

Predcyt Analytics



Enterprise Risk Model & Subscription Service

The Global Standard for Insurance
Risk and Value Management

A Predcyt Analytic Service

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WHAT DOES AN ERM
SUBSCRIPTION PROVIDE
THAT IS NOT PROVIDED BY
OTHER INDUSTRY RESEARCH?

Objective analysis,
untainted by analyst
opinion, about critical
company values calculated
using rigorous and
advanced risk
management principles
unmatched in the market.

Predyct Analytics

The Predyct Analytic, LLC, Enterprise Risk Model (ERM) subscription service provides to investors, investment bankers, insurance industry executives, and regulators an unparalleled view of insurance companies' current and projected financial performance.

Never have the economics and risk of insurance companies been so rigorously unbundled, analyzed and reconstituted to reveal as accurate a portrait of risk and return as has been accomplished with Predyct Analytic's ERM. There are four different service levels available on a subscription basis.

1

Predyct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

With PREDYCT ERM, the subscriber can:

- Identify in which businesses a company is creating or destroying enterprise value.

HOW DOES THIS HELP THE SUBSCRIBER?

- Shows if a company is earning the minimum Hurdle Rate¹ to create value
- Shows if a company is investing its capital in value-enhancing businesses
- Shows how a company is performing compared to its competitors
- Shows if some of its businesses should be either fixed or divested
- Shows if some of its businesses should be receiving greater investment

Enterprise Risk Model *(In Millions)*

DIVISION NUMBER	DIVISION NAME	ALLOCATED RISK AMOUNT IN \$	ALLOCATED CAPITAL (NOMINAL) ²	ALLOCATED CAPITAL (ECONOMIC) ³	TOTAL INCOME	RETURN ON NOMINAL CAPITAL	RETURN ON ECONOMIC CAPITAL (RAROC) ⁴	HURDLE RATE
0	Investment	\$569	\$1422	\$1707	\$143	10%	7%	14%
1	Homeowners/ Farmowners	\$25	\$63	\$75	\$3	5%	4%	14%
2	Private Passenger / Auto Liability Medical	\$6	\$15	\$18	\$1	7%	6%	14%
3	Commercial Auto / Truck Liability Medical	\$165	\$412	\$495	\$25	6%	5%	14%
4	Workers' Compensation	\$200	\$450	\$600	\$40	9%	7%	14%
5	Commercial Multiple Peril	\$37	\$92.5	\$111	\$4	4%	3.5%	14%
6	Special Liability (Ocean Marine, Aircraft (All Perils), Boiler and Machinery)	\$7	\$1.75	\$2.1	\$8	45%	38%	14%
<hr/>								
22	Reinsurance B-Nonpro- portional Assumed Property	\$2	\$5	\$6	\$2	40%	33%	14%
	Total	\$1,085	\$2,712	\$3,255	\$245	9%	8%	14%

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Predyct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

With PREDYCT ERM, the subscriber can:

- Identify the company's exposure to the Five Categories of Economic Risk⁵.
- Compare a company's risk exposures to those of its industry and to a peer group.

HOW DOES THIS HELP THE SUBSCRIBER?

- Identifies if a company has risk exposures, by risk category, that fall outside industry and peer norms
- Identifies risk exposures that can create huge drags on a company's earnings and value
- Provides the subscriber with unequaled insight into the reliability of a company's earnings
- Traces the sources of risk that contribute to a company's Principal Risk Categories
- Identifies the largest risk sub-factors

Each Company's Risk Is Benchmarked, by Category, to an Insurance Index of Companies and to a Peer Group

Five Categories of Economic Risk (In Millions)

NAME	COMPANY	%	INSURANCE INDEX ⁶	PEERS
Insurance Risk	\$500	34%		
ALM Risk	\$269	18%		
Equity Risk	\$526	36%		
Forex Risk	\$0	0%		
Credit Risk	\$168	12%		
Risk Before Diversification	\$1,463	100%		
Diversification Benefit	\$542	37%		
Total	\$921			

Unified Insurance Risk (In Millions)*

DIVISION/LOB	NEW BUSINESS RISK	OLD BUSINESS RISK	CATASTROPHIC RISK	TOTAL
Homeowners/Farmowners	\$80	\$120	\$22	\$222
Private Passenger/Auto Liability/Medical	\$20	\$40	\$50	\$110
Commercial Auto/Truck Liability/Medical	\$10	\$15	\$3	\$28
Workers' Compensation	\$15	\$40	\$5	\$60
Products Liability - Claims Made	\$12	\$45	\$0	\$137
Sum of Risks	\$200	\$476	\$80	\$676
Diversification Benefit	\$80	\$176	\$0	\$256
Net Premium Risk	\$120	\$300	\$80	\$500

Asset Liability Management Risk (In Millions)*

USD YEAR BUCKET	EXPOSURES INVESTMENT & LOANS	P&C AND HEALTH	NET EXPOSURE	VOLATILITY	RISK
1	\$1,571	(\$680)	\$891	0.00%	\$0
2	\$338	(\$1,303)	(\$965)	0.75%	\$7
3	\$1,638	(\$1,601)	\$97	1.51%	\$2
5	\$2,095	(\$1,017)	\$1,078	3.01%	\$33
7	\$2,213	(\$509)	\$1,705	4.17%	\$71
10	\$2,225	(\$626)	\$1,598	6.54%	\$105
15	\$318	(\$538)	\$280	8.77%	\$25
20	\$306	(\$139)	\$167	10.59%	\$18
30	\$149	\$0	\$149	18.43%	\$28
Sum of Risks					\$289
Diversification Benefit					\$20
Net ALM Risk					\$269

Bond Quality and Counter-Party Risk (In Millions)*

BOND/RECEIVABLES	STATEMENT VALUE	UPDATED ASSET RISK FACTOR	RISK
Risk Free	\$2,273	0.00%	0.00%
AAA	\$457	0.50%	\$2.18
CCC	\$5	23.85%	\$1.19
Sum of Risks	\$7,105		\$252
Diversification Benefit			\$43.4
Net Credit Risk			\$168

Equity Risk (In Millions)*

	COMPANY EXPOSURE	VOLATILITY	RISK
U.S.GNR.	\$2,094	20%	\$416
U.S.FIN.	\$356	30%	\$106
U.S.IDU.	\$154	22%	\$34
U.S.HCR.	\$8	22%	\$2
CA.ENE.	\$120	35%	\$42
Sum of Risks			\$559
Diversification Benefit			\$30
Net Equity Risk			\$526

* These charts are shown in larger format in the Appendix

3

Predyct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

With PREDYCT ERM, the subscriber can:

- Identify how much of a company's net worth could be lost over the next 12 months and with what probability.
- Infer a company's shadow rating based on its bankruptcy probability⁷.

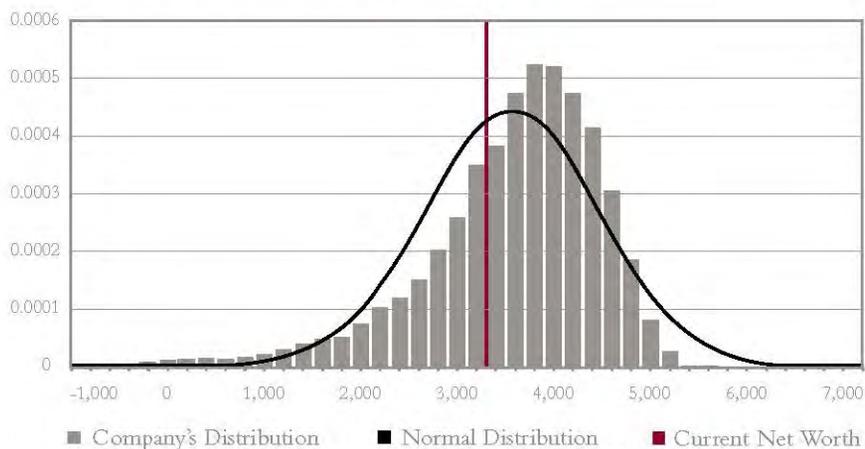
HOW DOES THIS HELP THE SUBSCRIBER?

- Provides an understanding of a company's financial steadiness
- Financial risk is marked-to-market on a quarterly basis

The Company's Downside Risk (VaR)

PROBABILITY	COMPANY RESULTS ⁸	STANDARD NORMAL ⁹
Probability of losing 5% of net worth or more	25.2%	30.9%
Probability of losing 10% of net worth or more	20.5%	24.8%
Probability of losing 25% of net worth or more	10.7%	10.9%
Probability of losing 50% of net worth or more	3.4%	1.6%
Probability of default	0.3%	0.0%
VaR 99% (In Millions) ¹⁰	2,520	1,813

Net Worth Distribution, 1 Year Horizon



Probability of Default as Implied by Agency Ratings

	COMPANY RESULTS (NOT GREATER THAN)
AAA, AA	0.01%
A	0.05%
BBB	0.19%
BB	0.99%
B	5.37%
CCC	28.73%

Company's Shadow Rating

ERM rates this AAA rated company as having a credit quality between BBB and BB

4

Predyct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

With PREDYCT ERM, the subscriber can:

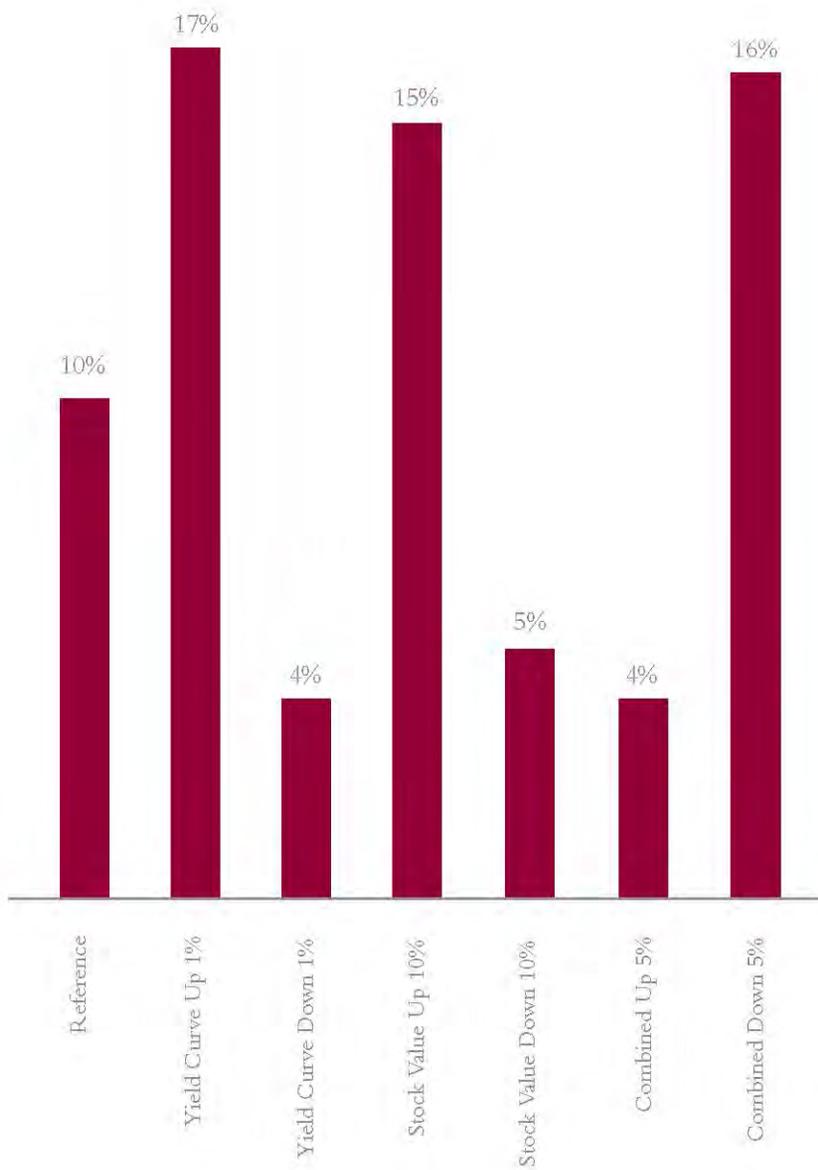
- Identify a company's sensitivity to changes of value in major financial indices.

PREDYCT ERM performs scenario analysis that projects how changes in critical input will impact a company's return on net worth; denoted here as the reference rate.

HOW DOES THIS HELP THE SUBSCRIBER?

- Helps investors make investment decisions based on their expectations of movements in key financial indices
- Shows how sensitive a company's value is to changes in key indices

Company's Return On Net Worth



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Predyct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

With PREDYCT ERM, the subscriber can:

- Ask “what if” questions

Restructuring Activity — What happens to a company's risk and financial return if it:

- Enters or withdraws from a line of business, state or country?
- Rebalances cash flow mismatches?
- Increases or decreases the quality of its bond portfolio?
- Changes the structure of its reinsurance?
- Securitizes risk and/or changes its debt level?
- Increases the size of its equity portfolio or changes its composition?

Mergers & Acquisitions — What happens to a company's risk and return if it:

- Acquires another company or business?
- Divests a business?

Scenario Analysis — What if:

- Reserve development risk increases or decreases in future periods?
- There are greater levels of correlation between risks in future periods?
- Premium pricing hardens or softens by specified levels in various lines of business?

ERM Displays the Before and After Results For Each Scenario in Easy-to-Interpret Exhibits

Example of “What if” Scenario

- Company withdraws from writing commercial auto in two states
- Company withdraws from writing workers’ compensation in three states
- Liberated capital is deployed to the company’s bond portfolio in proportion to existing duration and holdings.

BEFORE									AFTER								
ERM (In Millions)									ERM (In Millions)								
DIVISION NUMBER	DIVISION NAME	ALLOCATED PER AMOUNT IN \$	ALLOCATED CAPITAL NOMINAL ²	ALLOCATED CAPITAL ECONOMIC ³	TOTAL INCOME	RETURN ON NOMINAL CAPITAL	RETURN ON ECONOMIC CAPITAL (RAROC) ⁴	MURKEL RATE	DIVISION NUMBER	DIVISION NAME	ALLOCATED PER AMOUNT IN \$	ALLOCATED CAPITAL NOMINAL ²	ALLOCATED CAPITAL ECONOMIC ³	TOTAL INCOME	RETURN ON NOMINAL CAPITAL	RETURN ON ECONOMIC CAPITAL (RAROC) ⁴	MURKEL RATE
0	Investment	\$569	\$1422	\$1707	\$143	10%	7%	14%	0	Investment	\$569	\$1422	\$1707	\$143	10%	7%	12%
1	Homeowners/ Farmowners	\$25	\$63	\$75	\$3	5%	4%	14%	1	Homeowners/ Farmowners	\$25	\$63	\$75	\$3	5%	4%	12%
2	Private Passenger / Auto Liability Medical	\$6	\$15	\$18	\$1	7%	76%	14%	2	Private Passenger / Auto Liability Medical	\$6	\$15	\$18	\$1	7%	76%	12%
3	Commercial Auto / Truck Liability Medical	\$165	\$412	\$495	\$25	6%	5%	14%	3	Commercial Auto / Truck Liability Medical	\$100	\$250	\$300	\$70	28%	23%	12%
4	Workers' Compensation	\$200	\$450	\$600	\$40	9%	7%	14%	4	Workers' Compensation	\$150	\$375	\$450	\$50	14%	9%	12%
5	Commercial Multiple Peril	\$37	\$92.5	\$111	\$4	34%	3.5%	14%	5	Commercial Multiple Peril	\$37	\$92.5	\$111	\$4	34%	3.5%	12%
6	Special Liability (Ocean Marine, Aircraft (All Perils), Boiler and Machinery)	\$7	\$1.75	\$2.1	\$8	45%	38%	14%	6	Special Liability (Ocean Marine, Aircraft (All Perils), Boiler and Machinery)	\$7	\$1.75	\$2.1	\$8	45%	38%	12%
22	Reinsurance B-Nonproportional Assumed Property	\$2	\$5	\$6	\$2	40%	33%	14%	22	Reinsurance B-Nonproportional Assumed Property	\$2	\$5	\$6	\$2	40%	33%	12%
Total		\$1,085	\$2,712	\$3,255	\$245	9%	8%	14%	Total		\$970	\$2,425	\$2,910	\$300	12%	10%	12%

- Total Risk is reduced from \$1.2 billion to \$.970 billion
- RAROC improves from 8% to 10%

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Preduct's ERM Uniquely Provides to Subscribers What No Other Information Service Can Offer

Preduct's ERM benchmarks each company's financial performance (RAROC), by line of business, to Preduct's P&C insurance industry index of companies and to a peer group.

HOW DOES THIS HELP THE SUBSCRIBER?

- Observe how specific companies are performing overall and by line of business
- Observe industry and peer financial performance in specific lines of business
- Observe the financial performance of specific industry segments by company type, size, form of distribution and ownership

Enterprise Risk Model *(In Millions)*

DIVISION NUMBER	DIVISION NAME	COMPANY RETURN ON ECONOMIC CAPITAL (RAROC)	SEABURY INDEX: RETURN ON ECONOMIC CAPITAL (RAROC)	PEER RETURN ON ECONOMIC CAPITAL (RAROC)
0	Investment	10%	11%	10%
1	Homeowners	7%	10%	15%
2	Private Passenger Auto Liability	12%	10%	18%
3	Commercial Auto/Truck	6%	8%	16%
22	Reinsurance B-Nonproportional	15%	10%	12%
Average		9%	11%	18%

What Does a
PREDYCT ERM
Subscription Provide
That Is Not Provided
by Other Industry
Research?

Objective analysis, untainted by analyst opinion, about critical company values calculated using rigorous and advanced risk management principles unmatched in the market.

The report provides:

- Systematic breakdown of all the firm's holdings (assets, liabilities).
- Allocation of the firm's capital to lines of business so that the risk of the firm's assets are isolated from its underwriting activity. This enables the performance of investing and underwriting activity to be observed as distinct activities within the firm.
- The risk contribution of each risk category to a company's total enterprise risk: insurance, interest rate, equity, credit and foreign exchange risk.
- All risk calculated using a dynamic correlation structure that measures the risk of all of a company's holdings at the CUSIP level— no large bucketing of assets. PREDYCT ERM's architecture is constructed so that each time the composition of a company's assets and/or liabilities change, the risk of the company will also change to reflect the latest correlation structure among a company's holdings.
- Insurance risk is simulated based on statistical analysis of a company's and industry-wide loss patterns. The analysis includes both the development year patterns (development factors) and calendar year trends (claim inflation) and results in a dynamic correlation structure between Insurance Risk and the other Risk Categories.
- Capture of the complicated features of financial instruments including: call features, convexity and convertibility.
- The relative position of a company to the industry and to peers against each of the risk dimensions, e.g., insurance risk, interest rate risk, etc.
- A company's value-at-risk (VaR) score and downside risk, e.g., probability of losing a certain percentage of its net worth over the next 12 months.
- Where a company's capital is allocated in proportion to risk contribution. This may not agree with where a company has physically maintained or allocated its capital.
- The risk-adjusted return (RAROC) in each of a company's lines of business or business segments.
 - Scenario analysis of how changes to critical input parameters will impact a company's return on net worth if certain events should occur, such as: a one point increase or decrease in yield curves, equity rates, loss and combined ratios.
- How a company is performing in a certain line of business relative to the industry and to a peer class.
- All market risk factors and company indices are updated on a quarterly basis.
- PREDYCT ERM's risk and solvency capital modelling analytics exceed the most exacting requirements of Basel II and Solvency II, affording PREDYCT ERM users to achieve "Instant Compliance" with these regulatory initiatives.
 - The analytical methods used to calculate all PREDYCT ERM output are provided to the subscriber.

The Subscriber May Select from Four Different Levels of Service with a PREDYCT ERM Subscription

Level I

Provides one public Property & Casualty (P&C) company benchmarked against 25 other public P&C companies. P&C companies are defined here as companies that only underwrite P&C business.

PREDYCT ERM identifies a company's following risks in Level 1 against the top 25 benchmarked companies*:

- Insurance risk (*)
- Interest rate risk (ALM)
- Equity risk
- Credit risk
- Foreign exchange risk
- Total risk (VaR) and risk distribution of net worth
- Shadow rating based on the most current financial information

(*) The inclusion of catastrophe risk is a customization for an additional fee.

The financial performance of a company benchmarked against the other top 25 companies:

- PREDYCT ERM scores
- Five categories of risk as expressed above
- Each insurance line of business is benchmarked against Predyct's Index of companies in terms of development year factors and calendar year trends

- Each insurance line of business benchmarked to a peer group in terms of development year factors and calendar year trends
- All assets and liabilities of a company profiled by class

Simulation of what happens to the company's financial performance if:

- Interest rates go up or down by one percentage point
- Equity market rates go up or down by one percentage point
- Loss and combined ratio go up or down by one percentage point

Level II

Provides all Level I features, plus:

- Capital allocation – how much capital is tied up in each of a company’s business segments
- Risk-Adjusted Return On Capital (RAROC) of each business segment. Level 1 does not provide RAROC or capital allocation for separate business segments within a company.

Subscription Rates depend on the following criteria

A Basic Subscription of \$5,000 entitles the user of Level 1 to:

- One company’s financial performance benchmarked against the top 25 public companies.

The price then scales up per additional company: (All rates subject to adjustment based on the number of users):

Number of Companies	1 to 5 Users	6 to 10 Users	11 to 15 Users
1	\$5,000	\$7,500	\$10,000
2	\$5,000	\$7,500	\$10,000
3	\$4,500	\$6,000	\$10,000
4	\$3,500	\$5,500	\$10,000
5-10	\$3,000	\$5,000	\$8,500
11-25	\$2,500	\$4,000	\$7,000

Level II is provided for an additional charge of \$5,000 per company.

Level II is provided at no charge for any subscription priced at \$100,000 and above.

Level III

Allows for the purchase of a new report on a company that Predyct does not currently provide. Pricing to be developed (TBD).

Level IV – Consultative

Enables the client to seek extensive PREDYCT ERM analysis and answers to “what if” questions on the company of its choice to which it has a current subscription. Pricing and service TBD.

Footnotes

- 1 The Hurdle Rate is the rate of return that a company must earn to maintain its value. Also called the Required Return.
- 2 The amount of capital that a company actually has.
- 3 The amount of capital that is required to sustain risk at a specified level of statistical confidence.
- 4 Financial Performance is defined here as “Risk-Adjusted Return On Capital” (RAROC).
- 5 In Value-at-Risk (VaR) analysis, the Principal Risk categories to which any insurance company is primarily exposed are:
 - Insurance risk
 - Interest rate risk (ALM)
 - Credit risk
 - Equity risk
 - Foreign exchange risk
- 6 Insurance index consists of 25 P&C companies that represent industry specializations by: type of company, size, form of distribution and ownership. Index is currently in development.
- 7 Shadow Rating is defined as a company’s probability of insolvency in one year’s time translated into the same scale of default probability as studies have revealed are associated with the different rating classifications as produced by the major rating agencies.
- 8 Histogram represents individual companies’ actual distribution of net worth over the horizon period of 12 months. Companies’ risk distributions may be substantially different from a normal distribution owing to such issues as: catastrophe risks, lack of diversification, optionality of assets and low capitalization.
- 9 The standard normal curve represents a company’s risk if the company’s risk is normally distributed.
- 10 VaR (Value-at-Risk) is defined as the worst loss that a company may experience over a target horizon with a given level of confidence.

Appendix

For your convenience, some of the smaller charts shown in section 2 are included in larger formats in the Appendix.

- Insurance Risk (*seen on page A1*)
- Asset Liability Management Risk (*seen on page A1*)
- Bond Quality and Counter-Party Risk (*seen on page A2*)
- Equity Risk (*seen on page A2*)

Appendix

All ERM Exhibits Can Portray Before and After Results for Each “What if” Scenario the Subscriber May Elect

Insurance Risk (In Millions)

DIVISION LOB	NEW BUSINESS RISK	OLD BUSINESS RISK	CATASTROPHE RISK	TOTAL
Homeowners/Farmowners	\$80	\$120	\$22	\$222
Private Passenger/Auto Liability/Medical	\$20	\$40	\$50	\$110
Commercial Auto/Truck Liability/Medical	\$10	\$15	\$3	\$28
Workers' Compensation	\$15	\$40	\$5	\$60
Products Liability – Claims Made	\$12	\$45	\$0	\$137
Sum of Risks	\$200	\$476	\$80	\$676
Diversification Benefit	\$80	\$176	\$0	\$176
Net Premium Risk	\$120	\$300	\$80	\$500

Asset Liability Management Risk (In Millions)

USD YEAR BUCKET	EXPOSURES INVESTMENT & LOANS	P&C AND HEALTH	NET EXPOSURE	VOLATILITY	RISK
1	\$1,571	(\$680)	\$891	0.00%	\$0
2	\$338	(\$1,303)	(\$905)	0.75%	\$7
3	\$1,638	(\$1,601)	\$97	1.51%	\$2
5	\$2,095	(\$1,017)	\$1,078	3.01%	\$33
7	\$2,213	(\$509)	\$1,705	4.17%	\$71
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15	\$818	(\$538)	\$280	8.77%	\$25
20	\$306	(\$139)	\$167	10.59%	\$18
30	\$149	\$0	\$149	18.43%	\$28
Sum of Risks					\$289
Diversification Benefit					\$20
Net ALM Risk					\$269

Appendix

Each Risk Category May be Independently Modeled or Modeled in Relation to Any or All Risk Categories

Bond Quality and Counter-Party Risk *(In Millions)**

BOND/RECEIVABLES	STATEMENT VALUE	UPDATED ASSET RISK FACTOR	RISK
Risk Free	\$2,273	0.00%	0.00%
AAA	\$457	0.50%	\$2.18
CCC	\$5	23.85%	\$1.19
Sum of Risks	\$7,105		\$252
Diversification Benefit			\$43.4
Net Credit Risk			\$168

Equity Risk *(In Millions)**

	COMPANY EXPOSURE	VOLATILITY	RISK
US.GNR	\$2,094	20%	\$416
US.FIN	\$356	30%	\$106
US.IDU	\$154	22%	\$34
US.HCR	\$8	22%	\$2
CA.ENE	\$120	35%	\$42
Sum of Risks			\$559
Diversification Benefit			\$33
Net Equity Risk			\$526

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