Global Research
& Risk Solutions

CRISIL
An S&P Global Company

Debt securities:
GAAP vs IFRS

Analytical contacts

Anshuman Prasad
Senior Director
Global Head, Risk Analytics
CRISIL GR&RS
anshuman.prasad@crisil.com

Nageswara Sastry Ganduri
Director – Model Risk
CRISIL GR&RS
nageswara.ganduri@crisil.com

Nimisha Nidhi
Associate Director – Model Risk
CRISIL GR&RS
nimisha.nidhi@crisil.com

Ashok Kumar Subramanian
Associate Director – Model Risk
CRISIL GR&RS
ashok.subramanian@crisil.com

Contents

Executive summary

The collapse of the award-winning Silicon Valley Bank (SVB), followed by Signature Bank and First Republic Bank — all in the US — sparked extensive analyses to zero in on the causes.

Much of this scrutiny has been around critical topics such as stress testing, hedging, concentration risk and liquidity buffer management.

To boot, more regional US banks are reportedly under the pump. What's also unhelpful is that US interest rates are expected to be higher for longer.

Which begs the question, what about European and Asia-Pacific banks? Are they facing similar challenges? How would an SVB, First Republic or Signature have fared had they been European banks?

Can we attribute the difference in the financial strain faced by the US and European banks to the variance in regulatory practices on both sides of the Atlantic?

A lot of unanswered questions, ponderables and nuances, indeed.

Given the backdrop, this whitepaper examines and compares the classification, hedging and accounting practices related to debt securities under GAAP and IFRS.

Additionally, it analyses the cash and debt distribution of a few US and European banks.

US Generally Accepted Accounting Principles

The US Securities and Exchange Commission mandates that all publicly traded and regulated US companies adhere to Generally Accepted Accounting Principles (GAAP) administered by the Financial Accounting Standards Board (FASB) for financial reporting obligations.

Asset classification and subsequent treatment

Under GAAP, a debt security needs to be classified into one of the following three categories (paragraph 320-10-25-1):

1. Trading security: A security acquired with the intent of selling it within hours or days
2. Held-to-maturity (HTM) security: A security acquired with the intent of holding it until maturity
3. Available-for-sale (AFS) security: A security not classified as either a trading or HTM security

GAAP also specifies that an HTM security should not be sold under any of the following circumstances:

1. Changes in market interest rates and related changes in the security's prepayment risk
2. Need for liquidity (for example, due to the withdrawal of deposits, increased demand for loans, surrender of insurance policies, or payment of insurance claims)
3. Changes in availability of, and the yield on, alternative investments
4. Changes in funding sources and terms
5. Changes in foreign currency risk

Further, each category of debt security is measured differently in financial statements.

1. Investments in trading securities are measured at fair value. Unrealised profit and loss (P&L) are included in earnings
2. Investments in HTM securities are subsequently measured at amortised cost
3. Investments in AFS securities are measured at fair value. Unrealised P&L is excluded from earnings and reported under other comprehensive income until realised, except for the portion of unrealised P&L that is being hedged in a fair value hedge. P&L of the hedged portion is recognised in earnings during the period of the hedge

Paragraph 320-10-35-8 states that a sale or transfer of a security classified as HTM for a reason other than deterioration of the issuer's creditworthiness, changes in tax laws, major business combination or disposition, modification in regulatory requirements, or increase in risk weights of debt securities used for regulatory risk-based capital purposes (paragraph 320-10-25-6) calls into question (taints) the entity's intent concerning all securities that remain in the HTM category.

Hedging

In 2017, the FASB issued Accounting Standards Codification (ASC) No. 815, which provides guidance on derivatives and hedging.

The ASC 815 update aims to improve financial reporting of hedging relationships to accurately portray economic results of an entity's risk management activities in financial statements.

Additionally, it simplifies the application of hedge accounting[1] guidance in GAAP.

As a part of the update, an entity is required to present the earnings effect of the hedging instrument in the same income statement line item as the earnings effect of the hedged item[2]. This is to better understand the results and costs of an entity's hedging programme.

For fair value hedges, the overall change in fair value of the hedging instrument is disclosed in the same income statement line item as the earnings effect of the hedged item.

For cash flow and net investment hedges, the overall change in fair value of the hedging instrument is recorded in other comprehensive income and in the currency translation adjustment section of other comprehensive income, respectively.

The amounts are reclassified as earnings in the same income statement line item as the earnings effect of the hedged item when the hedged item affects earnings.

GAAP contains specific requirements for both initial and ongoing quantitative hedge effectiveness testing. It also includes strict requirements for specialised effectiveness testing methods, which allow an entity to forgo quantitative hedge effectiveness assessments for qualifying relationships.

[1] Hedge accounting is an accounting practice that allows entities to recognise gains or losses on hedging instrument and the associated hedged item in the same line item under profit or loss (or other comprehensive income) for any accounting period. It reduces the volatility in profit or loss (or other comprehensive income) that would have otherwise occurred if the hedged item and its hedging instrument were accounted for separately.

[2] This is unlike the earlier GAAP requirement, which had a provision of hedge accounting only for the portion of hedge deemed to be "highly effective" and required an entity to separately reflect the amount by which the hedging instrument did not offset the hedged item, which was referred to as the "ineffective" amount.

According to ASC paragraph 815-20-25-12(d), if the hedged item is a debt security classified as HTM, the designated risk being hedged is the risk of changes in its fair value attributable to credit risk, foreign exchange risk, or both.

ASC paragraphs 815-20-25-43(c)-2 and 815-20-25-43(d)-2 specify that with respect to fair value hedge and cash flow hedge, the change in fair value and/or the change in variable cash flow due to interest-rate risk will not be designated as a hedged item for an HTM security.

This implies that the concept of hedging interest-rate risk in a security classified as HTM is inconsistent with the classification, which requires the entity to hold the security until maturity regardless of changes in interest rates. Hence, hedging of only credit risk and forex risk is permitted.

According to ASC paragraph 815-20-25-12(f), if the hedged item is a financial asset, the designated risk being hedged can be the risk of changes in the overall fair value of the entire hedged item, interest rate-risk, foreign exchange risk, and/or credit risk.

This means that a security classified as AFS can be hedged for any or all of the above-mentioned risks.

Our view

While the FASB does not explicitly encourage banks to hedge interest-rate risk of HTM securities, it also does not prohibit them from doing so.

That said, changes in gains or losses for hedging instruments would result in banks reporting volatile earnings. This discourages them, in particular the regional ones, from hedging interest-rate risk of HTM securities.

Debt holdings at US banks

The GAAP guidelines call for an entity to implement robust liquidity management. If the majority of the entity's debt investments are in the HTM category, it raises a red flag.

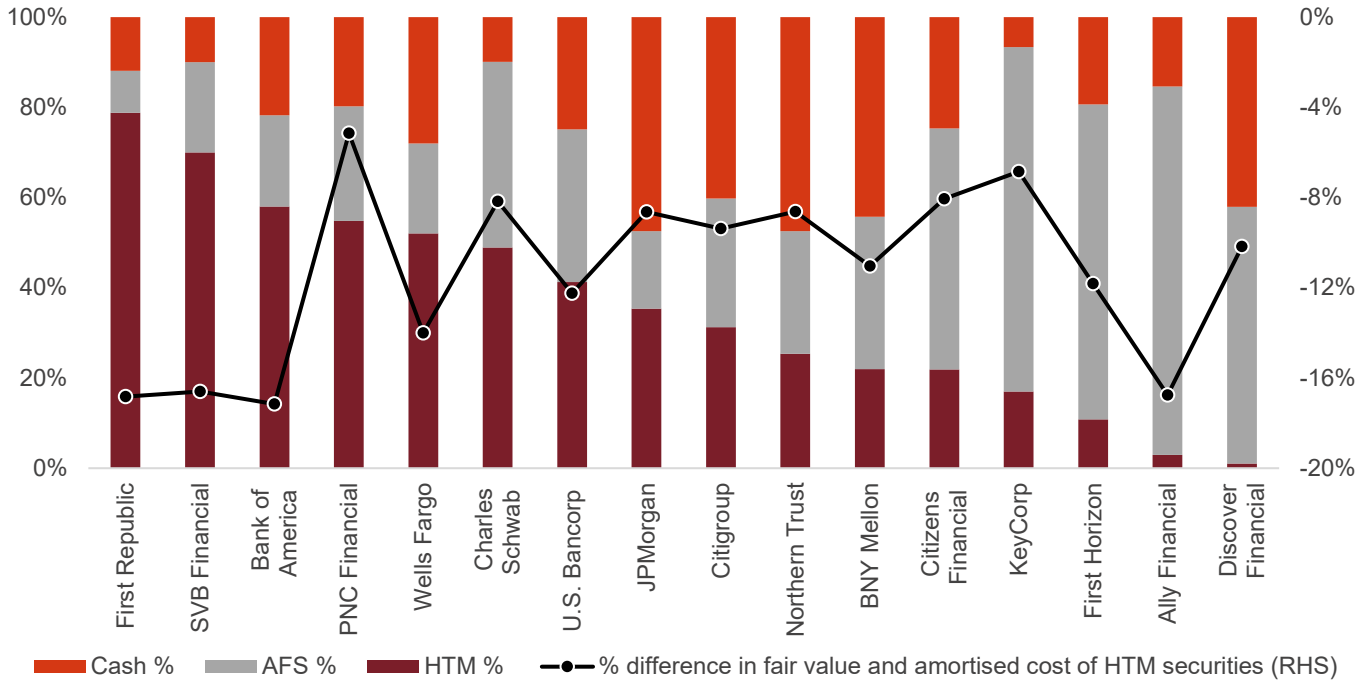
Figure 1 illustrates the distribution of cash and debt securities of various US banks, derived from their FR Y-9C or Form 10-K filings as of December 31, 2022. The right vertical axis shows the percentage difference in fair value and amortised cost of HTM securities.

The median percentage difference is ~-11% for the sample set. With substantial investments in HTM securities, the percentage difference for First Republic, SVB, and Bank of America was the highest, at around ~-17%.

Figure 2 displays total assets of the banks as of December 31, 2022. Most of these banks had total assets below or around $500 billion.

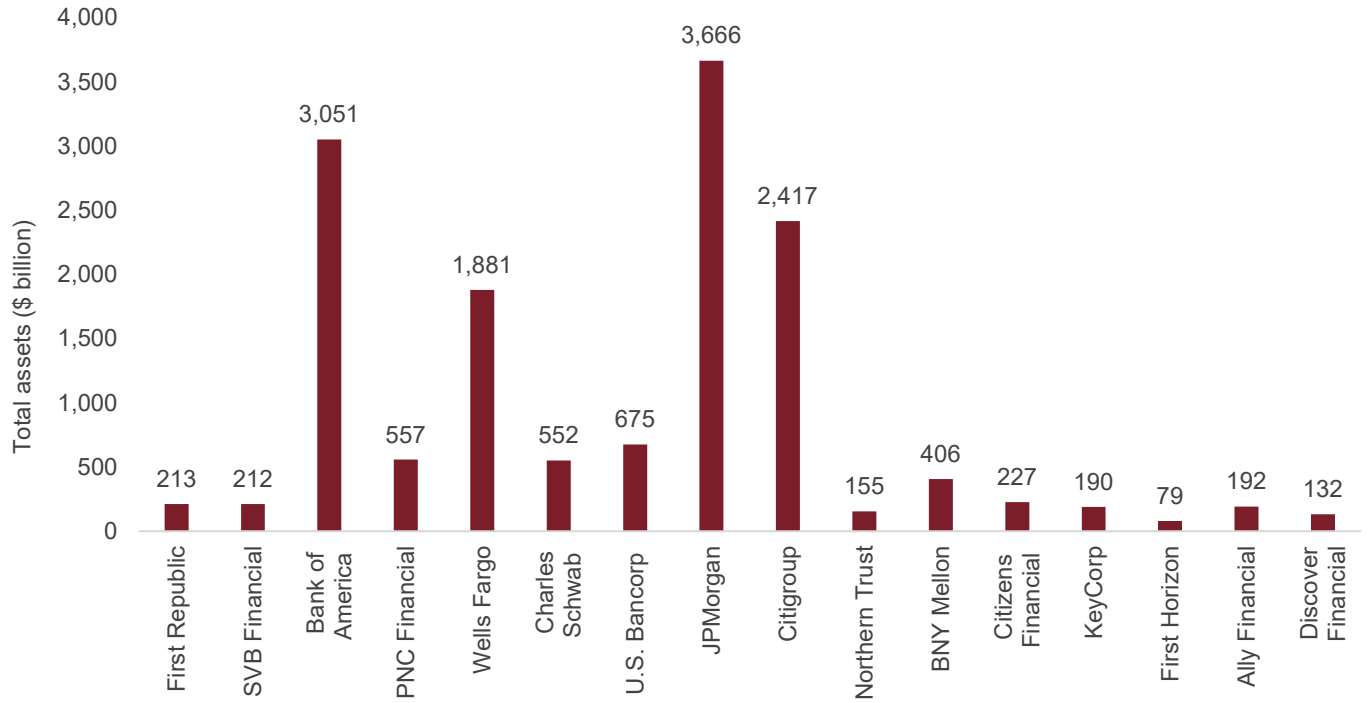
Though Bank of America had a high proportion of HTM securities and a higher difference in fair value and amortised cost of HTM securities, it held higher total assets ($3 trillion) than First Republic and SVB (~$200 billion each).

Figure 1: Cash and debt securities distribution of US banks as of December 31, 2022



Source: FR Y-9C and Form 10-K filings

Figure 2: Total assets of US banks as of December 31, 2022



Source: FR Y-9C and Form 10-K filings

International Financial Reporting Standards

International Financial Reporting Standards (IFRS) are issued and maintained by the International Accounting Standards Board. They were created to have a common accounting language across companies and countries.

The IFRS framework has been adopted in 167 countries, including the European Union (EU) and many parts of Asia and South America.

Australian companies follow the Australian equivalents of IFRS. Hong Kong entities adhere to Hong Kong Financial Reporting Standards (HKFRS), which are virtually identical to IFRS.

In Japan, IFRS is one of the four permitted financial reporting frameworks — the others are Japanese GAAP, Japan's Modified International Standards, and US GAAP.

India follows Indian Accounting Standards (Ind AS) based on the IFRS framework.

IFRS asset classification

Under the IFRS framework, financial assets are classified as subsequently measured at amortised cost, fair value through other comprehensive income (FVTOCI), or fair value through profit or loss (FVTPL).

The classification is based on the entity's business model for managing the financial assets, and the contractual cash flow characteristics of such assets (paragraph 4.1.1).

A financial asset is measured at amortised cost if the objective of the business model is to hold the asset to collect contractual cash flows, and the contractual terms of the asset ascertain cash flows (principal and interest payments) on specified dates (paragraph 4.1.2). From an accounting perspective, this category is comparable to the HTM category of GAAP.

A financial asset is measured at FVTOCI if the objective of the business model is achieved by collecting contractual cash flows as well as by selling the asset. Also, the contractual terms of the asset should ascertain cash flows (principal and interest payments) on specified dates (paragraph 4.1.2A).

A financial asset is measured at FVTPL if not measured at amortised cost or FVTOCI (paragraph 4.1.4).

The IFRS guidelines also have provision for reclassification of a financial asset. Paragraph 4.4.1 states that an entity should reclassify all affected financial assets if, and only if, it changes its business model for managing such assets.

Hedge accounting

At the inception of the hedging relationship, the IFRS hedge accounting guidelines require formal designation and documentation of the hedging relationship and the entity's risk management objective and strategy for undertaking the hedge.

The documentation should include identification of the hedging instrument, the hedged item, the nature of the risk being hedged, and how the entity will assess whether the hedging relationship meets the hedge effectiveness requirements (paragraph 6.4.1).

For a fair value hedge, gain or loss on the hedging instrument should be recognised in profit or loss in the case of debt assets. The hedging gain or loss should adjust the carrying amount of the hedged item and be recognised in profit or loss.

Any adjustment should be amortised to profit or loss if the hedged item is a financial instrument measured at amortised cost. If the hedged item is a financial asset that is measured at FVTOCI, the hedging gain or loss should be recognised in profit or loss (paragraph 6.5.8, 6.5.10).[3]

For a cash flow hedge, gain or loss on the hedging instrument that is determined to be an effective hedge should be recognised in other comprehensive income. Any remaining gain or loss on the hedging instrument is hedge ineffectiveness and should be recognised in profit or loss.

Our view

Although the IFRS and GAAP frameworks have many similar hedge accounting requirements, including the three hedge accounting models (cash flow hedge, fair value hedge, and net investment hedge), documentation, and qualifying criteria, there are some subtle differences.

Hedge effectiveness under GAAP is more restrictive than under IFRS. The IFRS framework allows for qualitative assessment of hedge effectiveness in certain cases, while GAAP requires the hedging relationship to be highly effective within the prescribed range.

For cash flow hedges, under IFRS 9, gain or loss on the hedging instrument considered as an effective hedge is recognised in other comprehensive income, while gain or loss from an ineffective hedge is classified as profit or loss.

Under US GAAP, an entity is not required to separately measure hedge ineffectiveness. Instead, the entire change in fair value of the hedging instrument is recorded in other comprehensive income. The amount is reclassified to earnings when it affects earnings.

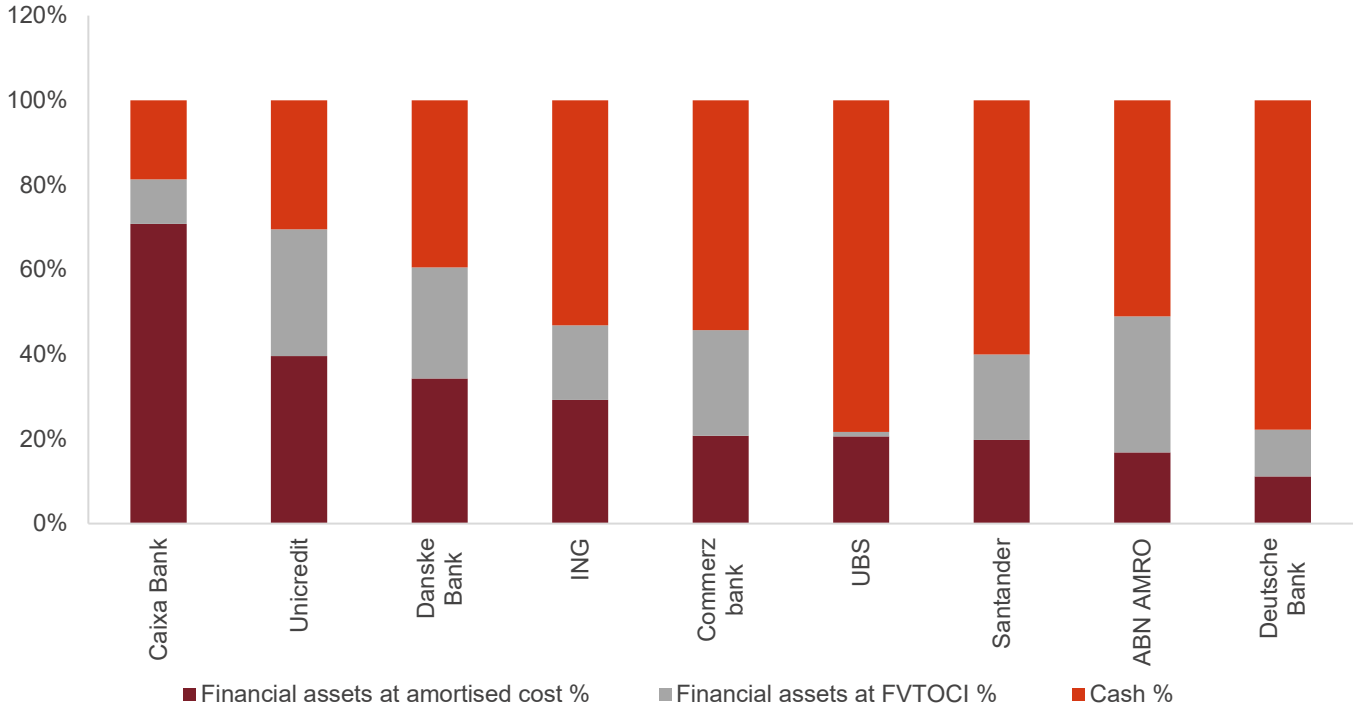
While hedging of interest-rate risk of HTM securities is not explicitly required in GAAP, there is no such restrictive guideline under IFRS. In the IFRS framework, the carrying amount of the hedged item adjusted by hedging gain or loss must be amortised for securities measured at amortised cost.

Debt holdings at EU banks

Figure 3 and Figure 4 present the cash and debt securities (amortised cost and FVTOCI) distribution and total assets for a few European banks, respectively. With the exception of Caixa Bank, whose financial assets at amortised cost stood at 71% as of December 31, 2022, the remaining banks had figures below 40%.

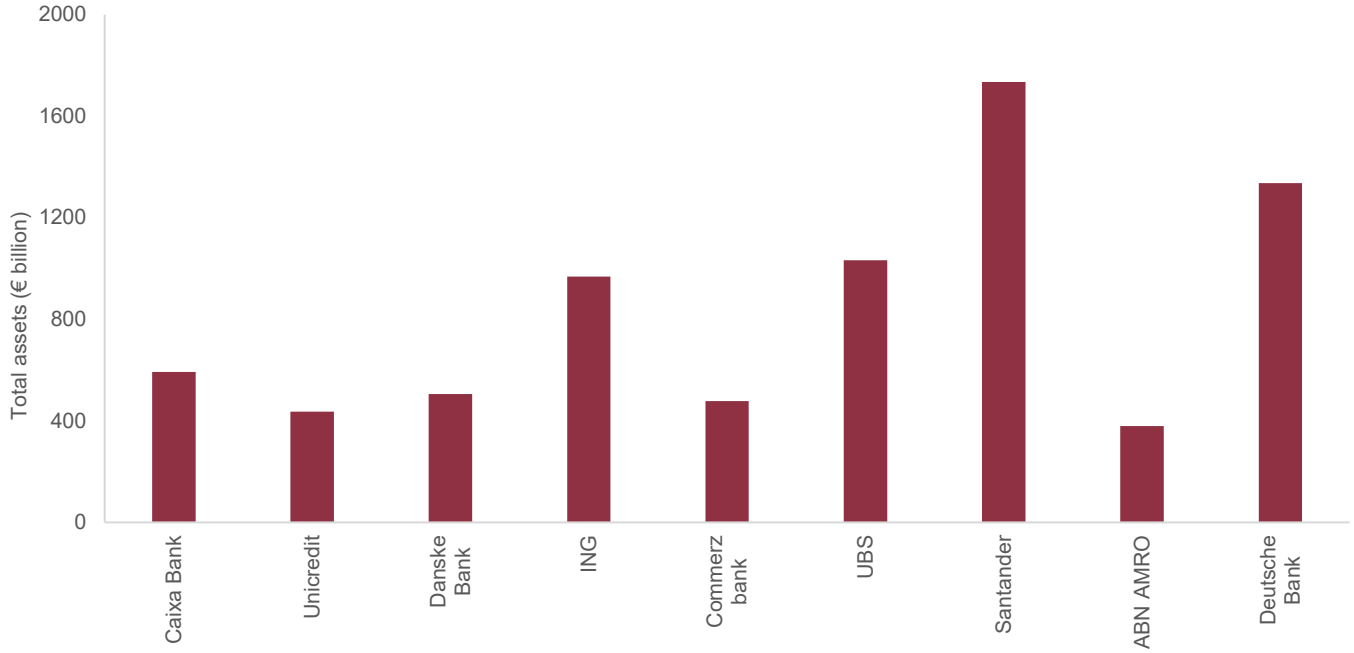
[3] More details on hedge accounting are provided in Chapter 6 of IFRS guidelines (https://www.ifrs.org)

Figure 3: Cash and debt securities distribution of European banks as of December 31, 2022



Source: Annual reports

Figure 4: Total assets[4] of European banks as of December 31, 2022



Source: Annual reports

[4] UBS reports its results in USD. Its total assets have been converted into Euro using the EUR/USD rate of 1.0702 as of December 30, 2022. Danske Bank reports its results in DKK. Its total assets have been converted into Euro using the EUR/DKK rate of 7.4344 as of December 30, 2022.

GAAP versus IFRS

The key differences between GAAP and IFRS are as follows:

- GAAP is a rule-based framework, while IFRS is more of a principles-based approach
- GAAP is detailed and prescriptive, while IFRS provides guidelines at a high level and is more flexible
- GAAP requires more disclosures compared with IFRS

Additionally, there are differences in treatment of inventory, development costs, write-down reversal, and fixed-assets valuation.

The widespread adoption of IFRS makes it better suited for companies operating in multiple countries. GAAP, being more US-focused, is apt for companies operating only in the US.

The lack of FASB guidelines on hedging HTM securities has had devastating consequences for regional banks in the US.

Though banks are not prohibited from hedging HTM securities, hedging them would result in volatile earnings. Moreover, it can raise questions regarding the bank's intention to hold these securities until maturity. This can be more pronounced for regional banks.

Hedging HTM bonds would also entail hedging costs. Consequently, most banks in the US hold a higher percentage of HTM bonds (see Figure 1), leading to a higher difference in their fair value and carrying value in a scenario of rising interest rates.

On the other hand, IFRS guidelines have provisions for hedging debt securities measured at amortised cost. This has led to stable financial statements of banks, resulting in a lower percentage of debt securities measured at amortised cost. Overall, IFRS has worked in favour of European banks amid rising interest rates.

The terms used to classify debt securities under GAAP — HTM and AFS — can be misleading. This is because banks may be required to liquidate even their HTM holdings in certain unforeseen circumstances.

In this context, the IFRS framework offers greater flexibility by allowing to classify securities as they are intended to be measured subsequently, rather than categorising them as HTM or AFS.

Conclusion

GAAP and IFRS are similar in many aspects. However, IFRS stands out as a principles-based framework that offers greater flexibility and has a broader scope. More importantly, HTM bonds do not qualify for hedging interest rate risk under GAAP, whereas IFRS does not have any such restriction.

Amid rising interest rates, it is crucial to hedge interest-rate risk, either partially or wholly. Hedge accounting can also reduce the percentage of HTM bonds and instil greater investor confidence. Perhaps, ASC 815 could be amended in this regard.

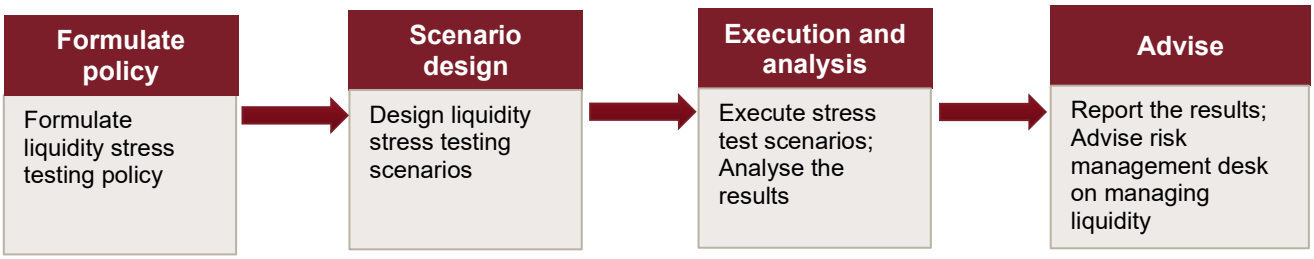
How CRISIL can help

CRISIL offers support in the following areas:

- Designing and implementing end-to-end overall hedge accounting framework

Hedging policy formulation	• Support hedging policy formulation, inclusive of risk, instruments and tenure to be hedged • Help formulate policy on hedge termination based on hedge effectiveness threshold • Specify guidelines for hedge rebalancing
Hedge Analysis	• Conduct research to identify effective hedging instruments by assessing the qualitative or quantitative hedge effectiveness based on the economic relationship between the hedged item and hedging instrument • Compute the hedge ratio to match the quantity of the hedged item and hedging instrument • Perform stress testing to ascertain the relationship between the hedging instrument and hedged item under different stress-testing scenarios
System Development	• Build a database of all instruments used for hedging and the corresponding hedged items • Automation of data extraction and consolidation • Facilitate linking of hedging instrument and hedged item in the system • Building informative dashboard of hedging instrument and corresponding hedged item while specifying the hedge effectiveness • Visually showing impact analysis of hedging
Report Generation	• Assist in report generation for hedge effectiveness measurement • Help the bank report hedge accounting for all covered instruments comprehensively • Assist the bank in meeting enhanced disclosure requirements for hedge accounting

- Conduct end-to-end liquidity stress testing of the bank



- Conduct interest rate stress testing of banks for all stress scenarios prescribed by BCBS
- Model economic value of equity methodology and report the same to the regulators

References

- FASB Accounting Standards Codification (https://asc.fasb.org/)
- IFRS Guidelines (https://www.ifrs.org/)
- Derivatives and Hedging (Topic 815), FASB Accounting Standards Update, August 2017

About CRISIL Limited

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

It is India's foremost provider of ratings, data, research, analytics and solutions with a strong track record of growth, culture of innovation, and global footprint.

It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers through businesses that operate from India, the US, the UK, Argentina, Poland, China, Hong Kong and Singapore.

It is majority owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

About Global Research & Risk Solutions

Global Research & Risk Solutions is the world's largest and top-ranked provider of high-end research and analytics services. We are the world's largest provider of equity and fixed income research support to banks, and the foremost provider of end-to-end risk and analytics services to trading and risk management functions at world's leading financial institutions. We provide corporate research and analytics solutions to operations, strategy, and sales and marketing teams of corporations globally. Coalition provides analytics and business intelligence to 14 leading global investment banks. We operate from 8 research centers in Argentina, China, India and Poland, working with clients across time zones and languages. Being part of CRISIL enables us to attract and retain top quality talent. We have over 2,300 employees, 75% of whom hold advanced degrees in finance, accounting and management. We employ the largest number of CFAs and CFA aspirants in India. We have won top honours at the World HR Congress on Talent Management and HR Project for the year 2015. We have also won the NASSCOM Exemplary Talent Practices Award (NExT Practices) for skill development for two years in succession in 2011 and 2012. The award recognizes us as a firm that has the vision to proactively invest in its people and get them future-ready.

We are committed to delivering cutting-edge analysis, opinions, and solutions. This underscores our proposition of being the best people to work with.

CRISIL Privacy Notice

CRISIL respects your privacy. We may use your contact information, such as your name, address, and email id to fulfil your request and service your account and to provide you with additional information from CRISIL. For further information on CRISIL's privacy policy please visit www.crisil.com.