

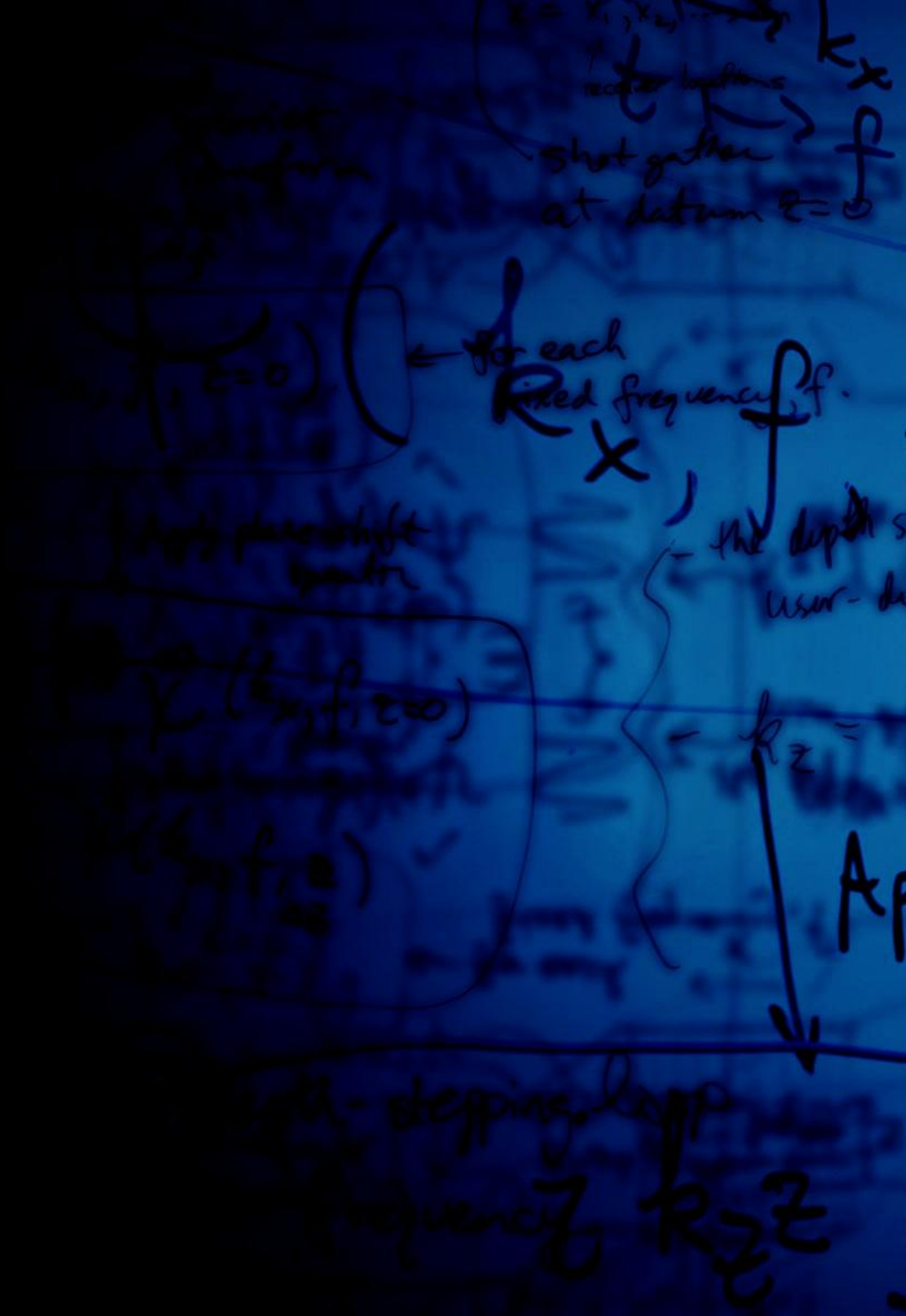


# Russell

## ALPS Casualty

Russell Group Limited

2011



# ALPS Casualty

- Product Overview
- Risk Model
- Portfolio Capture
- Aggregate Analysis
- Loss Simulation
- Pricing
- Portfolio Analysis
- Benefits



# ALPS Casualty – Product Overview

- ALPS Casualty was developed to meet the following market needs:
  - Data capture and management of client risk data.
  - Capture and management of risks underwritten, often not adequately done by in-house underwriting systems.
  - Ability to manage different casualty portfolios, such as Financial Institution and General Liability, in a single product.
  - Integration of aggregation, pricing, and portfolio analysis into single system and process.
  - Analysis and decision making support at point of binding contracts.
- The analysis provided to users includes:
  - Aggregate of exposures, across all treaties and direct acceptances, to single risk and systemic events.
  - Event set based simulation pricing using exposure (ILF) curve methodology.
  - Portfolio analysis.



# ALPS Casualty – Risk Model

- Although configuration can be bespoke ALPS Casualty standard set-up includes:
  - **Subject** – The entity for which the original insurance is purchased is captured as the subject within ALPS, for example in Financial Institutions the subject would be the name of the bank. Segmentation of subjects can be done using market standard classifications such as NAIC codes. Within ALPS all risks are captured for analysis purposes and can be tracked, or untracked, depending on requirement, for example all client data may be captured but only S&P 500 may be tracked for aggregation and pricing.
  - **Subject Data** – Underlying each subject is the ability to capture proprietary data that can be used for analysis and pricing purposes. For example the turnover of a company and the number of employees it has. Where possible this data can be supplemented with third party data.
  - **Cover Type** – A multi-cover type model, including but not limited to Directors and Officers (DO), Professional Indemnity (PI), Crime (CE), Employers Liability (EL), General Liability (GL), with portfolio and exposure capture either at individual cover type level (direct and reinsurance) or on a combined basis (retrocession).
  - **Event Type** – A default event type of All Risks, with the ability to define exposures and analysis for certain defined perils, for example excluding wild fire losses.



# ALPS Casualty – Portfolio Capture

- ALPS Casualty supports capture and analysis for the following inwards or outwards portfolios:
  - **Direct** – All types of direct casualty market placement can be captured including insurance, facultative reinsurance, binding authority acceptance, and excess policies.
  - **Treaty Reinsurance** – Quota share, surplus treaty, and excess of loss. All standard casualty market structures captured including RAD and/or LOD, interlocking, benefiting policies, mirror layers, commission protectors, and varying reinstatement provisions. For all treaty reinsurance underlying client questionnaire captured.
  - **Retrocession** - Ultimate Net Loss (UNL) supported with capture of client banded questionnaire. Industry Loss Warranty (ILW), either standalone or in conjunction with UNL conditions, with original loss warranty, deemed line, original loss window, and/or subject clash warranty.



# ALPS Casualty – Portfolio Capture

- Direct Screenshot

Other Lines

Subject:  Broker:  Y.O.A.:   
 Assured:  Cover Type:  As At:

Subject	CoverType	Y.O.A.	Inception	Expiry	Attachment	Limit	Excess Curcy	ROE	MOP	Underwriter	U/W Ref	Line%
AWB LIMITED	CE	2009	02-Jul-2009	01-Jul-2010	02-Jul-2009	180,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC21	7
AWB LIMITED	CE	2010	02-Jul-2010	01-Jul-2011	02-Jul-2010	180,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC22	7
AXA FINANCIAL	DO	2009	01-Nov-2009	31-Oct-2010	01-Nov-2009	120,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC16	8
AXA FINANCIAL	DO	2010	01-Nov-2010	31-Oct-2011	01-Nov-2010	120,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC17	5
AYALON FINANCIA	DO	2010	01-Oct-2010	30-Sep-2011	01-Oct-2010	210,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC46	1
AYALON FINANCIA	EPL	2009	01-Oct-2009	30-Sep-2010	01-Oct-2009	210,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC45	7
AZIZ EXCHANGE	DO	2010	04-Apr-2010	03-Apr-2011	04-Apr-2010	90,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC24	6
AZIZ EXCHANGE	OTH	2009	04-Apr-2009	03-Apr-2010	04-Apr-2009	90,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC23	4
AZTEC FINANCIAL	PI	2009	15-Dec-2009	14-Dec-2010	15-Dec-2009	230,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC33	9
B METZLER SEEL	CE	2009	01-Nov-2009	31-Oct-2010	01-Nov-2009	150,000,000	0 GBP	0.66667	DIRECT	RUSSELL	RUSSELLFAC25	9
B METZLER SEEL	CE	2010	01-Nov-2010	31-Oct-2011	01-Nov-2010	150,000,000	0 GBP	0.66667	DIRECT	RUSSELL	RUSSELLFAC26	6
BABCOCK & BROW	DO	2009	01-Dec-2009	30-Nov-2010	01-Dec-2009	110,000,000	0 GBP	0.66667	DIRECT	RUSSELL	RUSSELLFAC37	1
BACHMANN GROU	EPL	2009	01-Oct-2009	30-Sep-2010	01-Jul-2009	170,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC11	7
BAHRAIN FINANCII	CE	2010	01-Oct-2010	30-Sep-2011	01-Oct-2010	210,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC44	7
BAHRAIN FINANCII	OTH	2009	01-Oct-2009	30-Sep-2010	01-Oct-2009	210,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC43	10
BAILLIE GIFFORD &	PI	2009	15-Dec-2009	14-Dec-2010	15-Dec-2009	90,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC54	7
BANCA ARNER	CE	2009	01-Apr-2009	31-Mar-2010	01-Apr-2009	240,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC30	2
BANCA ARNER	CE	2010	01-Apr-2010	31-Mar-2011	01-Apr-2010	240,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC31	2
BANCA POPOLARE	DO	2009	14-Dec-2009	13-Dec-2010	14-Dec-2009	170,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC6	2
BANCO DE AHORF	EPL	2008	31-Dec-2008	30-Dec-2009	01-Dec-2008	200,000,000	0 GBP	0.66667	DIRECT	RUSSELL	RUSSELLFAC38	8
BANCO POPULAR	OTH	2009	30-Dec-2009	30-Dec-2010	30-Dec-2009	190,000,000	0 GBP	0.66667	DIRECT	RUSSELL	RUSSELLFAC12	2
BANK JULIUS BAEI	PI	2009	01-Dec-2009	30-Nov-2010	01-Dec-2009	120,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC1	0
BANK MUSCAT INT	CE	2009	01-Dec-2009	30-Nov-2010	01-Dec-2009	170,000,000	0 EUR	1	DIRECT	RUSSELL	RUSSELLFAC27	5
BANK OF BEIRUT L	DO	2009	01-Apr-2009	31-Mar-2010	01-Apr-2009	160,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC7	9
BANK OF BEIRUT L	DO	2010	01-Apr-2010	31-Mar-2011	01-Apr-2010	160,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC8	10
BANK OF LATVIA	DO	2009	01-Dec-2009	30-Nov-2010	01-Dec-2009	110,000,000	0 USD	1	DIRECT	RUSSELL	RUSSELLFAC28	4

Record: 1 of 54 | No Filter | Search

Report



# ALPS Casualty – Portfolio Capture

- Treaty Screenshot

**Edit Programme**

Reinsured: **BANK INSURANCE CO** Programme Name: FI Whole Account Excess of Loss Actual:  Y.O.A.: 2010 Type: XOL Mode: Renewed

Risks From: <Open> To: <Open> Losses From: 01-Jan-2010 To: 31-Dec-2010 Casualty Count Basis: All Casualties

Premium-related Amounts are in: USD R.O.E.: 1 Original Premium Income: 0 Status: Estimated

Excess: 500,000 or % of: <None> whichever the Greater: Excess is: UNL Max. Line %: 100 Min. Line %: 0

Limits: UNL Any one Loss Interlocking: Optional Loss-related Amounts are in: USD R.O.E.: 1 Tot Ind: <As per Layers>

Layers: Types Locales Benefit

No	Type	Limit	Prem Basis	Premium	Pr.Rate	Min Prem	Max Prem	Brokerage	% Max Brok	PP	CP	Backup	Stretch	
▶ 1	Core	5,000,000	Flat	4,000,000	0	0	Unlimited	0	0				10,000,000	Advanced
2	Core	10,000,000	Flat	3,000,000	0	0	Unlimited	0	0				20,000,000	Advanced
3	Core	10,000,000	Flat	2,500,000	0	0	Unlimited	0	0				20,000,000	Advanced
4	Core	10,000,000	Flat	2,000,000	0	0	Unlimited	0	0				20,000,000	Advanced
*							Unlimited							Advanced

Policy Number: Order %: 100 Slip Leader:

Reinstatements				Lines										
Grp No	How Many	Rate%	Value	U/W Ref	Line%	Status	Asif%	Pool	Underwriter	Broker	Stat Cat 1	Stat Cat 2	Stat Cat 3	
▶ 1	1	100	0	▶ RUSSELL1	5	Estimated	5		RUSSEL					
*				*					RUSSEL					



# ALPS Casualty – Aggregate Analysis

- ALPS Casualty 2 main aggregate reports
  - **Impact Analysis** - Calculates portfolio loss for user defined market loss(es). Market loss can be actual loss or realistic disaster scenario.
  - *Screenshot of impact loss entry and results*

The screenshot displays the ALPS Casualty software interface, divided into two main sections. The top section is for entering loss details, and the bottom section shows the resulting summary table.

**Loss Entry Section:**

- Navigation tabs: Losses, Underwriters, Results, Reports
- DOL: 18 Feb 2010
- Name: Bank Scenario 1A
- Type: [Dropdown]
- Location: [Dropdown]
- Total Casualties: 0 of which 0 are Fatalities
- Table of Subjects:

Subject	CoverType	Valuable	Loss Value
BNP PARIBAS	Directors & Officers		500,000,000
BANK OF LATVIA	Directors & Officers		200,000,000
BANK OF NOVA SCOTIA	Directors & Officers		200,000,000

**Summary Section:**

- Level: Summary (selected), Detail, Layer Events
- Table of Loss Events:

Date of Loss	Loss Event	Party	Inward Loss	Inward Premium	Outward Loss	Outward Premium	Balance
18-Feb-2010	Bank Scenario 1A		12,400,000	0	0	0	12,400,000
18-Feb-2010	Bank Scenario 1A	BANK INSURANCE CO	1,750,000	575,001	0	0	1,174,999
18-Feb-2010	Bank Scenario 1A	CASUALTY LIMITED	229,090	41,999	0	0	187,091
18-Feb-2010	Bank Scenario 1A	FI UNDERWRITERS	731,459	0	0	0	731,459

**TOTALS Summary:**

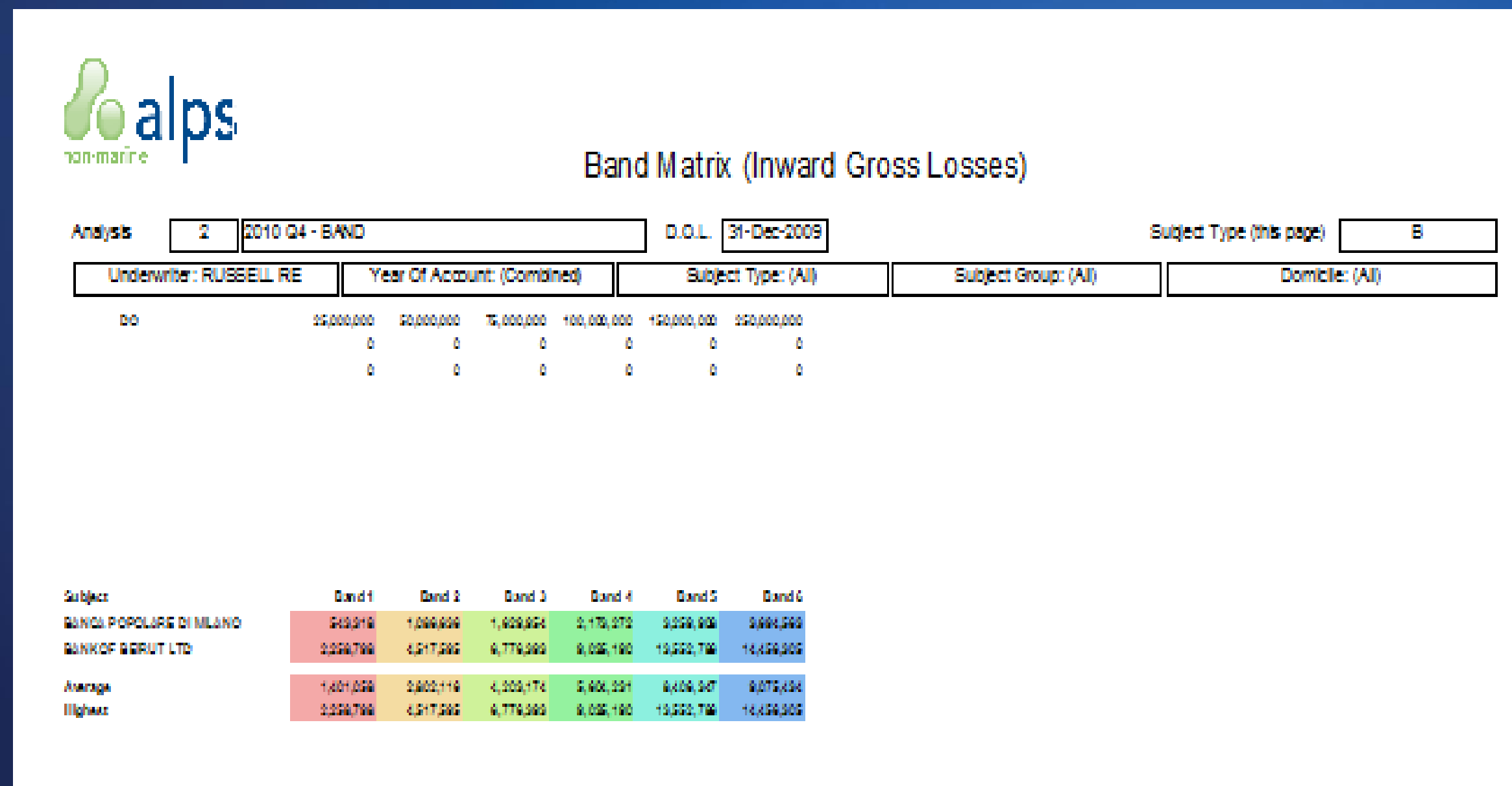
	Loss	TOTALS Premium	Net
Inward	15,110,549	617,000	14,493,549
Outward	0	0	0
Retained	15,110,549	617,000	14,493,549

Export button is visible at the bottom right of the summary section.



# ALPS Casualty – Aggregate Analysis

- **Band Analysis** - Calculates a banded matrix of portfolio exposures for user defined single subject market losses.
- *Screenshot of banded report*



# ALPS Casualty – Loss Simulation

- Within ALPS Casualty there is the option of using the ALPS loss simulation engine to create an event table to run the pricing and portfolio modeling.
- The loss simulation is fully configurable to user parameters to ensure that it reflects their view of the risks.
- Users set expected loss frequencies and define a set of exposures curves for each cover type.
- Risk losses are then simulated from these settings and can be combined with deterministic clash scenarios to create a market level event set.

# ALPS Casualty – Pricing

- User selects risk to be priced: direct, treaty reinsurance, or retrocession. Framework ensures a consistent approach to all acceptance methods.
- Event set is either user defined or generated by the ALPS simulation engine and processed through a risk to deliver the following statistics:
  - Trigger point
  - Worst burn
  - Expected burn
  - Standard deviation
  - Expenses
  - Reinstatement %
  - Cost of capital
  - Net premium
  - Expected reinstatement
  - Rate on line (ROL)
- Expenses, cost of capital, premium and rate on line calculated using user defined assumptions.
- Premium calculation can be done using either a target loss ratio or target return on capital.



# ALPS Casualty – Pricing

- Pricing results summary screenshot:
  - Direct Pricing

Sections Results

Level  Summary  Scenarios  Layer Events

Sctn	Unit of Cover	Trigger Point	Worst Burn	Cvrs	Expected Burn	Std Dev	Expenses	Reinst%	Cost of Capital	Net Premium	Expected Reinst	Net ROL	R.O.L.
All	1,915,000,000	0	1,845,658,782	1	78,679,125	255,790,489	7,867,913	0.00%	98,882,193	178,111,398	0	9.30%	9.30%
1	165,000,000	0	122,440,900	1	10,947,202	45,595,609	1,094,720	0.00%	6,239,314	17,143,802	0	10.39%	10.39%
2	1,750,000,000	0	1,750,000,000	2	67,731,923	246,966,085	6,773,192	0.00%	94,141,636	162,362,674	0	9.28%	9.28%

- Treaty Pricing

Results

Level  Summary  Scenarios  Layer Events

Lyr	Unit of Cover	Trigger Point	Worst Burn	Cvrs	Expected Burn	Std Dev	Expenses	Reinst%	Cost of Capital	Net Premium	Expected Reinst	Net ROL	R.O.L.
All	110,000,000	209,822,628	86,561,633	1	2,367,031	9,244,628	236,703	100.00%	1,413,254	3,932,370	84,604	3.57%	3.93%
1	12,500,000	209,822,628	20,020,438	2	1,355,245	3,424,706	135,525	100.00%	283,338	1,600,574	173,436	12.80%	14.09%
2	25,000,000	494,697,862	25,000,000	2	573,964	3,389,364	57,396	100.00%	407,928	1,015,963	23,319	4.06%	4.47%
3	32,500,000	1,485,568,488	32,500,000	2	353,934	3,095,327	35,393	100.00%	543,704	922,979	10,049	2.84%	3.12%
4	40,000,000	3,630,865,204	16,561,633	1	83,888	1,449,797	8,389	100.00%	284,128	375,617	793	0.94%	1.03%

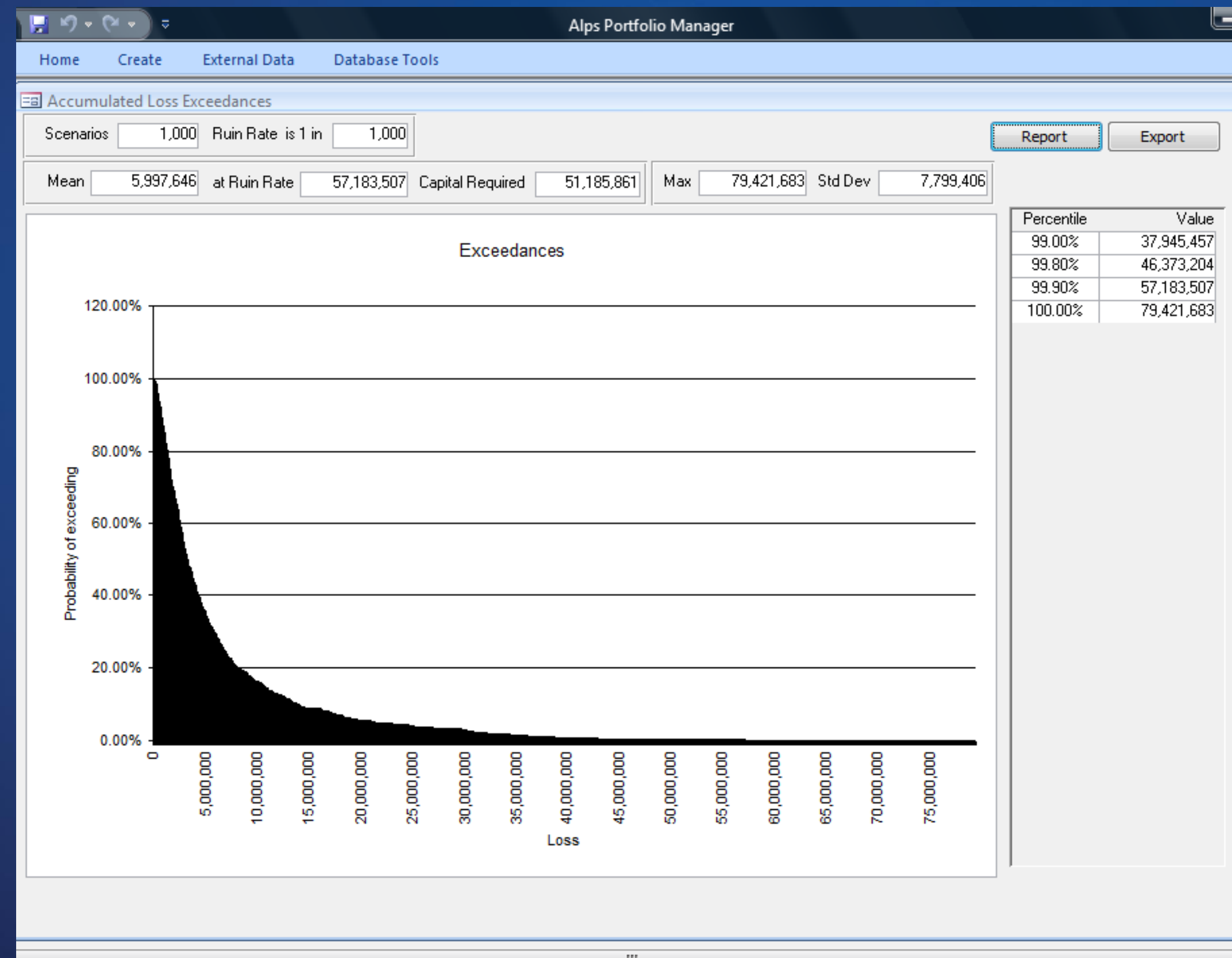


# ALPS Casualty – Portfolio Analysis

- Event set is either user defined or generated by the ALPS simulation engine, is now processed through the entire aviation portfolio.
- ALPS calculates the following statistics for the entire portfolio, for accumulated loss and highest individual loss:
  - Mean loss
  - Ruin loss
  - Capital required
  - Maximum loss
  - Standard deviation
  - Loss percentiles
  - Empirical loss distribution (for use in group capital/Solvency II model)

# ALPS Casualty – Portfolio Analysis

- Results screenshot:



# ALPS Casualty – Benefits

- Better understanding of assumed and ceded risk
- Better understanding of underlying risk prior to capital commitment
- Ensures efficient use of capital leading to improved underwriting results
- Ensures timely and consistent information on exposure
- Improves quality of risk management across specialty classes
- Valid logic reduces operational risk



Thank you