

Measurement of Loans and Origination Fees

A Comparison of U.S. GAAP and IFRS

By Ashwini Kamat

In the wake of the 2008 financial crisis, FASB and the IASB have undertaken efforts to improve the accounting and reporting of financial instruments. In July 2014, the IASB issued IFRS 9, *Financial Instruments*, that will become effective January 1, 2018; however, because convergence with U.S. GAAP has been incomplete, differences still exist in the measurement of financial instruments—especially in loan accounting. Consequently, financial institutions with global operations must meet the multiple compliance and reporting requirements that prevail in those jurisdictions and often must design their IT systems to address these variations.

This discussion will examine the differences between loan accounting under U.S. GAAP and IFRS, specifically with respect to the measurement of loans and origination fees and how IT systems can be leveraged to overcome the complexities in reporting.

Scope

This article uses the terms “loan” and “mortgage” interchangeably to mean a sum of money transferred by a financial institution to its client or customer for temporary use, to be repaid with or without interest according to the terms of the agreement written in the accompanying bond, note, mortgage, or other document of indebtedness. Other financial instruments, such as derivatives, debt or equity securities, and other investments are outside the scope of this article. The following discussion will focus on Accounting Standards Codification (ASC) Topics 310, “Receivables”; 825, “Financial Instruments”; 941, “Financial Services—Depository and Lending”; 948, “Financial Services—Mortgage Banking”; and applicable industry classification codes, as well as IFRS 9 and International Accounting Standard (IAS) 39, *Recognition and Measurement of Financial Instruments*.



Differences between U.S. GAAP and IFRS

With respect to recognition and measurement, there are differences in the calculation of effective interest and treatment of variations under both the standards; however, both sets of standards generally mandate the use of the effective interest method to amortize loans and recognize interest income. Despite this similarity, only U.S. GAAP provides specific guidance and some leeway for certain types of loans and fees applicable on such loans. It is essential to examine these variations to understand their impact.

Measurement

U.S. GAAP (ASC 825-10) and IFRS [IAS 39, para. 9; IFRS 9 (2010), para. 4.1.5, IFRS 9 (2009), para. 4.5] allow the

fair value option—that is, all loans designated as such are valued at fair value. Under IAS 39, other loans are designated upon initial recognition as “available-for-sale” financial assets, instead of being classified as “loans and receivables.” (These classifications no longer exist under IFRS 9.) Under U.S. GAAP (ASC 948-310-35-1), loans classified as “held for sale” have to be measured at the lower of cost or fair value. The effect of these differences will vary according to the accounting for such loans.

Calculation of Effective Interest Rate

The IAS 39 definitions section (IAS 39.9) includes [and IFRS 9, Appendix A, cross-references the definition] the following description of effective interest rate (EIR):

Effective interest rate is the rate that

exactly discounts the estimated future cash payments or receipts through the expected life of the financial instrument, or when appropriate, shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, an entity shall estimate cash flows considering all contractual terms of the financial instrument (for example, prepayment, call and similar options) but shall not consider future credit losses. The calculation includes all fees and points paid or received between parties to the contract that are an integral part of the effective interest rate (see IAS 18 Revenue), transaction costs, and all other premiums or discounts. ...

... There is a presumption that the cash flows and the expected life of a group of similar financial instruments can be estimated reliably. However in those rare cases when it is not possible to estimate reliably the cash flows or the expected life of a financial instrument (or a group of financial instruments), the entity shall use contractual cash flows over the full contractual term of the financial instrument (or a group of financial instruments).

ASC 310-20-35-26 contains corresponding U.S. GAAP guidelines:

Except as stated in the following sentence, the calculation of constant effective yield necessary to apply the interest method shall use the payment terms required by the loan contract and prepayments of principal shall not be anticipated to shorten the loan term. If the entity holds a large number of similar loans for which prepayments are probable and the timing and amount of prepayments can be reasonably estimated, the entity may consider estimates of future principal prepayments in the calculation of effective yield necessary to apply the interest method.

Furthermore, under ASC 310-20-35-29, "if loan-by-loan accounting is used, net fees and costs shall be amortized over contract life and adjusted based on actual prepayments."

IFRS clearly mandates the use of estimates (including estimates of prepayments) for the calculation of effective interest. It does allow use of contractual terms, but only as an exception. Thus, each financial institu-

tion will need to have its own internal accounting policies and guidelines to address matters like estimation of cash flows, expected lives, and chances of prepayments for different loans or loan types and groups. Needless to say, these policies have to be followed consistently, period after period. Any changes to the accounting policies or guidelines will need suitable approvals and disclosures, as per IAS 8, *Accounting Policies, Changes in Accounting Estimates and Errors*.

On the other hand, U.S. GAAP mandates that contractual terms and estimates

are only allowed to be used in certain cases, subject to the fulfillment of certain conditions, as in the case of a large number of loans with similar credit characteristics, where it is possible to estimate prepayments (ASC 310-20-35-26), or of loans acquired with deteriorated credit quality (ASC 310-30). The example below shows the effect that these differences will have on financial statements.

Example. Entity A has disbursed a loan of \$1 million at an interest rate of 10% per year, repayable in five equal annual

EXHIBIT 1

Amortization Schedule under U.S. GAAP

Year	Repayment	Contractual Interest	Fees Amortization	Closing Balance	U.S. GAAP Income
0				990,000	
1	263,797	100,000	2,906	829,109	102,906
2	263,797	83,620	2,563	651,494	86,183
3	263,797	65,603	2,117	455,417	67,720
4	263,797	45,783	1,556	238,958	47,339
5	263,797	23,982	858	0	24,840
Total		318,988	10,000		328,988

EXHIBIT 2

Comparison of Effective Interest Rate (EIR) under IFRS and U.S. GAAP

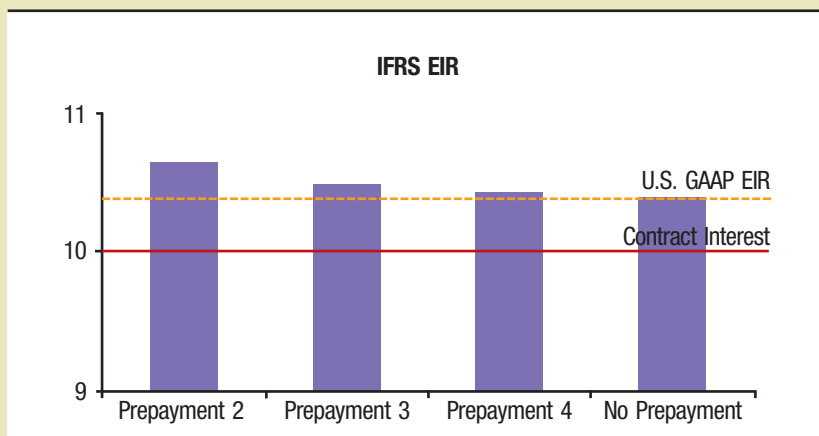


EXHIBIT 3

Amortization Schedules (Increasing Interest Rate)

U.S. GAAP Amortization Schedule					
Year	Repayment	Contractual Interest	Fees Amortization	Closing Balance	U.S. GAAP Income
0				99,000	
1	25,046	8,000	1,000	82,954	9,000
2	26,170	8,295		65,079	8,295
3	26,170	6,508		45,417	6,508
4	26,170	4,542		23,789	4,542
5	26,168*	2,379		0	2,379

IFRS Amortization Schedule				
Year	Repayment	Interest Income at EIR 9.6781%	Closing Balance	IFRS Income
0			99,000	
1	25,046	9,581	83,535	9,581
2	26,170	8,085	65,450	8,085
3	26,170	6,334	45,614	6,334
4	26,170	4,415	23,859	4,415
5	26,168*	2,309	0	2,309

* Rounding adjustment of \$2

installments. It has collected loan-origination fees of \$10,000 up front. The loan contract allows prepayment of the loan any time after the end of the first year. The entity follows loan-by-loan accounting.

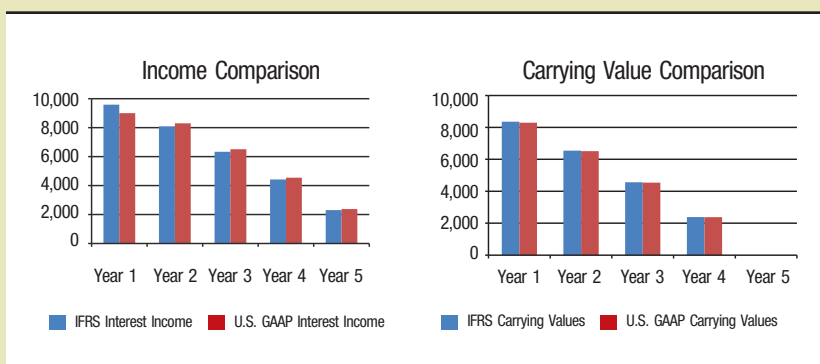
Under U.S. GAAP, no assumption of prepayment will be made; therefore, the EIR under U.S. GAAP will be calculated for the full contractual term and payments. In this case, EIR is 10.39%. *Exhibit 1* shows the simple amortization schedule under U.S. GAAP; these calculations can aid in understanding the more complex scenarios described later.

Based upon the details available, Entity A calculates EIR with the assumption that the loan will be prepaid. In addition, it calculates EIR based upon its own assessments of estimated life, repayment dates, and amounts based on past experience. To illustrate the variations in EIR values, they have been calculated on the assumption that the prepayment will occur at the end of year 2, year 3, or year 4.

The differences in the resulting EIR under U.S. GAAP or IFRS, due to the above factors, are summarized in *Exhibit 2*. The graph of EIR, calculated as per IFRS norms, with assumptions of prepayments, shows that the income recognized and the carrying values of loans amortized using different EIRs will differ significantly under U.S. GAAP and IFRS when periodic comparisons are made. The following sections explore other scenarios that might bring up differences in the income recognition and carrying values of assets.

EXHIBIT 4

Impact on Financial Statements



Realization of Principal or Interest

ASC 310-20-35-17 states: "Deferred net fees or costs shall not be amortized during periods when interest income on loan is not being recognized because of concerns over realization of loan principal or interest." Under IFRS, income recognition or amortization of fees or costs does not stop, even when a loan is impaired; however, impairment losses are recognized immediately, the carrying value of the loan is brought down to the present value of estimated future cash flows, and interest income is recognized on this reduced carrying cost.

Increasing Interest Rate during Loan Tenure

When the interest rate increases during the tenure of a loan, U.S. GAAP recommends computation of interest differently;

as a result, there is divergence from the method used in IFRS.

ASC 310-20-35-18(a) specifies the exception to the use of the interest method in the following manner:

If the stated rate of the loan increases during the term of the loan (so that interest accrued under the interest method in early periods would exceed interest at the stated rate), interest income shall not be recognized to the extent that the net investment in the loan would increase to an amount greater than the amount at which the borrower could settle the obligation.

Under IFRS, there is no differential treatment for such a scenario. The following example demonstrates the differences between the methods.

Example. Entity A has disbursed \$100,000 as a loan after collecting a loan origination fee of \$1,000 up front. The loan is for a period of five years, at an interest rate of 8% per year for the first year and 10% for the remaining tenure, repayable in equal annual installments. *Exhibit 3* presents the computations of EIR and interest income under U.S. GAAP and IFRS. In order to clearly bring out the differences between the U.S. GAAP and IFRS provisions, EIR under IFRS has been calculated based on contractual cash flows and tenure, which is at 9.6781%. In addition, currency translation is ignored in the calculations.

As depicted in *Exhibit 3*, the effective interest method is not used under U.S. GAAP and income is accounted for using the stated contractual interest rate during the loan tenure. The nonrefundable fees and costs are taken as profit or loss in the first reporting period. As a result, when the interest rate increases during the tenure of loan, the income recognized and the carrying values of the loans under both standards are significantly different, as shown in *Exhibit 4*.

No Scheduled Payment Terms (Demand Loans)

According to ASC 310-20-35-22:

For a loan that is payable at lender's demand, any net fees or costs may be recognized as an adjustment of yield on a straight line basis over a period that is consistent with any of the following: Understanding between the borrower and lender

If no understanding exists, lender's estimate of the period of time over

which the loan will remain outstanding, and any unamortized amount shall be recognized when the loan is paid in full. Such estimates should be monitored regularly and revised as appropriate. If contrary to expectation, if a loan remains outstanding beyond the anticipated payment date, no adjustment is required.

Under IFRS, effective interest would be calculated based on estimated cash flows over the expected life of the loan; thus, income recognized and the carrying values of the loan under U.S. GAAP and IFRS will differ significantly in a periodical comparison.

Example. Entity A has disbursed a demand loan of \$100,000 at an interest rate of 10% per year, repayable in five equal annual installments, and has collected a

loan origination fee of \$1,000 up front. Entity A expects that the loan will be fully repaid in four years. *Exhibit 5* shows how the financial statements are impacted under IFRS and U.S. GAAP. Note that for the sake of clearly revealing the impact of differences between the U.S. GAAP and IFRS provisions, the authors have again ignored the currency translation. As can be seen in *Exhibit 5*, the interest income and carrying values of the loan under both standards differ significantly.

Revolving Lines of Credit

In the case of revolving lines of credit, ASC 310-20-35-23 allows fees or costs to be calculated on a straight-line basis over the full term of the line of credit, unlike under IFRS. The amortization of fees

EXHIBIT 5 Amortization of Fees on Demand Loans

U.S. GAAP Amortization Schedule					
Year	Repayment	Contractual Interest	Fees Amortization	Closing Balance	U.S. GAAP Interest Income
0				99,000	
1	26,380	10,000	250	82,870	10,250
2	26,380	8,362	250	64,102	8,612
3	26,380	6,560	250	445,532	6,810
4	50,360	4,578	250	0	4,828
Total			1,000		30,500

IFRS Amortization Schedule					
Year	Repayment	Interest at EIR 10.4189%	Fees Amortization	Closing Balance	IFRS Interest Income
0				99,000	
1	26,380	10,315	315	82,935	10,315
2	26,380	8,641	279	65,196	8,641
3	26,380	6,793	232	45,608	6,793
4	50,360	4,752	174	0	4,752
Total			1,000		30,500

happens regardless of whether the credit limit is fully utilized.

Differences in Estimated and Actual Cash Flows

ASC 310-20-35-26 states:

If the entity estimates future prepayments in applying the interest method and a difference arises between the prepayments anticipated and actual prepayments received, the entity shall recalculate yield to reflect the actual payments to date and anticipated future payments. The net investment in the loan shall be adjusted to the amount that would have existed had the new effective yield been applied since the acqui-

sition of the loan. The investment in the loan shall be adjusted to the new balance with a corresponding charge or credit to interest income.

In contrast, IAS 39 (AG8) provides guidance on accounting for differences when an entity revises its estimates:

When an entity revises its estimates of payments or receipts, the entity shall adjust the carrying amount of financial asset or liability (or a group of financial instruments) to reflect actual and revised cash flows. The entity recalculates the carrying amount by computing the present value of estimated future cash flows at the financial instrument's original effective interest rate calculat-

ed in accordance to para 92. The adjustment is recognized in the profit or loss as income or expense.

Therefore, when actual cash flows differ from the estimates, U.S. GAAP mandates the recalculation of EIR; IFRS, on the other hand, does not insist upon it. The following example examines the impact of this provision on income recognition and carrying values of loans under both standards.

Example. Entity A has disbursed a loan of \$100,000 at an interest rate of 10% per year, repayable in five equal annual installments, and has collected a loan origination fee of \$1,000 up front. It expects that the loan will be fully repaid in three years; however, in the third year, it becomes clear that the loan will not be fully repaid, but instead will complete its full contractual term. *Exhibit 6* shows how this scenario impacts the financial statements under U.S. GAAP and IFRS. Note that for the sake of clearly bringing out the impact of differences between the U.S. GAAP and IFRS provisions, the authors have ignored currency translation. In this example, the company considers estimated future prepayments when applying the interest method under U.S. GAAP.

Restructuring Loans

Under ASC 310-20-35-9, if a loan is restructured on favorable terms (i.e., the new loan's effective yield is at least equal to the loans of other customers with similar credit risk and the present value of the cash flows of the new loan is at least 10% different from the present value of the cash flows, as per the original terms), the restructured loan should be treated as a new loan and the unamortized fees or costs be taken as income.

Under IFRS, there is no special accounting treatment for restructured loans. Any change in cash flow estimates needs to be adjusted (according to IAS 39, AG8) into the carrying value of the loan as profit or loss.

Example. Entity A disbursed a loan of \$100,000, at an interest rate of 10% repayable in five equal annual installments; a fee of \$1,000 was collected up front. Entity A later restructures the loan at the end of year 2. The terms of restructuring are favorable to Entity A, such that the loan will be fully repaid at the end of year 4 by payment of equal annual installments

EXHIBIT 6

Differences in Estimated and Actual Cash Flows

U.S. GAAP Amortization Schedule

Year	Repayment	Interest	Catch-up Amortization	Closing Balance	Interest Income
0				99,000	
1	26,380	10,377		82,997	10,377
2	26,380	8,699		65,316	8,699
3	26,380	6,846	(240)	45,542	6,606
4	26,380	4,734		23,896	4,734
5	26,380	2,484		0	2,484
Total					32,900

Note: EIR revised from 10.4815% to 10.3950% in Year 3 based on revised cash flows.

IFRS Amortization Schedule

Year	Repayment	Interest	Catch-up Amortization	Closing Balance	Interest Income
0				99,000	
1	26,380	10,377		82,997	10,377
2	26,380	8,699		65,316	8,699
3	26,380	6,846	(293)	45,489	6,553
4	26,380	4,768		23,877	4,768
5	26,380	2,503		0	2,503
Total					32,900

Note: EIR is constant at 10.4815% throughout the loan term.

of \$40,000 during the third and fourth years. (See *Exhibit 7*.)

Compliance Challenges

It is evident from the previous sections that there are significant differences in the accounting treatment of the amortization of loans and the nonrefundable fees or costs under U.S. GAAP and IFRS. Given the volume of loan-related transactions and the complexities arising from the ever-changing nature of products, business rules, and accounting standards, reporting accurate, reliable, and compliant information to internal and external stakeholders in a timely manner is daunting.

A large multinational financial institution falls under the jurisdiction of different regulatory authorities and, therefore, faces multiple reporting challenges. Such an organization is required to report to all authorities where it has operations, as well as to its parent corporate office, which might fall under a different jurisdiction.

IT systems have typically not been able to keep pace with fast-changing regulations, demands of business, and other reporting challenges. Financial institutions generate financial reports and relevant disclosures for internal and external stakeholders every day. Often, accountants have to resort to using spreadsheet-based macros to come up with the required reports. Such methods are inefficient, prone to error, and likely to raise concerns about the security and safety of data.

Financial institutions should constantly assess the capabilities of their financial accounting processes and evaluate their efficacy against the best-in-class processes that other institutions follow worldwide. A large investment of time, effort, and cost is required to achieve the ideal IT solution to tackle the complexities of divergent accounting standards. But when weighed against the costs of an error in the recognition of income and the corresponding adverse impact on asset valuations, the business case for investing in an effective IT solution is compelling. □

Ashwini Kamat, CA, CQA, PMP, is a Six Sigma Black Belt, and IFRS-certified member of the banking industry practice and head of the finance and reporting sub-practice of Tata Consultancy Services Ltd.

It is evident that there are significant differences in the accounting treatment of the amortization of loans and the nonrefundable fees or costs under U.S. GAAP and IFRS.

EXHIBIT 7 Restructuring of a Loan

U.S. GAAP Amortization Schedule

Year	Repayment	Interest at EIR	Unamortized Fee Taken in to Income	Carrying Value	Income
0				99,000	
1	26,380	10,291		82,911	10,291
2	26,380	8,618	453	65,602	9,071
3	40,000	9,390		34,992	9,390
4	40,000	5,008		0	5,008
Total					33,760

Note: Interest at EIR of 10.3945% in the first two years; in year 2, unamortized fees taken in to income. Interest income calculated at new EIR of 14.3130% during years 3 and 4.

IFRS Amortization Schedule

Year	Repayment	Interest at EIR	Catch-up	Carrying Value	Income
0				99,000	
1	26,380	10,291		82,911	10,291
2	26,380	8,618	3,906	69,055	12,524
3	40,000	7,178		36,233	7,178
4	40,000	3,767		0	3,767
Total					33,760

Note: Interest at EIR of 10.3945% throughout the loan tenure. Catch-up adjustment made when the loan is restructured.

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