

XMI-ALMIS

IAS39 OVERVIEW

IAS39 Hedge Accounting for Banks and Building Societies

A Structured Solution – Reduce Accounting Volatility with XMI-ALMIS

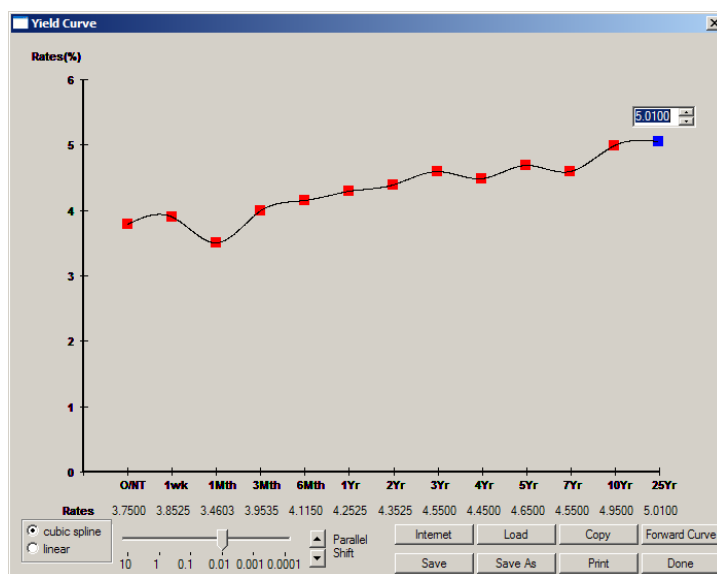
Our ALM specialist software product, XMI-ALMIS, has been significantly developed to incorporate full IAS39 functionality. The aim of the product is to help you reduce accounting volatility and produce the necessary accounting journals, with back-up calculations and documentation.

The system functionality is described in three parts:

1. Fair Value

XMI-ALMIS has mark-to-market capabilities for a broad range of instruments, particularly those associated with retail and wholesale banking.

Functionality to download and create yield curves.



Example

XMI-ALMIS can calculate the fair value of individual fixed mortgages and other banking book assets by calculating the difference in discounted cash flow (DCF) at the fixed rate and the DCF at the implied forward rate.

The system can use the mortgage term to calculate a repayment (amortisation) profile. This can significantly improve the reliability of the fair value calculation.

IAS CODE	Product/ Transaction	Repricing Date	Accounting Balance	Existing DCF	New DCF	Change	Present Value
NONE	80044026393/2	01/08/2003	287,968	36,207	30,380	5,826	293,794
NONE	92044191856/1	01/09/2003	28,583	3,700	3,115	585	29,168
NONE	81091044504/1	01/04/2005	61,243	11,961	10,107	1,854	63,097
NONE	91314186058/2	01/06/2005	239,417	38,355	32,302	6,054	245,471
NONE	90234162000/1	01/07/2005	95,531	16,424	13,912	2,512	98,043
NONE	91204183428/1	01/12/2002	126,818	12,456	10,186	2,270	129,088
NONE	90234161806/1	01/08/2003	1,852,510	240,319	202,211	38,108	1,890,618
NONE	M0356241/1	29/07/2002	47,629	3,654	2,961	693	48,322
NONE	M0401077/1	02/08/2002	83,030	6,703	5,442	1,262	84,292
NONE	M0402022/1	06/08/2002	49,111	3,963	3,217	746	49,857
NONE	M0402907/1	12/08/2002	59,427	4,798	3,895	903	60,330
NONE	M0400898/1	13/08/2002	50,508	4,078	3,310	768	51,276
NONE	M0405180/1	24/08/2002	55,650	4,493	3,647	846	56,496
NONE	M0400823/1	26/08/2002	64,594	5,215	4,234	982	65,576
NONE	M0404793/1	27/08/2002	44,701	3,569	2,896	673	45,374
NONE	M0401190/1	27/08/2002	123,897	10,004	8,121	1,883	125,780
NONE	M0356280/1	31/08/2002	42,354	3,403	2,762	641	42,995

The system offers a drill-down to access fair value calculations per transaction, highlighting the monthly amortisation. In this example the mortgage has a book value of £287,968 and an interest balance of £302,198.

The calculation will work off a mid market curve, with the ability to apply a credit spread separately for each mortgage product type.

Fixed Product Report (Fixed Rate Mortgages[NONE]) - [Example (GBP)]

80044026393/2

Period Days	Value	Existing Rate	Existing Cashflow	Spot Rate	Disc Rate	Existing DCF	Forward Rate	Forward Cashflow	Forward DCF	Change
0	302,198	5.3400	0	3.7500	1.000000	0	0	0	0	0
1	302,198	5.3400	44	3.784168	0.999898	44	3.784168	31	31	13
31	300,712	5.3400	1,320	3.958071	0.996709	1,315	3.953533	974	974	342
59	300,712	5.3400	1,232	3.955917	0.993748	1,224	3.955303	912	907	317
90	297,720	5.3400	1,350	3.955762	0.990480	1,337	4.159228	1,052	1,042	296
120	296,215	5.3400	1,300	4.008299	0.987162	1,283	4.267859	1,039	1,026	258
151	294,703	5.3400	1,337	4.062640	0.983660	1,315	4.378523	1,096	1,078	237
181	293,184	5.3400	1,287	4.115253	0.980200	1,261	4.285028	1,033	1,012	249
212	291,658	5.3400	1,323	4.139495	0.976717	1,292	4.320567	1,070	1,045	247
243	290,126	5.3400	1,316	4.162779	0.973213	1,281	4.367428	1,076	1,047	233
273	288,587	5.3400	1,267	4.185341	0.969799	1,228	4.412025	1,047	1,015	213
304	287,041	5.3400	1,302	4.208676	0.966247	1,258	4.459648	1,087	1,051	207
334	285,489	5.3400	1,253	4.231273	0.962788	1,206	4.504250	1,057	1,018	189
365	283,929	5.3400	1,288	4.254153	0.959194	1,235	4.361020	1,052	1,009	226
396	282,363	5.3400	1,281	4.262560	0.955723	1,224	4.378011	1,050	1,003	220
424	280,790	5.3400	1,150	4.270164	0.952587	1,096	4.392535	946	901	194
455	279,210	5.3400	1,266	4.278592	0.949114	1,202	4.410349	1,046	993	209
485	277,623	5.3400	1,218	4.286757	0.945753	1,152	4.426518	1,010	955	197
516	276,029	5.3400	1,252	4.295200	0.942280	1,180	4.443785	1,042	982	198
546	274,429	5.3400	1,204	4.303376	0.938918	1,131	4.459955	1,006	945	186
577	272,821	5.3400	1,237	4.311830	0.935444	1,157	4.477222	1,037	970	187
608	271,206	5.3400	1,230	4.320287	0.931970	1,146	4.494215	1,035	965	182
638	269,584	5.3400	1,183	4.328475	0.928609	1,099	4.510387	999	928	171
669	267,955	5.3400	1,215	4.336939	0.925135	1,124	4.527655	1,030	953	171
699	266,318	5.3400	1,169	4.345132	0.921774	1,077	4.543826	995	917	161
730	264,675	5.3400	1,200	4.353868	0.918296	1,102	4.764672	1,071	984	119
761	263,024	5.3400	1,193	4.370631	0.914672	1,091	4.798254	1,072	980	111
789	261,366	5.3400	1,071	4.385772	0.911390	976	4.826962	968	882	94
820	259,701	5.3400	1,178	4.402536	0.907746	1,069	4.862171	1,072	974	96
850	258,028	5.3400	1,132	4.418760	0.904210	1,024	4.894132	1,038	939	86
881	256,349	5.3400	1,163	4.435525	0.900546	1,047	4.928261	1,073	966	81
911	254,661	5.3400	1,118	4.451750	0.896992	1,003	4.960224	1,038	931	71
942	252,967	5.3400	1,147	4.468517	0.893310	1,025	4.994355	1,073	959	66
973	0	0.0000	0	4.485284	0.889618	0	5.027947	0	0	0

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Example: Swaps

Summary reports for a swap portfolio showing the fair value, priced off a market yield curve.

Fair Value Swap - [Example 2 (GBP)]

Reference	Product Description	Expiry Date	Nominal Value	Fair Value
SW 0109	Interest swaps	03/08/2002	1,000,000	22,979
SW 0043	Interest swaps	01/07/2003	8,000,000	-521,394
SW 0060	Interest swaps	01/08/2001	10,000,000	149,616
SW 0061	Interest swaps	01/02/2001	10,000,000	12,909
SW 0062	Interest swaps	03/07/2001	5,000,000	89,129
SW 0063	Interest swaps	01/06/2002	10,000,000	-340,938
SW 0064	Interest swaps	01/06/2002	5,000,000	-159,687
SW 0065	Interest swaps	01/06/2002	5,000,000	-139,153
SW 0066	Interest swaps	01/06/2002	5,000,000	-136,074
SW 0067	Interest swaps	01/10/2002	10,000,000	-266,519
SW 0068	Interest swaps	01/10/2002	10,000,000	-251,233
SW 0069	Interest swaps	01/10/2002	5,000,000	-114,993
SW 0070	Interest swaps	01/04/2003	10,000,000	-161,320
SW 0071	Interest swaps	01/04/2003	10,000,000	158,116
SW 0072	Interest swaps	27/02/2002	3,000,000	12,014
SW 0073	Interest swaps	14/06/2001	10,000,000	12,724
SW 0074	Interest swaps	01/03/2001	10,000,000	-11,174
SW 0075	Interest swaps	14/06/2001	5,000,000	8,146
SW 0076	Interest swaps	14/06/2001	10,000,000	20,307
SW 0077	Interest swaps	01/03/2001	5,000,000	-4,240
SW 0078	Interest swaps	30/03/2004	5,000,000	103,707
SW 0079	Interest swaps	01/07/2003	10,000,000	189,489

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 Summary
 Detail

The system can provide detailed reports showing the fair value calculations for each swap.

Product Name	Cashflow Date	Receipt Princ Val	Receipt Rate	Receipt Term	Receipt Cash Flow	Payment Princ Val	Payment Rate	Payment Term	Payment Cash Flow	Net Cashflow	Spot Rate	Discount Rate	Fair Value
SW 0109	05/11/2001	1,000,000	7.2000	93	18,345	1,000,000	6.0000	93	15,288	3,057	4.2216	0.9895	3,025
	04/02/2002	1,000,000	7.2000	91	17,951	1,000,000	4.4384	91	11,066	6,885	4.2603	0.9792	6,742
	03/05/2002	1,000,000	7.2000	88	17,359	1,000,000	4.3850	88	10,598	6,761	4.2772	0.9693	6,553
	03/09/2002	1,000,000	7.2000	92	18,148	1,000,000	4.4452	92	11,204	6,944	4.2982	0.9589	6,659
										23,647			22,979
SW 0043	01/01/2001	8,000,000	5.9694	1	1,308	8,000,000	7.2100	1	1,580	-272	3.7626	0.9999	-272
	02/04/2001	8,000,000	3.9575	91	78,933	8,000,000	7.2100	91	143,805	-64,872	3.9550	0.9903	-64,243
	02/07/2001	8,000,000	4.2766	91	85,298	8,000,000	7.2100	91	143,805	-58,507	4.1168	0.9800	-57,337
	01/10/2001	8,000,000	4.3221	91	86,205	8,000,000	7.2100	91	143,805	-57,600	4.1973	0.9696	-56,849
	01/01/2002	8,000,000	4.4585	92	89,903	8,000,000	7.2100	92	145,385	-55,482	4.2533	0.9591	-53,213
	01/04/2002	8,000,000	4.3777	90	88,355	8,000,000	7.2100	90	142,225	-55,870	4.2709	0.9491	-53,026
	01/07/2002	8,000,000	4.4273	91	88,303	8,000,000	7.2100	91	143,805	-55,502	4.2902	0.9390	-52,116
	01/10/2002	8,000,000	4.4775	92	90,296	8,000,000	7.2100	92	145,385	-55,099	4.3156	0.9287	-51,170
	01/01/2003	8,000,000	4.5301	92	91,347	8,000,000	7.2100	92	145,385	-54,038	4.3546	0.9182	-49,618
	01/04/2003	8,000,000	4.7977	90	94,640	8,000,000	7.2100	90	142,225	-47,585	4.4128	0.9074	-43,179
	01/07/2003	8,000,000	4.8958	91	97,648	8,000,000	7.2100	91	143,805	-46,157	4.4790	0.8963	-41,371
										-550,984			-521,384
SW 0060	01/02/2001	10,000,000	7.0550	32	61,852	10,000,000	6.0075	32	52,668	9,184	3.9523	0.9966	9,153
	01/05/2001	10,000,000	7.0550	89	172,026	10,000,000	4.0258	89	98,163	73,863	3.9930	0.9871	72,910
	01/08/2001	10,000,000	7.0550	92	177,825	10,000,000	4.3107	92	108,653	69,172	4.1451	0.9768	67,553
										152,219			149,616

2. Hedge Effectiveness Testing for IAS39 Hedge Accounting

Each hedge relationship for IAS39 hedge accounting has its own separate data set containing the hedge effectiveness calculation with supporting data.

Effectiveness tests include calculations and the necessary supporting documentation.

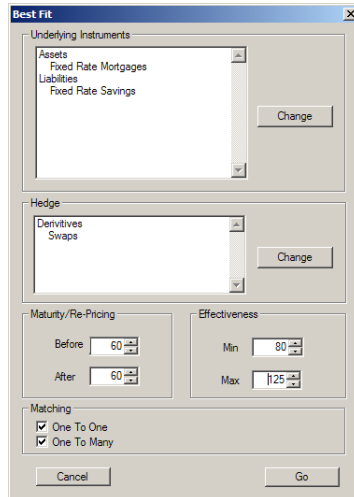
The system provides clear details of hedge effectiveness testing calculations for all relevant asset/liability classes.

Summary reports are then available to base journal entries.

Custom: Hedge Effectiveness Report - Sterling			
	Hedge	Underlying Instruments	Effective %
31/12/2000	258.96	294.01	88.076
SSAP003			
31/12/2000	258.87	264.29	97.946
SSAP004			
31/12/2000	235.77	213.64	110.35
SSAP005			
31/12/2000	231.64	195.62	118.41
SSAP006			
31/12/2000	154.93	185.98	83.304
SSAP007			
31/12/2000	77.56	69.34	111.85
SSAP008			
31/12/2000	49.31	43.55	113.21
SSAP009			
31/12/2000	24.64	23.95	102.89
SSAP010			
31/12/2000	14.69	13.47	109.11
SSAP011			
31/12/2000	14.62	14.74	99.185
SSAP012			
31/12/2000	9.84	9.33	105.49
SSAP013			
31/12/2000	4.80	4.69	102.27

3. Reduce Accounting Volatility with XMI-ALMIS Best Fit

The system has automatic and optimised hedge allocation to take advantage of macro hedging. By searching through fair value calculations for each transaction, the system can automatically search and determine hedge effectiveness. This will significantly reduce the accounting volatility that is associated with IAS39.



The system will store the details of matches found for future reference.

Match	Product	Reference	Maturity	Value	PV Change	% Effective
1	Swaps	sw 98788	31/10/2003	26000000	12844905	101.4032
	Fixed Rate Mortgages	M0413180/1	01/11/2003	258986875	-12667161	
2	Swaps	SW 0118	01/10/2003	5000000	-258957	88.0767
	Fixed Rate Savings	BRANCH FIXED RATE BOND 9	16/09/2003	5849572	294013	
3	Swaps	SW 0117	01/10/2003	5000000	-258867	97.9466
	Fixed Rate Savings	DIRECT FIXED RATE BOND 9	16/08/2003	5512405	264294	
4	Swaps	SW 0108	02/09/2003	5000000	-235765	110.3583
	Fixed Rate Savings	DIRECT FIXED RATE BOND 9	16/09/2003	4305712	213636	
5	Swaps	SW 0116	02/09/2003	5000000	-235510	120.3947
	Fixed Rate Savings	BRANCH FIXED RATE BOND 9	16/08/2003	4011069	195615	
6	Swaps	SW 0125	02/12/2003	3000000	-154932	83.3048
	Fixed Rate Savings	BRANCH FIXED RATE BOND 9	16/10/2003	3631647	185982	
7	Swaps	SW 00040	02/01/2004	1400000	-77555	111.8555
	Fixed Rate Savings	FTSE Bonus Bond FLAT	02/01/2004	1613680	69335	
8	Swaps	SW 0076	14/06/2001	1000000	-49310	113.2184
	Fixed Rate Savings	June 2000 Fixed Rate Bon	15/06/2001	5322221	43553	
9	Swaps	SW 0075	14/06/2001	5000000	-24642	102.8979
	Fixed Rate Savings	June 2000 Fixed Rate Bon	15/06/2001	3029945	23948	
10	Swaps	SW 0123	05/12/2001	1000000	-14693	109.1199
	Fixed Rate Savings	3Yr Fixed Rate Bond 1997	16/10/2001	948857	13465	
11	Swaps	SW 0101	02/10/2001	1000000	-14618	99.1858
	Fixed Rate Savings	3Yr Fixed Rate Bond 1997	16/08/2001	1333830	14738	
12	Swaps	SW 0121	22/09/2001	1000000	-9838	
	Fixed Rate Savings	3Yr Fixed Rate Bond 1997	16/09/2001	737315	9326	