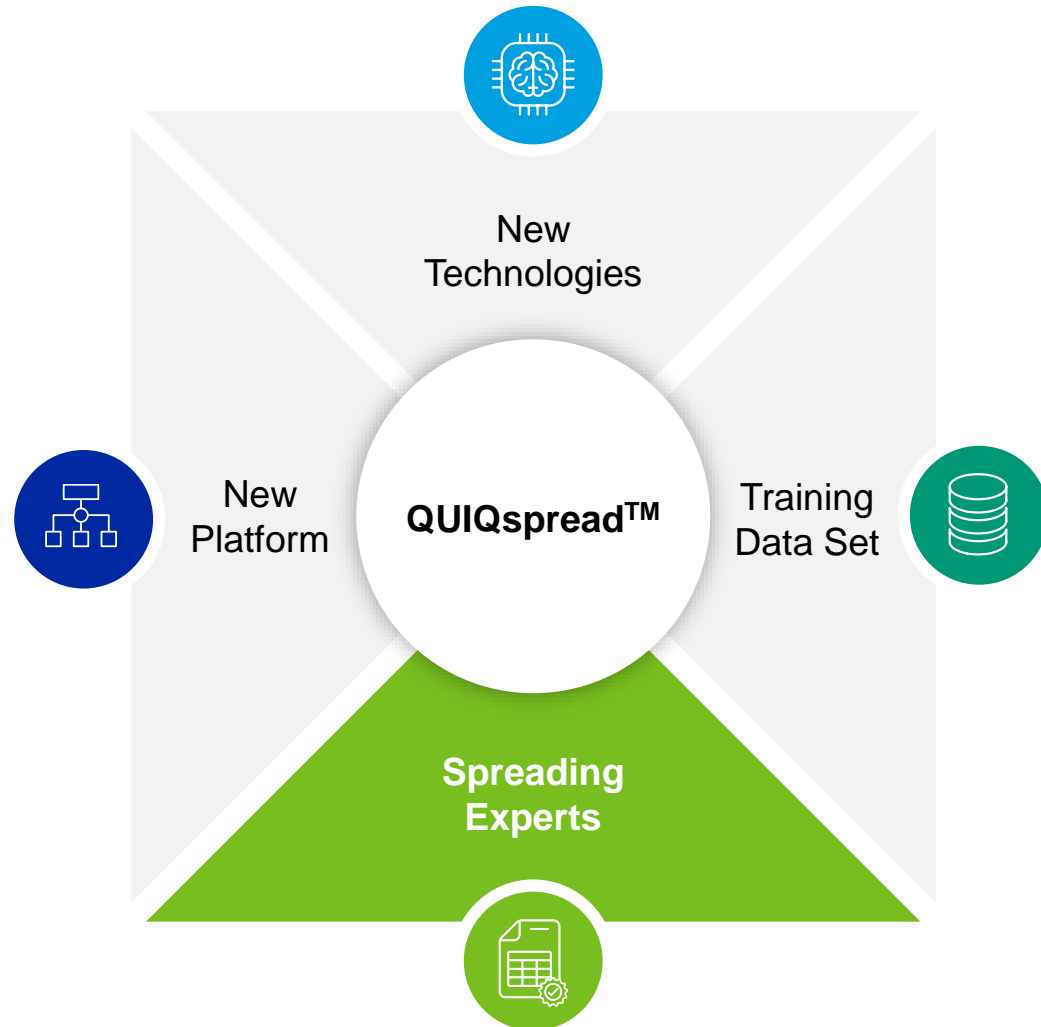
# QUIQspread™: Automated spreading for faster, better decisions



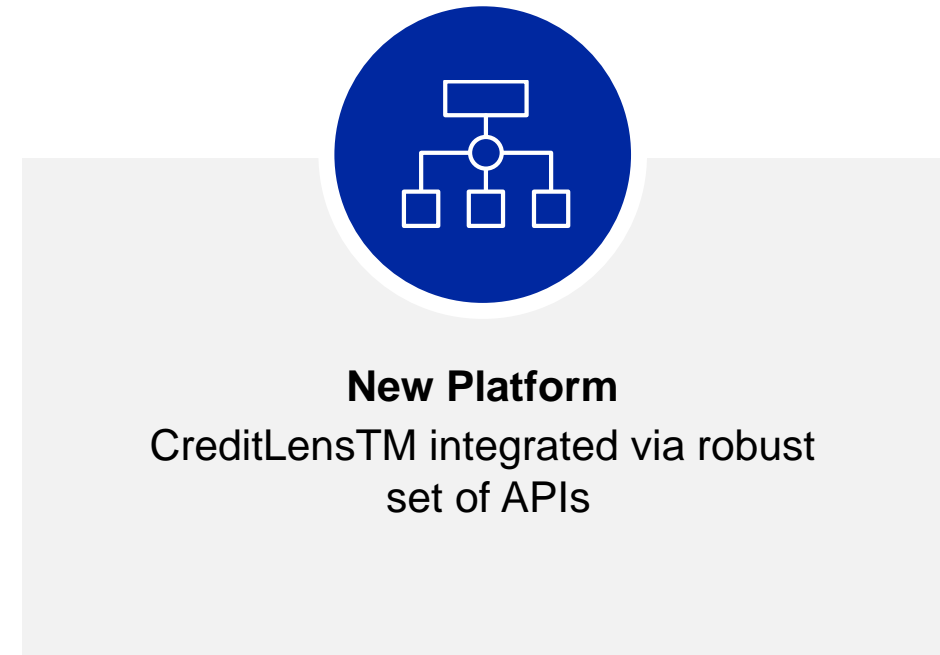
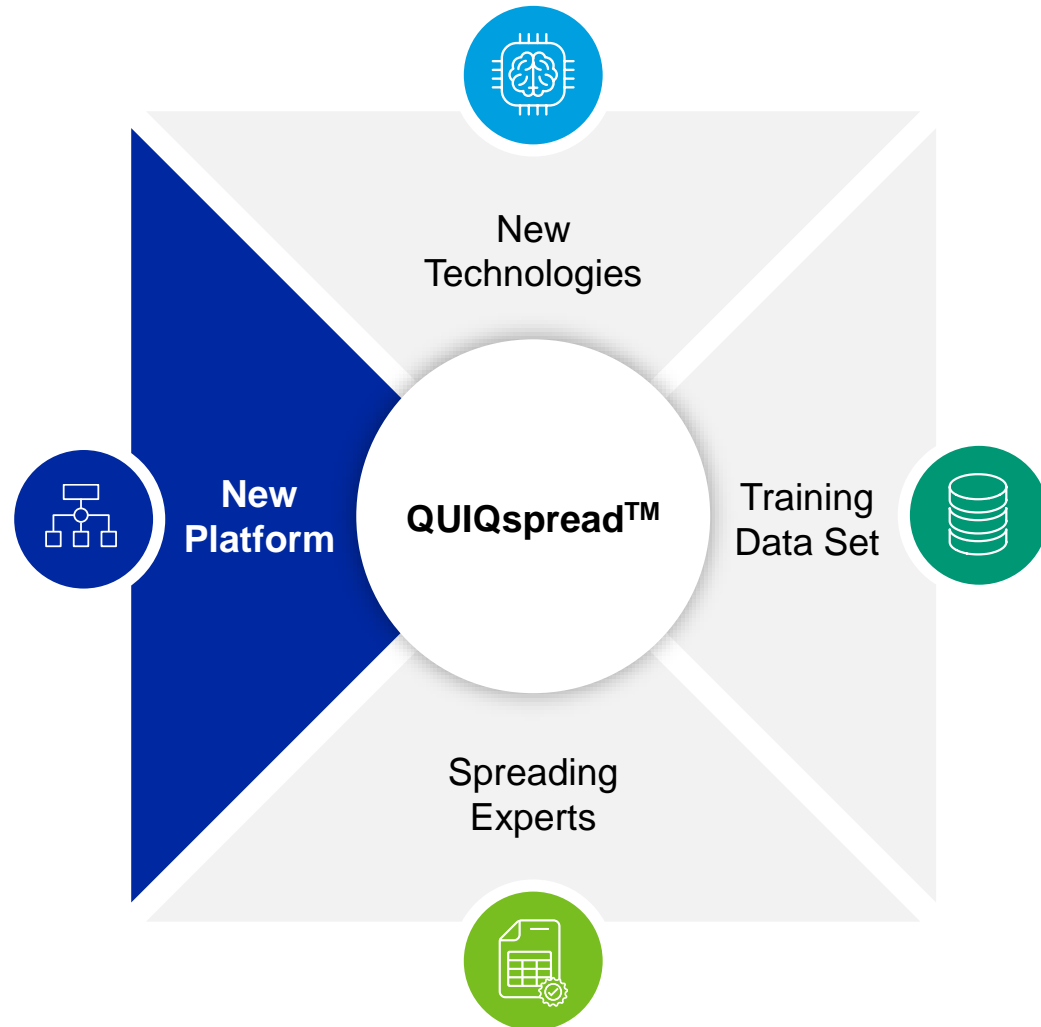
# QUIQspread™: Automated spreading for faster, better decisions



# QUIQspread™: Automated spreading for faster, better decisions

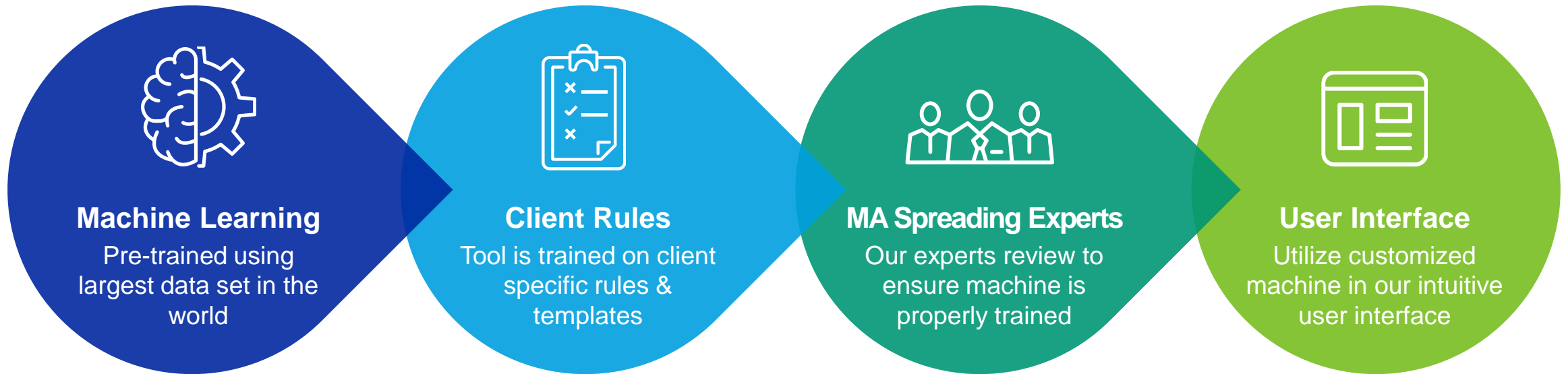


# QUIQspread™: Automated spreading for faster, better decisions

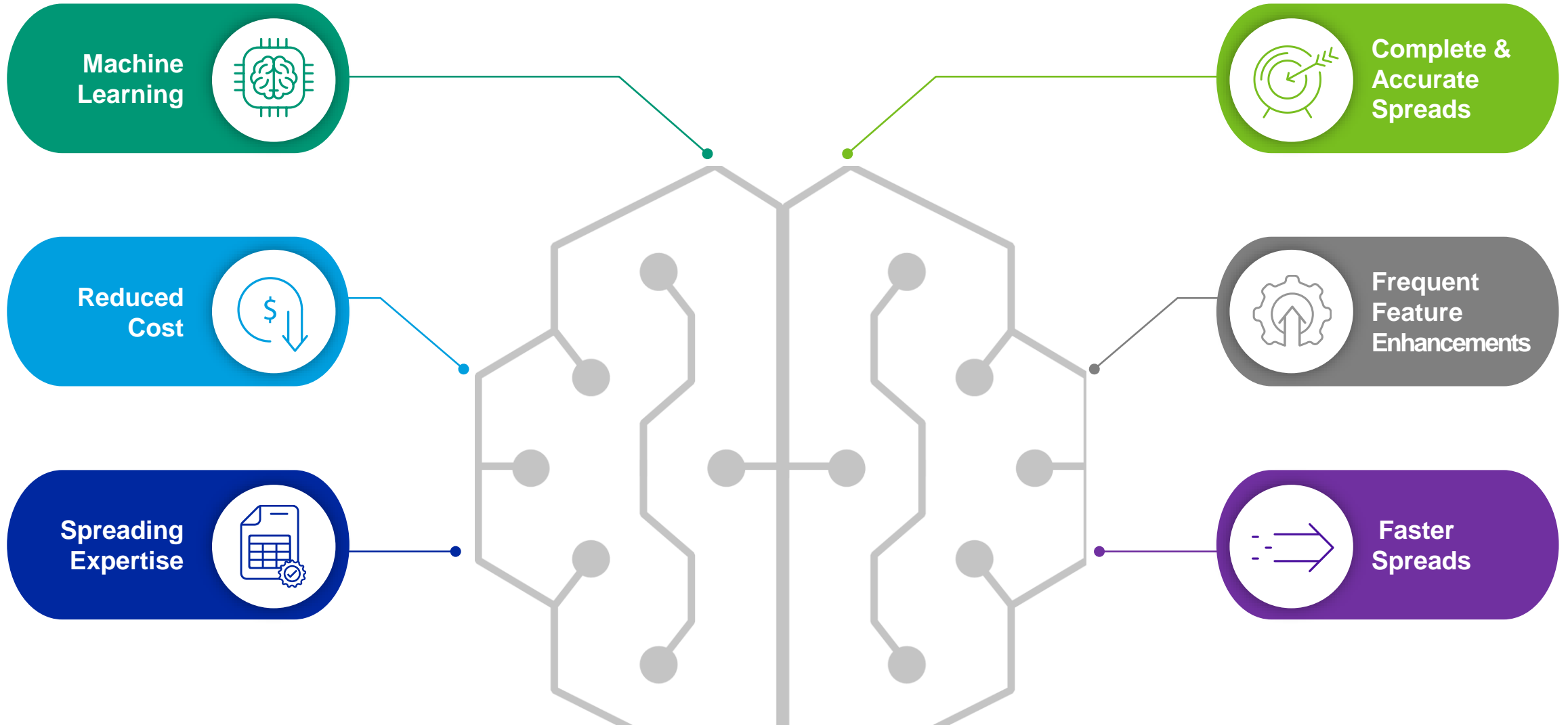




# Customizing QUIQspread to you



# Key Differentiators & Benefits





**DEMO**

# CreditLens™ Ecosystem

1

Future Focus

# Our Industry is Undergoing Rapid Change

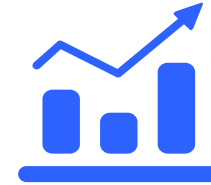
Technology presents an opportunity to deliver faster, better solutions.



Consumerization of  
user experience



Faster decision-making  
and business insights



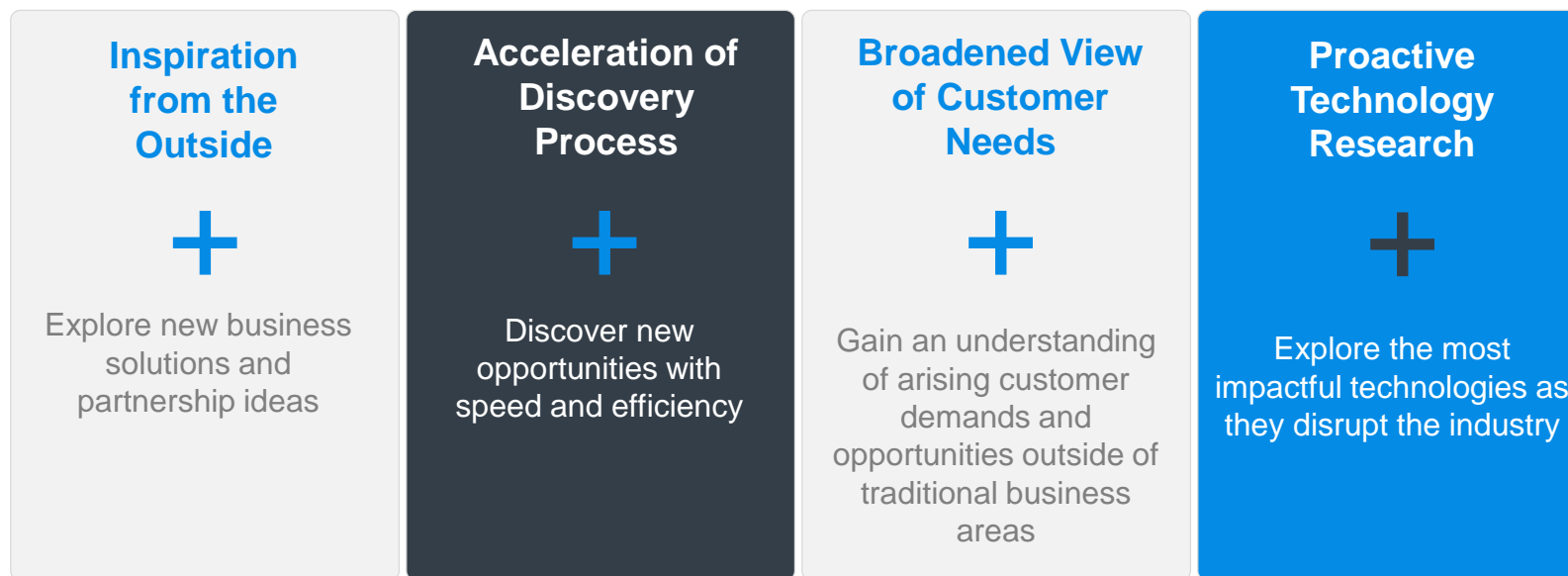
Democratization of  
data-driven decisions

**Moody's Analytics' technology strategy focuses on solving customers' business problems**

Deliver *actionable insights*, achieve *higher operational efficiency*, *lower TCO*, free up time to focus on high-value activities

# Moody's Analytics Adopts An Ecosystem View of Business Technology

Faster realization of value and adoption of best-in-class technologies



Result = ***Reduce costs and operational frictions*** for our customers through innovative products and solutions

# Moody's Analytics Innovates With Purpose

Next generation technology is a defining element of our culture



## Data & Analytics

**Evolutionary algorithms** used in scorecard and credit model development

**Alternative data** sources to augment SME credit scoring accuracy

**Crowd-sourced data** on CRE leases and sales



## Deliver Efficiencies

**Machine Learning (ML) and Deep Learning** tools to automate financial data spreading – *QUIQspread™ platform*

**Artificial Intelligence (AI)** to automatically generate credit report and news summarization

**Natural Language Processing (NLP)** to streamline semantic annotation and entity recognition



## Increase Adaptability

**SaaS** solutions reduce total cost of ownership and enhance user experience

**Microservice-oriented and modular solutions** integrate seamless with third party ecosystems and software

**PaaS** architecture allows the application of blockchain techniques and big data



## Improve Decisions

**NLP** based early warning and credit monitoring tools

**Sentiment analytics** to enhance lenders toolkits

**AI** tailored credit training – *Credit Coach™ tool*

**AI** powered lending decisions – *CreditLens™ solution*



# Artificial Intelligence

Moody's Analytics uses AI to create efficient processes and to provide robust solutions to pressing problems



Moody's Analytics uses its credit expertise and unique datasets to train **Deep Learning** process to scan news articles for credit relevant information. Moody's Analytics uses this internally in its credit research and model validation process. **Credit Sentiment Scores** provide efficient early warning and monitoring for customers.



Moody's Analytics **Natural Language-powered solutions** allow customers to deal with influx of information and to incorporate signals from alternative data into credit decision processes and analytics, thus extracting actionable business insights.



Moody's Analytics leverages **genetic algorithms** in the development and internal validation of scorecards and credit models we provide to customers across the globe.



*Moody's Analytics Credit Coach tool* provides eLearning to credit professionals. The solution leverages **machine learning** techniques to diagnose the challenges of individuals and to provide immediate and tailored training to improve performance saving time and money.

# Artificial Intelligence – Information Summarization

Efficient process to track and monitor influx of unstructured data for credit officers, analysts, KYC and compliance



**Improve  
Decisions**

Publication Date	Title	Score	Relevance
2017-12-17 16:00:00	Kelvin Davis of Caesars Entertainment in top q...	0.15	96.89
2017-11-28 16:00:00	CAESARS ENTERTAINMENT: "Cabral" Suit Alleges I...	0.00	64.08
2017-11-27 16:00:00	Jeffrey Benjamin of Caesars Entertainment in t...	0.15	84.39
2017-11-26 16:00:00	CAESARS ENTERTAINMENT: "Cabral" Suit Alleges I...	0.06	64.08
2017-11-12 16:00:00	Troubled Company Prospector Profile -- Caesars...	23.71	50.78
2017-10-30 10:57:37	Caesars ends free self-parking for Nevadans at...	0.01	31.37
2017-10-18 17:00:00	CAESARS ENTERTAINMENT: Moody's Gives Ba3-PD Pr...	96.98	64.12
2017-10-17 17:00:00	David Bonderman of Caesars Entertainment in to...	0.27	96.89
2017-09-28 17:00:00	Caesars Entertainment Operating Company Supple...	61.44	85.71
2017-09-26 17:00:00	Christopher J. Williams of Caesars Entertainme...	6.01	79.69
2017-09-26 17:00:00	Flamingo Las Vegas Renovation Includes Custom ...	0.01	33.07
2017-09-21 17:00:00	Stories from the Bankruptcy Court Dockets - Ca...	28.13	85.71
2017-09-17 17:00:00	Stories from the Bankruptcy Court Dockets - Ca...	0.86	85.71
2017-09-17 17:00:00	Caesars Entertainment Operating Company Settle...	0.03	80.00
2017-09-06 17:00:00	Caesars Entertainment Operating Company Compro...	6.82	85.71
2017-08-30 17:00:00	Caesars Entertainment Operating Company Settle...	0.00	85.71
2017-08-15 17:00:00	Daily Technical Summary Reports on Resorts & C...	0.11	85.16
2017-06-21 17:00:00	Caesars Entertainment Operating Company Settle...	0.00	85.71
2017-06-15 17:00:00	Caesars Entertainment Operating Company Settle...	2.58	85.71
2017-06-05 17:00:00	Stocks Under Scanner in the Resorts and Casino...	3.26	93.75

Caesars Entertainment Operating Company filed with the U.S. Bankruptcy Court a 13th amendment to the Supplement for the Debtors' Third Amended Joint Plan of Reorganization.

Christopher J. Williams of Caesars Entertainment in second quartile of Mid Cap Director Scorecard for past year.

Flamingo Las Vegas Renovation Includes Custom LED Lighting.

Caesars Entertainment Operating Company Compromise Approved -- The U.S. Bankruptcy Court issued an order approving Caesars Entertainment Operating Company's (CEOC) compromise or settlement, per Rule 9019, between CEOC and the State of Mississippi. As previously reported, "The 'in lieu' Stories from the Bankruptcy Court Dockets - Caesars Entertainment Operating Company, Inc.

Caesars Entertainment Operating Company Settlement Approved -- The U.S. Bankruptcy Court approved Caesars Entertainment Operating Company's (CEOC) compromise between CEOC and Harrah's New Orleans Management Company and the Secretary of the Department of Revenue, State of Louisiana. As previously reported, "Importantly, the Settlement Agreement effectively eliminates the \$41 million liability asserted in Louisiana Claims, by disallowing and expunging all Louisiana Claims other than the Allowed Claim and providing that the Negotiated Refund Amount will be set off against the Allowed Claim in full satisfaction of the amount asserted therein.

Caesars Entertainment Operating Company filed with the U.S. Bankruptcy Court a 13th amendment to the Supplement for the Debtors' Third Amended Joint Plan of Reorganization.

the Debtors will not be required to make any cash payments or distributions under the Plan with respect to the Allowed Claim, ultimately to the benefit of the Debtors' stakeholders.

# Artificial Intelligence – Early Warnings

Identify, track, quantify and monitor credit event-related information about business entities

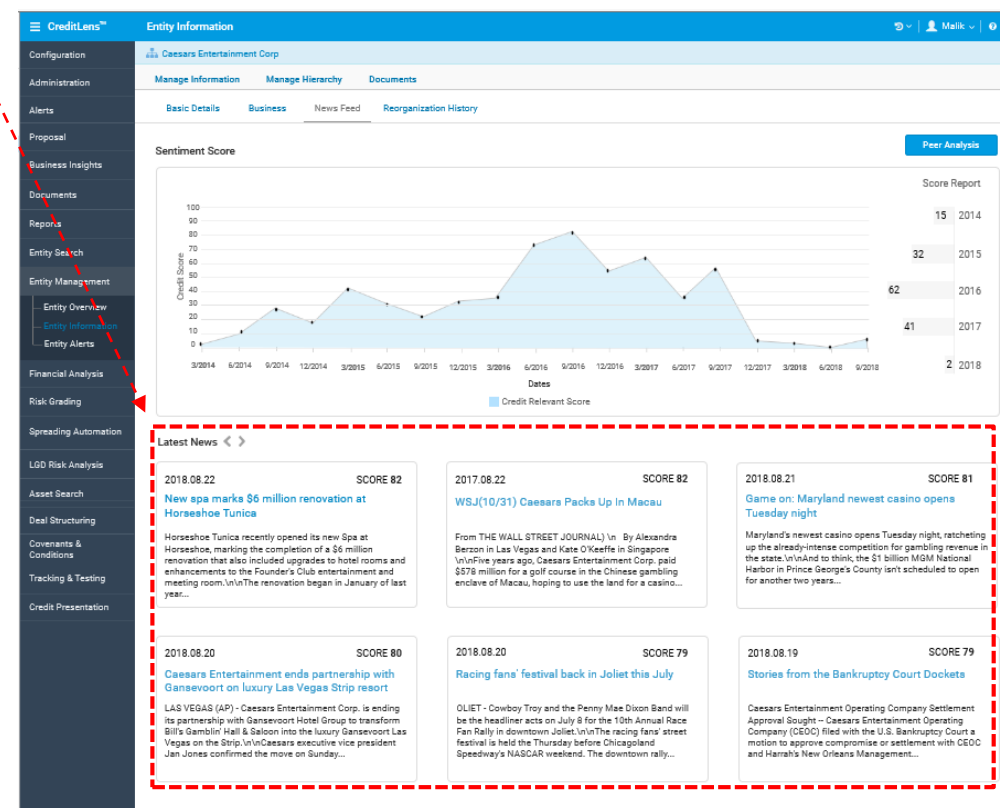


Improve  
Decisions

Automatically **read, process and summarize** thousands of publications and media sources to deliver credit details that help identify potential impact to the portfolio **without information overload**

Comprehensive dashboard that **generates early warning indicators and credit sentiment scores**

Highlight companies with adverse sentiment for **additional risk assessment**, compare against industry benchmarks or custom trigger



# Artificial Intelligence – Lending & Underwriting

Faster and better business decisions with automated spreading



Improve  
Decisions

## QUIQspread™

Machine learning algorithms  
read and apply decision rules  
to financial statements

Automated spreading is  
populated and fed into  
underwriting system



## CreditLens™

AI-enabled credit decisioning  
engines

Lending and approval  
process automation for  
credit officers

≅ 45+%

**Direct Cost Savings** with AI  
spreading automation

*100% accuracy  
with QUIQspread*

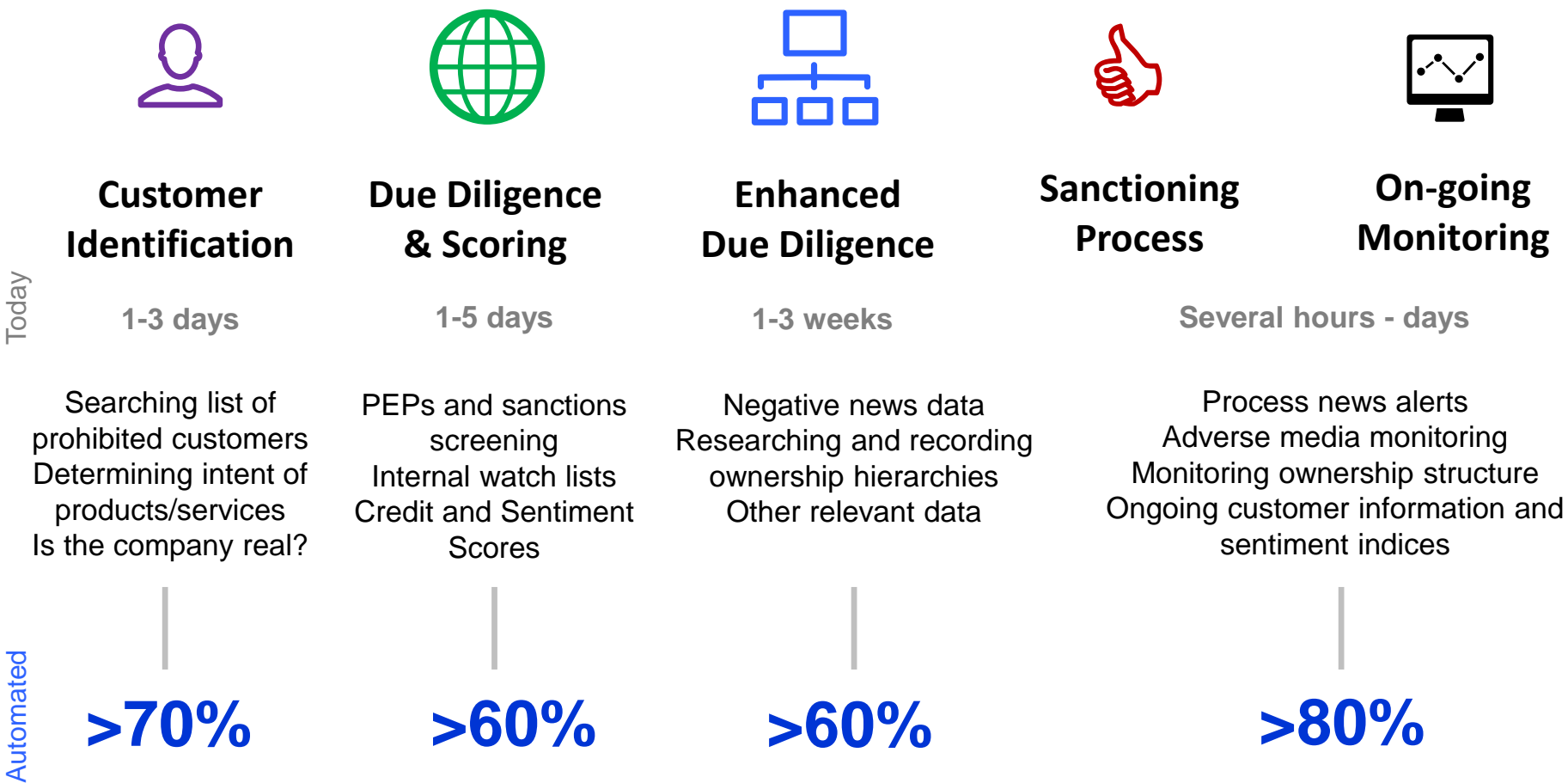
*Up to 60% cheaper  
spreading cost*

# Artificial Intelligence – Compliance & KYC

Leverage BvD company data and AI entity recognition algorithms



Improve  
Decisions

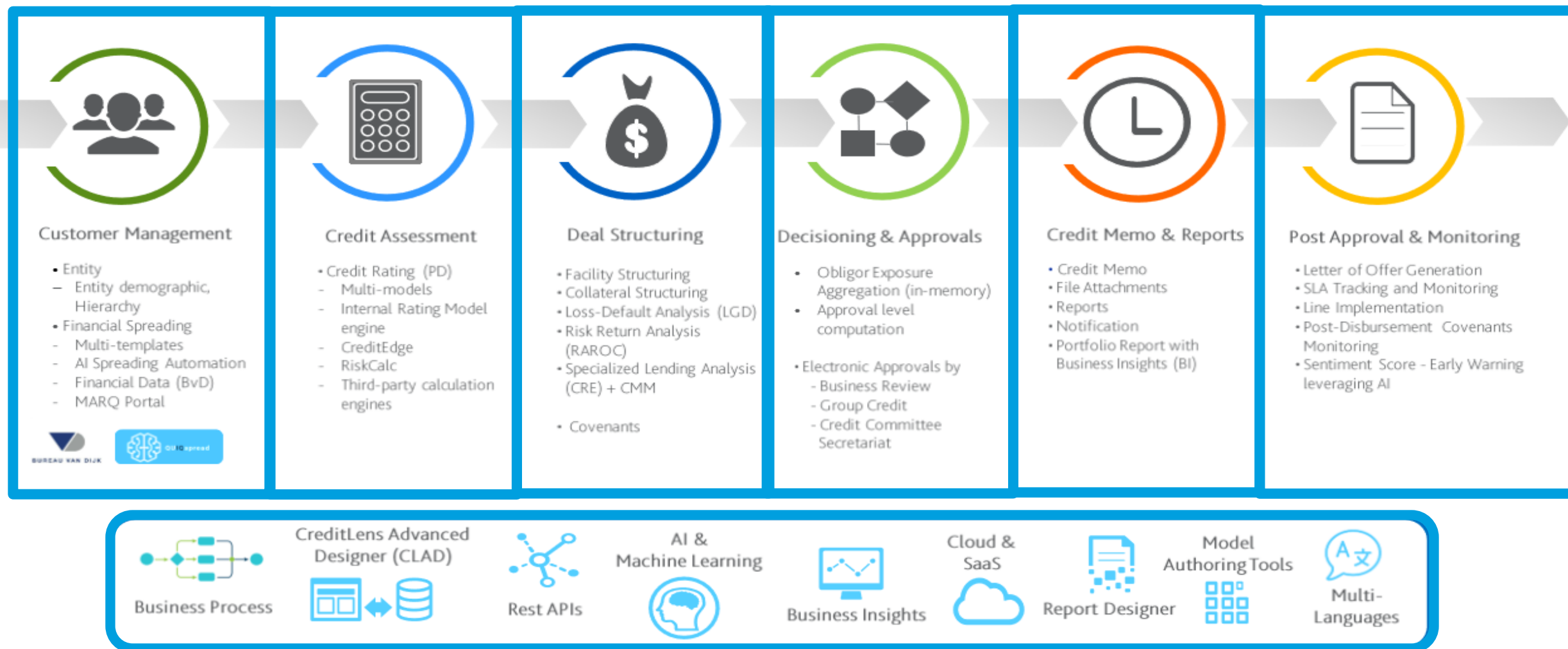


2

Creditlens ecosystem

# What is the CreditLens™ ecosystem ?

## Scope and breadth

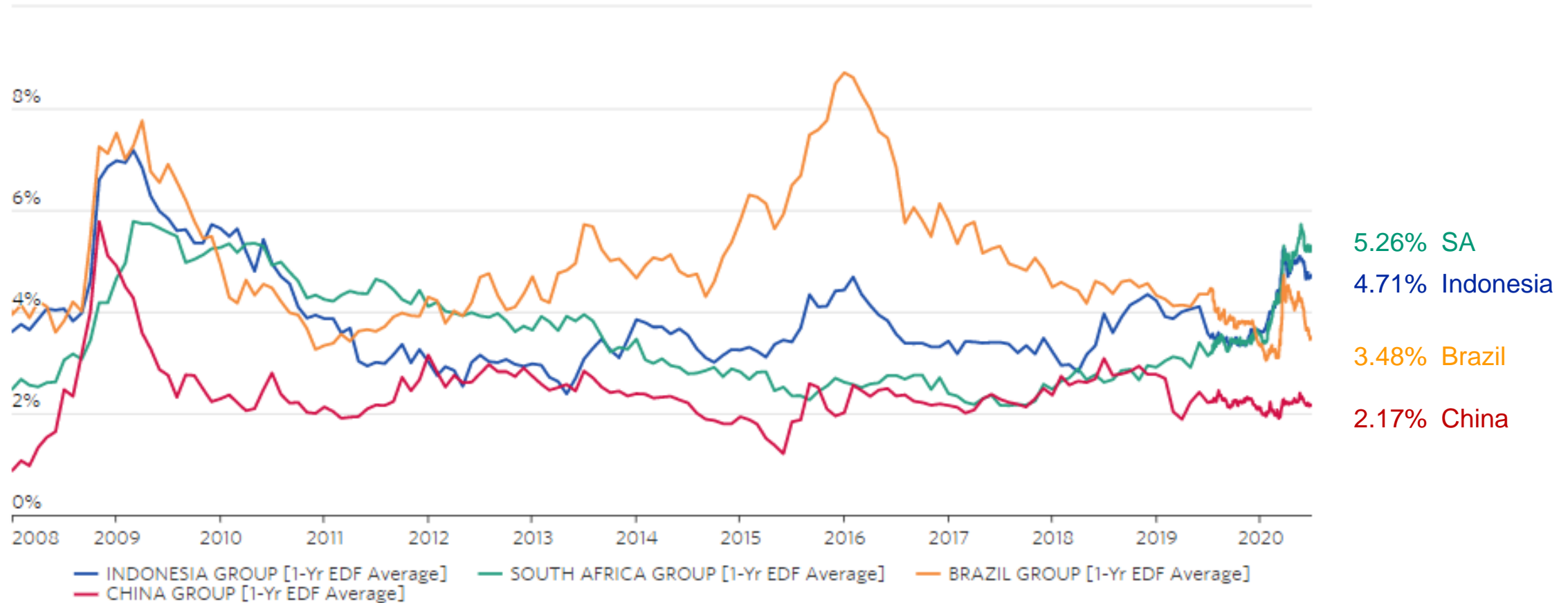


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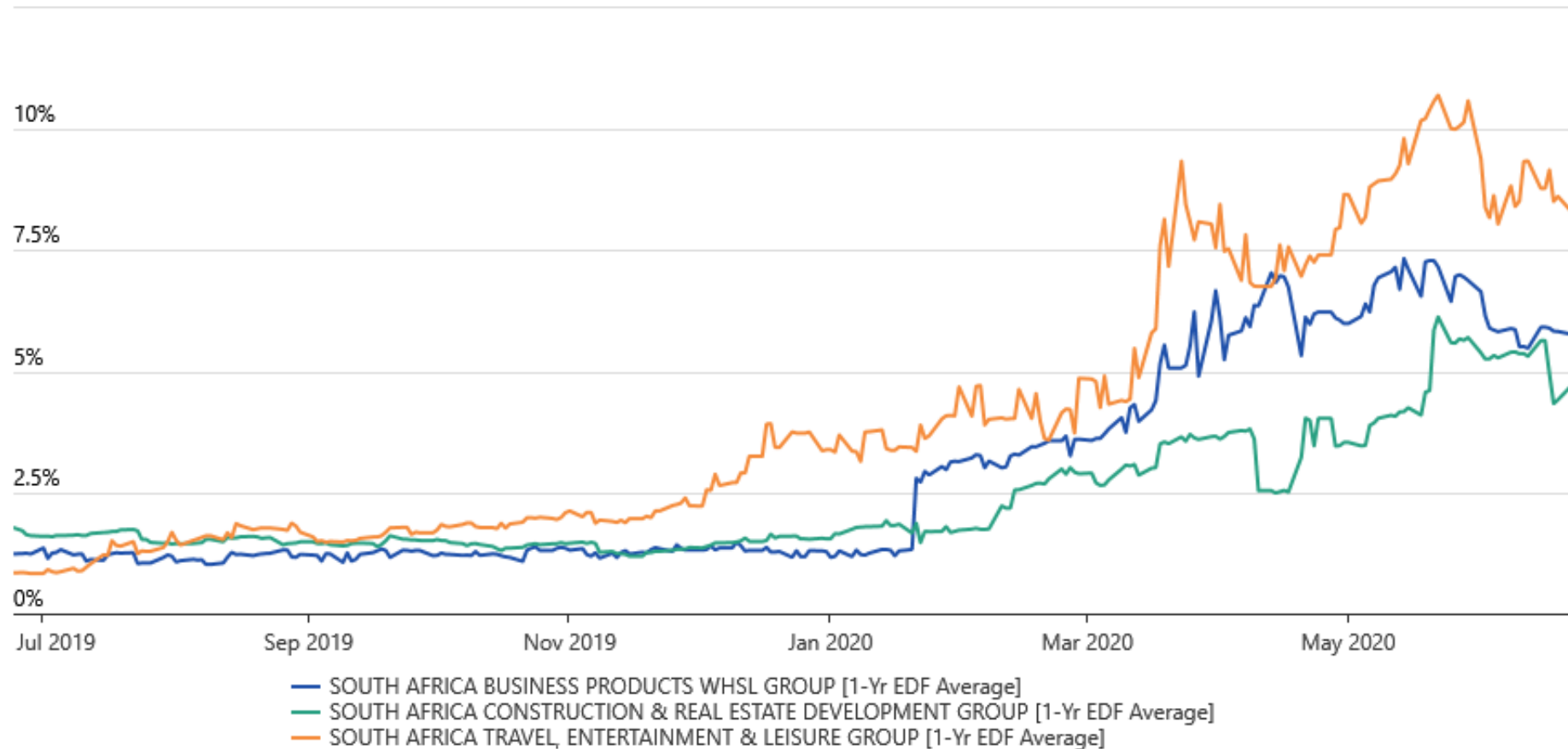


# State of Credit in South Africa during COVID-19 and Early warnings

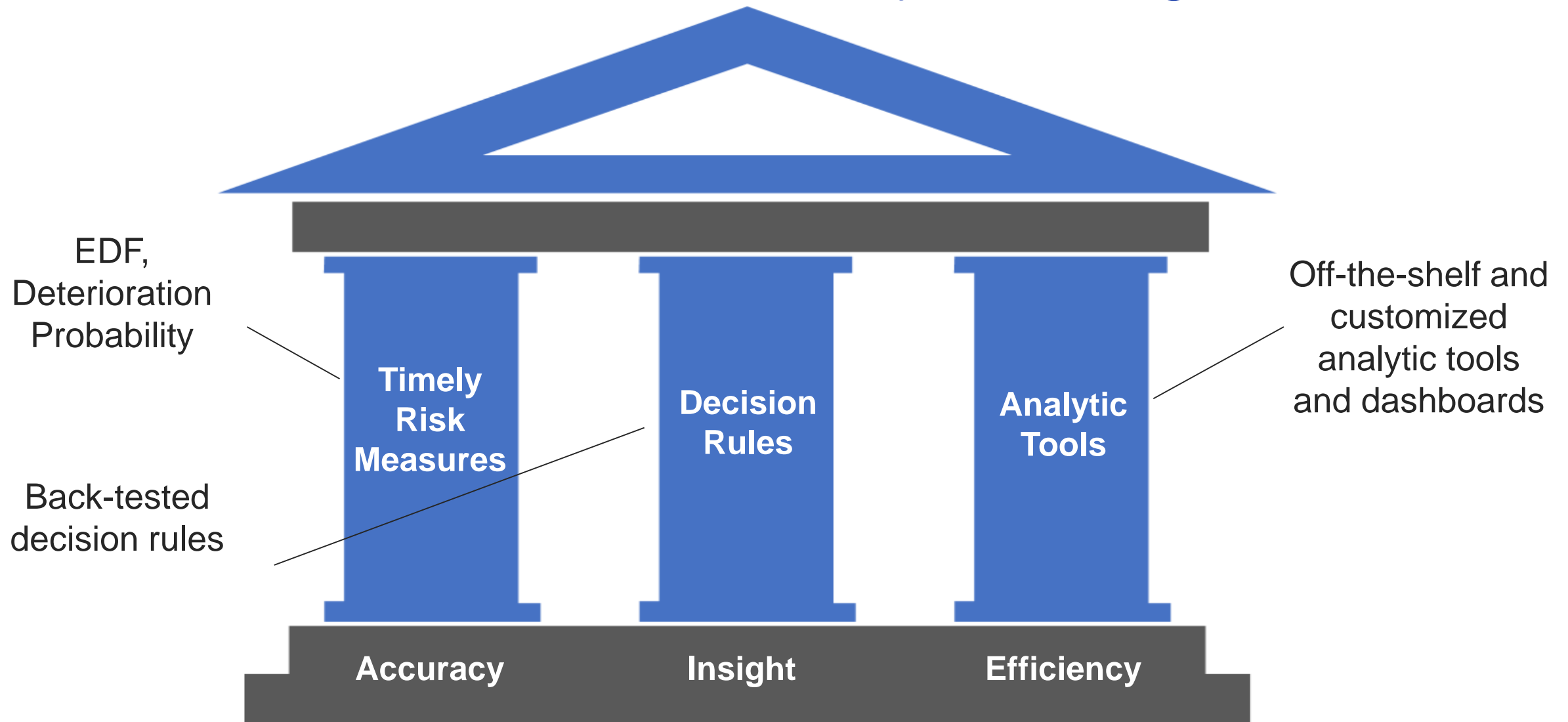
# The South African economy has reached EDF levels similar to those during the financial crisis



# The COVID-19 economic shock has caused credit risk to surge across industries



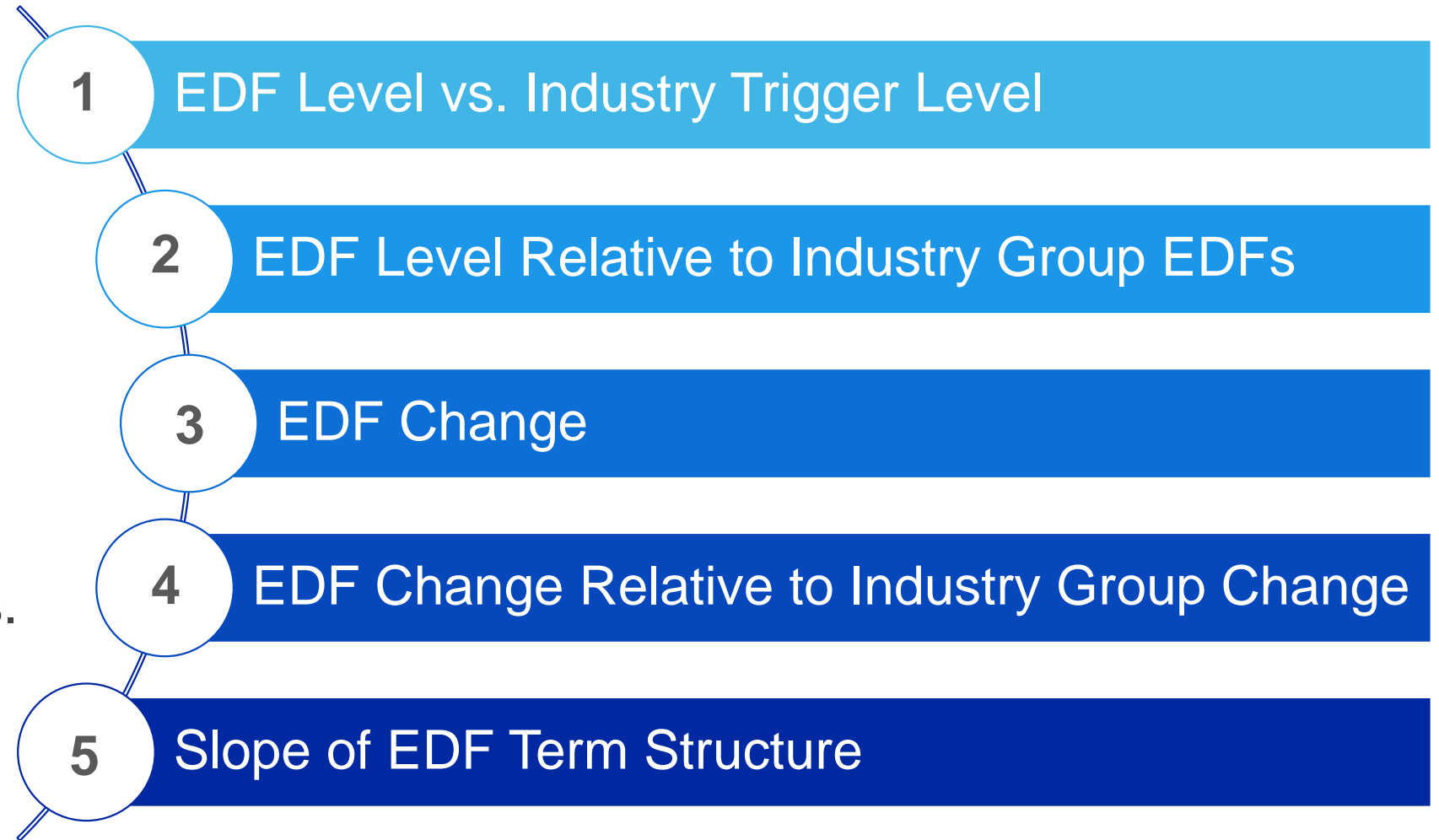
# Foundations of effective early warning



# Decision Rules: when should I get worried?

Which exposures in a portfolio should be considered **relatively more risky**, and merit deeper investigation?

We have identified **5 successful strategies**.



# The next generation of early warning adds the following dimensions to streamline your workflow



## PD and non-PD risk metrics

Leverage Moody's Analytics risk, economic and unstructured dataset.

Aggregate Credit Score with customizable weights.



## Data Pre-population

Prepopulated financials statement and loan & transaction data.



## Portfolio Analytics and Benchmarking

Slice and dice your portfolio and understand where the riskiest exposure are.

Benchmark risk of portfolio with peers.

# The Portfolio library will act as the entry point for CreditEdge™ and RiskCalc™ models

Early Warning Framework

Username

Portfolio Library

Settings

Help

Portfolio Library

<input type="checkbox"/>	Portfolio Name		Total Exposure	Aggregate Credit Score	Date Created	Last Modified
<input type="checkbox"/>	UCB	<a href="#">VIEW RESULTS</a>	100,000,000.00	<div><div></div><div></div><div></div><div></div></div>	22 Apr 2020, 16:20:32 (GMT)	22 Apr 2020, 16:20:32 (GMT)
<input type="checkbox"/>	Apple	<a href="#">VIEW RESULTS</a>	100,000,000.00	<div><div></div><div></div><div></div><div></div></div>	20 Feb 2020, 19:08:10 (GMT)	20 Feb 2020, 19:08:10 (GMT)
<input type="checkbox"/>	Ford Motor Co.				19 Feb 2020, 11:20:32 (GMT)	19 Feb 2020, 11:20:32 (GMT)
<input type="checkbox"/>	Alphabet	<a href="#">VIEW RESULTS</a>	100,000,000.00	<div><div></div><div></div><div></div><div></div></div>	19 Feb 2020, 10:09:08 (GMT)	19 Feb 2020, 10:09:08 (GMT)
<input type="checkbox"/>	Amazon				18 Feb 2020, 16:20:32 (GMT)	18 Feb 2020, 16:20:32 (GMT)
<input type="checkbox"/>	Microsoft	<a href="#">VIEW RESULTS</a>	100,000,000.00	<div><div></div><div></div><div></div><div></div></div>	17 Feb 2020, 11:20:32 (GMT)	17 Feb 2020, 11:20:32 (GMT)
<input type="checkbox"/>	Facebook	<a href="#">VIEW RESULTS</a>	100,000,000.00	<div><div></div><div></div><div></div><div></div></div>	16 Jun 2019, 14:20:32 (GMT)	16 Jun 2019, 14:20:32 (GMT)

Rows per Page: 101-7 of 7

# Public and private portfolio creation simplified with Smart Search

Early Warning Framework

Username

Portfolio Library

Settings

Help

Portfolio Library

Portfolio Details

General Information

Portfolio Name

UCB

Analysis Date

22 Apr 2020

Previous Analysis Date

22 Jan 2020

Search or import companies.

Search

You can upload a list of Identifiers (sample file) and add full company details as a second step or upload Full Company Details (sample file) directly.

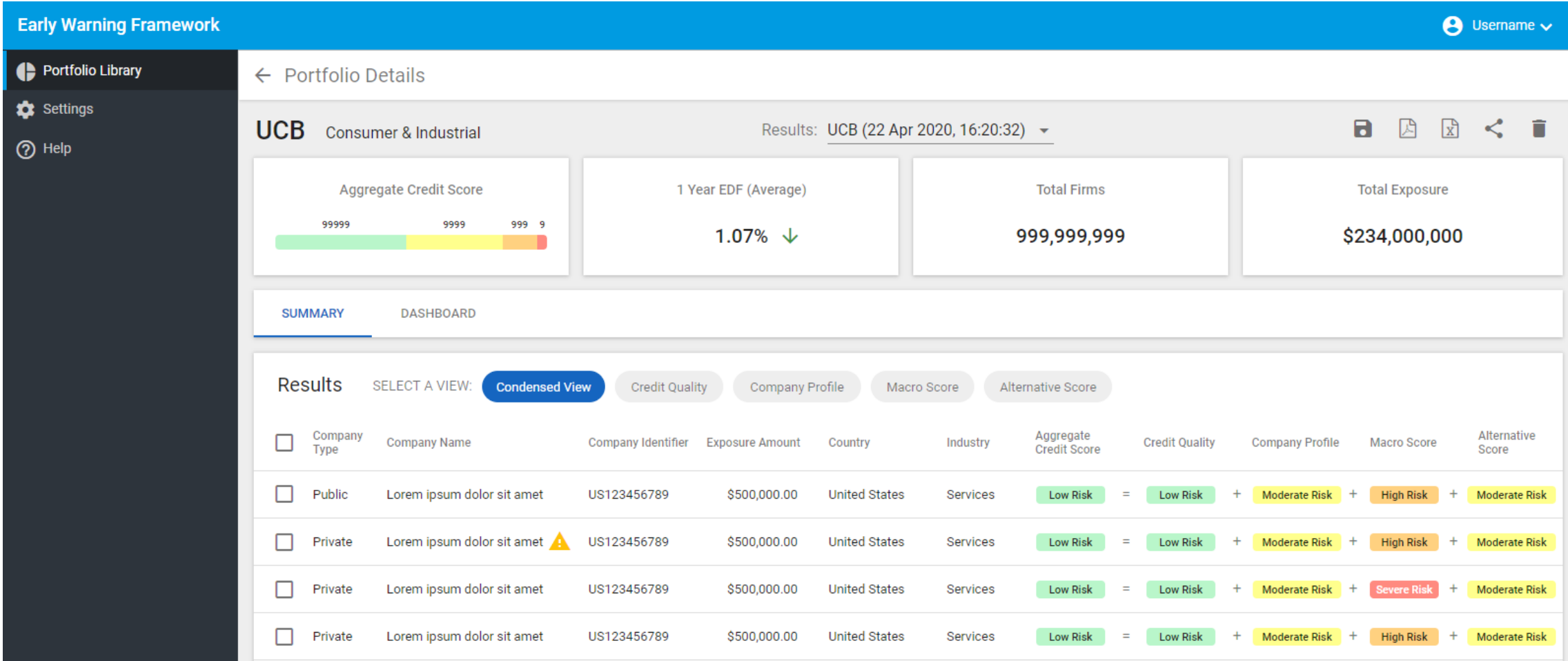
Drop Your File Here or

BROWSE

DOCUMENTATION



# The Aggregate Credit Score is a single actionable risk metric capturing different type of risks



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Assistant Director  
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