BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS



### CreditPrecisor

Our solution provides a fully controlled, high precision and efficient process for **borrower's credit creditworthiness** and loan risk-based **pricing**. It first calculates an accurate client *rating* grade and corresponding *PD*. Then, the loan pricing is calculated based on the PD and incorporating *LGD*, *EAD*, *financial* and *operational* costs and detailed *transaction characteristics* 

Additionally, client and loan performance status is tracked to permit an effective management of assets and clients

### CONFIGURATION TO BANK'S PORTFOLIO

Loan PRICING **CreditPrecisor** can be configured to the bank's portfolio of lending assets, supporting any type of exposure including retail, SME, specialised lending and corporates

Features that can be configured include:

- Credit rating/scoring factors and weights specific to the loan type and segment
- Credit risk cost: PD, LGD, EAD, expected loss (ECL/IFRS9) and economic capital/regulatory capital
- Cost structure: funding costs, operating and administrative costs, and more
- Income structure: loan balance projection and interests, fees and more
- Loan and client life cycle workflow

### VALUABLE RISK MANAGEMENT OUTPUTS

**CreditPrecisor** provides multiple valuable risk management metrics:

- End-to-end web platform for loan origination, rating, PD calculation, pricing and post approval facility management
- Loan scoring/rating grade and PD
- Loan **risk-based pricing**: spread and reference rate
- Scenario simulation engine for estimating the impact of changes in the rating/pricing underlying variables into the final rating or value add of the loan
- Borrower/application compliance evaluation: ESG, AML, CFT and other
- Transaction profitability: RAROC, EVA, expected loss, interest rates paid, present value from economic and accounting views, transaction cost structure and more
- Model validation data for the backtesting of PDs, evaluation of loan pricing precision, rating/scoring models validation and recalibration and more
- Loan portfolio's ratings, PDs, LGDs and EADs for capital requirement calculations
- Strategic reports defined based on two sources:
  - Portfolio composition: reports on any information captured or calculated during the rating and pricing including ratings, statuses, expected loss, profitability metrics (NPV, average RAROC and other) and so on
  - Log of actions: reports on the activity and/or activity quality by user/group.
     i.e., the number of loans transacted by user/group, or the average PD assigned by user/group, or the number of rating iterations by user and more

1

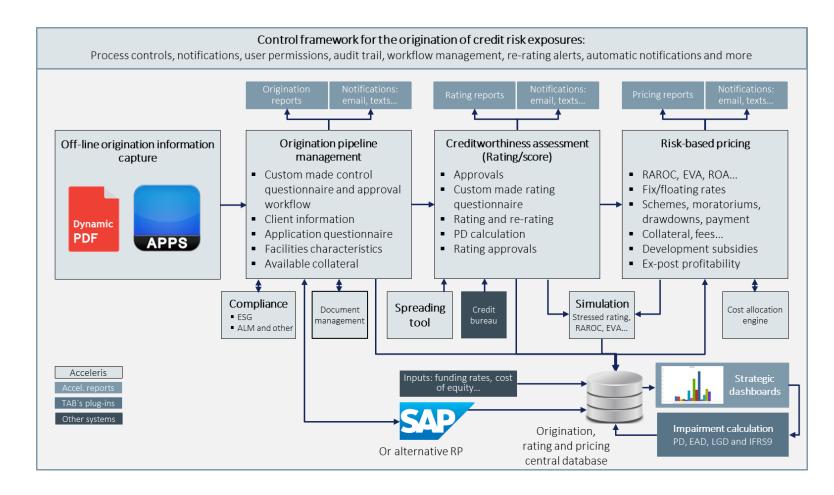
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## End to end loan management system

**CreditPrecisor** provides a flexible framework to manage any type of loans in an organization:

- **Origination**: front-end to capture all data to trigger the loan application, on-line and off-line, for submission
- Credit costs: fully flexible module to define rating, rerating and PD, LGD and EAD calculation processes for any type of loan
- Risk-based pricing: fully flexible module to price any type of loan, including debt, guarantees, equity, project finance etc.
- Strategic dashboards: portfolio composition, credit analysts and risk department performance, credit risk parameters, rating biases, exception reports and other defined by user dashboards
- Loan approval documentation: generation of rating and pricing reports for loan submission
- Origination to disbursement workflow: workflow, controls and approvals during origination pipeline until disbursement
- Compliance evaluation: ESG, AML, CFT and other
- Control framework: notifications, user permissions, audit trail, automatic alerts and notifications, workflow to manage facilities all along its life cycle: under review, life, default, quarantine, workout and so on



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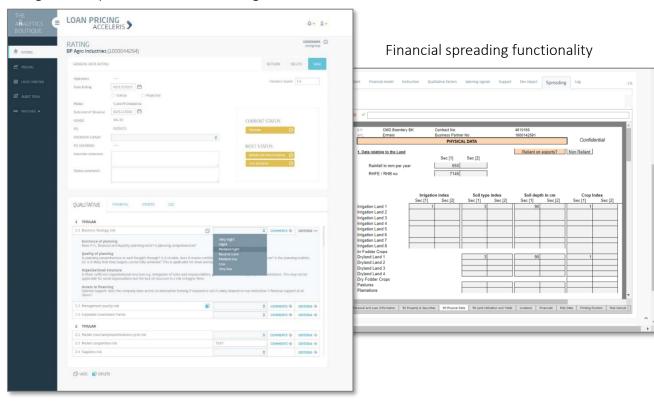
## Fully flexible creditworthiness assessment

**CreditPrecisor** provides a highly flexible environment to create credit debtor rating and loan instruction process allowing the configuration of almost any rating model.

It permits the creation of any type of questionnaire and analysis:

- Any type of client: individuals, micro-companies, SMEs, corporates, financial institutions and more
- Any industry: agriculture, services, manufacturing and others
- Rating dimensions: qualitative, financial, other numerical data and more
- Spreading tool for financials and others
- Non financials considerations: environmental, social, industrial and economic development questionnaires
- Risk analytics: calculation of Probabilities of Default term profile
- Strategy: rating process can be defined for efficiency lending or to deep analysis with strong governance and anything else in between
- Loan instruction documents storage and management: financial statements, property titles, identification, others, as defined by user

### Configurable input sheets for loan rating and instruction



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## Compliance on ESG and other (ALM, CFT or else)

**CreditPrecisor** flexible mask creation engine permits to add additional evaluation forms to comply with the different regulations:

- It provides the appropriate ESG questionnaires to identify, evaluate the climate-related and environmental risks of borrowers
- CreditPrecisor provides a sufficient granular ESG classification of client exposures to correctly assess climate-related and environmental risks, and the assess the portfolio exposures to these risks
- It permits to control and implement institution's risk appetite framework and to manage ESG related risk, through (sub-)sector, geography, sovereign, businesses or other lending limits
- Accordingly, it permits to include climate-related and environmental risks in all relevant stages of the credit-granting process and credit processing and to capture the opinion on how climate-related and environmental risks affect default risk
- CreditPrecisor can be configured to consider climate-related and environmental risks in the collateral valuations and to give benefit to environmental compliant assets, and consequently adjusting prices of collaterals exposed to those risks
- The risk-based loan pricing algorithm can be configured to deploy an ESG sensitive pricing framework: funding, RWAs, economic capital, expected loss
- Simulation engine can be used for the evaluation of ESG scenarios and their impact on the portfolio credit worthiness, EVA, RAROC or else
- Any other compliance topic such as ALM, CFT or else can be easily configured and integrated into the borrowers or loan evaluation

### ESG questionnaire integrated in loan/lender evaluation

ESG Questionr	naire DEEP dive		
DATA	DATA INPUT		
DT01	Data Input		
DT02	Total Revenue		EUR
	last fiscal year		
DT03	EBITDA last fiscal year		EUR
DT04	EBITDA carbon price scenario		Eur/ton CoZe
CLI05	Renewable energy / Fossil fuel footprint reduction		RISK EVENTS⊟
Risk events			
	<ul> <li>Adopts / invests in renewable energy infrastructure and technology</li> <li>Reduction initiatives in the use and production of fossil fuels</li> <li>Resource &amp; energy efficient buildings</li> </ul>		
DT05	GHG Scope 1		CO2 equivalent emissions in tons
DT06	GHG Scope 2		CO2 equivalent
			emissions in tons
DT07	GHG Scope 3		CO2 equivalent
			emissions in tons
DT08	Waste & Pollutions in tons		
DT09	Water Use		COMENTS: ⊞
DT10	Compliant with ESG policy?		COMENTS: ⊞
DT11	Automotive ?	0	COMENTS: ⊞
DT12	CO2e information not available	0	COMENTS: ⊞
DT13	Is the client covered by CSRD?		
RISK	RISK DRIVER		
OBJE	ENVIRONMENTAL		
CLI	CLIMATE CHANGE		
CLI01	Carbon footprint		RISK EVENTS ⊞
CLI02	External ESG Rating	0	RISK EVENTS ⊞
CCI03	Aligned to EU-Taxonomy / Paris Agreement		RISK EVENTS ⊞

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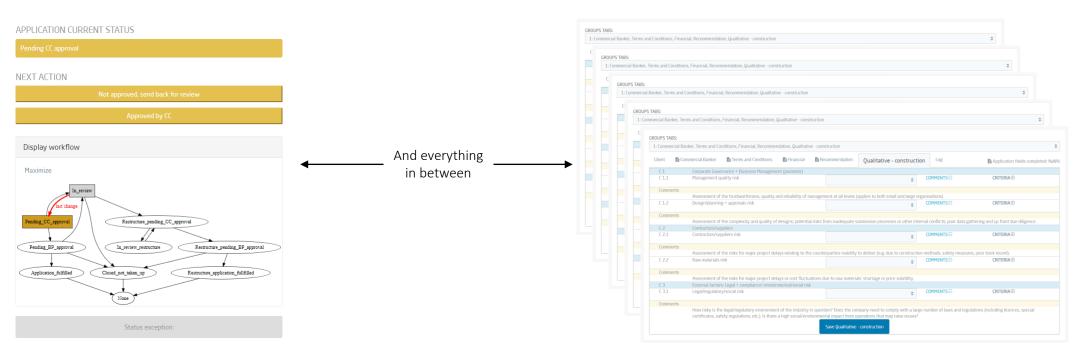


## Creditworthiness assessment adapts to institution's strategy

**CreditPrecisor** permits maximum flexibility in defining credit approval processes for all sorts of transactions, such as efficiency oriented lending or, alternatively, complex, large, customised long term transactions in need of strong governance and detailed analysis

### Efficiency oriented lending

Transactions in need of detailed analysis and approval strong governance



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Portfolio creditworthiness scenario analysis

## Creditworthiness and RAROC simuation engine

Simulation of the institution portfolio under multiple scenarios

- Definition of macroeconomic or business scenarios: based on the rating model inputs, it will be possible to define multiple scenarios and re-rate each loan of the portfolio under such scenario to easily analyse the impact of the scenario
  - The definition of the new scenarios will be done by defining flexible rules to transform original rating inputs into the new rating inputs
- **ESG scenarios:** environmental events affecting rating and collateral values such as borrower income and asset value
- Re-evaluation of the portfolio under the new scenarios: all portfolio assets will be revaluated under multiple defined in an automatic manner and be available for the analysis
- Strong analytics: the impact in the portfolio health of the different scenarios will be easily analysed permitting a deeper understanding of portfolio for the purposes of informed management actions
- **Reporting:** CreditPrecisor robust reporting features will be available for the analysis and report generation of the portfolio simulation engine

Definition of macroeconomic scenario

Configure rules to transform rating variables Revaluate portfolio rating under multiple scenarios Revaluate portfolio's value add, expected loss, RAROC...

Management reports

Customer name $\Delta$	Credit Grade aft (Foreign Current		Credit Grade aft (Foreign Currence		Credit Grade be assessment (Loc Rating)	al Currency	Credit Grade b assessment (Loc Rating)	al Currency	Final PD (	TTC) FL	Final PD (TTC) HS		
	Simulation	Original	Simulation	Original	Simulation	Original	Simulation	Original	Simulation	Original	Simulation	Origina	
Customer 1					B+	B+	B+	B+	0.015	0.014	0.0159	0.01	
Customer 2					В	В	CCC+	B-	0.0243	0.0249	0.0616	0.03	
Customer 3							B-	B-	0		0.035	0.03	
Customer 4	В	ВВ	B+	BB-	В	ВВ	B+	BB-	0.0239	0.0076	0.0176	0.010	
Customer 5	В	ВВ	B+	BB-	В	BB	B+	BB-	0.0239	0.0076	0.0176	0.010	
Customer 6	В	ВВ	B+	BB-	В	BB	B+	BB-	0.0239	0.0076	0.0176	0.010	
Customer 7	В	B+	В	B+	В	B+	В	B+	0.0237	0.0186	0.0288	0.019	
Customer 8							В	В	0		0.0344	0.030	
Customer 9							В	B-	0		0.0263	0.038	
Customer 10					B-	B-	B-	B-	0.035	0	0.035		
Customer 11	B-	B-	B-	B-	B-	B-	B-	B-	0.035	0.035	0.035	0.03	
Customer 12					CCC+	CCC	ccc	CCC-	0.0641	0.1314	0.1047	0.205	
		<b>†</b>	<u>†</u>	1		<b>†</b>	<u> </u>	1	<u> </u>	1		1	

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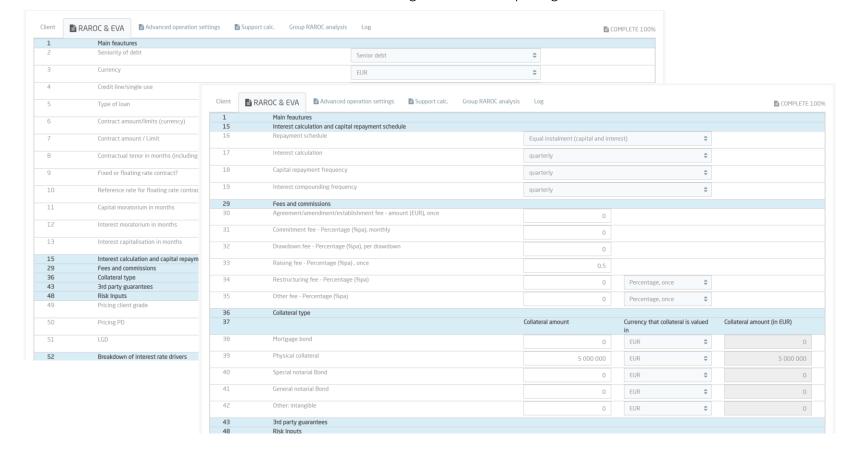


## Highly configurable pricing model

**CreditPrecisor** supports the pricing of multiple products and has a customizable modular cash flow projection structure that allows to include any product. It also permits to select from the following options:

- Products: term loan, working capital loan, syndicated loan, CRE loan, letter of credit (import), commercial discount, factoring, leasing, overdraft, commercial paper, guarantees, equity and more
- Main facility features: debt seniority, currency, contract amount, contractual tenor and more
- Interest calculation and capital repayment schedule: repayment schedule, interest calculation, capital repayment frequency and more
- Fees and commissions: commitment fee, drawdown fee, restructuring fee and more
- Collaterals: mortgage bond, physical collateral, notarial bond, third party guarantees and more
- Credit risk cost: LGD, PD, EAD, eco./ reg. capital
- ESG adjustment: funding cost, RWAs, economic capital, Rating, collateral value and more

### Detailed configuration of loan pricing



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## Detailed pricing profitability analysis

**CreditPrecisor** permits a detailed profitability analysis for properly structuring the transaction adding collateral, guarantees commissions, cross selling and other:

- Multiple profitability metrics: EVA, RAROC, RORWA, RORAC, ROTA, spread analysis and more for the overall transaction and by year in books
- Transaction structuring impact analysis: as additional collateral, guarantees, insurance, cross selling and other is added to the transaction, the profitability analysis can be recalculated for the profitability impact evaluation
- Multiple layers profitability analysis: It provides the profitability by facility, application (if the application contains several facilities), client and client group (when the client is subsidiary of a larger group). This permits strategic management of client relationships
- Ex-post profitability analysis: the facility, application, client or client group profitability can be analysed after approval given materialised changes in rating, expected recoveries, and so on

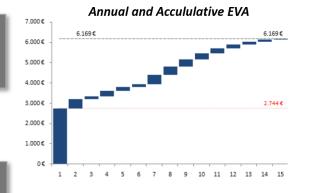
Detailed profitability analysis by transaction, application, client and group

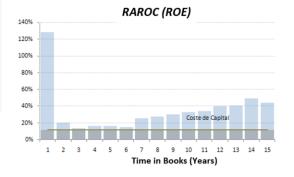
### Transaction Profitability

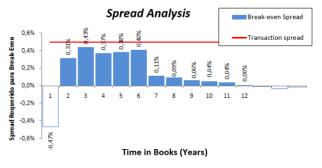
RAROC = 26% ROA= 0.44% EVA = 6.169 €

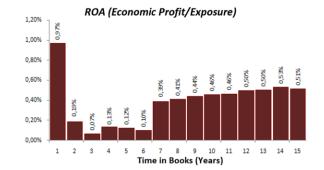
### Loan Structure

Spread = +0,55%
Initial&cancelation commissions
2 loan holders as guarantors
Increased collateral
Cross selling of credit
cards, unemployment
insurance









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## Loan cash flow projection for precise pricing

**CreditPrecisor** performs a detailed projection of **transaction** cash flows in order to determine the loan profitability or required price for achieving the target price, including:

- Interest income: spread and reference rate
- Funding costs: the funding cost of the institution
- Fees and commissions: Agreement/Amendment/Establishment fee,
   Commitment fee and others
- Operating/admin expenses: incorporates all operational costs implicit in the lending activity, i.e. loan evaluation, administration and other
- Credit risk costs: adds the expected loss and capital costs including:
  - Probability of default as corresponds to the credit quality of the borrower
  - Loss given default of the type of deal and the collateral
  - Exposure at default
- Contract balance: models multiple loan amortization standard schemes as well as bespoke amortization schedule
- FX Rate: allows different currencies and uses the forward curve of the exchange rate

## Conceptual representation of the pricing analytics performed by CreditPrecisor, in JavaScript run in the browser

FX	Rate	FX rates	100	190	1.00		130	100	100	100	100		100	100	100			100	100	100	100	100	100	100
Contract balance calculations		Opening capital and capitalised interest Opening capital and capitalised interest interest capital and capitalised interest interest capital interest capital factors paid capital drawn capital drawn capital and capitalised interest paid capital capitalised interest capitalised interest capitalised capital capitalised capi	\$ 660,000 \$ 560,000 \$ 57,000 \$ 50,000	5,651,000 5,663,000 5,474,378 51,661 10,461	1 (61 00) 2 (69 00) 3 (75 (52 52 62) 52 (62 62) 52 (62 62)	3,001,000 3,993,000 3,283,556 31,551 31,551	160000 3,60000 1,00000 5000 5000	3,003,000 0,001,000 3,001,035 52,661 52,661	3 550,000 3 550,000 3 554,000 5 550 50,000	3,661,000 3,661,000 6,811,418 51,551 82,661	3 565,000 8 603,007 50 601 50 601	3,603,000 3,693,000 8,734,008 32,661 82,663	1 (20 00) 3 (49 00) 5 (45 (31) 5 (61) 5 (61)	5,651,000 5,663,000 6,564,505 1204,506 1204,506 1204,506 1204,506 1204,506	1534.768 1534.769 1375.698 51374 51374 51374 51374 51374 54375 5440.607	5-601-617 5-600-617 5-702-801 50-80	2 (78, 12) 2,06,05 2,06,10 2,05,10 60,00 50,00 50,00 50,00 79,21 79,22 3,01,63	5 (1) 833 5 (1) 869 7,769 450 67 5 D 67 5 D 67 5 D 67 5 D 75 5 D	8,997,542 2,956,337 66,226 66,226 66,226 66,226 66,226 76,226 76,226 76,226	5.901.750 6.961.250 7.390.563 64.300 94.300 94.300 94.300 104.700 104.700	6 708 700 8 706 998 7 806 807 60 600 60 600 60 600 60 600 60 600 60 700 60 70	5.534.667 6.554.667 1.502.658 62.568 62.568 62.568 62.568 52.568 52.568 52.568 52.568	8 460,375 8 466,375 8 833,480 5 1677 8 1677 8 1677 8 1677 10 370 10 370 10 370 10 370 10 370 10 370	B. SEE DEC 9.000 DEC FORE RET 79.1 THE 79.1 THE 79.
		Clother capital and capitalised interest  Operational costs	3,883,000	5,653,000	3,883,000	2,003,000	3.563,000	2,613,000	3,683,000	5.001,000	2,583,000	3,603,000	9,885,000	5,534,706	3,400,417	5,001,115	\$101811	8,397,542	6.863,290	8,725,558	8,554,667	8,400,375	8,328,681	8,191,792
Costs	OpEx	Operational costs	T(683	C093/F	1,683	C88,17	1,683	C89,IT.	7,663	2/862	1,611	(88) (00)	11,683	H ERO	10521	1,365	11,197	11,004	10,872	92,76	10,547	11,385	¥0,223	10,063
	OPEX	PV Operational costs	71,063	11,685	71,683	TI,ARD	11,683	11,883	T(083	11,663	71,003	11,683	71,683	10,885	nen	11,380	11,192	11,004	WA72	10,710	90,547	11,365	10,221	10,061
		Expected loss: Bysiness partner risk premium	11,565 81,014	11,448 191317	TL332	11,218 191,214	71,104 91,514	\$1,000 H1.512	\$1,001 \$1,012	N.770	10,061	\$1,554 mr. 314	10,447 81,074	92.666	T)(254	3,001	9,612	2.377 27.064	3,145 Mr. Aug	8,78 91.04	8,634 75-244	0,474 92.464	8,257 M-264	00.004
	Credit risk	Expected loss: Business partner risk premium PV Expected loss: Business partner risk premi	90079	63.156	W 006	whit does	0.647	1/6/400	114,004	11,000 11,000	0.745	61.50	Acces.	00.00	(1,0%	19361	10000	15,000	78225	730001	14.60F	V2.367	15.60	10,000
		Expected loss: Country risk premium Expected loss: Country risk premium PV Expected loss: Country risk premium	10,344 10,144	4793	0.005 0.005	SEAR!	0,002 A300	11.000 11.000	0,867 Walter	1	60,845 10,845	43,743	60003 60003	0366 4 260	Make 1	AC 2004 .	#7900 #1911	MADE:	(/p)	HOUSE.	O.A.F	1,100 1,100	10.7A	0,40
		Maturity yrs. Ceofficient of correlation [R] Maturity adjustment factor [b]	0.8h 2.m	500 9100		SAM SAM	A 80	5/80 5/80	2.00 2.00	940 940	2.00 2.00	51M 9100	7.00 2.00 2.00		210	50V	7.00 2.00		7 50 2 10	940 540	2 m	0.00 5 m	0.59 240	54M
		Capital requirement (in %) [K] Regulatory capital Regulatory capital		2,340000	CONNEC.	23.95	23/068	2585	239300	2000		2,340000	CONTRACTOR	23822A**	200000 200000	23654************************************	2285394	25.85 ***********************************	12050A	2002	25 85. "Z20004"	23623A**	2000 2000 2000 2000	23650A***
		Cost of equity Cost of equity Capital benefit	9734 20300 20301	JC5.6 JC5.6 H 5.5	26,936	10,000 100,00 10,00	20.80	28,500 28,500	P. 03 (8000) (9000)	3(Ab) 3(Ab)	20,397 20,397 5,127	20'86 20'86	26,935	26 SHV 26 SHV 34 SHV	20,547 20,547 43,87	JICSAD NOSAU NOSA	26,947 26,947 W.S.B	28,540 28,540 A 506	2096 2096 836	28.54V 28.54V H.536	20040 20040 20040	9634V 2634V	16.541 16.541 16.54	JICHO JICHO NISS
		Capital benefit Net cost of capital Net cost of capital	0,775	1000 1000 1000	6,075	0773 0773	16,649	73,172	10,000 0,000 00000	VE NOT	0,775	ticus ticus	6,125 10,725	L(mb	966,0 966,0 966,0	HODE USA SORA	13,534°	900A 0,504 90400	100A	13,56W 13,56W	900(d 5)00(d 900(d	LENA	9,536 9,630 9,640	COSA COSA
		PV Net cost of capital Cost of funding (in %)	0.642	97935	14,365°	6,500	9 80%	12,004	6302 9455	8999 12.00	9.504 9.504	6(66)	9,30°	MINT.	SOME	16.00	u sau	sens.	7(444	699	3604 9.865	WHEN	6,506	6003 ***********************************
	Funding	Cost of funding Cost of funding PV Cost of funding	6001 6001	6120 6220 6008	#7584 #97584	80,00 80,00 80,00	63,200 65,200 86,36	\$0,000 \$0,000 \$5,500	6.1,451 6.5,451 58,565	63,251 63,251 96,881	80,000 80,000 90,000	64,50 64,50 64,66	63,257 63,257 56,057	\$1,000 \$1,000 \$1,000	\$2,373 \$4,546 34,546	SCHOR SCHOR SCCIOR	50,546 50,546	28/36/ 28/36/ 28/36/	56(d)3 56(d)3 40,374	57,007 57,007 98,007	5 ( 62 5 ( 62 V ( ) 63	4010 2670 2670	50,945 50,945 84,902	2046 2046
Revenue	Fees	Agrammon (Amendment (Establishment fer Agrammon (Amendment (Establishment fee ) Committee (Committee (Establishment fee ) Committee (Committee (Establishment fee ) Chandoon fee  Feet (Establishment fee ) Feet (Establishment fe																00000000 <del>0</del> 00						0000000 <u>0</u> 001
		Total fee revenue Total fee revenue PV Total fee revenue																						-
	Interest	Rate Amount Amount	n sun.	HIMPS	H SMIL	1060	H seft.	11905	11 5655	ALMOS.	n suh	HISADS.	H MATE	10406 1204.906 1204.906	Arbin. H Jetr	INNO	11.36/h 	11305 11305	H 565	10905 94,505 94,605	Anger 1	HOMES BLAM BLAM	NAMES OF THE PERSONS	11/4D) -7K (NE: -0000E
Profit	or Loss	Accounting profit or loss Accounting profit or loss PV Accounting profit or loss Suttainable profit or loss Sustainable profit or loss PV Systainable profit or loss PV Systainable profit or loss	-277,800 -271,807 -2715,009 -291,056 -291,056 -288,646	-277.8/17 -277.8/17 -275.220 -271.506 -295.506 -285.725	277.947 -277.517 -296.969 -291.596 -291.596 -282.834	-277,617 -277,817 -286,742 -291,506 -291,506 -278,512	277.67 -277.02 -284.04) -291.596 -291.596 -277.338	-(77.917 -277.817 -281.319 -291.506 -291.509 -274.338	-217,80 -277,80 -259,723 -271,596 -271,598 -271,598	-277 917 -277 811 -296 309 -291 506 -290 606 -290 611	217,60 217,60 20,000 20,000 20,000 20,000	-277.847 -277.817 -296.862 -291.506 -295.506 -283.388	277 947 -277,887 -249,453 -291,586 -250,596 -280,734	1025,000 1026,000 301 %2 1012 426 1012 426 690 TII	-95,939 -65,539 -75,296 -50,541 -(65,64) -67,275	-95,977 -95,972 -56,580 -93,575 -93,575 -93,575 -96,362	-94,006 -84,006 -73,637 -95,533 -65,643 -85,536	-95,000 -86,000 -21,70 -23,543 -91,640 -84,660	-06,07) -06,073 -12,467 -50,677 -90,677 -83,893	-95 T/6 -98 T/6 -75 J/62 -25 T/0 -98 J/0 -83 J/03	-(6,13) -66,143 -71,004 -50,744 -90,244 -60,238	-95 174 -96 174 -96 395 -93 776 -93 776 -814 N	-96.307 -96.207 -99.629 -99.911 -99.911 -90.615	-96 (41 -85 241 -96 961 -31 145 -91 045 -72 826

BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS



# Ex-post profitability calculation and client relationship analysis

Precisor Risk-Based Loan Pricing permits to calculate Ex-Post profitability by loading all portfolio assets and evaluating the actual performance of each transaction looking the actual commissions charged, interest paid (i.e., arears interest rates), transaction actual length, etc. Portfolio analysis can be performed and compare the actual profitability to the profitability originally forecasted for the portfolio and each of the transactions. In addition, application, client, group or market segment profitability analysis can be generated to better define management strategy.

Client relationship analysis based on ex-post profitability

See sele	cted Client view							Delete	selected
Client view									
TitleRow	EVA_after_Opex_YTD	Total_Revenue_YTD	Expected_loss_YTD	RAR_YTD	Economic_capital_YTD	Operational_costs_YTD	RAROC_bc	RAROC_ac	DateChange
Client legacy YTD	540	540	0	540	0	O	0	0	14/11/2022
Client legacy op.	582.04	582.04	0	582.04	0	0	0	0	14/11/2022
Group legacy op.	-8206989.11	1231223.66	9090741.16	-7859517.5	3346383.74	0	-234.87	-234.87	14/11/2022
New operations	66297.97	66319.24	3.69	66315.56	175.99	0	115244.72	115244.72	14/11/2022
Group + new	-8140691.14	1297542.9	9090744.85	-7793201.94	3346559.73	0	0	0	14/11/2022
4									<b>+</b>

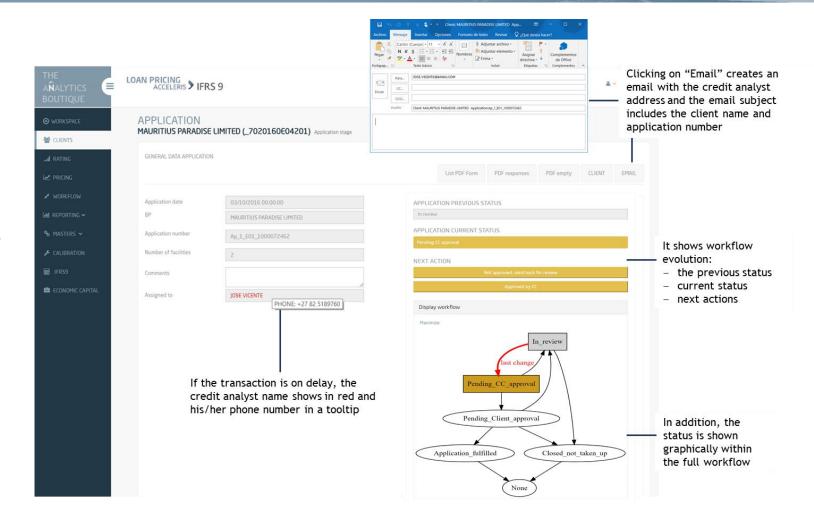
BRINGING EFFICIENCY, PRECISION AND CONTROL INTO YOUR LENDING PROCESS



## Efficiency and process acceleration features

**CreditPrecisor** provides features to increase the efficiency of the lending process:

- Tracks SLA automatically
- Creates alerts based on SLA
- Provides telephone of credit analyst working on the transaction in a tooltip over the his/her name
- Send email to the credit analysts automatically titling it with the client name and application number
- Shows the previous and current application status, together with the next actions
- Illustrates the whole workflow clearly point where the transaction is, where does it come from and which paths are available
- Multiple exception and SLA reports



BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS

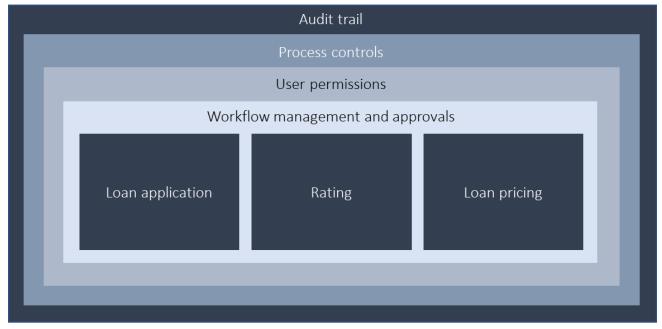


## Internal governance for credit granting

**CreditPrecisor** creates a strong governance framework to guarantee the quality of the loan origination process:

- Workflow management and approvals: permits to build a customizable workflow and embed multiple approval and control checks by different departments / functions
- **User permissions**: users can be assigned very specific permissions into workflow steps, tool menus / functions, reports and so on
- Process controls: each workflow step may incorporate controls such as the existence of a rating before pricing, permission for editing or deleting or other as defined by the user
- Audit trail: every action is recorded in a log organized by user, date, facility, rating, application and so on. The log of actions can also be used for reporting purposes
- Process quality alerts: CreditPrecisor automatically generates re-rating alerts or identifies rating biases such as easy raters, or iterations for rating improving etc.
- Notifications: automatic notifications are sent when the application / rating / pricing tools change status and there are actions to be initiated as a consequence
- Reports: the centralized data repository can be used to generate exception reports, staff performance, identification of process bottle necks and others

Customizable multilayer governance framework



Process quality alerts



Notifications



Reports



BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS

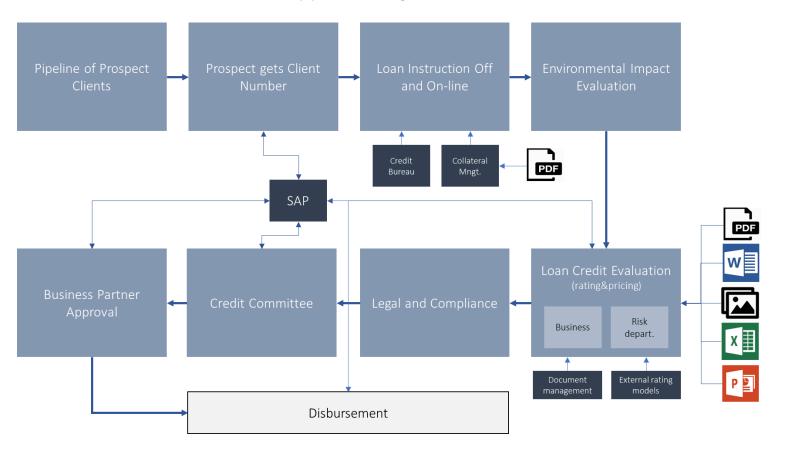


## Full loan origination workflow

CreditPrecisor permits to manage the loan origination process:

- Pipeline of prospect clients: managing the prospect clients until the potential client is given a client number. The client number generation can be done internally or interfaced with RP system
- Loan instruction: on-line and off line functions and capture the main loan and client characteristics and available collateral
- Environmental impact evaluation: CreditPrecisor is sufficiently flexible to incorporate questionnaire and evaluations for environmental impact or any other evaluation
- Loan credit evaluation: during the credit evaluation, both business and risk departments can contribute and validate. All comments and agreements are part of the audit trail
- Document management: supporting documents are stored with in CreditPrecisor and can be interfaced with the document management system
- Legal and compliance: CreditPrecisor is sufficiently flexible to incorporate check lists for validating the compliance (ESG, ALM, CFT and other) with all requirements
- Credit committee approvals: multiple approvals can be embedded in the workflow

### Customizable loan pipeline and origination workflow



BRINGING EFFICIENCY, PRECISION AND CONTROL INTO YOUR LENDING PROCESS



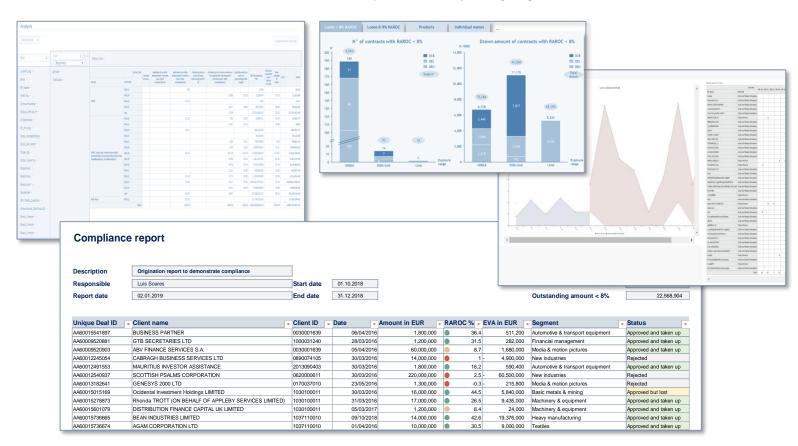


### Flexible and comprehensive reporting engine

## Smart monitoring

**CreditPrecisor** provides powerful reporting functionalities exploiting the central loan origination repository including:

- Create custom made dashboards
- Pivot table interactive flexible reporting
- Multiple predefined dashboards:
  - Strategic reporting: portfolio composition, portfolio growth and so on
  - Staff performance: Number of clients rated by analyst and/or department and number of loans priced by analyst and/or department, times and so on
  - Process efficiency: Derived from the time and date of each change in the workflow, it is possible to measure time consumed by staff, group, phase and so on, and identify bottle necks in the processes
  - Portfolio profitability analysis: expected loss, NPV, average RAROC or any other calculated metric
  - Exception reports: loans applications, responses, pending re-rating are overdue
  - Rating biases: identification of systematic "easy raters" or the opposite, rating fraud and more
  - Other, as defined by user
- Generation of loan approval documentation: pricing, rating and approval documentation and more



BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS



### CreditPrecisor

**CreditPrecisor** provides a highly flexible environment to create credit rating and loan pricing input sheets, adapting these to the internal control and management processes and culture. The rating results is translated into PD and fed into the pricing module with the rest of the transaction structure to determine a loan pricing that is consistent with the borrower risk and institution's cost structure and profitability targets

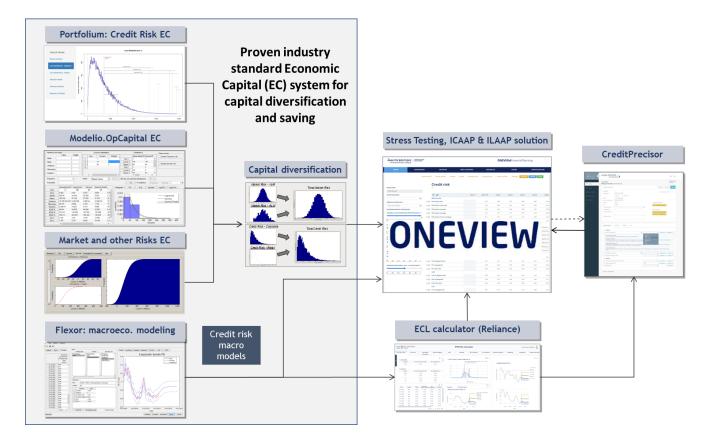
This permits to introduce control, efficiency and precision into the lending process of the institution.

## Ecosystem

AnalytiX Boutique provides an ecosystem of tools and services that complement the risk management process:

- Rating/Scoring building, validation and maintenance
- IRB parameters: PD, LGD and EAD
- Portfolium: Credit economic and regulatory capital calculation
- Flexor: integrated stress testing and macroeconomic model development tool
- Reliance IFRS 9: end-to-end engine that provides all the analytics and required accounting outputs for IFRS 9 impairment requirements
- OneView: consistent inputs and outputs for critical financial planning process including stress testing, ICAAP, ILAAP, asset allocation and more

Ecosystem: macroeconomic modelling, stress testing, IFRS9, Machine Learning

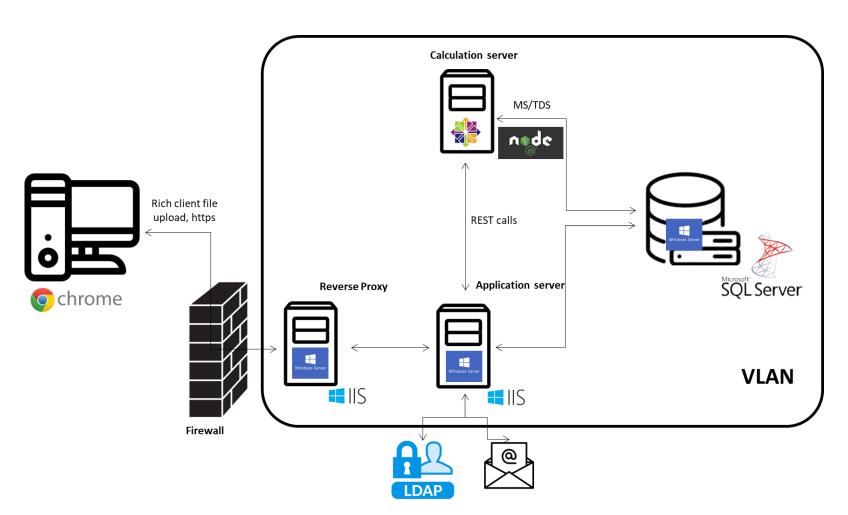


BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS



### CreditPrecisor's technical architecture

- Pricing and profitability calculations performed distributed in browser using JavaScript technology
- Calculation server for simulation engine and batch calculations
- Single data model consolidates all outputs and inputs permitting a strong and consistent reporting and dash boards
- Maximum standards of security in our cloud infrastructure:
   ISO 14001, ISO 22301, ISO 27001, ISO 9001, ISO 50001
- Microsoft technology: SQL server, Node, ISS



BRINGING PRECISION AND CONTROL INTO YOUR LENDING PROCESS



CreditPrecisor provides multiple befits to your loan origination process

Fully governed end-to-end rating and pricing processes	

Audit trail and user control and highly specific user permissions

Strong workflow management with multiple controls to manage the facility life end-to-end

### Single centralized rating and pricing algorithms

- The same centralised algorithms are used by all users for all facility rating and pricing
- No model version issues. Being web based, there is only a single application (no local installation)

### User friendliness

- The tool is easy to navigate with web pages designed for usability
- Tooltips and multiple controls for help and avoiding errors and inputs inconsistency

### Flexibility and scalability

- Changing questionnaire and weights for rating can be easily done in the configuration module
- Flexible workflow and controls configuration

### Unified rating/pricing platform for all products

- The tool accepts an unlimited number of different pricing and rating questionnaires and models
- Can handle the rating and pricing of any product and each product may have its own workflow

### Direct single point and automatic feed for inputs and parameters

- Changing of parameters and inputs is done centrally rather than in each calculation model
- Products share inputs (e.g. funding rates) which are fed automatically and once for all

### Consolidation of rating and pricing data into a single data warehouse

 All rating and pricing information is consolidated into a single data model. This information can be used to generate portfolio reports as well as to calculate risk parameters such as PD, LGD...

Robust technology supporting a critical process

Underlying code is .Net which is highly robust, scalable, flexible and easy to integrate with other systems. Robust database that supports the model, SQL Server