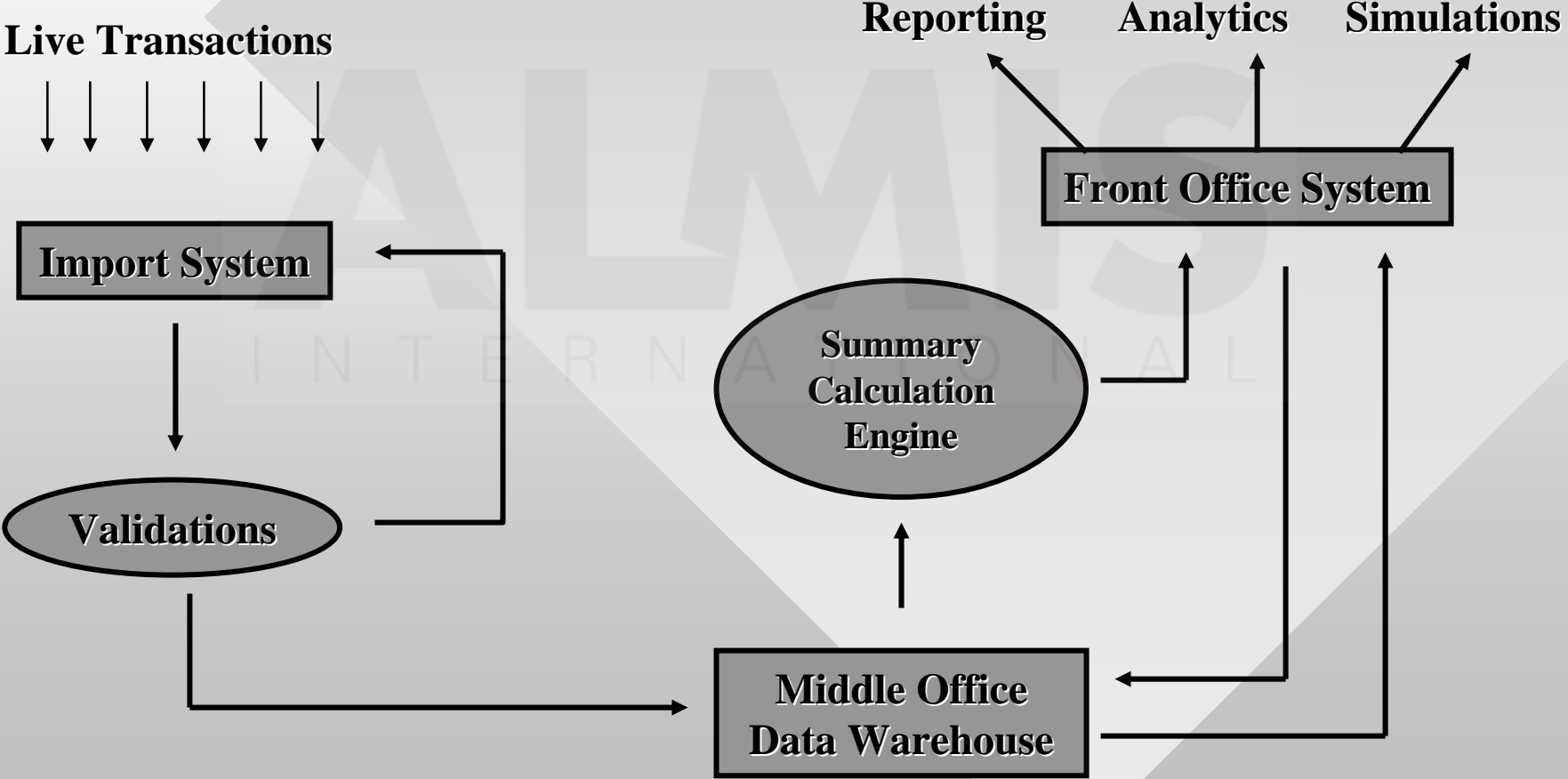


System Overview

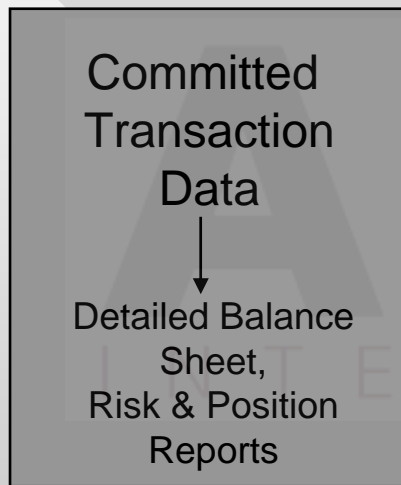
ALMIS
INTERNATIONAL

System Overview

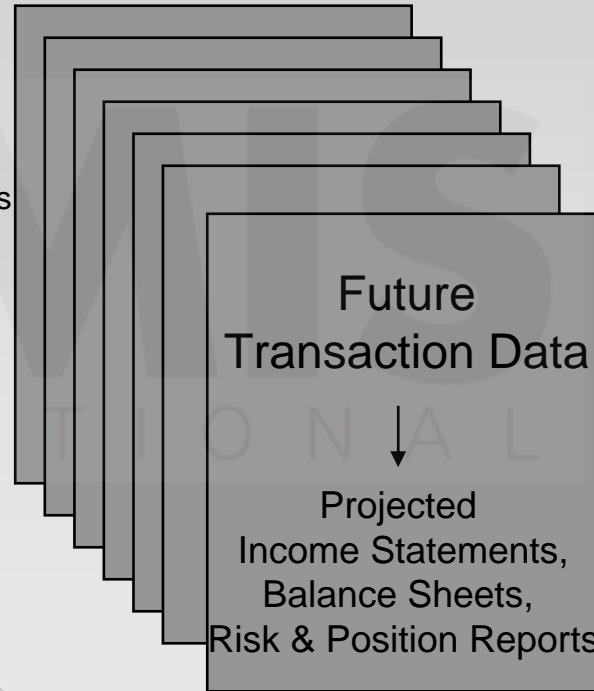


Asset liability risk by portfolios

Current Balance Sheet



Future Assumptions



Committed (Static) Analysis
Step 1

Forward Looking (Dynamic) Analysis
Step 2

Quantification Methodology

ALMIS
INTERNATIONAL

What is ALM

- Controllers tell us where we have been
- Budgeting tells us where we want to go
- ALM tells us how we are going to get there!

Quantification Methods

Committed
(Static)

Dynamic
(Forward Looking)

Market Value



Income



Risk Quantification Methods

- 'Position'
 - A \$10m long position
- 'What-If'
 - Effect of interest rates rising by 1%
- 'Worst Case'
 - The worst outcome possible assuming 99% confidence in the next 10 days
- 'Simulation'
 - A full range or distribution of possible outcomes

At least 16 techniques

Committed
(Static)

Dynamic
(Forward Looking)

Market Value

Position
What – If
Worst Case
Simulation

Position
What – If
Worst Case
Simulation

Income

Position
What – If
Worst Case
Simulation

Position
What – If
Worst Case
Simulation

Committed (Static) Risk

- Margin and balance sheet
- Gap reports
- Millimonths and committed earnings sensitivity
- Market Value Gap and Value at Risk

Margin and Balance Sheet

- Not a risk report
- Highlights the current balance sheet balances (including off-balance sheet instruments)
- Highlights current yields and margins

Margin & Balance Sheet Report

Total balance including interest accrual

Weighted average effective annualised interest rate

Total balance excluding interest accrual

Weighted average interest rate of interest items

The daily interest earned or paid
 = interest balance * Ave Rate / days basis (eg 360)

= Net Margin * days basis (eg 360) / Total interest assets

= Net Margin * days basis / Total accounting assets

Product Name	Accounting Balance (000's)	CAR/APR Rate %	Interest Balance (000's)	Ave Rate %	Daily Margin
ASSETS:					
Disponibilidades	196,246	6.32	196,246	6.13	33,435
Cartera de Credito Vigente	8,168,438	8.20	8,009,883	8.00	1,780,518
Instrumentos Financieros	3,950	5.07	3,950	4.98	546
Cartera de Credito Vencida	211,204	5.76	211,144	5.65	33,158
Otros Activos	-574,824	0.00	0	0.00	0
Total Assets	8,005,014	8.67	8,421,223	7.90	1,847,657
LIABILITIES:					
Captacion	7,201,878	6.30	7,062,433	6.89	1,352,386
Creditos Diferidos	1,367	0.00	0	0.00	0
Obligaciones	114,739	0.00	0	0.00	0
Total Liabilities	7,317,984	6.20	7,062,433	6.89	1,352,386
HEDGES:					
Swaps Receivable	2,670,693	7.42	2,670,693	7.42	550,763
Swaps Payable	2,670,693	6.90	2,670,693	6.90	-511,593
Forwards y FX Swaps	-442,657	7.03	-442,657	7.03	-113,926
Total Hedges	2,228,036	6.74	2,228,036	6.74	-74,756
Net Margin :		1.97		0.89	420,515
Margin Over Interest Assets					1.80
Margin Over Total Assets					1.89

Copy

Paste

Print

Summary
 Detail

Done

Gap Reports

- Break even cumulative
- Break even periodic
- Rolling gap cumulative
- Rolling gap periodic

Gap analysis

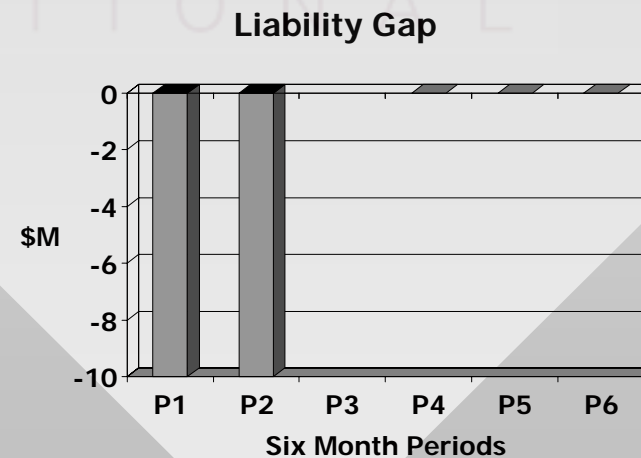
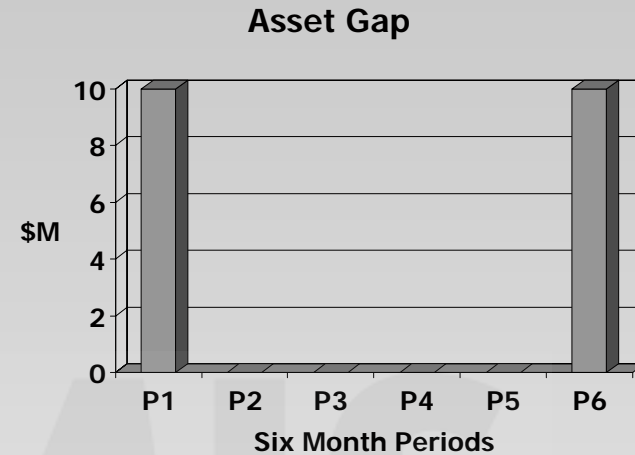
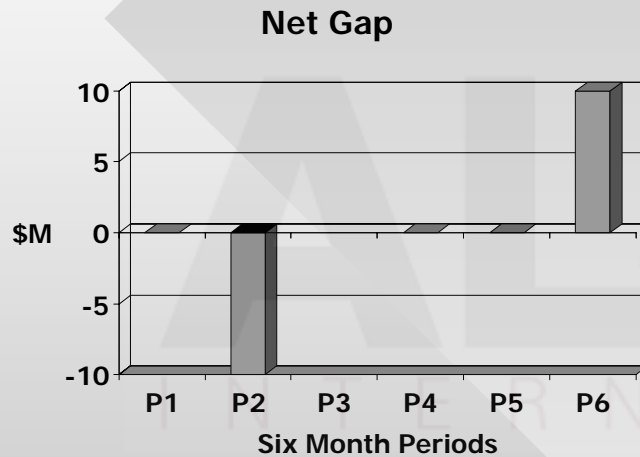
- Simplest method of measuring interest rate risk
- Basis of regulatory reports
- Analysis re-pricing profile of assets and liabilities
- Re-pricing means the earliest possibility of a change to interest rates

Gap reporting

Example - Very simple balance sheet

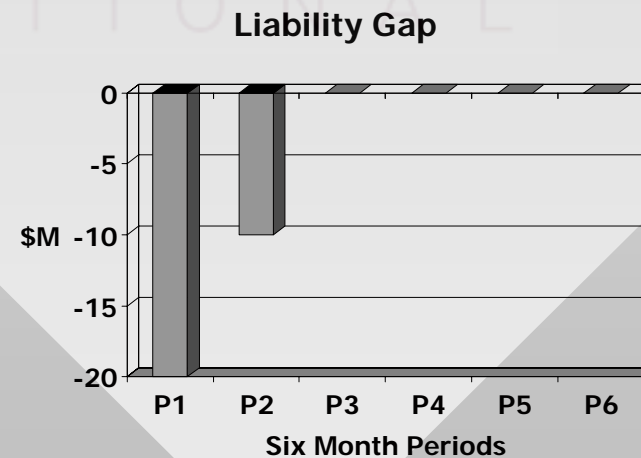
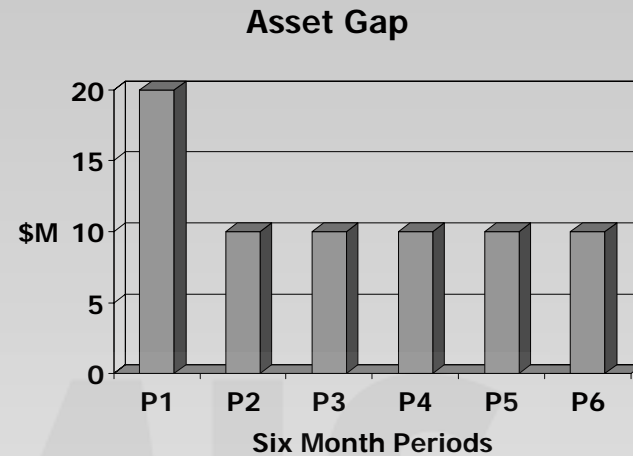
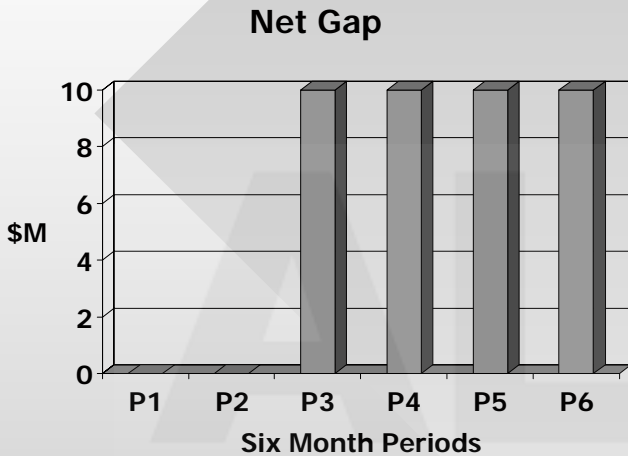
Assets	Loan 1	\$10m	1 Mths Libor
	Loan 2	\$10m	Fixed 3 Years
Liabilities	Funding 1	\$10m	1 Mth Libor
	Funding 2	\$10m	Fixed 1 Year

Periodic Gap



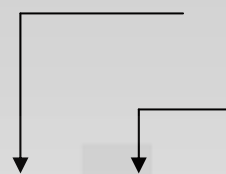
- Period Gap shows Market Value position
- Positive Gap equals exposure to rising rates
- Negative Gap equals exposure to falling rates
- If rates rise the value of our three year asset will be less
- If rates fall the value of our one year liability will be more

Cumulative Gap



- Cumulative Gap shows Earnings position
- Positive Gap equals exposure to rising rates
- Negative Gap equals exposure to falling rates
- If rates rise our earnings will fall in P3 to P6

Break even periodic



Periodic Gap in each time period for each product
 Weighted average rate of items which re-price in each time period for each product

Category Name	Value (000's)	Ave %	07/07/98 Value	%	14/07/98 Value	%	21/07/98 Value	%	28/07/98 Value
ASSETS:									
Disponibilidades	196,246	6.13	133,996	6.01	0	0.00	22,250	6.68	20,000
Cartera de Credito Vigente	8,168,438	8.00	367,929	7.00	189,430	8.12	193,785	8.33	266,332
Instrumentos Financieros	3,950	4.98	0	0.00	0	0.00	0	0.00	0
Cartera de Credito Vencida	211,204	5.65	17,095	4.80	22,850	5.63	21,028	5.44	15,330
Otros Activos	-574,824	0.00	-574,824	0.00	0	0.00	0	0.00	0
Assets Before Hedging:	8,005,014	8.47	-55,803	-62.04	212,279	7.85	237,063	7.92	301,663
HEDGED ASSETS:									
Swaps	2,670,693	7.42	0	0.00	3,441	6.50	357,094	8.24	0
Forwards y FX Swaps	-442,657	-11.31	606,207	7.51	0	0.00	1,231	0.00	6,800
Total Assets	10,233,051	9.05	550,403	14.56	215,720	7.83	595,388	8.10	308,463
LIABILITIES:									
Captacion	7,201,878	7.89	4,390	0.00	0	0.00	0	0.00	0
Creditos Diferidos	1,367	0.00	1,367	0.00	0	0.00	0	0.00	0
Obligaciones	114,739	0.00	114,739	0.00	0	0.00	0	0.00	0
Liabilities Before Hedging:	7,317,984	7.76	120,496	0.00	0	0.00	0	0.00	0
HEDGED LIABILITIES:									
Swaps	2,670,693	6.90	200,000	7.70	37,853	5.47	26,476	6.73	0
Forwards y FX Swaps	-442,657	-11.31	148,683	3.13	3,742	7.51	0	0.00	5,187
Total Liabilities	9,546,021	8.40	469,179	4.28	41,595	5.65	26,476	6.73	5,187
NET RISK	687,030	8.74	81,224	9.83	174,126	7.48	568,912	8.04	303,275

Summary
 Detail
 Period Level 1
 Period Level 2
 Period Level 3

Break even cumulative

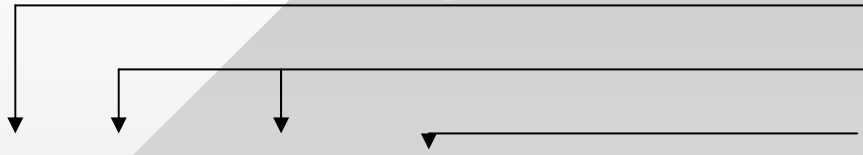
Cumulative Gap in each time period for each product

Weighted average rate of outstanding items in each time period for each product

Break-Even Cumulative Report - [Banco1 (USD)]									
Category Name	Value (000's)	Ave %	07/07/98 Value	%	14/07/98 Value	%	21/07/98 Value	%	28/07/98 Value
ASSETS:									
Disponibilidades	196,246	6.13	62,250	6.40	62,250	6.40	40,000	6.24	20,000
Cartera de Credito Vigente	8,168,438	8.00	7,800,556	8.05	7,611,126	8.05	7,417,341	8.04	7,151,009
Instrumentos Financieros	3,950	4.98	3,950	4.98	3,950	4.98	3,950	4.98	3,950
Cartera de Credito Vencida	211,204	5.65	194,096	5.73	171,246	5.74	150,218	5.78	134,888
Otros Activos	-574,824	0.00	0	0.00	0	0.00	0	0.00	0
Assets Before Hedging:	8,005,014	8.47	8,060,852	7.98	7,848,572	7.98	7,611,510	7.99	7,309,847
HEDGED ASSETS:									
Swaps	2,670,693	7.42	2,670,694	7.42	2,667,253	7.43	2,310,159	7.30	2,310,159
Forwards y FX Swaps	-442,657	-11.31	105,173	4.29	105,173	4.29	103,942	4.34	97,142
Total Assets	10,233,051	9.05	10,836,719	7.81	10,620,999	7.81	10,025,611	7.79	9,717,148
LIABILITIES:									
Captacion	7,201,878	7.89	7,197,500	6.91	7,197,500	6.91	7,197,500	6.91	7,197,500
Creditos Diferidos	1,367	0.00	0	0.00	0	0.00	0	0.00	0
Obligaciones	114,739	0.00	0	0.00	0	0.00	0	0.00	0
Liabilities Before Hedging:	7,317,984	7.76	7,197,500	6.91	7,197,500	6.91	7,197,500	6.91	7,197,500
HEDGED LIABILITIES:									
Swaps	2,670,693	6.90	2,470,694	6.83	2,432,841	6.85	2,406,365	6.85	2,406,365
Forwards y FX Swaps	-442,657	-11.31	562,697	8.07	558,955	8.07	558,955	8.07	553,768
Total Liabilities	9,546,021	8.40	10,230,891	6.95	10,189,297	6.96	10,162,820	6.96	10,157,633
NET RISK	687,030	8.74	605,828	7.39	431,702	7.39	-137,210	7.37	-440,485

Summary
 Detail
 Period Level 1
 Period Level 2
 Period Level 3

Rolling Gap Periodic



Detailed time periods

Periodic Gaps

Net periodic position

Liabilities - Assets

Weighted average rate of items which re-price in each time period

Break - even interest rate.

$$= ((\text{Liabilities value} * \text{ave rate}) - (\text{Asset value} * \text{ave rate})) / \text{Net Position}$$

Period (Days)	Maturity Date	Liabilities (000's)	Ave Rate %	Assets (000's)	Ave Rate %	Net Position (000's)	Break-Even Rate %	Cumulative Position (000's)
0	30/06/1998	0	0.00	0	0.00	0	0.00	-687,030
1	01/07/1998	320,496	4.81	-236,407	-9.29	556,903	-1.18	-1,243,933
7	07/07/1998	0	0.00	180,605	7.01	-180,605	7.01	-1,063,329
14	14/07/1998	37,853	5.47	215,705	7.83	-177,852	8.33	-885,477
21	21/07/1998	26,476	6.73	594,167	8.11	-567,690	8.18	-317,787
28	28/07/1998	0	0.00	301,650	9.42	-301,650	9.42	-16,136
35	04/08/1998	1,081,109	6.39	563,081	8.90	518,027	3.66	-534,164
42	11/08/1998	1,167	8.54	140,568	7.62	-139,401	7.61	-394,763
49	18/08/1998	386,670	8.84	892,646	7.46	-505,976	7.02	111,214
56	25/08/1998	937	7.50	145,380	8.56	-144,442	8.57	255,656
63	01/09/1998	1,757	8.54	368,142	8.68	-366,385	8.68	622,041
70	08/09/1998	142,535	5.56	151,140	9.51	-8,604	74.96	630,645
77	15/09/1998	198,301	7.26	521,748	7.44	-323,447	7.55	954,092
84	22/09/1998	0	0.00	176,789	8.10	-176,789	8.10	1,156,881
91	29/09/1998	0	0.00	409,413	8.31	-409,413	8.31	1,540,294
98	06/10/1998	168,869	8.12	447,643	8.16	-278,774	8.18	1,819,068
105	13/10/1998	67,230	7.22	54,272	8.80	12,958	8.18	1,806,109
112	20/10/1998	970,052	8.11	983,290	8.08	-13,238	5.98	1,819,348
119	27/10/1998	166,896	3.22	54,077	7.66	112,819	1.08	1,706,528
126	03/11/1998	185,061	8.12	291,082	8.87	-106,021	10.18	1,812,549
133	10/11/1998	0	0.00	156,068	6.25	-156,068	6.25	1,868,617
140	17/11/1998	187,831	7.07	205,855	6.99	-18,224	6.21	1,886,841
147	24/11/1998	0	0.00	102,861	6.01	-102,861	6.01	2,089,702
154	01/12/1998	1,283	6.83	67,750	7.97	-66,467	7.99	2,156,169
161	08/12/1998	0	0.00	173,039	7.06	-173,039	7.06	2,329,207
168	15/12/1998	1,620	8.54	86,811	7.20	-85,192	7.17	2,414,399
175	22/12/1998	0	0.00	597,039	7.40	-597,039	7.40	3,011,438
182	29/12/1998	0	0.00	266,186	6.69	-266,186	6.69	3,277,624
189	05/01/1999	83,952	6.43	34,170	10.17	49,782	3.87	3,227,841
196	12/01/1999	0	0.00	12,417	7.30	-12,417	7.30	3,240,259
203	19/01/1999	5,167	11.50	16,024	9.05	-10,857	7.88	3,251,116
210	26/01/1999	0	0.00	14,365	9.20	-14,365	9.20	3,265,481
217	02/02/1999	917	8.54	52,236	8.23	-51,319	8.22	3,316,800
224	09/02/1999	14,649	7.76	28,809	6.77	-14,160	5.73	3,330,959
231	16/02/1999	0	0.00	3,542	6.74	-3,542	6.74	3,334,502
238	23/02/1999	937	7.50	6,060	7.92	-5,123	8.00	3,339,624
245	02/03/1999	1,757	8.54	20,809	9.27	-19,052	9.33	3,358,676
252	09/03/1999	0	0.00	11,089	7.79	-11,089	7.79	3,369,765
259	16/03/1999	19,444	8.00	6,879	7.43	12,565	8.31	3,357,200
266	23/03/1999	0	0.00	7,348	7.58	-7,348	7.58	3,364,548
273	30/03/1999	0	0.00	4,108	9.06	-4,108	9.06	3,368,656
280	06/04/1999	740	8.54	5,467	9.85	-4,727	10.06	3,373,383
287	13/04/1999	0	0.00	1,358	8.95	-1,358	8.95	3,374,741
294	20/04/1999	150,000	7.93	4,924	8.90	145,076	7.90	3,229,665

Rolling Gap Cumulative

Detailed time periods

Cumulative Gaps

Net cumulative position

Liabilities - Assets

Weighted average rate of outstanding items in each time period

Break - even interest rate.

= ((Liabilities value * ave rate) - (Asset value * ave rate)) / Net Position

Period (Days)	Maturity Date	Liabilities (000's)	Ave Rate %	Assets (000's)	Ave Rate %	Net Position (000's)	Break-Even Rate %
0	30/06/1998	9,988,677	6.82	10,675,708	8.21	-687,030	28.36
1	01/07/1998	9,668,182	6.89	10,912,115	7.83	-1,243,933	15.14
7	07/07/1998	9,668,182	6.89	10,731,510	7.84	-1,063,329	16.51
14	14/07/1998	9,630,329	6.89	10,515,805	7.84	-885,477	18.16
21	21/07/1998	9,603,852	6.89	9,921,639	7.83	-317,787	35.99
28	28/07/1998	9,603,852	6.89	9,619,889	7.76	-16,139	522.59
35	04/08/1998	8,522,743	6.96	9,056,907	7.71	-534,164	19.64
42	11/08/1998	8,521,577	6.96	8,916,339	7.71	-394,763	23.89
49	18/08/1998	8,134,907	6.91	8,029,693	7.73	111,214	-52.87
56	25/08/1998	8,133,970	6.91	7,878,314	7.72	255,656	-18.16
63	01/09/1998	8,132,213	6.91	7,510,172	7.67	622,041	-2.35
70	08/09/1998	7,989,678	6.93	7,359,032	7.63	630,645	-1.29
77	15/09/1998	7,791,376	6.92	6,837,284	7.65	954,092	1.71
84	22/09/1998	7,791,376	6.92	6,680,495	7.64	1,130,881	2.71
91	29/09/1998	7,791,376	6.92	6,251,082	7.59	1,540,294	4.19
98	06/10/1998	7,622,507	6.90	5,803,440	7.55	1,819,068	4.81
105	13/10/1998	7,555,277	6.89	5,749,168	7.54	1,806,109	5.84
112	20/10/1998	6,585,225	6.71	4,765,877	7.43	1,819,348	4.84
119	27/10/1998	6,418,329	6.80	4,711,801	7.42	1,706,528	5.09
126	03/11/1998	6,233,268	6.76	4,420,719	7.33	1,812,549	5.39
133	10/11/1998	6,233,268	6.76	4,264,651	7.37	1,968,617	5.46
140	17/11/1998	6,045,637	6.76	4,058,796	7.39	1,986,841	5.47
147	24/11/1998	6,045,637	6.76	3,955,935	7.42	2,089,702	5.49
154	01/12/1998	6,044,354	6.76	3,888,185	7.41	2,156,169	5.57
161	08/12/1998	6,044,354	6.76	3,715,147	7.43	2,329,207	5.68
168	15/12/1998	6,042,735	6.75	3,628,335	7.44	2,414,399	5.73
175	22/12/1998	6,042,735	6.75	3,031,297	7.44	3,011,438	6.06
182	29/12/1998	6,042,735	6.75	2,765,111	7.52	3,277,624	6.11
189	05/01/1999	5,958,782	6.76	2,730,941	7.48	3,227,841	6.15
196	12/01/1999	5,958,782	6.76	2,718,524	7.48	3,240,259	6.15
203	19/01/1999	5,953,616	6.76	2,702,500	7.47	3,251,116	6.16
210	26/01/1999	5,953,616	6.76	2,688,135	7.46	3,265,481	6.17
217	02/02/1999	5,952,698	6.76	2,635,899	7.45	3,316,800	6.20
224	09/02/1999	5,938,049	6.75	2,607,090	7.46	3,330,959	6.20
231	16/02/1999	5,938,049	6.75	2,603,548	7.46	3,334,502	6.20
238	23/02/1999	5,937,112	6.75	2,597,488	7.46	3,339,624	6.20
245	02/03/1999	5,935,355	6.75	2,576,679	7.44	3,358,676	6.22
252	09/03/1999	5,935,355	6.75	2,565,590	7.44	3,369,765	6.23
259	16/03/1999	5,915,911	6.75	2,558,711	7.44	3,357,200	6.22
266	23/03/1999	5,915,911	6.75	2,551,363	7.44	3,364,548	6.22
273	30/03/1999	5,915,911	6.75	2,547,254	7.44	3,368,656	6.23
280	06/04/1999	5,915,170	6.75	2,541,787	7.43	3,373,383	6.23
287	13/04/1999	5,915,170	6.75	2,540,429	7.43	3,374,741	6.23
294	20/04/1999	5,765,170	6.72	2,535,505	7.43	3,229,665	6.16

Millimonths and earnings sensitivity

- Millimonths is an extension of Gap reporting which is used as the basis for calculating interest rate sensitivity

INTERNATIONAL

Interest Exposure Report

Accounting or interest balance

Weighted average interest rate

Weighted average duration
measured in months

Millimonth (weighted and discounted time values measured in million months) calculations for each time period.

Impact on earnings resulting from 1% parallel movements

Category Name	Value (000's)	Ave Rate %	Ave Dur'n (Mths)	01/07/98 to 07/07/98	14/07/98	21/07/98	28/07/98
ASSETS:							
Disponibilidades	196,246	6.13	0.5	22.3	14.5	12.4	5.3
Cartera de Credito Vigente	8,168,438	8.00	6.7	1,844.8	1,797.7	1,748.2	1,699.6
Instrumentos Financieros	3,950	4.98	1.0	0.9	0.9	0.9	0.9
Cartera de Credito Vencida	211,204	5.65	2.2	48.0	42.3	37.9	33.4
Otros Activos	-574,824	0.00	0.0	-19.2	0.0	0.0	0.0
Total Assets:	8,005,014	8.47	6.9	1,896.9	1,855.5	1,799.4	1,739.2
LIABILITIES:							
Captacion	7,201,878	7.89	180.4	1,678.7	1,676.8	1,675.0	1,673.2
Creditos Diferidos	1,367	0.00	0.0	0.0	0.0	0.0	0.0
Obligaciones	114,739	0.00	0.0	3.8	0.0	0.0	0.0
Total Liabilities:	7,317,984	7.76	177.5	1,682.5	1,676.8	1,675.0	1,673.2
RISK BEFORE HEDGING	687,030	8.13	-170.6	214.3	178.7	124.5	66.0
HEDGES:							
Swaps Receivable	2,670,693	7.42	29.4	622.8	621.8	578.0	537.0
Swaps Payable	2,670,693	6.90	-14.9	-582.9	-574.3	-561.6	-559.4
Forwards y FX Swaps	-442,657	11.31	9.3	-105.9	-106.3	-105.8	-105.7
Total Hedging:	2,228,037	10.83	15.5	-65.9	-58.8	-89.4	-128.0
RISK AFTER HEDGING			-155.1	148.4	119.9	35.1	-62.0
Sensitivity							
+1% P/L [USD] (000's)				9.9	33.7	104.3	185.3
-1% P/L [USD] (000's)				-9.8	-33.6	-104.3	-185.3

Copy Paste Print Summary Detail Period Level 1 Period Level 2 Period Level 3 Done

What is Millimonths?

Millimonths is a measure of the time weighted values at risk to interest rate movements in specified time periods. It forms the basis of calculating the institution's committed earnings risk.

Millimonths

Example - Very simple balance sheet

Assets	Loan 1	\$10m	1 Mths Libor
	Loan 2	\$10m	Fixed 3 Years
Liabilities	Funding 1	\$10m	1 Mth Libor
	Funding 2	\$10m	Fixed 1 Year

Simple single number measurement

	Average value (\$ million)	Months to Re- pricing	Millimonths
Assets			
Loan 1	10	1	10
Loan 2	10	36	360
Total	20		370
Liabilities			
Funding 1	10	1	10
Funding 2	10	12	120
Total	20		130
Net			240

Single measurement

- Our exposure is therefore represented by 240 millimonths. We can calculate the sensitivity to a one percent movement in interest rates by multiplying the millimonths total by \$833.33. (i.e. the effect of a 1 percent movement on \$1 million for 1 month).

$$\text{ie } \$1\text{m} * .01 * 1/12 = \$833.33333$$

- This gives a sensitivity of: $240 \text{ MM} * \$833.33 = \$200,000$
- Therefore, if interest rates rise by one percent, it will cost this institution a total of \$200,000 over the next three years.

Millimonths over time

- We can spread the millimonths over specified time periods to show the earnings risk over time.
- In each time period we calculate the millimonths based on the time to repricing and the length of each time period

Earnings risk over time

	Millimonths in six month time periods						Total
	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
<i>Assets</i>							
Loan 1	10						10
Loan 2	60	60	60	60	60	60	360
	70	60	60	60	60	60	370
<i>Liabilities</i>							
Funding 1	10						10
Funding 2	60	60					120
	70	60					130
Net	0	0	60	60	60	60	240
Sensitivity + 1% \$K	0	0	-50	-50	-50	-50	-200

Modified Millimonths

- This is a simple Millimonth calculation.
- Millimonths in time period = average value in time period * (days in time period or days still to re-price in time period) * 30 / 1,000,000 * discount rate
- Discounting is performed to take account of assumptions relating to the re-investment of cash-flows at the new interest rate.

Modified Millimonths

- The £10m Fixed Loan in our example has a coupon of 7%, and pays interest semi-annually. Simple millimonths equals 360 MM's. The following table shows how we calculate modified millimonths and reconcile this with duration. We assume the current three year rate for a mortgage backed security is 10%.

Modified Millimonths

Cash-Flow Date	Cash-Flow Amount \$K	Cash-Flow Discounted @ 10%	Price Weights	Price Weighted Maturity
0.5 Years	350	334	3.6	0.221 months
1.0 Years	350	318	3.4	0.410 months
1.5 Years	350	303	3.3	0.587 months
2.0 Years	350	289	3.1	0.746 months
2.5 Years	350	276	3.0	0.891 months
3.0 Years	10,350	7,776	83.6	30.078 months
Total		9,296	100.0	32.933 months

$$\$350 / (1.10)^{0.5} = 334$$

$$334 * 100 / \$9,296 = 3.6$$

$$(3.6 * 6 \text{ month}) / 100 = 0.221 \text{ Months}$$

Current price sums all cash flows discounted by the yield to maturity (10%)

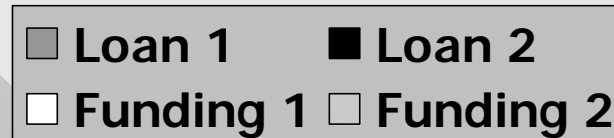
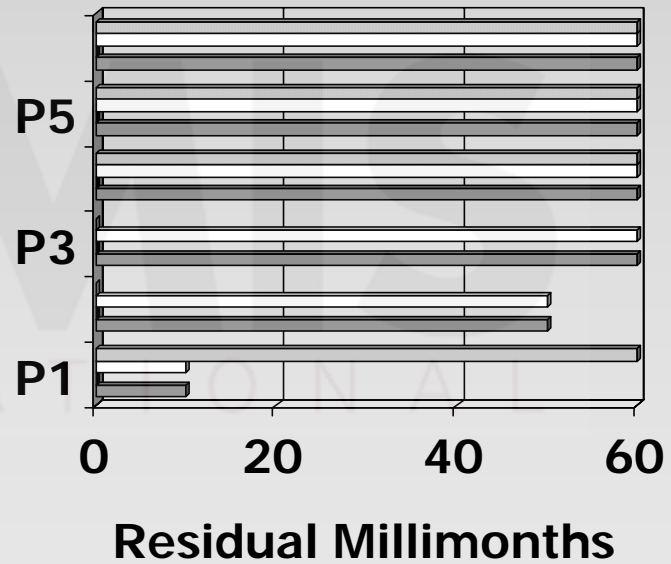
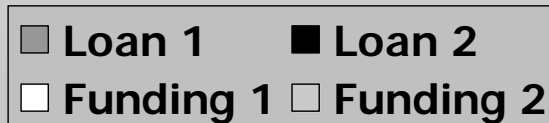
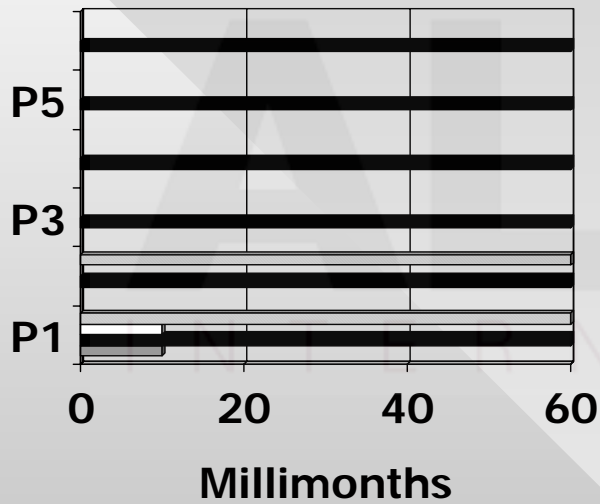
Millimonths versus Duration

- $32.933 \text{ months} * \text{£}10\text{m} = 329.33$
Modified Millimonths (Not 360)
- $\text{Duration} = \text{Millimonths} / \text{Value} =$
 32.933 Months

Residual Millimonths

- A residual millimonth calculation is performed to highlight the earnings risk of each specific instrument or product.
- Residual millimonths is calculated by taking the millimonths assuming no repricing or discounting in the period and subtracting the actual millimonths.

Residual Millimonths



Residual Millimonths

		Millimonths in six month time periods						Total								
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6									
<i>Assets</i>																
Loan 1		10						10								
Loan 2		60	60	60	60	60	60	360								
		70	60	60	60	60	60	370								
<i>Liabilities</i>																
Funding 1		10						10								
Funding 2		60	60					120								
		70	60					130								
Net		0	0	60	60	60	60	240								
Sensitivity + 1% \$K		0	0	-50	-50	-50	-50	-200								

		Residual Millimonths in six month time periods						Total
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
<i>Assets</i>								
Loan 1		50	60	60	60	60	60	350
Loan 2		0	0	0	0	0	0	0
		50	60	60	60	60	60	350
<i>Liabilities</i>								
Funding 1		50	60	60	60	60	60	350
Funding 2		0	0	60	60	60	60	240
		50	60	120	120	120	120	590
Net		0	0	-60	-60	-60	-60	-240

Residual MM's *
833.33

		Product Sensitivity in six month time periods +1% \$K						Total
		Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	
<i>Assets</i>								
Loan 1		41.7	50	50	50	50	50	291.7
Loan 2		0	0	0	0	0	0	0
		41.7	50	50	50	50	50	291.7
<i>Liabilities</i>								
Funding 1		41.7	50	50	50	50	50	291.7
Funding 2		0	0	50	50	50	50	200.0
		41.7	50	100	100	100	100	491.7
Net		0	0	-50	-50	-50	-50	-200.0

Residual Millimonths

- Residual Millimonths are used to create complex and diverse interest rate scenarios
 - Full shift
 - Specific changes to the entire balance sheet
 - Market
 - Changes to different interest rate markets
 - Category
 - Changes to Asset or Liability categories
 - Product
 - Changes to specific products

Full Shift Sensitivity

Shows the effect across the entire balance sheet. The Mirror effect is the equal and opposite change

Category Name	07/07/98	14/07/98	21/07/98	28/07/98	04/08/98	11/08/98	18/08/98	25/08/98	01/09/98	08/09/98	15/09/98	22/09/98	TOTAL
% Change	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
P/L Effect	9.9	33.7	104.3	185.3	233.8	131.0	158.5	252.8	295.1	350.8	370.9	420.0	2,546.0
Mirror P/L Effect	-9.8	-33.6	-104.3	-185.3	-233.8	-131.0	-158.5	-252.8	-295.1	-350.8	-370.9	-420.0	-2,546.0

Sensitivity by interest market

Specific interest rate changes can be applied to individual interest rate markets

In this case the same 1% change is applied to all interest rate markets giving the same net impact as the full shift sensitivity

Committed Market Sensitivity - [Banco1 (USD)]														
Description	Ave Rate	07/07/98	14/07/98	21/07/98	28/07/98	04/08/98	11/08/98	18/08/98	25/08/98	01/09/98	08/09/98	15/09/98	22/09/98	TOTAL
Libor	7.11	101.2	140.1	206.4	282.6	328.3	221.6	249.3	342.5	381.8	431.7	444.0	488.4	3,617.8
Non Interest	0.00	-115.0	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-134.2	-1,590.8
Cpp	5.18	0.7	4.3	7.7	10.9	12.2	12.3	12.3	12.3	12.3	12.4	12.9	12.9	123.0
Tie	5.77	0.4	1.1	1.8	2.8	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	33.4
Tre	5.77	0.0	0.0	0.1	0.2	0.2	3.8	3.8	3.9	4.0	4.0	4.1	4.1	28.2
Bco Mundial	9.49	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.6	3.5	4.6
Dom	6.42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	6.5
Cetes	6.40	0.1	0.2	0.3	0.4	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	7.1
Fija	7.48	0.0	-0.2	-0.5	-0.7	-0.9	-1.1	-1.4	-1.6	-1.9	-0.5	2.7	3.8	-2.5
Prime	8.19	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	1.3	1.7	3.5
Other	5.59	-0.7	-0.8	-0.4	0.3	1.1	1.3	1.3	1.3	1.4	1.4	1.4	1.4	8.8
Tiip	5.69	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	3.3	7.7	7.7	7.7	26.7
Cirr	6.96	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-2.2
B.I.D.	199.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.9	5.5
Prime Average	6.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fixed	7.43	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.0	22.8	22.8	22.8	22.8	276.3
NET RISK		9.9	33.7	104.3	185.3	233.8	131.0	158.5	252.8	295.1	350.8	370.9	420.0	2,546.0

Sensitivity by Category

Specific interest rate changes can be applied to specific asset or liability categories

In this case the same 1% change is applied to all categories giving the same net impact as the full shift sensitivity

Committed Product Sensitivity - [Banco1 (USD)]														
Description	Ave Rate	07/07/98	14/07/98	21/07/98	28/07/98	04/08/98	11/08/98	18/08/98	25/08/98	01/09/98	08/09/98	15/09/98	22/09/98	TOTAL
Disponibilidades	6.13	19.6	26.1	27.9	33.7	34.3	34.3	34.3	34.3	34.3	34.3	34.3	34.3	381.6
Cartera de Credito Vige	8.00	51.0	90.2	131.4	172.0	246.9	308.3	377.4	505.3	546.1	605.6	632.2	670.5	4,336.8
Instrumentos Financierc	4.98	0.0	0.0	0.0	0.0	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	5.9
Cartera de Credito Veni	5.65	1.1	5.8	9.5	13.2	15.8	16.6	18.3	20.5	23.7	25.4	28.1	29.7	207.6
Otros Activos	0.00	-95.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-111.8	-1,325.3
TOTAL ASSETS		-24.2	10.3	57.0	107.2	185.7	248.2	319.0	449.1	493.1	554.3	583.6	623.5	3,606.7
Captacion	7.89	-1.5	-3.1	-4.5	-6.0	-7.6	-9.2	-51.3	-86.9	-86.6	-90.3	-118.2	-125.8	-592.8
Creditos Diferidos	0.00	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-3.2
Obligaciones	0.00	-19.1	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-22.3	-264.5
TOTAL LIABILITIES		-20.8	-25.6	-27.1	-28.6	-30.1	-31.8	-73.8	-109.4	-111.2	-112.9	-140.8	-148.4	-860.5
Swaps Receivable	7.42	-519.0	-518.2	-481.7	-447.5	-446.3	-429.4	-428.9	-428.4	-428.0	-427.5	-381.5	-362.4	-5,298.9
Swaps Payable	6.90	485.7	478.6	468.0	466.2	436.2	256.3	256.0	255.7	255.4	251.3	224.1	222.0	4,055.5
Forwards y FX Swaps	11.31	88.2	88.6	88.2	88.1	88.4	87.8	86.3	85.9	85.7	85.6	85.5	85.3	1,043.3
TOTAL HEDGES		54.9	49.0	74.5	106.7	78.3	-85.4	-86.6	-86.8	-86.9	-90.6	-71.9	-55.1	-200.1
NET RISK		9.9	33.7	104.3	185.3	233.8	131.0	158.5	252.8	295.1	350.8	370.9	420.0	2,546.0

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Sensitivity by Product

Committed Product Sensitivity - [Banco1 (USD)]														
Description	Ave Rate	07/07/98	14/07/98	21/07/98	28/07/98	04/08/98	11/08/98	18/08/98	25/08/98	01/09/98	08/09/98	15/09/98	22/09/98	TOTAL
Inversiones	0.00	6.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	83.2
TOTAL ASSETS		-24.2	10.3	57.0	107.2	185.7	248.2	319.0	449.1	493.1	554.3	583.6	623.5	3,606.7
Captacion														
Depositos a la Vista	0.00	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8	-10.1
Valores o titu FUA	7.51	-0.2	-0.5	-0.8	-1.1	-1.5	-1.8	-2.1	-2.4	-2.7	-3.1	-3.4	-3.7	-23.3
Valores o titu LIB	5.50	0.0	-0.2	-0.3	-0.4	-0.5	-0.6	-0.7	-0.8	-0.9	-1.0	-1.1	-1.2	-7.7
Depositos a pl LIB	10.50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Pagarés con re FUA	10.50	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-1.8
Prestamos de O FUA	3.35	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.4	-0.4	-2.5
Prestamos de O LIB	5.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3
Prestamos de B CIRR	6.96	0.0	0.0	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-2.2
Prestamos de B FUA	6.31	0.0	-0.1	-0.1	-0.2	-0.2	-0.4	-0.6	-0.7	-1.1	-1.3	-1.3	-1.4	-7.5
Prestamos de B LIB	6.06	-0.3	-0.8	-1.4	-2.0	-2.5	-3.1	-3.7	-8.0	-8.5	-9.2	-39.2	-48.9	-127.7
Prestamos de B BCO	10.85	-0.2	-0.5	-0.8	-1.2	-1.5	-1.9	-2.7	-3.4	-3.8	-4.3	-4.8	-5.3	-41.8
Prestamos de B BID	199.36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.9	5.5
Prestamos de B TRE	5.78	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.5
Creditos Diferidos														
Creditos diferidos O	0.00	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-3.2
Obligaciones														
Otras Cuentas	0.00	-17.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-20.7	-245.3
Acreedores diversos	0.00	-1.4	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-1.6	-19.2
TOTAL LIABILITIES		-20.8	-25.6	-27.1	-28.6	-30.1	-31.8	-33.8	-36.8	-41.2	-46.3	-52.0	-58.4	-460.5
Swaps Receivable														
Pay Libor	7.18	-352.6	-352.0	-350.3	-349.8	-348.6	-345.8	-345.3	-345.0	-344.6	-344.3	-343.9	-342.9	-4,165.2
Pay Prime	7.24	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-6.7
Pay Prime Average	7.26	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-1.4
Rec Libor	7.94	-165.7	-165.5	-130.7	-97.1	-97.0	-82.9	-82.8	-82.7	-82.6	-82.5	-82.4	-82.3	-1,125.5
Swaps Payable														
Pay Libor	6.26	319.3	312.4	302.2	301.3	271.5	94.5	94.4	94.3	94.2	90.3	66.1	65.2	2,105.6
Pay Prime	6.12	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	8.7
Pay Prime Average	6.00	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.4
Rec Libor	8.25	165.7	165.5	165.1	164.2	164.0	161.1	160.9	160.7	160.5	160.4	157.4	156.2	1,941.7
Forwards y FX Swaps														
Futuros y Cont	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Futuros	5.16	-17.0	-17.0	-17.0	-16.9	-16.9	-16.9	-16.9	-16.9	-16.9	-16.8	-16.8	-16.8	-202.9
Forwards	0.00	-2.5	-1.6	-1.5	-1.5	-1.1	-1.1	-1.1	-1.4	-1.4	-1.4	-1.4	-1.5	-17.9
Currency Swaps fix	7.43	23.2	23.2	23.2	23.2	23.1	23.1	23.1	23.0	22.8	22.8	22.8	22.8	276.3
Currency Swaps LIB 6	6.41	84.6	84.1	83.5	83.4	83.3	82.7	81.3	81.2	81.1	81.0	81.0	80.9	987.8
TOTAL HEDGES		54.9	49.0	74.5	106.7	78.3	-85.4	-86.6	-86.8	-86.9	-90.6	-71.9	-55.1	-200.1
NET RISK		9.9	33.7	104.3	185.3	233.8	131.0	158.5	252.8	295.1	350.8	370.9	420.0	2,546.0

Specific interest rate changes can be applied to specific products

In this case the same 1% change is applied to all products giving the same net impact as the full shift sensitivity

Market Value Gap Report

- Calculates the effect on market value
- Forms Basis of Value at Risk Calculations

ALMIS
INTERNATIONAL

Market Value Gap Report

Time Periods

Periodic Gap Position

Non interest items - other assets, other liabilities and capital

Period (Days)	Funding	Investments	Net Position	Non Interest	Adjusted Position	Market Value	Period Rate	Discount Rate	Weighted Rate	Discounted Market Value	Option Value +1%
0	134,362	577,018	442,657	0	442,657	0.00	0.0000	0.0000	0.0000	0.00	0
1	333,149	-223,719	-566,868	-890,830	134,062	-3.67	5.6523	0.9998	0.9998	-3.67	0
2	10	23,951	23,941	0	23,941	-1.31	5.6523	0.9997	0.9998	-1.31	0
3	0	93,282	93,282	0	93,282	-7.67	5.6523	0.9995	0.9997	-7.66	0
4	0	9,196	9,196	0	9,196	-1.01	5.6523	0.9994	0.9996	-1.01	0
5	1,659	18,150	14,491	0	14,491	-1.99	5.6523	0.9992	0.9995	-1.98	0
6	0	46,696	46,696	0	46,696	-7.67	5.6523	0.9991	0.9994	-7.67	0
7	0	7,830	7,830	0	7,830	-1.50	5.6523	0.9989	0.9994	-1.50	0
8	0	32,483	32,483	0	32,483	-7.12	5.6536	0.9988	0.9993	-7.11	0
9	0	12,471	12,471	0	12,471	-3.08	5.6554	0.9986	0.9992	-3.07	0
10	0	27,609	27,609	0	27,609	-7.56	5.6589	0.9985	0.9992	-7.55	0
11	0	86,574	86,574	0	86,574	-26.09	5.6594	0.9983	0.9991	-26.05	0
12	3,742	11,861	9,119	0	9,119	-2.67	5.6600	0.9982	0.9990	-2.66	0
13	37,853	32,377	-5,476	0	-5,476	1.95	5.6615	0.9980	0.9989	1.95	0
14	0	12,329	12,329	0	12,329	-4.73	5.6630	0.9979	0.9989	-4.72	0
15	21,310	70,043	48,733	0	48,733	-20.03	5.6645	0.9977	0.9989	-19.98	0
16	0	16,244	16,244	0	16,244	-7.12	5.6661	0.9976	0.9987	-7.10	0
17	0	346,532	346,532	0	346,532	-161.40	5.6676	0.9974	0.9986	-160.98	0
18	0	25,759	25,759	0	25,759	-12.70	5.6691	0.9973	0.9986	-12.67	0
19	5,167	23,706	18,539	0	18,539	9.65	5.6707	0.9971	0.9985	-9.62	0
20	0	92,032	92,032	0	92,032	-50.43	5.6715	0.9970	0.9984	-50.36	0
21	0	21,081	21,081	0	21,081	-12.13	5.6737	0.9968	0.9983	-12.09	0
22	3,128	43,701	40,573	0	40,573	-24.46	5.6753	0.9967	0.9983	-24.37	0
23	0	39,300	39,300	0	39,300	-24.76	5.6768	0.9965	0.9982	-24.68	0
24	0	39,208	39,208	0	39,208	-25.78	5.6783	0.9964	0.9981	-25.69	0
25	0	61,454	61,454	0	61,454	-42.09	5.6798	0.9962	0.9980	-41.93	0
26	0	46,946	46,946	0	46,946	-33.44	5.6814	0.9961	0.9980	-33.31	0
27	2,080	34,276	32,196	0	32,196	-42.35	5.6829	0.9959	0.9979	-42.33	0
28	0	43,565	43,565	0	43,565	-33.42	5.6844	0.9958	0.9978	-33.28	0
29	322	21,769	21,446	0	21,446	-17.04	5.6860	0.9957	0.9977	-16.96	0
30	0	35,868	35,868	0	35,868	-28.48	5.6875	0.9955	0.9977	-28.35	0
60	1,483,474	1,927,659	444,185	0	444,185	-547.63	5.6875	0.9909	0.9909	-542.67	0
90	395,269	1,345,606	950,337	0	950,337	-1,952.75	5.6875	0.9865	0.9867	-1,926.29	0
120	1,897,545	1,805,068	7,523	0	7,523	-21.64	5.7083	0.9819	0.9864	-21.25	0
150	377,894	763,503	385,619	0	385,619	-1,426.26	5.7292	0.9774	0.9842	-1,393.98	0
182	141,898	1,184,169	1,042,283	0	1,042,283	-4,740.25	5.7500	0.9725	0.9816	-4,809.93	0
212	89,119	124,488	35,369	0	35,369	-190.90	5.7552	0.9680	0.9795	-194.79	0
242	16,504	111,413	94,909	0	94,909	-590.26	5.7604	0.9635	0.9773	-588.74	0
273	21,201	36,503	15,302	0	15,302	-107.95	5.7657	0.9589	0.9758	-103.52	0
303	150,740	48,176	-102,565	0	-102,565	809.28	5.7709	0.9545	0.9727	772.45	0
333	76	34,816	34,740	0	34,740	-302.67	5.7761	0.9501	0.9704	-287.55	0
366	2,058	100,551	98,493	0	98,493	-941.75	5.7813	0.9453	0.9681	-890.26	0
395	5,167	10,785	5,619	0	5,619	-584.49	5.7813	0.9410	0.9659	-55.04	0
425	17,323	41,129	23,806	0	23,806	-267.41	5.7813	0.9367	0.9636	-250.41	0
456	19,444	14,611	-4,833	0	-4,833	58.33	5.7814	0.9322	0.9614	54.36	0

Net Position - Non Interest Items

Simple Market Value = Adjusted Position * Days in period / Days Basis * 1%

Implied yield curve on straight linear basis

Discount rate $1/(1+I)^{\text{Days/Days Basis}}$
Time weighted discount rate

Discounted market value = market value * discount or weighted discount

Option adjustments

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Value at Risk

Value at Risk is an estimate with pre-determined confidence intervals of how much one can lose from holding a position over a set time horizon, whether it be one day for typical trading activities or a month or longer for portfolio management. This method uses historical volatility's and correlation's of rates and prices to estimate the market risk in positions.

Value at Risk

Volatility as per Risk Metrics data and methodology adjusted to take account of confidence level and holding period

Value at Risk without correlation = Discounted market value * yield volatility

Period (Days)	Investments	Net Position	Non Interest	Adjusted Position	Market Value	Period Rate	Discount Rate	Weighted Rate	Discounted Market Value	Yield Volatility	Value at Risk
0	577,018	442,657	0	442,657	0.00	0.0000	0.0000	0.0000	0.00	0.0000	0.00
1	-223,719	-556,668	-690,930	134,062	-3.67	5.6523	0.9998	0.9998	-3.67	0.065849	-0.2
2	23,951	23,941	0	23,941	-1.31	5.6523	0.9997	0.9998	-1.31	0.065849	-0.1
3	93,282	93,282	0	93,282	-7.67	5.6523	0.9995	0.9997	-7.66	0.065849	-0.5
4	9,196	9,196	0	9,196	-1.01	5.6523	0.9994	0.9996	-1.01	0.065849	-0.1
5	16,150	14,491	0	14,491	-1.99	5.6523	0.9992	0.9995	-1.98	0.065849	-0.1
6	46,696	46,696	0	46,696	-7.68	5.6523	0.9991	0.9995	-7.67	0.065849	-0.5
7	7,830	7,830	0	7,830	-1.50	5.6523	0.9989	0.9994	-1.50	0.065849	-0.1
8	32,483	32,483	0	32,483	-7.12	5.6538	0.9988	0.9993	-7.11	0.065867	-0.5
9	12,471	12,471	0	12,471	-3.08	5.6554	0.9986	0.9992	-3.07	0.065885	-0.2
10	27,609	27,609	0	27,609	-7.56	5.6569	0.9985	0.9992	-7.55	0.065903	-0.5
11	86,574	86,574	0	86,574	-26.09	5.6584	0.9983	0.9991	-26.05	0.065920	-1.7
12	11,861	8,119	0	8,119	-2.67	5.6600	0.9982	0.9990	-2.66	0.065939	-0.2
13	32,377	-5,476	0	-5,476	1.95	5.6615	0.9980	0.9989	1.95	0.065956	0.1
14	12,329	12,329	0	12,329	-4.73	5.6630	0.9979	0.9989	-4.72	0.065974	-0.3
15	70,043	48,733	0	48,733	-20.03	5.6645	0.9977	0.9988	-19.98	0.065991	-1.3
16	16,244	16,244	0	16,244	-7.12	5.6661	0.9976	0.9987	-7.10	0.066010	-0.5
17	346,532	346,532	0	346,532	-161.40	5.6676	0.9974	0.9986	-160.98	0.066027	-10.6
18	25,759	25,759	0	25,759	-12.70	5.6691	0.9973	0.9986	-12.67	0.066045	-0.8
19	23,706	18,539	0	18,539	-9.65	5.6707	0.9971	0.9985	-9.62	0.066064	-0.6
20	92,032	92,032	0	92,032	-50.43	5.6722	0.9970	0.9984	-50.28	0.066081	-3.3
21	21,081	21,081	0	21,081	-12.13	5.6737	0.9968	0.9983	-12.09	0.066098	-0.8
22	43,701	40,573	0	40,573	-24.46	5.6753	0.9967	0.9983	-24.37	0.066117	-1.6
23	39,300	39,300	0	39,300	-24.76	5.6768	0.9965	0.9982	-24.68	0.066135	-1.6
24	39,208	39,208	0	39,208	-25.78	5.6783	0.9964	0.9981	-25.69	0.066152	-1.7
25	61,454	61,454	0	61,454	-42.09	5.6798	0.9962	0.9980	-41.93	0.066170	-2.8
26	46,946	46,946	0	46,946	-33.44	5.6814	0.9961	0.9980	-33.31	0.066188	-2.2
27	34,276	32,216	0	32,216	-23.83	5.6829	0.9959	0.9979	-23.73	0.066206	-1.6
28	43,565	43,565	0	43,565	-33.42	5.6844	0.9958	0.9978	-33.28	0.066223	-2.2
29	21,769	21,446	0	21,446	-17.04	5.6860	0.9956	0.9977	-16.96	0.066242	-1.1
30	35,868	35,868	0	35,868	-29.48	5.6875	0.9955	0.9977	-29.35	0.066259	-1.9
60	1,927,659	444,185	0	444,185	-547.63	5.6875	0.9909	0.9909	-542.67	0.066259	-36.0
90	1,345,606	950,337	0	950,337	-1,952.75	5.6875	0.9865	0.9867	-1,926.29	0.084332	-162.4
120	1,605,068	7,523	0	7,523	-21.64	5.7083	0.9819	0.9864	-21.25	0.084641	-1.8
150	763,503	385,619	0	385,619	-1,426.26	5.7292	0.9774	0.9842	-1,393.98	0.084951	-118.4
182	1,184,169	1,042,283	0	1,042,283	-4,740.25	5.7500	0.9725	0.9818	-4,609.93	0.152424	-702.7
212	124,488	35,369	0	35,369	-190.90	5.7552	0.9680	0.9795	-184.79	0.152562	-28.2
242	111,413	94,909	0	94,909	-590.26	5.7604	0.9635	0.9773	-568.74	0.152700	-86.8
273	36,503	15,302	0	15,302	-107.95	5.7657	0.9589	0.9750	-103.52	0.152840	-15.8
303	48,176	-102,565	0	-102,565	608.26	5.7709	0.9545	0.9727	772.45	0.152978	118.2
333	34,816	34,740	0	34,740	-302.67	5.7761	0.9501	0.9704	-287.55	0.153116	-44.0
365	100,551	98,493	0	98,493	-941.75	5.7813	0.9453	0.9681	-890.20	0.248550	-221.3
395	10,785	5,619	0	5,619	-58.49	5.7813	0.9410	0.9659	-55.04	0.248550	-13.7
425	41,129	23,806	0	23,806	-267.41	5.7813	0.9367	0.9636	-250.47	0.248550	-62.3
456	14,611	-4,833	0	-4,833	58.33	5.7814	0.9322	0.9614	54.38	0.248554	13.5

Correlation Matrix

Sum of Value at Risk calculations for main time intervals
Correlation matrix from risk metrics data

Rate Point	Total Value At Risk	R090	R180	R360	S02	S03
R030	-75.6	0.390176	0.458110	0.310190	0.239933	0.249637
R090	-282.7		0.522675	0.267758	0.140273	0.140778
R180	-759.4			0.895959	0.792095	0.789047
R360	-1,168.1				0.961313	0.955663
S02	-1,158.3					0.992967
S03	-1,168.3					
S04	1,141.8					
S05	-10,731.0					
S07	-186.4					
S10	74,912.0					
Total	60,524.0					

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Value at Risk with Correlation

VaR Squared

Sum of VaR Squared

$VaR_{R030} * VaR_{R090} * Corr * 2$

Rate Point	Value At Risk Squared	R090	R180	R360	S02	S03
R030	5,716.7	16,677.8	52,606.1	54,790.5	42,025.0	44,103.6
R090	79,900.4		224,387.4	176,815.5	91,852.8	92,982.4
R180	576,666.2			1,589,475.9	1,393,423.9	1,400,092.0
R360	1,364,417.0				2,601,250.0	2,608,373.6
S02	1,341,613.6					2,687,447.5
S03	1,364,969.4					
S04	1,303,790.5					
S05	115,154,715.9					
S07	34,758.8					
S10	5,611,800,411.7					
Total	5,733,026,960.2	16,677.8	276,993.4	1,821,082.0	4,128,551.7	6,832,999.2
Total VaR	62,138.0					

Sum of columns

Square root of sum of VaR squared plus sum of columns

Enterprise Wide VaR

Detailed VaR by currency

The screenshot displays the following windows and data:

- Windows: Value At Risk Co-Variance - Banco1[CHF], Banco1[MMX], Banco1[JPY], Banco1[GBP], Value At Risk Currency Correlations - Banco1[CONSOL], Value At Risk Currency Co-Variance - Banco1[CONSOL].
- Value At Risk Currency Correlations - Banco1[CONSOL]** Table:

Portfolio Currency	Total Adjusted Value At Risk	FRF	DEM	JPY	ESP	GBP
USD	62,008.9	1.000000	1.000000	1.000000	1.000000	1.000000
FRF	561.5		0.996234	0.475557	0.991075	0.617302
DEM	1,699.3			0.496224	0.989982	0.589891
JPY	1,091.8				0.482920	0.180135
ESP	675.1					0.601039
GBP	1,961.9					
ITL	0.9					
NLG	0.0					
BEF	26.6					
CAD	0.0					
CHA	0.0					
CHF	239.2					
MMX	0.0					
- Value At Risk Currency Co-Variance - Banco1[CONSOL]** Table:

Portfolio Currency	Adjusted VAR Squared	FRF	DEM	JPY	ESP	GBP
USD	3,845,103,185.3	69,632,317.5	210,743,138.7	135,396,507.8	83,728,994.4	243,315,813.4
FRF	315,249.0		1,901,024.3	583,019.3	751,372.4	1,360,006.2
DEM	2,887,612.4			1,841,198.8	2,271,530.8	3,933,304.4
JPY	1,191,919.5				711,902.5	771,681.2
ESP	455,809.9					1,592,248.6
GBP	3,849,219.5					
ITL	0.7					
NLG	0.0					
BEF	710.1					
CAD	0.0					
CHA	0.0					
CHF	57,239.1					
MMX	0.0					
Total	3,853,860,945.5	69,632,317.5	212,644,162.9	137,820,725.8	87,463,800.1	250,973,053.7
Total VaR	68,174.6					

Currency correlation matrix from risk metrics data

Total VaR by currency converted into base currency

Total VaR by currency squared

$$\text{VaR DEM} * \text{VaR JPY} * \text{Corr DEM JPY} * 2$$

Sum of columns

Square root of (sum of VaR squared plus sum of columns)

Dynamic (forward looking) Risk

- Dynamic term structures specified
- Assumptions are controlled in the planning wizard
- Data modified at a transactional level for each term structure
- Forward looking balance sheet risk and predicted income is calculated and presented

Dynamic (forward looking) Risk

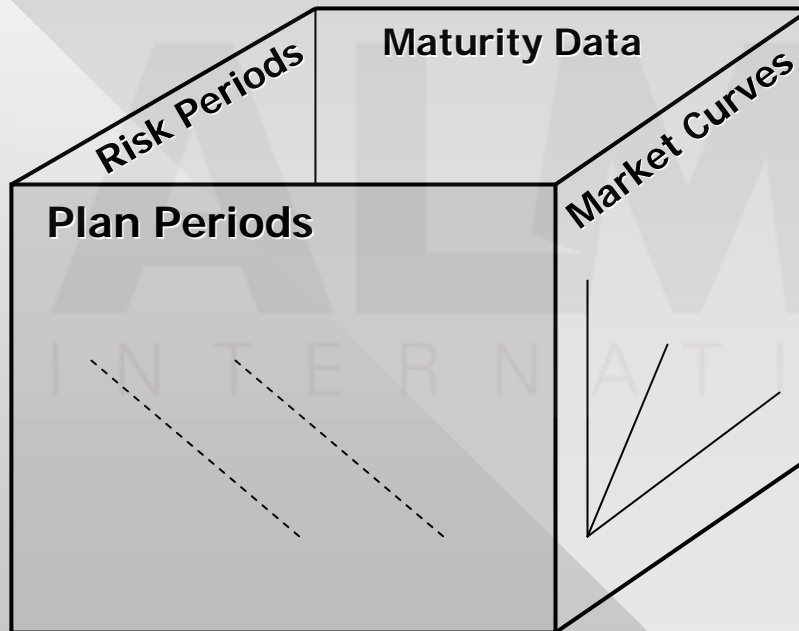
Balanced Static Transaction Data

Planning Wizard

- Setting plan time horizons
- Setting re-pricing strategies
- Setting new interest rates
- Inputting new business
- Inputting wastage and prepayments
- Inputting cash flow assumptions
- Inputting balancing assumptions

Future Balance sheets and income statements

Term Structure Model



- Can be very complex
- Specific to each market

Plan periods

Start Date

Unlimited Time Periods

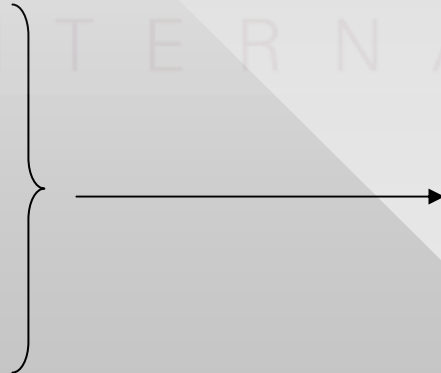
- Daily
- Weekly
- Fortnightly
- Monthly
- Bi-monthly
- Quarterly
- Bi-annually
- Annually

Fixed Periods

31 Dec 2000
31 Dec 2000
31 Dec 2000
31 Dec 2000
31 Dec 2000
31 Dec 2000
31 Dec 2000
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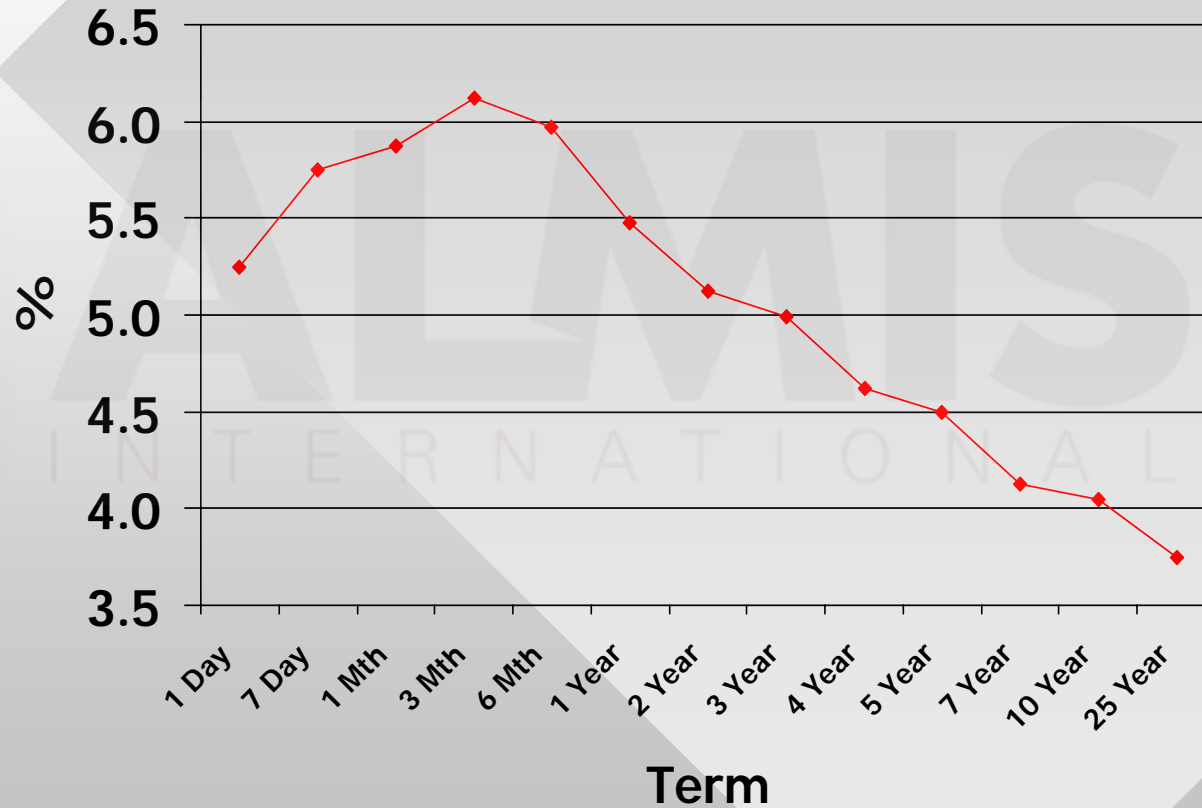
Concurrent Periods

31 Jan 2000
28 Feb 2000
31 Mar 2000
30 Apr 2000
31 May 2000
30 Jun 2000
31 Jul 2000
31 Aug 2000
30 Sep 2000
31 Oct 2000
31 Nov 2000
31 Dec 2000
31 Dec 2002
31 Dec 2002



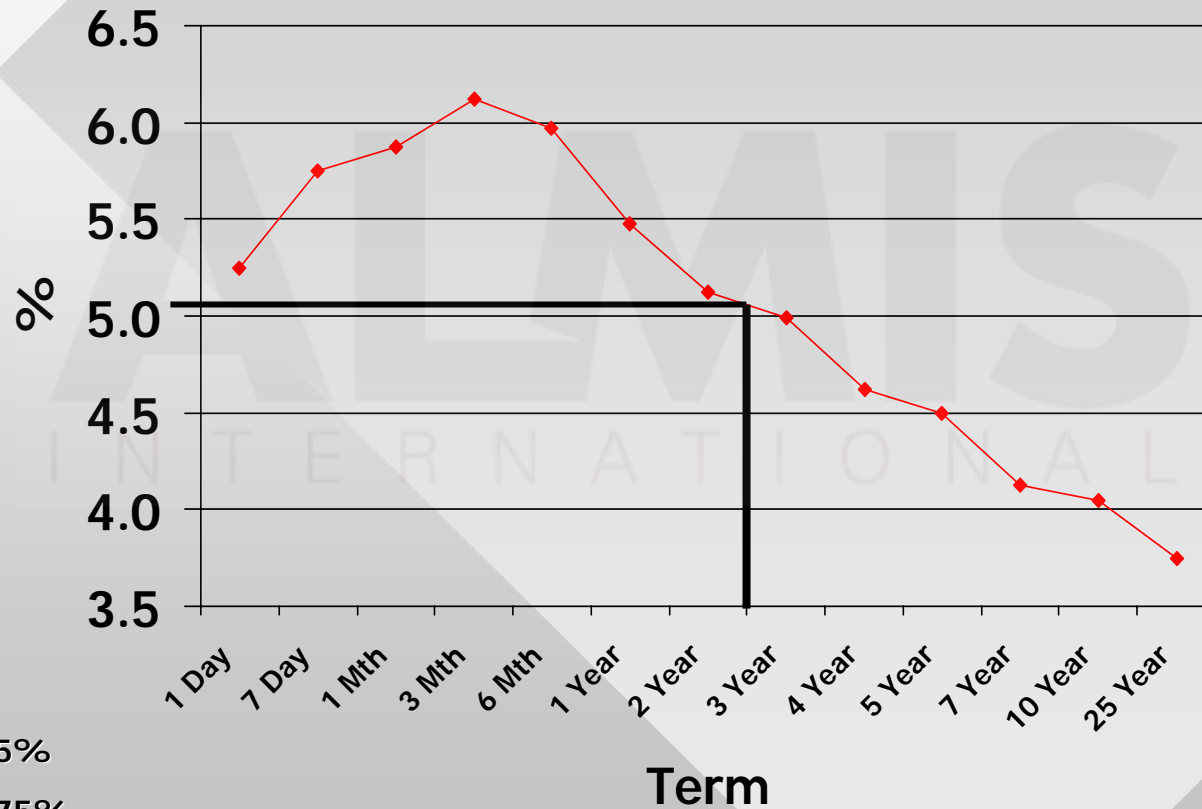
Yield Curve

Shows the current term structure of interest rates



Yield Curve

Linear relationships



2 Year = 5.125%

3 Year = 4.9875%

2 Year 3 Months = $(2 \text{ Yr} * 9 \text{ Mths} + 3 \text{ Yr} * 3 \text{ Mths}) / 12 \text{ Mths}$

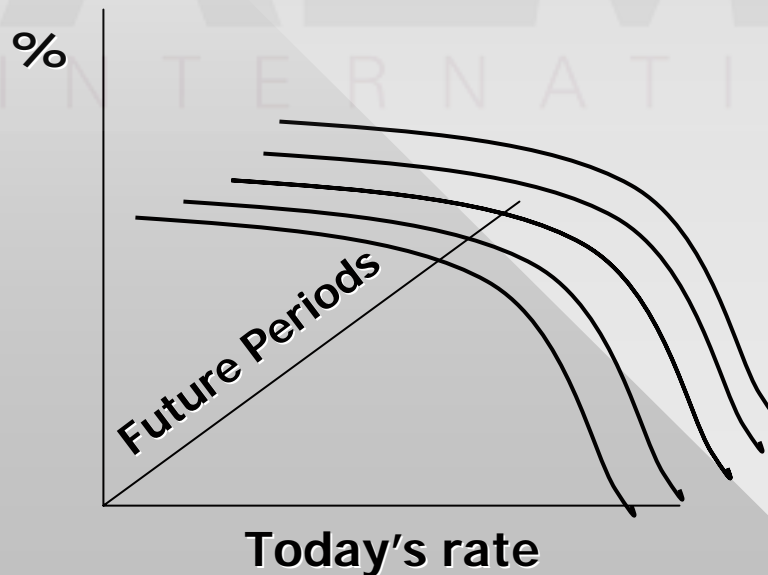
= 5.090625

Forward Curve

A market forward curve can be calculated from the yield curve.

We know today's 3 month rate and today's 6 month rate

From this we can calculate the 3 month rate in 3 months time



Forward Curve

$$\left(1 + \frac{Z_l}{2}\right)^l = \left(1 + \frac{Z_s}{2}\right)^s * \left(1 + \frac{sfl}{2}\right)^{l-s}$$

Where,

S = start period

l = end period

Z_l = Interest rate at end period

Z_s = Interest rate at start period

sfl = Forward rate

Forward Curve - Example

Example

1 year rate = 7%

2 year rate = 6%

What is the 1 year rate in 12 months time

$$\left(1 + \frac{Z_l}{2}\right)^l = \left(1 + \frac{Z_s}{2}\right)^s * \left(1 + \frac{sfl}{2}\right)^{l-s} \quad \left(1 + \frac{6\%}{2}\right)^2 = \left(1 + \frac{7\%}{2}\right)^1 * \left(1 + \frac{sfl}{2}\right)^{2-1}$$

or

or

$$sfl = 2 * \left(\left(\frac{\left(1 + \frac{Z_l}{2}\right)^l}{\left(1 + \frac{Z_s}{2}\right)^s} \right)^{\frac{1}{l-s}} - 1 \right)$$

$$sfl = 2 * \left(\left(\frac{\left(1 + \frac{6\%}{2}\right)^2}{\left(1 + \frac{7\%}{2}\right)^1} \right)^{\frac{1}{2-1}} - 1 \right)$$

= 5.11111%

Forward Curve

- Forward rates are calculated as above
- The forward rate should be adjusted by an interest rate margin
- The interest rate margins can be specified in basis points or as a percentage for each class or product

Maturity & Re-Pricing

- Maturity dates and re-pricing dates are calculated independently for each transaction
- Matured transactions are deleted or rolled forward - as set
- Re-pricing strategies are set dynamically for each class or product

Risk Periods

- Detailed transaction sets are available for each forward time period
- Risk reports and analysis can then be performed on exact days for each transaction
- Reporting periods can be set dynamically

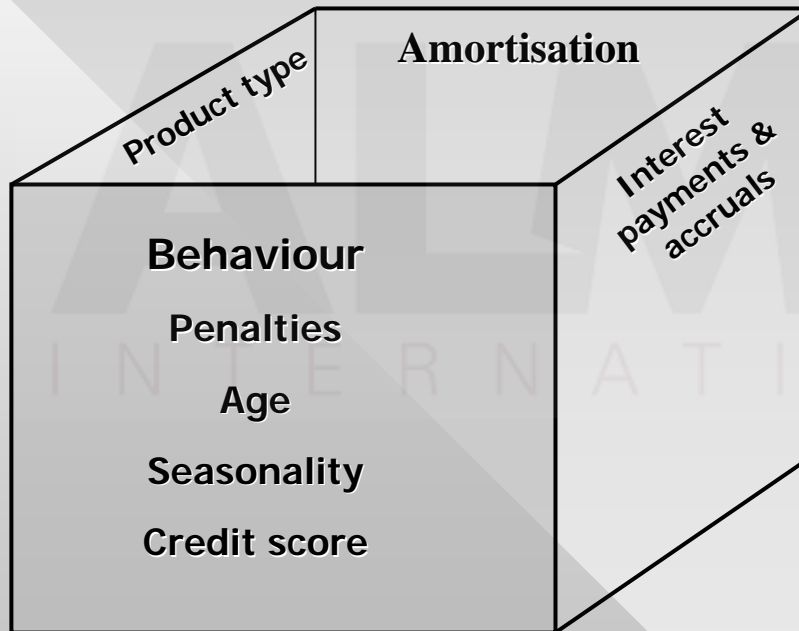
Risk reporting periods

- Time periods set according to needs
- Unlimited time periods
- Various time period sets
- Accounting periods or fixed periods

New Business Assumptions

- Growth
- New products
- Funding and hedging
- Interest rate forecasts and predictions
- Targets

The pre-payment model



- Behaviour can be linked to specific instruments and rate structures
- Highly specific to each market

Transaction data for each future balance sheet

ALMIS Front Office

File Currency Data Reports Sensitivity Portfolio Help

Obligaciones - [Banco1 (USD)]

Prod Code	Reference	Amount	Average
3610	Otras cuentas por Pagar		
3610	Otras cuentas por Pagar		
3610	Otras cuentas por Pagar		
3610	Otras cuentas por Pagar		
3620	Acreedores diversos		

Disponibilidades - [Banco1 (USD)]

Prod Code	Reference	Accounting Balance	Interest Balance	Days Up
0112	Barclays	83,003,879	83,003,879	1
0112	Banco Santander	50,000,000	50,000,000	3
0112	Banca Serfin	20,000,000	20,000,000	30

Forwards y FX Swaps - [Banco1 (USD)]

Forward Date	Prod Code	Reference	Amount	Interest Rate	APR	Repricing Days	Expiry Days	Amortise
30/06/98	18900	80300007	8,036,250	5.1000	5.1000	191	191	F.
30/06/98	18900	80300008	3,216,000	5.1000	5.1000	191	191	F.
30/06/98	18900	80300013	5,370,000	5.1000	5.1000	190	190	F.

Instrumentos Financieros - [Banco1 (USD)]

Prod Code	Reference	Start Date	Principal Value	Acc'ting Rate	Repricing Date
02175	TB Gobierno Am	30/04/98	3,950,304	4.9768	30/07/98

Swaps - [Banco1 (USD)]

Forward Date	Receipt Expiry Date	Payment Expiry Date	Receipt Rate	Payment Rate	Present Rcpt Rate	Present Pymt Rate	Profit/Loss	Amortise
08/09/94	08/09/98	08/09/98	9.5448	10.5500	0.0000	0.0000		
06/02/92	15/10/98	15/10/98	6.0000	5.3075	0.0000	0.0000		
29/06/92	15/10/98	15/10/98	6.7239	6.2775	0.0000	0.0000		
29/06/92	15/04/99	15/10/98	6.7239	6.2775	0.0000	0.0000		
18/11/92	17/11/98	18/11/98	7.8100	6.9078	0.0000	0.0000		
18/11/92	17/05/99	18/11/98	7.8100	6.9078	0.0000	0.0000		
15/10/93	15/10/98	15/10/98	4.6200	5.9425	0.0000	0.0000		
15/11/93	15/11/98	18/11/98	4.7100	6.1128	0.0000	0.0000		
20/01/93	15/11/98	18/11/98	7.3593	6.0000	0.0000	0.0000		

Otros Activos - [Banco1 (USD)]

Prod Code	Reference	Amount	Average Life
5302	Estimación Preventiva par	-722,750,804	1
6310	Otras cuentas por cobrar	208,400	1
6310	Otras cuentas por cobrar	1,420	1
6310	Otras cuentas por cobrar	80,225	1
6310	Otras cuentas por cobrar	55,140	1
6310	Otras cuentas por cobrar	-13,792	1
6311	Deudores diversos	210,883	1
6311	Deudores diversos	3,185,709	1
6315	Pagos anticipados	6,907,964	1
8320	Bienes adjudicados	1,442,020	1
8320	Bienes adjudicados	53,223,648	1
9330	Otras inversiones	46,535,228	1
9360	Inversiones permanentes e	36,090,000	1

Disponibilidades - [Banco1 (USD)]

Prod Code	Reference	Accounting Balance
0112	Barclays	83,003,879
0112	Banco Santander	50,000,000
0112	Banca Serfin	20,000,000
0112	Bancobras	8,250,000
0112	Banco Industrial	14,000,000
0112	Bladex	20,000,000
1100	Caia	968,362

Start ALMIS Front Office

Example Interest rate swap

- Nominal \$10m
- Receives 1 yr at 7%
- Pays 3 Mth at 6%
- Forward 3 Mth rate
 - 3 Mths 6.25
 - 6 Mths 6.45
 - 9 Mths 6.75

Example Interest rate swap

Forward Periods	Q1	Q2	Q3	Q4	Total
Income	175,000	175,000	175,000	175,000	700,000
Expenditure	150,000	156,250	161,250	168,750	636,250
Net Margin	25,000	18,750	13,750	6,250	63,750
Plan +1%					
Income	175,000	175,000	175,000	175,000	700,000
Expenditure	175,000	181,250	186,250	193,750	736,250
Net Margin	0	-6,250	-11,250	-18,750	-36,250
Delta	25,000	25,000	25,000	25,000	100,000

Automatic balancing

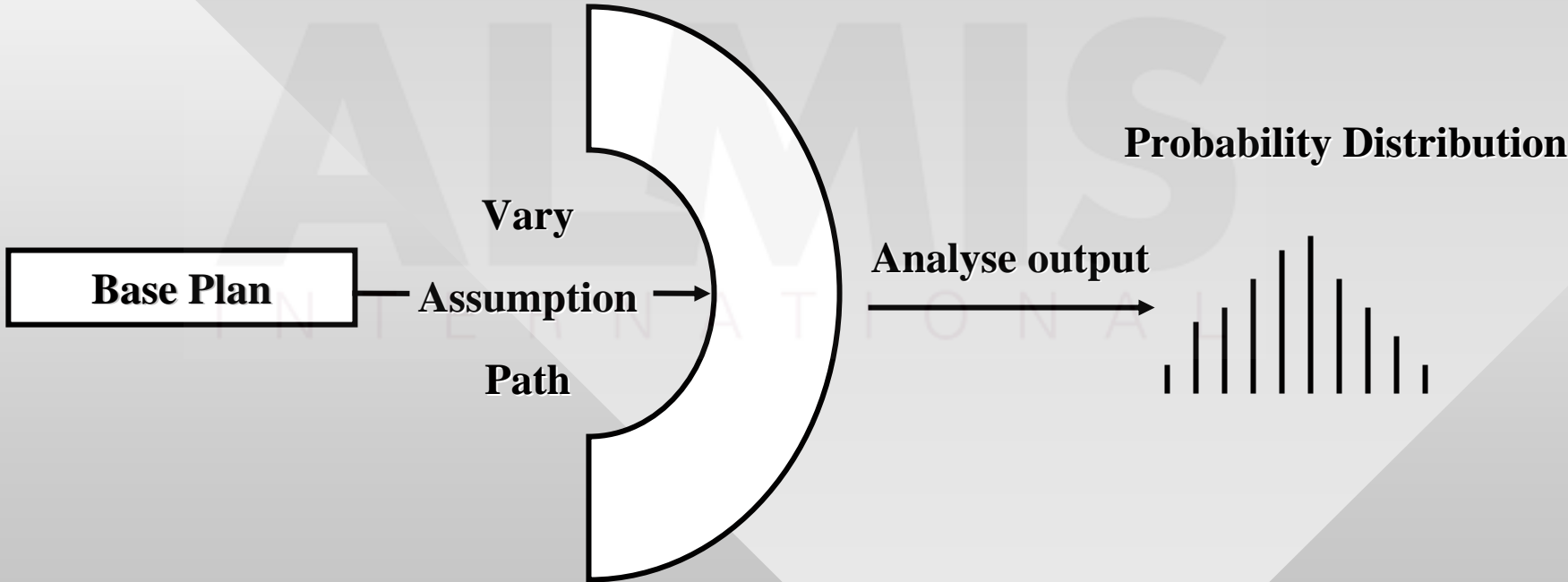
- Net margin, profits, tax and dividends are calculated
- Reserves and accruals adjusted
- Balancing calculated for each plan

Iterative



Simulations

**Simulated balance sheet
and income statements**

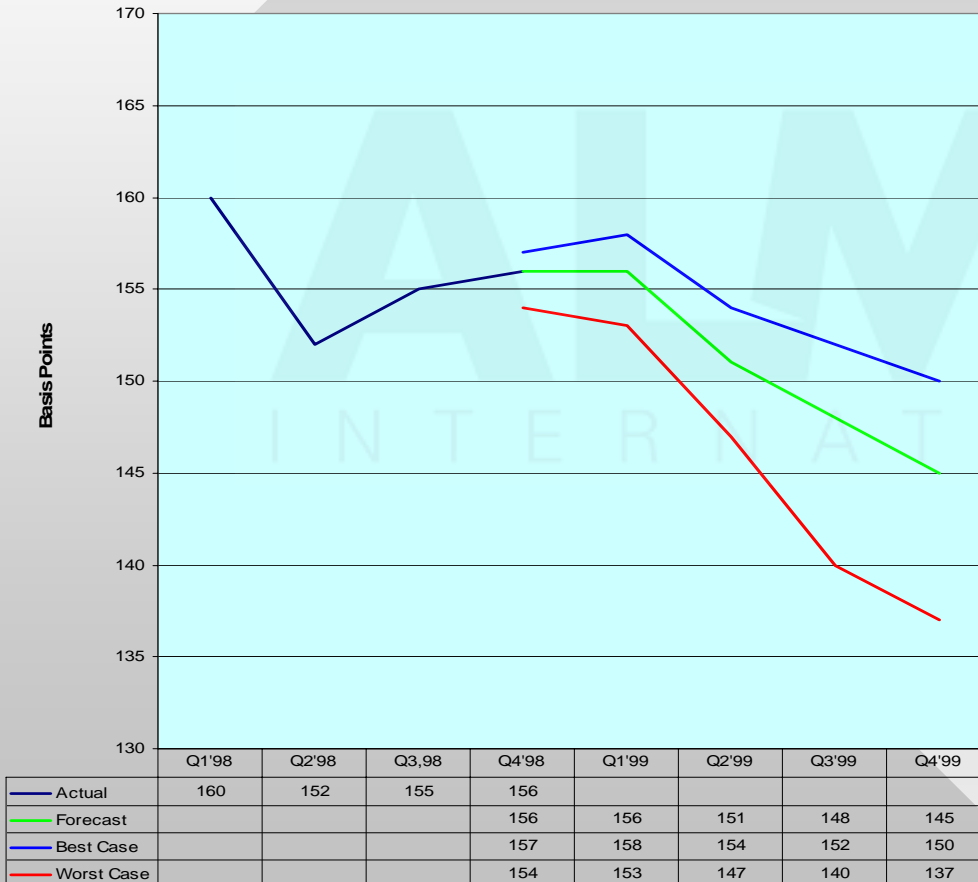


Sample ALCO Reports

ALMIS
INTERNATIONAL

Interest Margin

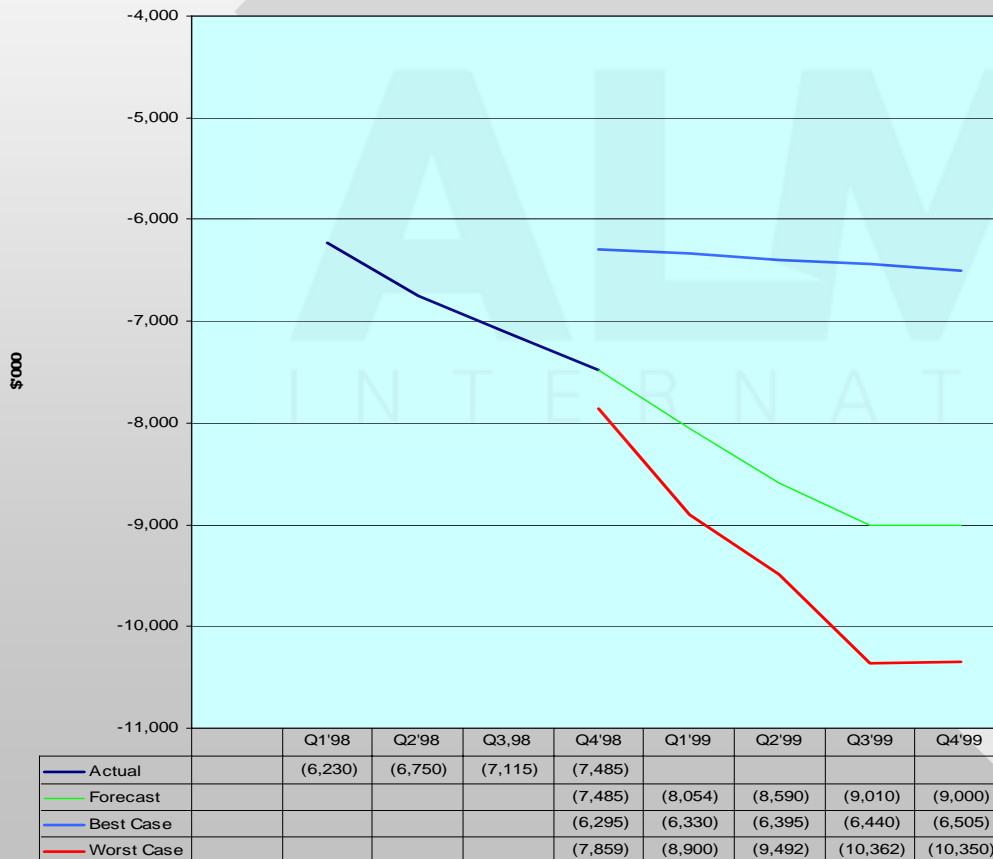
Interest Margin



- Interest margin of forward balance sheets
- Range of alternative scenarios

Value at Risk

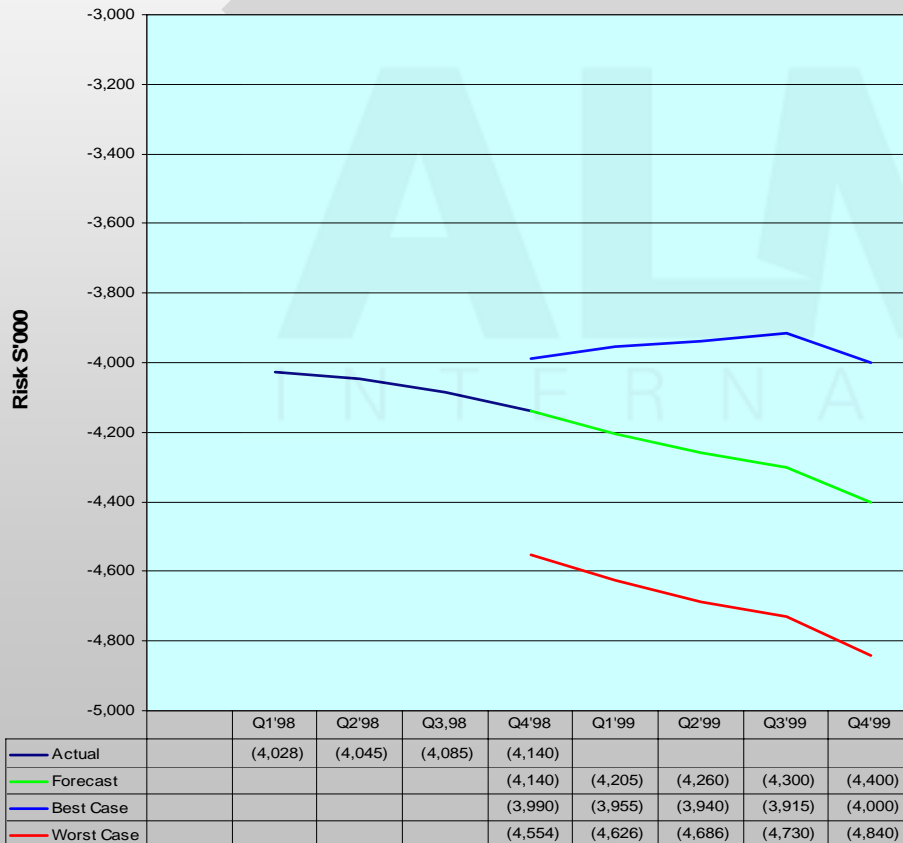
Consolidated Value at Risk



- Historic VaR
- VaR of future balance sheets
- Range of alternative scenarios

Earnings Sensitivity

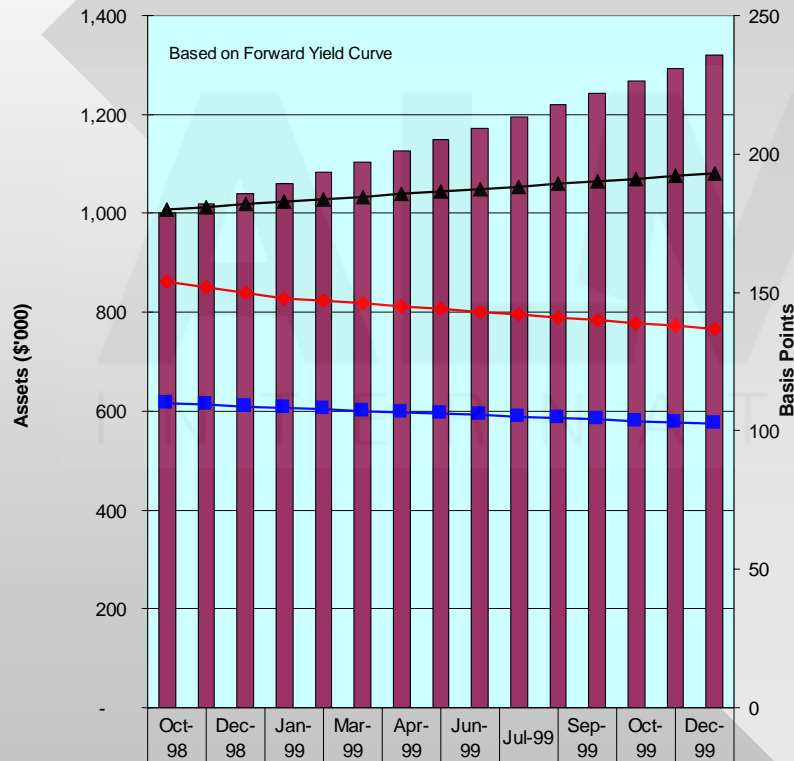
Earnings Sensitivity (12 Months ahead) - 1% Rise



- Sensitivity of earnings over a 12 month period for forward balance sheets
- 1% full shift
- Range of alternative scenarios

Business Scenario 1

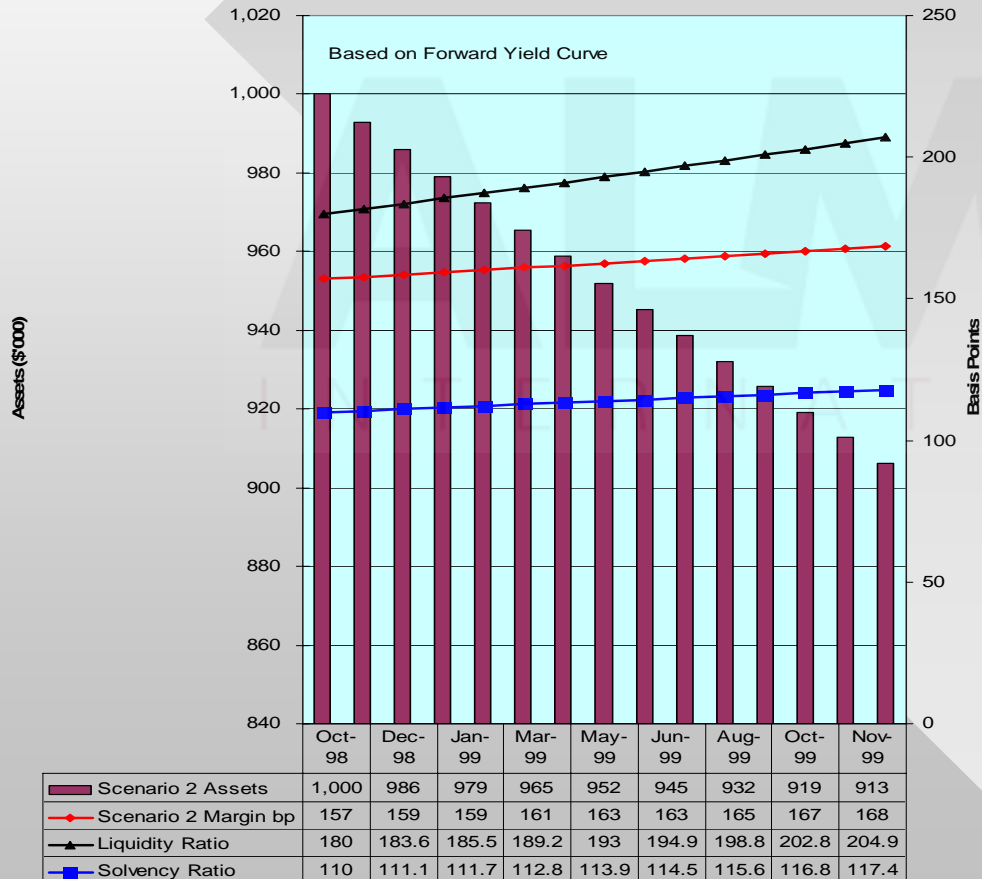
Business Scenario 1 - Growth



- Aim for growth
- Products priced competitively
- Assets increasing
- Margin falling
- Solvency falling
- Liquidity rising

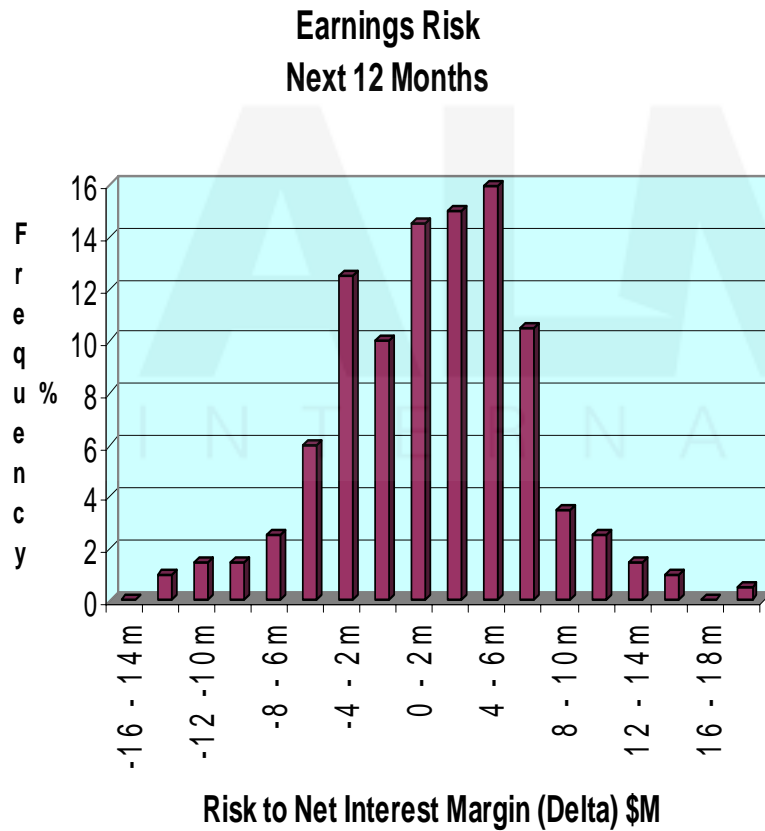
Business Scenario 2

Business Scenario 2 - Margin



- Aim to improve margin
- Products priced profitably
- Assets reducing
- Margin rising
- Solvency rising
- Liquidity rising

Risk to Earnings



- Shows the Delta of NIM
- Monte Carlo generation of variables
- 1% chance of losing more than \$12m