Strategic Business Planning for Financial Institutions

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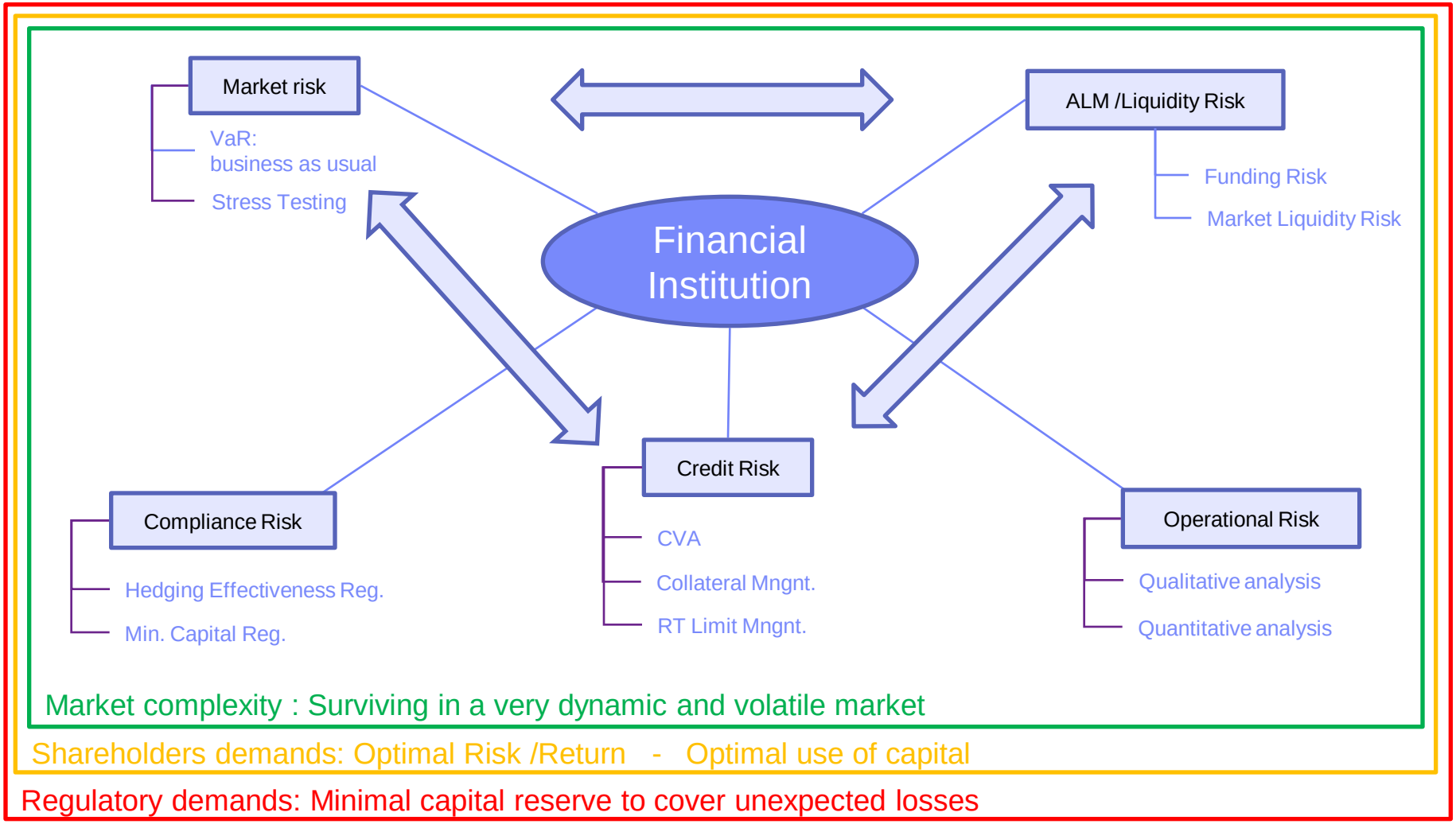
Risk Spectrum for Financial Services



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So how to make sure the institution will survive?

- Full and complete picture of all activities and exposures of the institution

- Clear understanding of each of the risks:
  - What is their impact on the business?
  - How do they interact?

- Full understanding of the dynamics of the market:
  - Strong interdependencies (systemic risk) => nobody can stay on the sideline
  - What if “Bussiness as usual”, but also
  - What if a Crisis occurs => be prepared for the worst: Stress Testing

- Business Planning and Forecasting: make sure you have the decision making tools
  - to find a winning business strategy
  - to optimally use your capital

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Risk Solution Vendors: Ranking Nov-2011

RiskTech100® Top 10

Rank 2011	Rank 2010	Company	HQ	Total Score	Functionality	Core Technology	Organizational Strength	Customer Satisfaction	Market Presence	Innovation
1	7	IBM	US	69.8%	79%	73%	65%	63%	72%	67%
2	1	SunGard	US	66.8%	76%	63%	70%	60%	71%	61%
3	2	SAS	US	65.8%	77%	74%	63%	58%	62%	61%
4	9	Oracle	US	63.3%	70%	72%	61%	57%	60%	60%
5	6	Moody's Analytics	US	62.5%	61%	64%	64%	62%	62%	62%
6	8	Wolters Kluwer FS	US	62.0%	63%	56%	69%	61%	63%	60%
7	17	Misys	UK	61.7%	68%	59%	62%	59%	62%	60%
8	4	Fiserv	US	61.3%	62%	58%	69%	63%	61%	55%
9	5	MSCI	US	61.3%	59%	53%	69%	63%	63%	61%
10	12	NICE Actimize	US	60.3%	60%	59%	62%	58%	61%	62%

Source: RiskTech100® 2011

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So how do we address this?

Step 1: Get a complete picture of all activities/data within the institution

Step 2: Provide a complete view of the current situation

- Comprehensive summary view
- Full drill down functionalities

Step 3: look at historical evolution to identify trends

Step 4: Evaluate “Risk” versus “Return” over time

Step 5: Check the Risk/Return not only for “business as usual” but also in “crisis”

Step 6: Optimization Analysis: how can we increase risk/Return

Step 7: Forecast the result of strategic decisions

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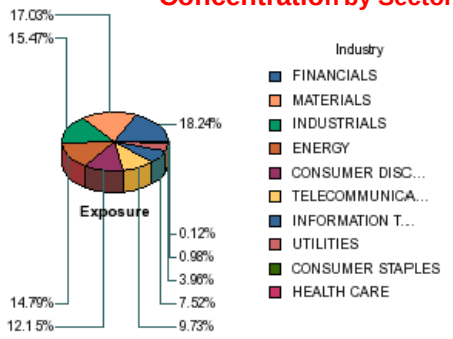
1. Comprehensive view of the current situation of the bank (CEO Dashboard)

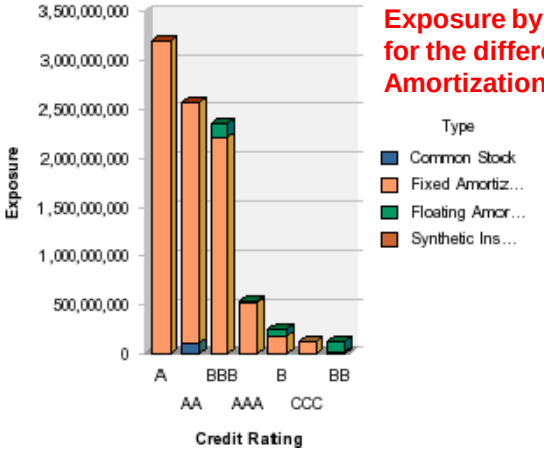
KEY RISK, LIQUIDITY AND PROFITABILITY MEASURES		TOTAL BANK	XYZBank Portfolio	XYZBank UK Portfolio	XYZBank USA Portfolio
Market Risk					
	Market VaR 99.96%	793,336,216	671,451,853	108,570,291	13,314,072
	Monetary Duration	18,668,785,409	27,525,502,609	-8,246,686,828	-610,030,372
ALM					
	NII	208,794,300.7	205,874,785.77	10,935,666.99	-8,016,152.06
	1 Yr EaR	6,397,481	4,861,426	1,679,066	-143,011
	Duration Gap	-956,986,090	443,575,313	-1,555,673,546	155,112,142
	VaR 99.96%	31,987,404	24,307,131	8,395,330	-715,057
	EVE	1,596,417,056	3,643,396,816	-1,976,819,973	-70,159,786
	EVE at Risk	2,194,982,222	4,000,181,512	-1,750,329,162	-54,870,128
Liquidity Risk					
	Liquidity Coverage Ratio	4.12	3.2	0	412.42
	Net Stable Funding Ratio	-1.02	-1.05	0	-0.2
	FSA Combined Survival Horizon	> 4 Months	0	8 Weeks	> 4 Months
	Liquidity Buffer	-2,745,515,940	-2,759,621,211	-3,523,555	17,628,827
	Opportunity Cost of Liq Buffer	-458,085,423	-486,047,188	-3,791,006	31,752,771
Regulatory Capital					
	RWA	7,148,944,215	6,821,885,728	227,400,542	99,657,944
	Reg Cap Requirement (Maturity Adjusted)	571,915,537	545,750,858	18,192,043	7,972,636
	Capital Charge Unadjusted	356,257,299	341,826,968	7,948,197	6,482,134
	Capital Charge Maturity Adjusted %	5.16%	7.13%	3.81%	4.53%
	Mat Adj Cap Charge / EAD	7.44%	8.02%	4.89%	3.95%
	Unadj Cap Charge / EAD	4.73%	5.01%	3.41%	3.36%
Credit Risk					
	Expected Loss	81,679,196	80,903,888	571,229	204,079
	Unexpected Loss 99.96%	648,362,529	626,571,566	9,918,368	11,872,596
	Exposure	9,411,594,544	8,072,143,606	733,455,565	605,995,373
	Expected Shortfall 99.96%	771,567,713	742,680,670	13,166,580	15,720,463
	Credit Eco Cap (Analytical)	777,598,105	672,554,914	59,118,883	45,924,308
	Defaulted Loans	285,527,923.44	285,527,923.44		
	Defaulted Loan %	3.03%	3.54%		
	WAPD	0.33%	0.37%	0.04%	0.01%
Operational Risk					
	OpRisk	48,521,933	43,802,762	3,789,618	929,553
FTP					
	1 Yr FTP Interest	106,866,845	327,223,985	-179,685,824	-40,671,316
	1 Yr FTP Liquidity	-493,794,326.66	-287,474,602	-187,594,449	-18,725,275
	1Yr Commercial Margin	595,721,782	166,125,403	378,215,940	51,380,439
	1 Yr Financial Margin	-388,927,482	39,749,382	-367,280,273	-59,396,591
Economic Capital					
	EC 100% Correlated	1,010,744,293	945,080,933	47,065,587	18,597,774
	EC Diversified Var Covar	824,035,679	785,099,346	30,763,193	16,299,421
	EC Diversified Copula	878,527,999	824,496,606	37,520,347	16,511,046
	Book Value	1,597,894,319	3,644,874,078	-1,976,819,973	-70,159,786
	Market Value	2,396,841,478	5,467,311,118	-2,965,229,960	-105,239,680
	Correlation Market/Credit	12.50%			
	Correlation Credit/ALM	20.00%			
	Correlation Market/ALM	15.00%			
	Target Rating	AA			
	Tier 1 Capital	369,685,084			
	Tier 1 Capital %	4.82%			
	Herfindahl Concentration	2.68%	3.32%	25.56%	19.55%
RAPM					
	RAROC (Earnings-based Net) 100% Correlated	19.97%	15.62%	121.11%	-14.79%
	RAROC (Total Return-based Net) 100% Correlated	6.70%	2.93%	79.50%	14.04%
	RAROC (Earnings-based Gross) 100% Correlated	32.00%	30.90%	53.68%	33.32%
	RAROC (Total Return-based Gross) 100% Correlated	18.73%	18.21%	12.06%	62.15%
	RAROC (Earnings-based Net) Diversified	24.50%	18.81%	185.29%	-16.88%
	RAROC (Total Return-based Net) Diversified	8.22%	3.53%	121.63%	16.01%
	RAROC (Earnings-based Gross) Diversified	39.26%	37.20%	82.12%	38.02%
	RAROC (Total Return-based Gross) Diversified	22.98%	21.92%	18.46%	70.91%
	SVA	201,893,563	147,642,970	57,001,799	-2,751,206
	Hurdle Rate	12.00%			

Concentration by Sector



"Strong concentration in 3 sectors:
- Financials
- Materials
- Industrials"

Exposure by rating for the different Amortization types



"High exposure to Fixed Bonds."

Concentration by region,
Concentration by business line,
....

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2. Historical views are provided to evaluate trends

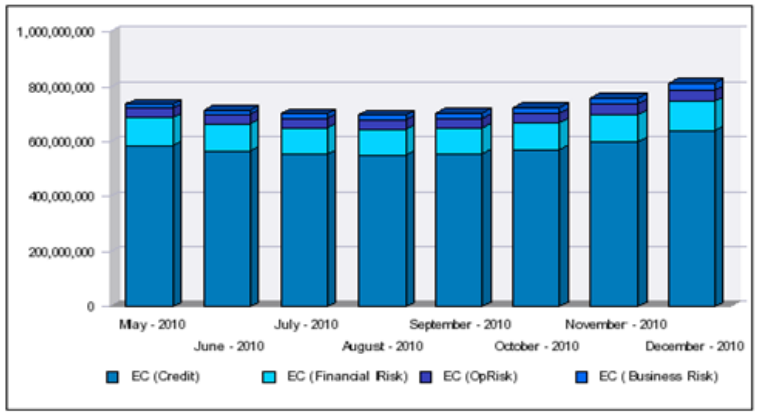
(CEO Dashboard)

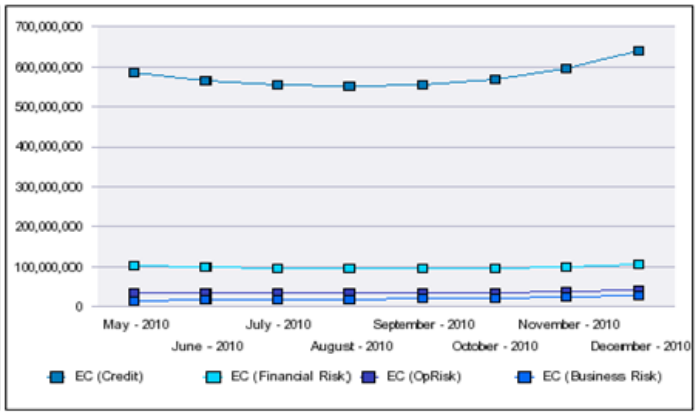
All Portfolio Hierarchy Level 1 | All Portfolio Hierarchy Level 2 | All Credit Rating | All Industry | All Region

KEY RISK INDICATORS

Trends in key Risk Indicators (Economic Capital components)

	May - 2010	June - 2010	July - 2010	August - 2010	September - 2010	October - 2010	November - 2010	December - 2010
Total EC	737,929,916	715,039,696	701,252,796	697,354,744	704,569,354	724,661,963	760,076,512	814,116,039
EC / Risk Appetite %	54.26%	52.58%	51.56%	51.28%	51.81%	53.29%	55.89%	59.86%
Divesification Benefit	16.35%	16.47%	16.59%	16.70%	16.80%	16.88%	16.93%	16.95%
Total Credit Risk	585,886,322	566,554,918	554,518,423	550,407,904	555,208,740	570,344,239	597,786,682	640,203,551
Credit Risk (EC) / Total EC %	79.40%	79.23%	79.08%	78.93%	78.80%	78.70%	78.65%	78.64%
Expected Loss (EL) / EAD bp	0.24	0.23	0.22	0.21	0.20	0.18	0.17	0.15
Credit Risk (EC) / EAD %	7.37%	7.37%	7.35%	7.31%	7.26%	7.21%	7.15%	7.09%
Probability of Default (PD) %	0.5248%	0.5103%	0.4910%	0.4668%	0.4377%	0.4045%	0.3681%	0.3297%
Financial Risk	102,120,682	98,827,176	96,633,832	95,591,918	95,793,431	97,379,193	100,549,622	105,578,931
Financial Risk / Total EC %	13.84%	13.82%	13.78%	13.71%	13.60%	13.44%	13.23%	12.97%
Operational Risk	34,632,502	33,626,681	33,111,514	33,127,761	33,740,292	35,043,705	37,169,871	40,297,959
Operational Risk / Total EC %	4.69%	4.70%	4.72%	4.75%	4.79%	4.84%	4.89%	4.95%
Business Risk	15,290,410	16,030,921	16,989,028	18,227,162	19,826,890	21,894,826	24,570,337	28,035,597
Busniness Risk / Total EC %	2.07%	2.24%	2.42%	2.61%	2.81%	3.02%	3.23%	3.44%





"Historical data can show trends that put current results in perspective: mainly the Credit Component within the Economical Capital calculation has been increasing over the last months."

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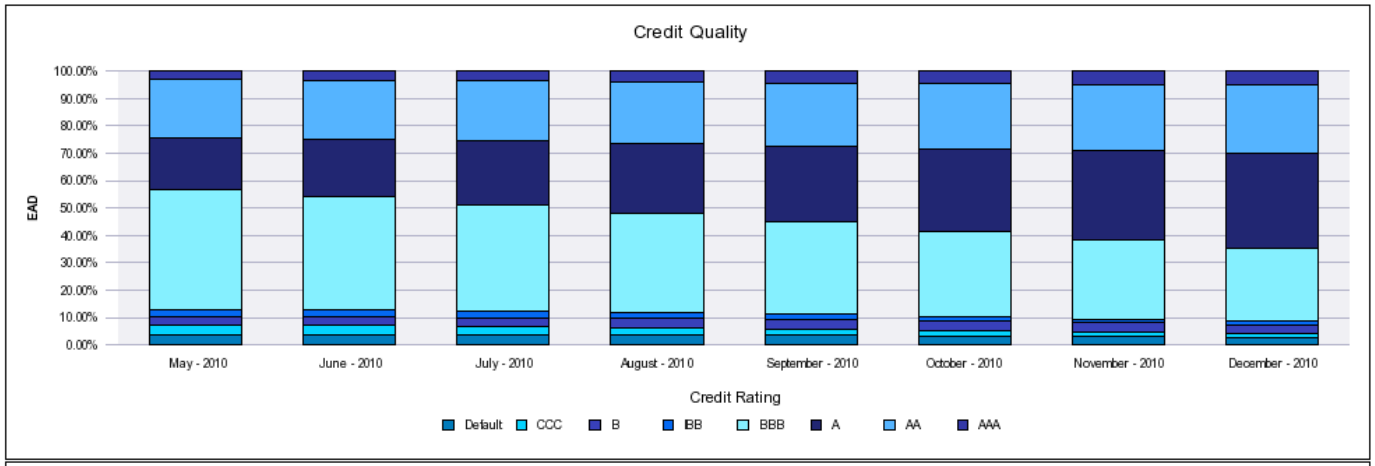
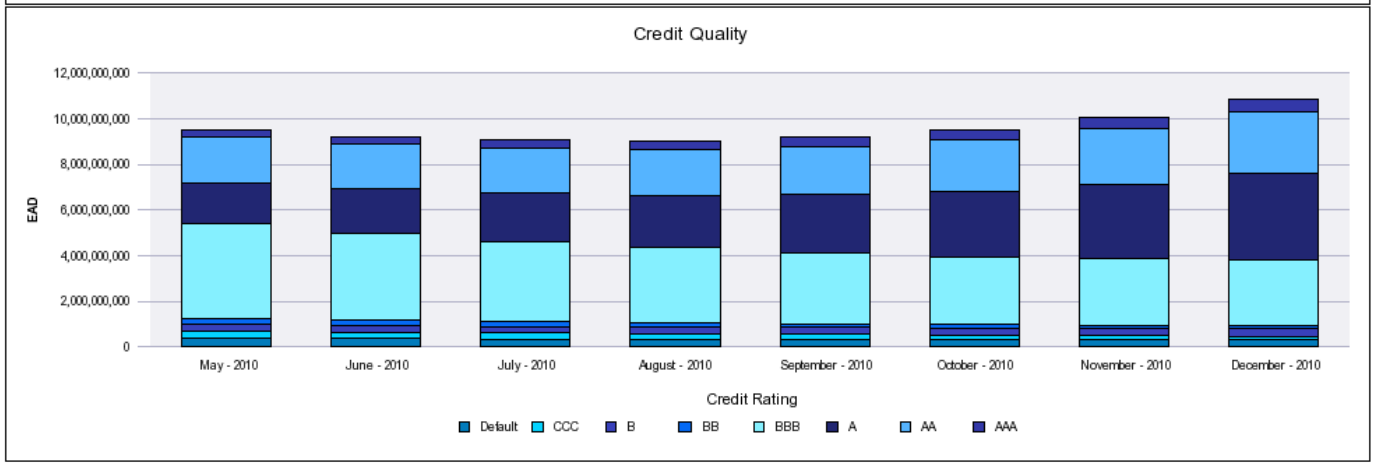
2.A. Historical trends: Drilling down into Credit Risk (CEO Dashboard)

All Portfolio Hierarchy Level 1 | All Portfolio Hierarchy Level 2 | All Industry

B2 Credit Portfolio - Credit Quality





Trend analysis of the Credit Portfolio:

"The portfolio has been moving towards higher quality counterparties, and this in relative as well as absolute terms."

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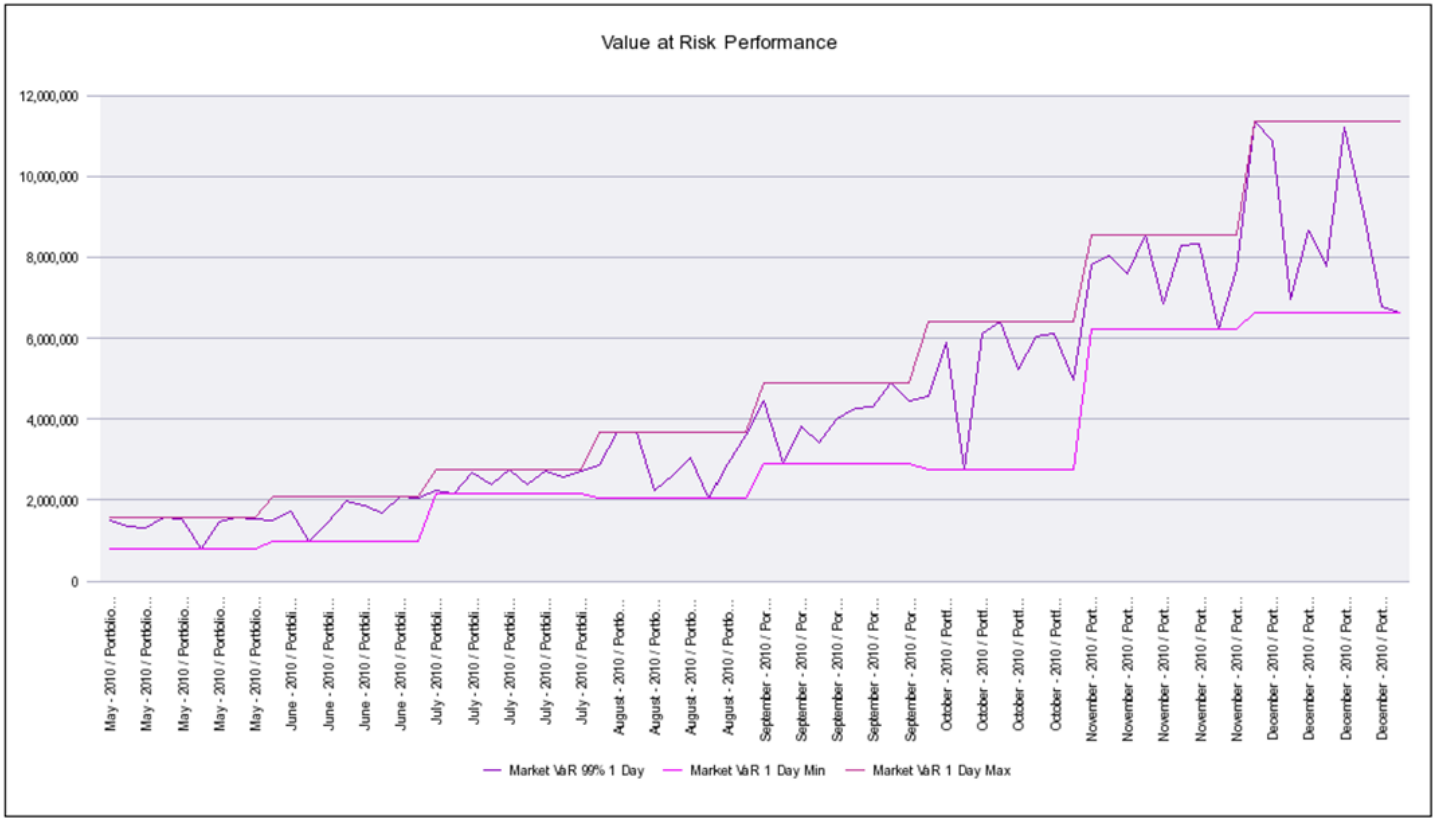
2.B. Historical trends: Drilling down into Market Risk (CEO Dashboard)

All Portfolio Hierarchy Level 1 | All Portfolio Hierarchy Level 2 | All Region

C2 Market VaR



Trend analysis of the Market Risk:

"Clear increase of VaR values, as well as volatility of the VaR figures (spread min. versus max.):
- More volatile market.
- More position taking / shifting of positions."

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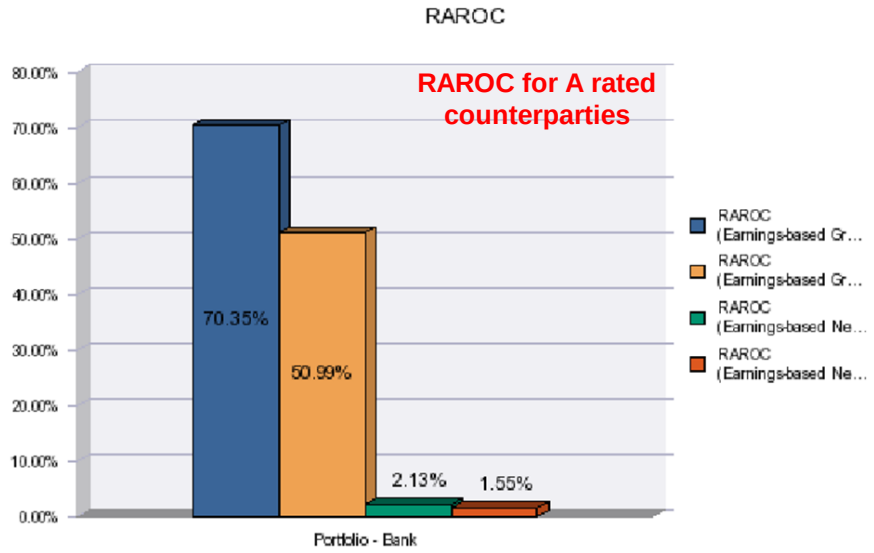
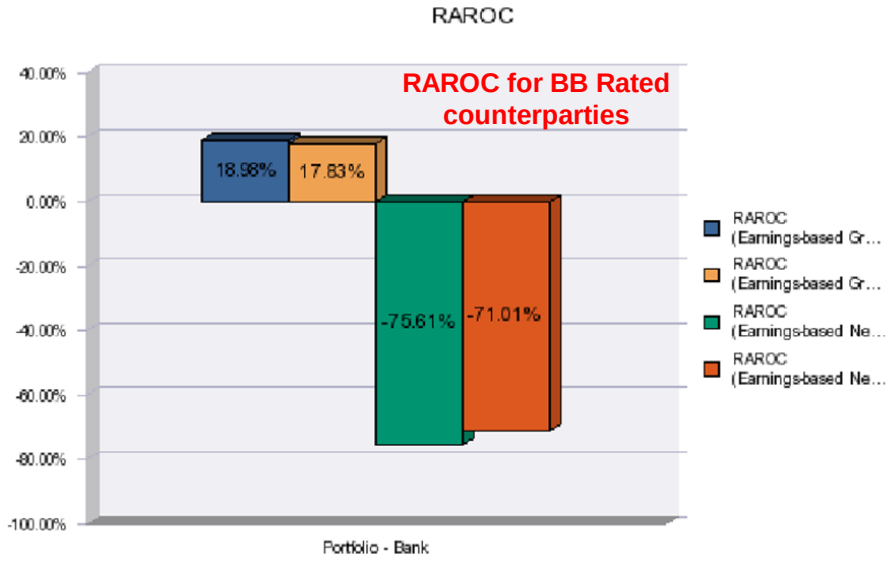
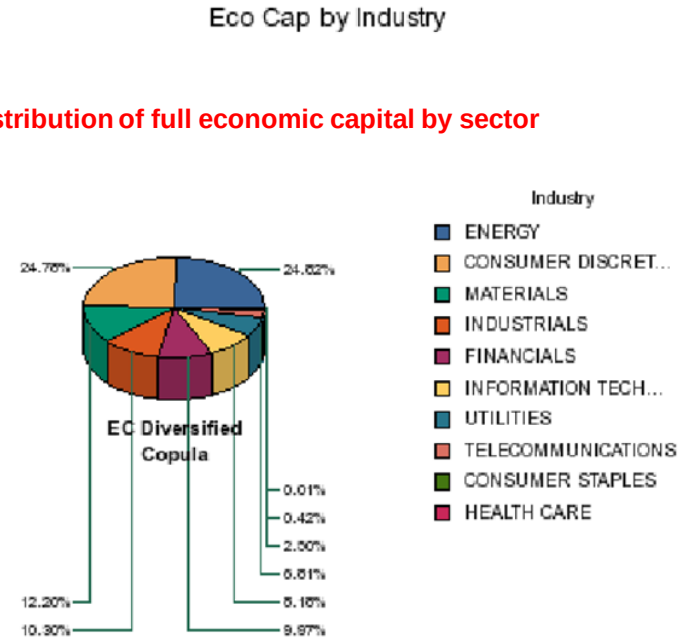
3.A. Drill down into the Risk/Return (CEO Dashboard)







Risk/Return Analysis based on RAROC:

"Capital consumption is clearly concentrated in 2 industries: energy and Consumer Discretionary.

While on gross basis all counterparties seem profitable, on net basis (after costs: green and orange bars) only the high quality counterparties are profitable."

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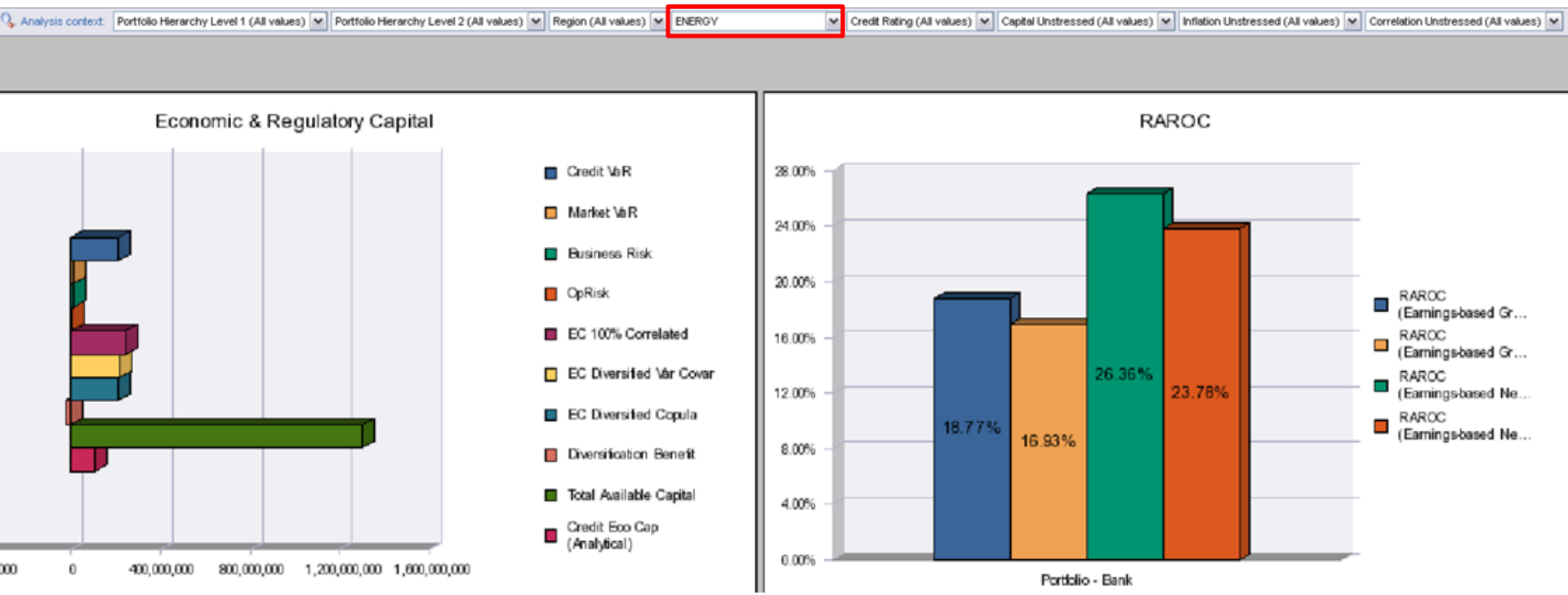
3.B. Drill down into the Risk/Return (CEO Dashboard)

Risk/Return analysis for the Energy sector.



"Yet when drilling down into the energy sector, we can see that it is profitable in terms of RAROC."

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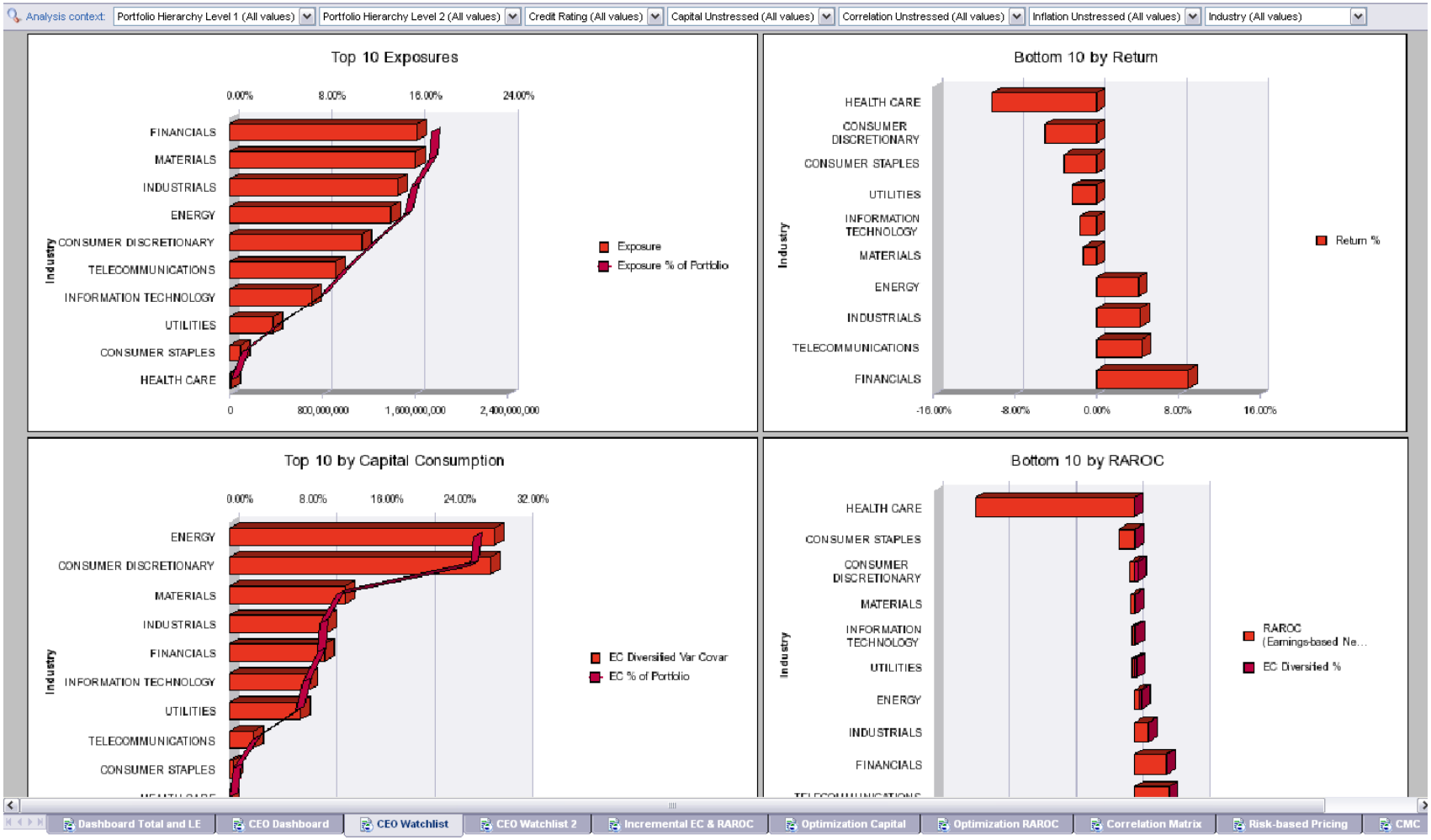
4.A. Spot the main business concerns (CEO Watch-List)

CEO watch-list report



"The risk and return profile are clearly different for the different industries. Health Care is the worst performer and therefore the exposure has been strongly reduced. Energy and Consumer Discretionary need special attention: they are taking a large part of the Capital Consumption while their return is not excelling."

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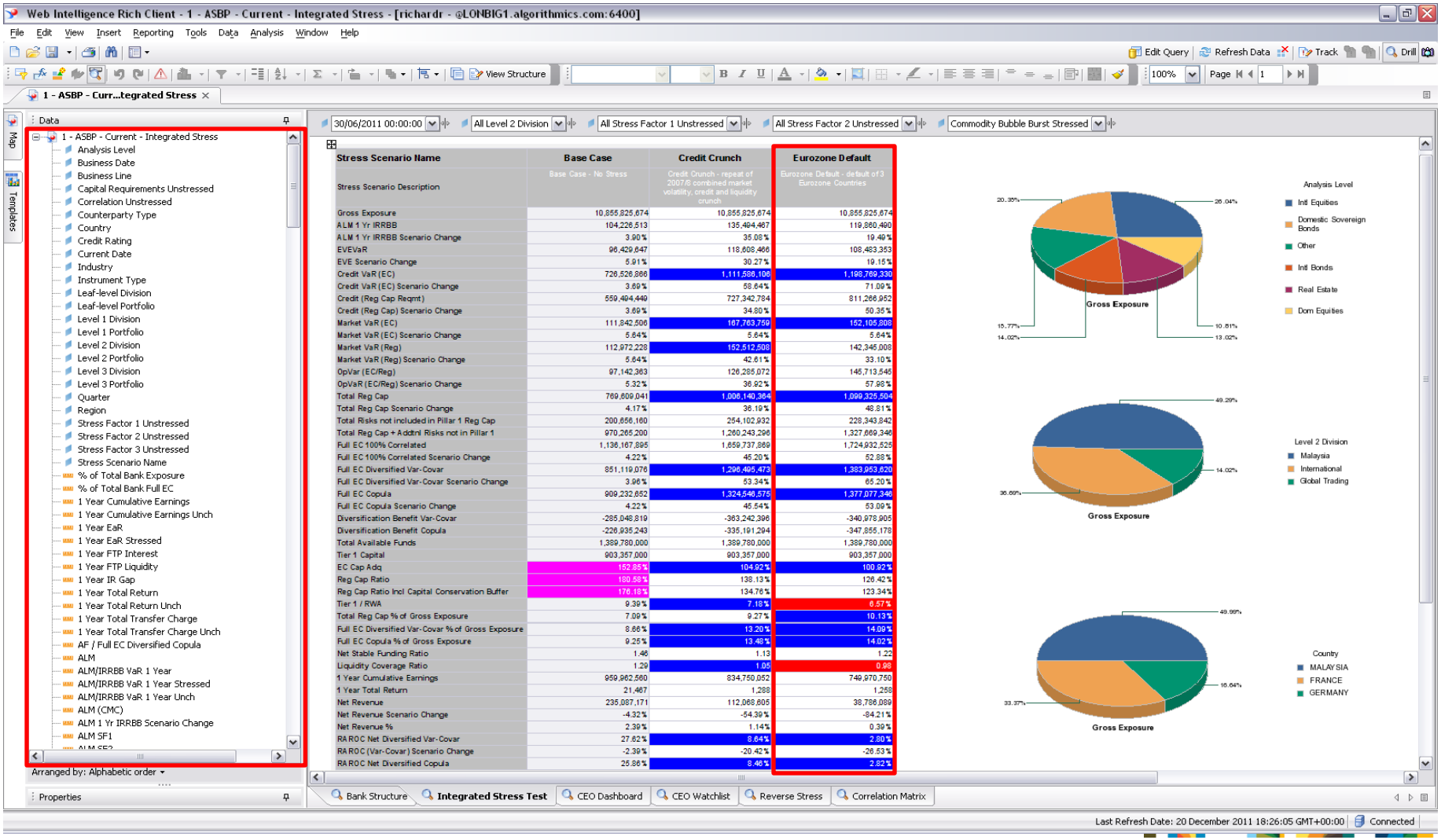
4.B. Integrated Stress Testing – Risk Appetite and Profitability



Stress Scenario Name	Base Case	Credit Crunch	Eurozone Default
Stress Scenario Description	Base Case - No Stress	Credit Crunch - repeat of 2007/8 combined market volatility, credit and liquidity crunch	Eurozone Default - default of 3 Eurozone Countries
Gross Exposure	10,855,825,674	10,855,825,674	10,855,825,674
ALM 1 Yr IRRBB	104,226,513	135,494,467	119,860,490
ALM 1 Yr IRRBB Scenario Change	3.90%	35.08%	19.40%
EVEVaR	96,429,647	118,608,466	108,483,353
EVE Scenario Change	5.91%	30.27%	19.15%
Credit VaR (EC)	726,526,866	1,111,586,106	1,198,769,330
Credit VaR (EC) Scenario Change	3.69%	58.64%	71.09%
Credit (Reg Cap Reqmt)	559,494,449	727,342,784	811,266,952
Credit (Reg Cap) Scenario Change	3.69%	34.80%	50.35%
Market VaR (EC)	111,842,506	167,763,759	152,105,809
Market VaR (EC) Scenario Change	5.64%	5.64%	5.64%
Market VaR (Reg)	112,972,228	152,512,508	142,345,008
Market VaR (Reg) Scenario Change	5.64%	42.61%	33.10%
OpVar (EC/Reg)	97,142,363	126,285,072	145,713,545
OpVaR (EC/Reg) Scenario Change	5.32%	36.92%	57.98%
Total Reg Cap	769,809,041	1,006,140,364	1,099,325,504
Total Reg Cap Scenario Change	4.17%	36.19%	48.81%
Total Risks not included in Pillar 1 Reg Cap	200,656,160	254,102,932	228,343,842
Total Reg Cap + Addtnl Risks not in Pillar 1	970,265,200	1,260,243,296	1,327,669,346
Full EC 100% Correlated	1,136,167,895	1,659,737,869	1,724,932,525
Full EC 100% Correlated Scenario Change	4.22%	45.20%	52.88%
Full EC Diversified Var-Covar	851,119,076	1,296,495,473	1,383,953,820
Full EC Diversified Var-Covar Scenario Change	3.96%	53.34%	65.20%
Full EC Copula	909,232,652	1,324,546,575	1,377,077,346
Full EC Copula Scenario Change	4.22%	45.54%	53.09%
Diversification Benefit Var-Covar	-285,048,819	-363,242,396	-340,978,905
Diversification Benefit Copula	-226,935,243	-335,191,294	-347,855,178
Total Available Funds	1,389,780,000	1,389,780,000	1,389,780,000
Tier 1 Capital	903,357,000	903,357,000	903,357,000
EC Cap Adq	152.85%	104.92%	100.92%
Reg Cap Ratio	180.58%	138.13%	126.42%
Reg Cap Ratio Incl Capital Conservation Buffer	176.18%	134.76%	123.34%
Tier 1 / RWA	9.39%	7.18%	6.57%
Total Reg Cap % of Gross Exposure	7.09%	9.27%	10.13%
Full EC Diversified Var-Covar % of Gross Exposure	8.66%	13.20%	14.09%
Full EC Copula % of Gross Exposure	9.25%	13.48%	14.02%
Net Stable Funding Ratio	1.46	1.13	1.22
Liquidity Coverage Ratio	1.29	1.05	0.96
1 Year Cumulative Earnings	959,962,560	834,750,052	749,970,750
1 Year Total Return	21,467	1,288	1,258
Net Revenue	235,087,171	112,068,805	38,786,089
Net Revenue Scenario Change	-4.32%	-54.39%	-84.21%
Net Revenue %	2.39%	1.14%	0.39%
RAROC Net Diversified Var-Covar	27.62%	8.64%	2.80%
RAROC (Var-Covar) Scenario Change	-2.39%	-20.42%	-26.53%
RAROC Net Diversified Copula	25.86%	8.46%	2.82%

"And what happens in case of an escalation of the European Debt Crisis? What if 3 countries default? Our Credit VaR would increase with 72% leading to an increase in Regulatory and Economic Capital of about 50%. All this will lead to a breach of the Liquidity Ratio (below 100%) and a Tier 1 Minimum capital Ration bearly above 6%.

4. Optimization Process

Analysis context: Portfolio Hierarchy Level 1 (All values) | Portfolio Hierarchy Level 2 (All values) | Credit Rating (All values) | Industry (All values) | Region (All values) | Capital Unstressed (All values) | Inflation Unstressed (All values) | Correlation Unstressed (All values)

Exposure	9,313,410,943
Increment Amount	9,313,411
Increment %	0.10%
EC Diversified Var Covar	813,656,780
EC Diversified %	8.74%
Return %	2.17%
RAROC (Earnings-based Net) Diversified	24.81%

RAROC Optimization matrix

INVEST \ DIVEST	CONSUMER DISCRETIONARY XYZBank Portfolio	CONSUMER DISCRETIONARY XYZBank UK Portfolio	CONSUMER STAPLES XYZBank Portfolio	ENERGY XYZBank Portfolio	ENERGY XYZBank USA Portfolio	FINANCIALS XYZBank Portfolio	HEALTH CARE XYZBank Portfolio	INDUSTRIALS XYZBank Portfolio	INDUSTRIALS XYZBank UK Portfolio	INDUSTRIALS XYZBank USA Portfolio	INFORMATION TECHNOLOGY XYZBank Portfolio	INFORMATION TECHNOLOGY XYZBank UK Portfolio	INFORMATION TECHNOLOGY XYZBank USA Portfolio	MATERIALS XYZBank Portfolio	MATERIALS XYZBank UK Portfolio	MATERIALS XYZBank USA Portfolio	TELECOMMUNICATIONS XYZBank Portfolio	TELECOMMUNICATIONS XYZBank USA Portfolio	UTILITIES XYZBank Portfolio
CONSUMER DISCRETIONARY XYZBank Portfolio	0.00%	-0.05%	-0.07%	-0.12%	-0.04%	-0.20%	0.00%	-0.10%	-0.34%	-0.09%	-0.05%	-0.11%	-0.11%	-0.07%	-0.10%	-0.14%	-0.17%	-0.11%	-0.04%
CONSUMER DISCRETIONARY XYZBank UK Portfolio	0.05%	0.00%	-0.02%	-0.07%	0.02%	-0.15%	0.06%	-0.04%	-0.29%	-0.04%	0.00%	-0.05%	-0.06%	-0.02%	-0.04%	-0.08%	-0.12%	-0.05%	0.01%
CONSUMER STAPLES XYZBank Portfolio	0.07%	0.02%	0.00%	-0.05%	0.03%	-0.13%	0.07%	-0.03%	-0.27%	-0.02%	0.02%	-0.04%	-0.04%	-0.00%	-0.03%	-0.07%	-0.10%	-0.04%	0.03%
ENERGY XYZBank Portfolio	0.12%	0.07%	0.05%	0.00%	0.09%	-0.08%	0.13%	0.03%	-0.22%	0.03%	0.07%	0.02%	0.01%	0.05%	0.03%	-0.01%	-0.05%	0.02%	0.08%
ENERGY XYZBank USA Portfolio	0.04%	-0.02%	-0.03%	-0.09%	0.00%	-0.17%	0.04%	-0.06%	-0.31%	-0.06%	-0.01%	-0.07%	-0.08%	-0.04%	-0.06%	-0.10%	-0.13%	-0.07%	-0.01%
FINANCIALS XYZBank Portfolio	0.20%	0.15%	0.13%	0.08%	0.17%	0.00%	0.21%	0.11%	-0.14%	0.11%	0.15%	0.10%	0.09%	0.13%	0.10%	0.07%	0.03%	0.10%	0.16%
HEALTH CARE XYZBank Portfolio	-0.00%	-0.06%	-0.07%	-0.13%	-0.04%	-0.21%	0.00%	-0.10%	-0.35%	-0.10%	-0.05%	-0.11%	-0.12%	-0.08%	-0.10%	-0.14%	-0.17%	-0.11%	-0.05%
INDUSTRIALS XYZBank Portfolio	0.10%	0.04%	0.03%	-0.03%	0.06%	-0.11%	0.10%	0.00%	-0.25%	0.00%	0.05%	-0.01%	-0.02%	0.02%	-0.00%	-0.04%	-0.07%	-0.01%	0.05%
INDUSTRIALS XYZBank UK Portfolio	0.34%	0.29%	0.27%	0.22%	0.31%	0.14%	0.35%	0.25%	0.00%	0.25%	0.29%	0.24%	0.23%	0.27%	0.24%	0.21%	0.17%	0.24%	0.30%
INDUSTRIALS XYZBank USA Portfolio	0.09%	0.04%	0.02%	-0.03%	0.06%	-0.11%	0.10%	-0.00%	-0.25%	0.00%	0.04%	-0.01%	-0.02%	0.02%	-0.00%	-0.04%	-0.07%	-0.01%	0.05%
INFORMATION TECHNOLOGY XYZBank Portfolio	0.05%	-0.00%	-0.02%	-0.07%	0.01%	-0.15%	0.05%	-0.05%	-0.29%	-0.04%	0.00%	-0.06%	-0.06%	-0.02%	-0.05%	-0.09%	-0.12%	-0.06%	0.01%
INFORMATION TECHNOLOGY XYZBank UK Portfolio	0.11%	0.05%	0.04%	-0.02%	0.07%	-0.10%	0.11%	0.01%	-0.24%	0.01%	0.06%	0.00%	-0.01%	0.03%	0.01%	-0.03%	-0.06%	-0.00%	0.06%
INFORMATION TECHNOLOGY XYZBank USA Portfolio	0.11%	0.06%	0.04%	-0.01%	0.08%	-0.09%	0.12%	0.02%	-0.23%	0.02%	0.06%	0.01%	0.00%	0.04%	0.01%	-0.02%	-0.06%	0.01%	0.07%
MATERIALS XYZBank Portfolio	0.07%	0.02%	0.00%	-0.05%	0.04%	-0.13%	0.08%	-0.02%	-0.27%	-0.02%	0.02%	-0.03%	-0.04%	0.00%	-0.03%	-0.06%	-0.10%	-0.03%	0.03%
MATERIALS XYZBank UK Portfolio	0.10%	0.04%	0.03%	-0.03%	0.06%	-0.10%	0.10%	0.00%	-0.24%	0.00%	0.05%	-0.01%	-0.01%	0.03%	0.00%	-0.04%	-0.07%	-0.01%	0.05%
MATERIALS XYZBank USA Portfolio	0.14%	0.09%	0.07%	0.01%	0.10%	-0.07%	0.14%	0.04%	-0.21%	0.04%	0.09%	0.03%	0.02%	0.06%	0.04%	0.00%	-0.03%	0.03%	0.09%
TELECOMMUNICATIONS XYZBank Portfolio	0.17%	0.12%	0.10%	0.05%	0.13%	-0.03%	0.17%	0.07%	-0.17%	0.07%	0.12%	0.06%	0.06%	0.10%	0.07%	0.03%	0.00%	0.06%	0.13%
TELECOMMUNICATIONS XYZBank USA Portfolio	0.11%	0.05%	0.04%	-0.02%	0.07%	-0.10%	0.11%	0.01%	-0.24%	0.01%	0.06%	0.00%	-0.01%	0.03%	0.01%	-0.03%	-0.06%	0.00%	0.06%
UTILITIES XYZBank Portfolio	0.04%	-0.01%	-0.03%	-0.08%	0.01%	-0.16%	0.05%	-0.05%	-0.30%	-0.05%	-0.01%	-0.06%	-0.07%	-0.03%	-0.05%	-0.09%	-0.13%	-0.06%	0.00%

"Algo Strategic Business Planning" not only identifies a winning strategy but will also provide insight into the portfolio changes that will lead to an optimal use of economic capital.

The RAROC Optimization Matrix will show the projected effect on overall RAROC of "swapping" out of some portfolios (shown in red for intuitive clarity), and into those shown in green.

In this case the CRO might find that divesting from the consumer discretionary sector with healthcare and some energy and utilities portfolios, and expanding more into some industrials and financials portfolios, would improve profitability.

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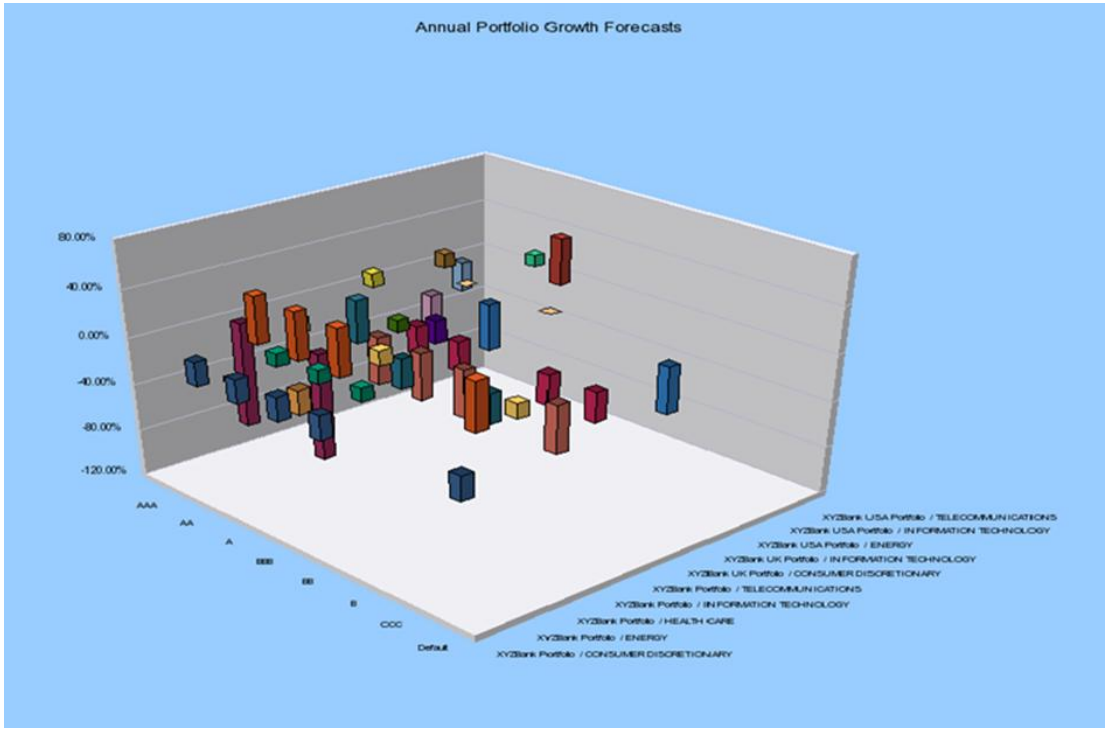
5. Forecasting and Planning



Granular view of portfolio growth scenarios

"Let's now use the results of the optimization analysis to evaluate certain business strategies. Starting from the following rules for the lending policy in the next 3 years:

- we grow exposures in two to three years' time in line with the optimization results (see above) and
- we maintain the current full economic capital levels
- while we continually improving return and RAROC.

What growth rates can we expect in the different sectors?"

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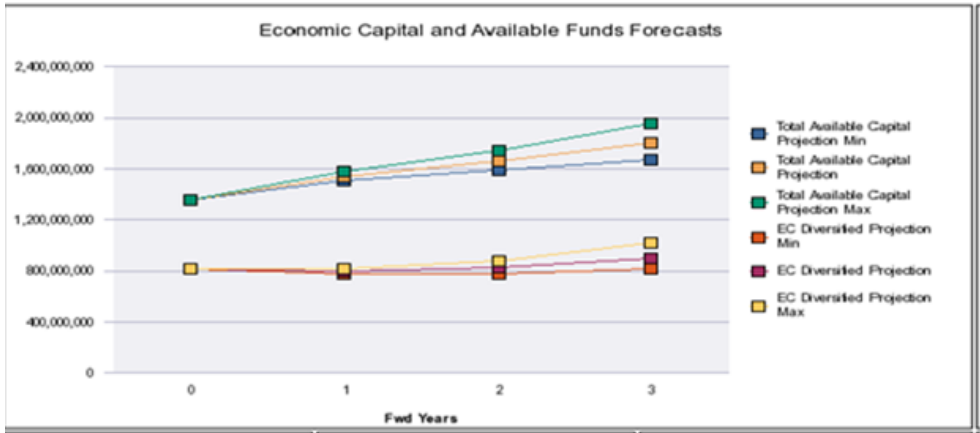
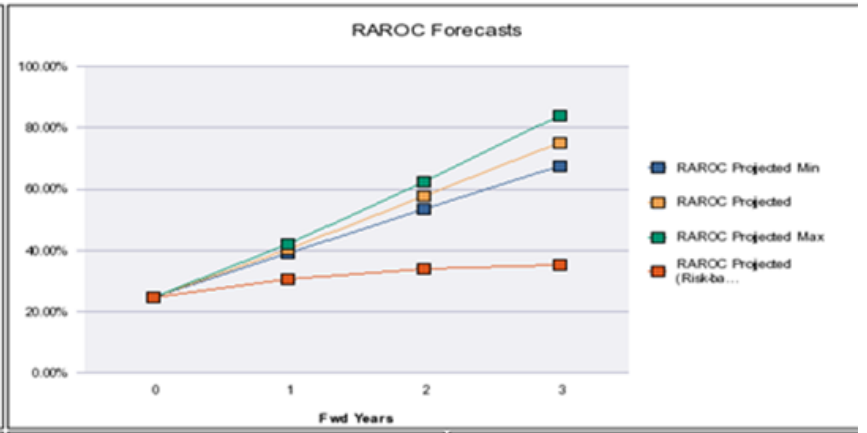
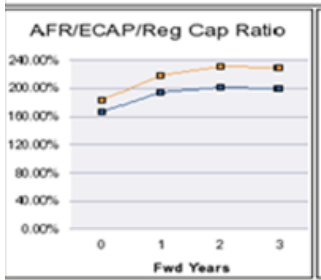
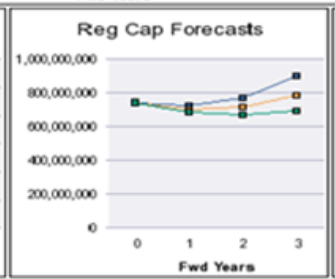
Forecasting, Planning, Risk-based Limits and Impact Assessment

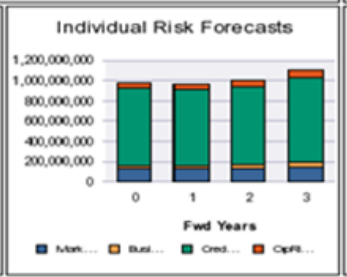
Projected impact of portfolio changes, based on the same business strategies.

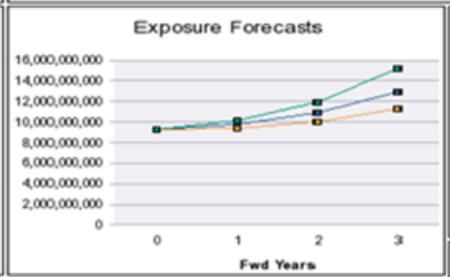




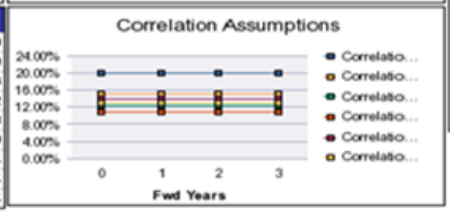


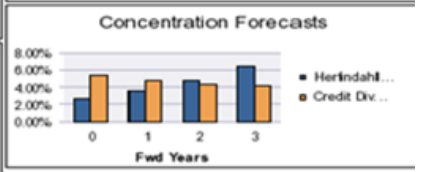






Fwd Years	0	1	2	3
Total Available Capital Projection Min	1,359,967,150	1,508,169,887	1,584,389,029	1,670,211,349
Total Available Capital Projection	1,359,967,150	1,542,104,276	1,658,099,957	1,800,495,260
Total Available Capital Projection Max	1,359,967,150	1,576,176,719	1,739,855,884	1,958,701,316
EC Diversified Projection Min	812,796,972	772,969,568	774,567,558	814,801,762
EC Diversified Projection	812,796,972	793,501,802	821,040,893	899,922,803
EC Diversified Projection Max	812,796,972	815,572,067	877,685,321	1,016,798,000
AFR/ECAP Ratio	167.32%	194.34%	201.95%	200.07%
AFR/Reg Cap	182.89%	218.94%	231.31%	229.75%
EC % Projection	8.73%	8.16%	7.54%	6.95%





Growth Factor Min	-2.46%
Growth Factor	0.72%
Growth Factor Max	3.71%

"based on our business strategy Economic Capital stays steady while Capital Adequacy improves year after year: RAROC grows from 20 to 80% in 3 years and revenue grows healthily.
Concentration grows in terms of exposures, but when default rates and correlations are considered there is no significant increase, and diversification actually improves through the re-balancing of the portfolio."

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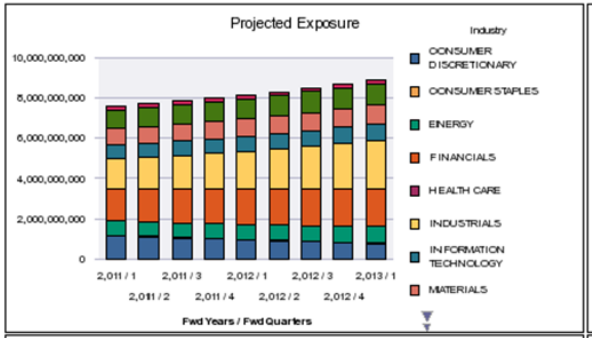
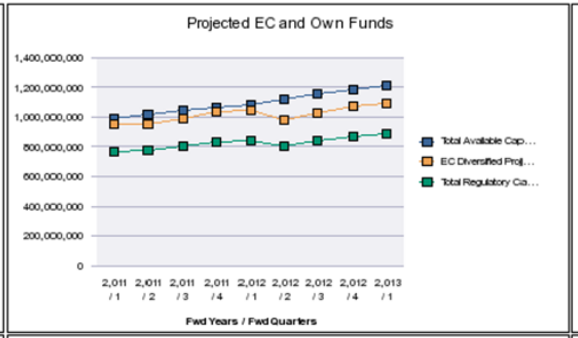
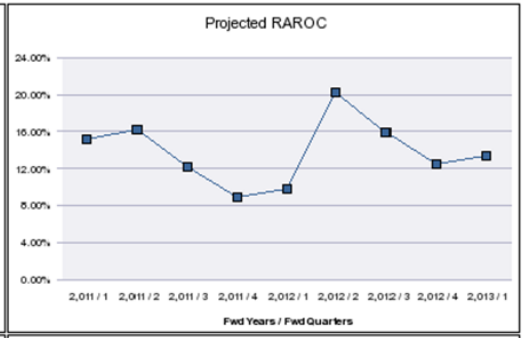
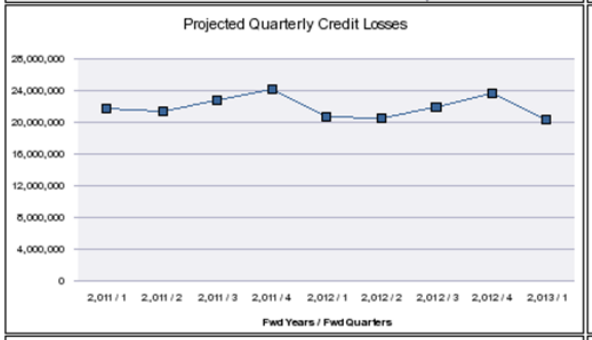
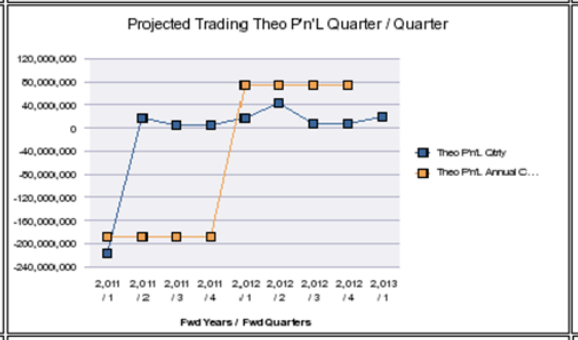
Stress Testing

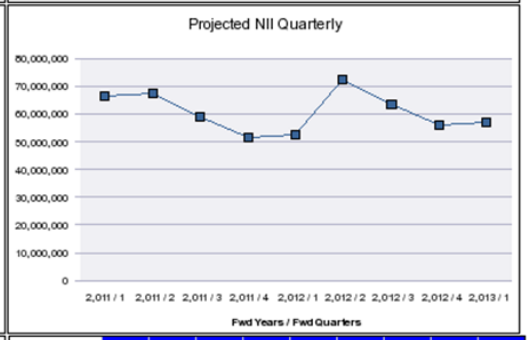


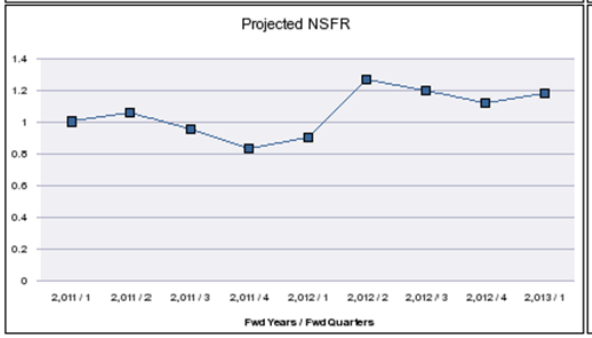


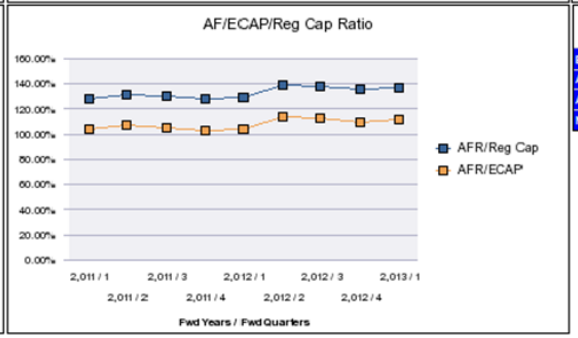












Risk-Based Limits	2011 Q1	2011 Q2	2011 Q3	2011 Q4	2012 Q1	2012 Q2	2012 Q3	2012 Q4	2013 Q1
EC%	12.52%	12.38%	12.67%	12.97%	12.83%	11.94%	12.12%	12.40%	12.27%
AFR/ECAP	1.04	1.07	1.05	1.03	1.04	1.14	1.12	1.1	1.11
AFR/Reg Cap	1.29	1.32	1.3	1.28	1.29	1.39	1.38	1.35	1.37
NSFR	1	1.06	0.95	0.83	0.91	1.27	1.2	1.12	1.18

Projected impacts under Stess scenarios

"And what happens in case of a potential for a double dip recession and commodity bubble burst?
The effect on liquidity ratios would now also be considered. The combination of both scenarios might produce undesired results, such as the concentration in commodity-related trading and lending activities hitting profitability, capital adequacy, liquidity and breaking risk-based limits on full economic capital."

So how to make sure the institution will survive?

- Full and complete picture of all activities and exposures of the institution

- Clear understanding of each of the risks:
  - What is their impact on the business?
  - How do they interact?

- Full understanding of the dynamics of the market:
  - Strong interdependencies (systemic risk) => nobody can stay on the sideline
  - What if “Bussiness as usual”, but also
  - What if a Crisis occurs => be prepared for the worst: Stress Testing

- Business Planning and Forecasting: make sure you have the decision making tools
  - to find a winning business strategy
  - to optimally use your capital

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The Question?

Algo Strategic Business Planning enables banks to:

- A. Monitor risk-set limits at multiple levels across the organization
- B. Perform risk/return analysis at for your trading book.
- C. Forecast capital adequacy requirements and profitability for your bank-wide strategic decisions

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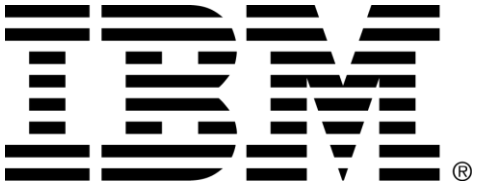

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