

# **Guide to accounting for financial instruments and derivatives**

## **All that stuff about AS 30, 31 and 32**

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### **Note of caution**

We would like to start this article with two notes of caution.

First, AS 30, 31 and AS 32 are Indian accounting standards that correspond, respectively, to IAS 39, IAS 32 and IFRS 7. Accounting for financial instruments is a very nebulous concept – the amount of standard writing currently going on in this field is both elaborate and hectic. Standards get modified and re-written very quickly. IAS 39, for instance, is being adopted in India in its existing form – but there is already an ongoing project to replace IAS 39 in 3 phases. First phase is already done - IFRS 9 implements that. For second phase, there is an exposure draft already, and for the third, there is an expected exposure draft during the year. However, on 26<sup>th</sup> May 2010, the US FASB went ahead and issued its own exposure draft for a new, all comprehensive exposure draft on accounting for financial instruments. The US ED means quite a few things – first, as there are significant differences between the US and IASB approach, it is not leading to a convergence. Two, the US approach seems to verging towards a parallel disclosure of both amortised cost and fair values. In other words, fair values are not replacing amortised costs – they two would co-exist.

Since standard-writing on this subject is brisk, therefore, it was important to state the date of this article – stated on the top.

Second, this article is an overview article – it is intended for understanding the broad structure of the standards. There are several matters of details and complexities that this article does not go into.

### **What is mark to market accounting?**

What is the big change that accounting standards on financial instruments bring about? Clearly, the big change is that fair value accounting, also called mark-to-market accounting, is taking over the age-old historical cost accounting. By the way, “mark-to-market” is a stock market term; “fair value” is more preferable as the accountants’ jargon. The accountants’ global notion is that assets are stated at their historical costs – we do not book a gain or a loss until we actually realize it. In case of a loss, if the loss is not transient, there may be a case for making a provision, or in case of currently traded assets, write down.

However, as it is generally felt that historical costs are less relevant than prevailing values, there is a general consensus, at least for the time being, that fair values provide more current and relevant information. How long will this view last is by itself a question

– there are several strong contrarian views also, particularly owing to the pro-cyclicality of mark-to-market accounting. Those interested to read more about this may click on my articles on fair value accounting at [www.vinodkothari.com/fair\\_value\\_accounting.htm](http://www.vinodkothari.com/fair_value_accounting.htm)

By way of a general note, people often think that AS 30-32 prescribe fair valuation for all financial assets. This is far from truth. Of course, for disclosure purposes. AS 32 corresponding to IFRS 7 does provide for disclosure of fair values to provide readers with a comparative idea of the accounting values and the prevailing market values, but the actual accounting of assets on fair value basis is limited only to certain classes of assets.

## **The basic structure of AS 30:**

The key components of AS 30 are as follows:

- What are financial instruments, financial assets and financial liabilities?
  - An important question in this is, what are derivatives, as all derivatives are by definition defined as financial assets.
  - Identification of embedded derivatives in non-derivative contracts, and decision whether such derivative requires separation.
- When is a financial instrument recognized on books?
- When is a financial instrument de-recognised from books?
- At what value is a financial instrument recognized at the inception?
- At what value is a financial instrument carried in books over time?
- To correct the discrepancy that would otherwise in case of assets/liabilities that are not fair-valued, and connected derivatives that seek to hedge the risk of such assets/liabilities, will the entity be permitted to adopt hedge accounting?
- If so, what type of hedge is it, and what is the resulting effect of the hedge on the revenue statement/ balance sheet?

## **What is a financial instrument?**

The accounting standards AS 30, 31 and 32 apply to financial instruments. If the asset/liability in question is not financial instrument, there is no question of applying the standard. A financial instrument may be a financial asset or a financial liability.

Briefly stated, cash, a right to receive cash, or a right to receive another financial instrument in exchange, is a financial asset. For example, every loan or receivable is a right to receive cash, and hence, is a financial instrument. An equity share is also a right to receive dividends and distribution of assets, and hence, is a financial asset. A machine or a building is not, and hence, is a non-financial asset. A convertible bond is not an obligation to pay cash, but an obligation to convert the same into equity – which is also a financial asset. As for understanding whether the asset in question is a financial asset, it is not the functional test that is applied – it is the nature of the asset. For instance, no matter whether the entity in question is trading in shares or holding it as an investment, it is still a financial asset.

Correspondingly, an obligation to pay cash or another financial instrument in exchange, is a financial liability. However, the entity's own equity instruments are not financial liabilities. Therefore, all obligations to pay cash or exchange other financial instruments, other than what is treated as the entity's own equity instruments, will be treated as financial liabilities.

### ***What is a derivative?***

A derivative, as the name implies, is something that derives its value from an "underlying" – the underlying may be an asset, a liability, or even something as abstract as the weather. Therefore, we commonly say: "derivatives pertain to an underlying", and not an underlying asset, or underlying contract, thus leaving the scope of the word "underlying" to be huge.

But that by itself cannot be the meaning of a derivative. If such was the case, a contract to buy a flat upon construction derives its value from the flat, and hence, would be a derivative. There are two other features of derivatives – (a) they require no or minimal initial investment, or at least the investment required is not commensurate with the value of the underlying; (b) they can be net-settled, that is, settled by way of differences rather than actual delivery of the underlying. For instance, if a contract for purchase of a flat is customarily or contractually net settled, that is, not by delivery of the flat but a contract for differences (in the value of the flat at the time of settlement and value at the time of contract), then such a contract for purchase or sale of a non-financial asset will also be a derivative.

Connected with the question of a derivative is the question of embedded derivatives. This is, by itself, a complicated question but here is a simple idea. Derivatives are essentially options, forwards and swaps. There is yet another form of derivative – futures, but futures are typically exchange-traded and will not be found embedded into non-derivative contracts. There might sometimes be options, forwards or swaps embedded into contracts which are, non-derivative contracts. The simplest example is a convertible bond. The convertible bond can be de-composed into two: a non-convertible bond, and a call option on equity shares. There might, similarly, be derivative contracts embedded in non-financial contracts too. Why is it so important to find hidden derivatives? This is partly ascribable to the fact that the standard originally was in response to derivatives-related debacles, but the Standard provides a special treatment to derivatives – and therefore, it is necessary to detect and dissect derivatives.

If there is an embedded derivative whose economic substance is different from the non-derivative asset where it is embedded, then the derivative part requires separation, unless the composite asset is being fair valued. Why that exception in case the composite asset is fair valued? As we will understand later, the basic thrust of derivatives accounting is in fair valuation – so if the composite asset is anyway subject to fair valuation, then it does not matter whether the derivative remains embedded, or is separated.

## **So what if it is a financial instrument:**

Once we find that a transaction creates a financial asset or financial liability, or disposes of or extinguishes a financial asset or financial liability, there are questions pertaining to recognition and de-recognition of the asset or liability.

### **Recognition of a financial asset or liability:**

As a financial asset is a right or liability pertaining to cashflows, the date of recognition should be the date on which the entity becomes entitled to, or obligated to, the cashflows and not the actual date of the inflow or outflow. That would mean trades should be entered into based on contracting of assets or liabilities. Except for matters of detail, this rule is not difficult to comply with.

### **De-recognition of financial asset:**

The rules on de-recognition of financial assets look simple, but they are very complicated and they become particularly pertinent in case of transactions like securitisation or transfers of financial assets. There have been far reaching changes in the way these transactions are accounted for. These are matters of very elaborate detail, and unless someone is deeply interested in the topic, only the broad description below should suffice. For those deeply interested, follow my securitisation accounting page at [www.vinodkothari.com/accountingissues.htm](http://www.vinodkothari.com/accountingissues.htm)

The broad rule is that in order to de-recognise financial assets from the books of the seller, a mere legal sale of the asset is not enough, it should be backed by either transfer of risks and rewards, or surrender of control by the seller. For example, Bank A sells a portfolio of loans either to Bank B or to the capital market. It is quite commonplace for the seller to continue to retain risk, or retain rewards, or both – for example, typical credit enhancement may be a first loss risk retained by the seller. Residual profits, that is, the actual returns from the asset minus a predetermined rate normally flow back to the seller. In such a case, a transfer of risks and rewards has not taken place, and that brings us to step 2 in the analysis.

Step 2 is – even if a transfer of risks/rewards has not taken place in entirety, has the seller surrendered control over the asset the way it would happen in a commercial transaction of sale? In a commercial transaction of sale, a sale would pass on to the buyer the right to freely transfer or pledge the acquired asset. If the seller has restrained that right of the buyer, or the buyer does not have a practical ability to re-sell the asset, then the sale is disregarded, and the asset does not get de-recognised from the books of the seller.

It is not difficult to understand that if an asset is not removed from the books of the seller, there is no sale treatment at all, and hence, there is no question of booking a gain or loss on the sale. The asset continues on the books of the seller, and to the extent of money received by the so-called sale, a loan liability is brought up.

It is also important to understand that if the seller has not been able to put an asset off the balance sheet, then the buyer will not be able to put the asset on the balance sheet – that would mean the buyer will continue to reflect a loan-type receivable from the seller.

### **Derecognition of financial liability:**

A liability is removed from books when the liability is discharged or extinguished. Except for matters of detail, this may not be a very complex provision.

## **Initial and subsequent valuation of financial instruments**

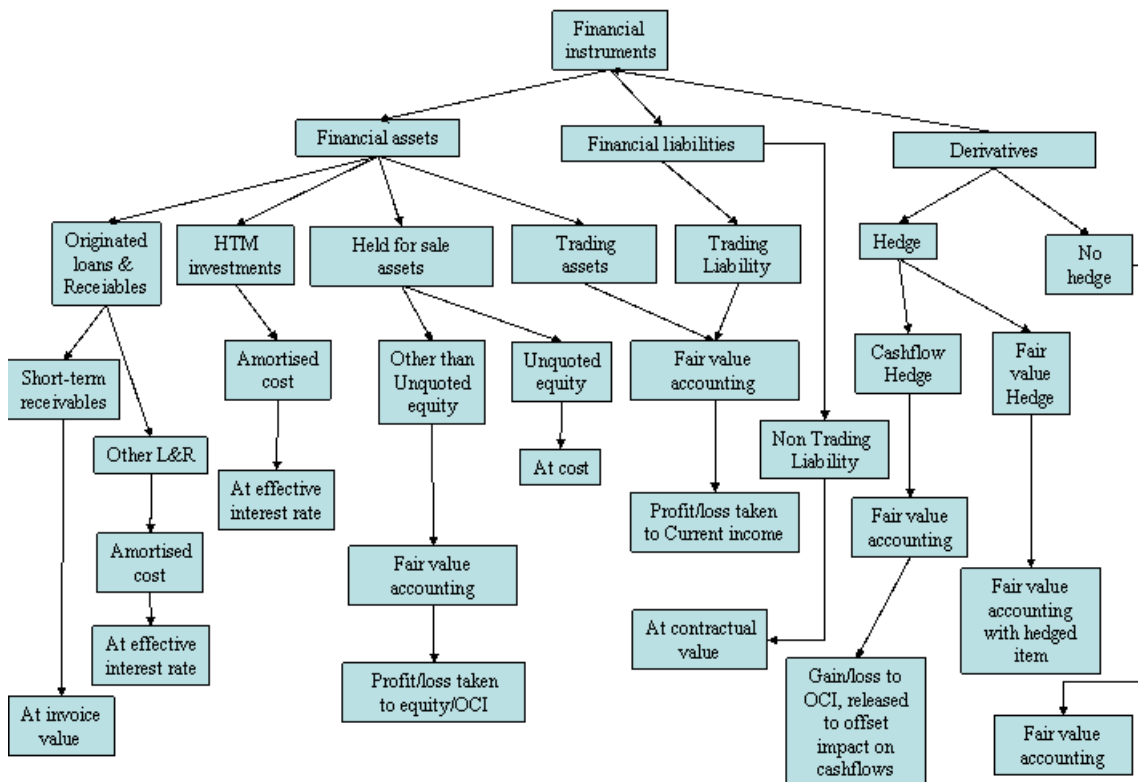
### ***At what value is initial measurement done?***

Initially, all financial assets are measured at fair values. Unless there are reasons to suggest the contrary, the purchase or acquisition price of a financial asset, or the contractual value of a liability, is its fair value also. However, there may be exceptions. For instance, a subvention loan, or a loan at a subsidized interest rate is written. If we fair value this loan, its fair value surely will not be the nominal loan value. So in cases where there are transactions which are not arms-length, a question of fair valuation at inception shall arise.

### ***Classification of financial assets and liabilities:***

We have discussed initial measurement of financial instruments; however, the on-going measurement of financial assets/liabilities is the most tricky and significant part of the Standard. For subsequent measurement, the classification of assets/liabilities matters, as valuation is done based on what class does the asset/liability fall in. The big picture of classification, and consequent valuation rules, is shown in the chart below. The chart looks daunting, but then would not be difficult to digest once we get the concepts discussed below.

## The big picture of accounting for financial instruments: Vinod Kothari



For the purpose of whether or not fair valuation is to be done, financial assets and liabilities are classified as follows:

- Financial assets
  - Loans and receivables
  - Hold to maturity investments
  - Available for sale assets
  - Trading assets
- Financial liabilities
  - Trading liabilities
  - Non-trading liabilities

Each of the terms above have defined meanings; let us understand each.

### Loans and receivables:

The word “receivables” is simple – any sum of money that has become a receivable or fallen due. Loans mean loans originated by the enterprise, and not held in marketable form. Note a point here – the original wording of the standard referred to an originated loan; hence, a loan portfolio acquired by Bank A from Bank B would not, as per original wording, fit to be put into this category. However, the word “originated” was later dropped from the text. Hence, now, even acquired loans may fall under the category of loans and receivables. If loans are originated with an intent of selling, then it is not fit to be put into this category.

### **Hold to maturity (HTM) investments:**

These are investment that (a) have a specified maturity, and (b) are intended, by way of a positive intent, to be held to maturity. Equities, for example, cannot be classified as HTM as equity does not have any specified maturity at all. The entity must have the ability and positive intent to hold the instrument to maturity – so, it cannot be said that since I was not intended to sell it, hence, it is meant to be held to maturity. The classification of an instrument as HTM should be done very carefully and very sparingly, as such classification is a sort of promise to the world that you are not meaning to sell the investment prior to maturity. If you actually do sell it, except in exceptional situations that are listed in the standard, it leads to a breach of the promise, the consequence of which is that the entity cannot give an HTM classification to any instrument at all for the year of sale or next 2 years. This is called the “tainting rule”.

### **Trading assets:**

Assets where there is a ready and liquid quoted market, which are acquired for the purpose of short-term trade, and where mark-to-market valuations are possible on every trading day, are trading assets. Assets do not fall under this category merely because there is a market for the asset – the entity must have acquired the asset for short term trading intent. Generally, banks and others who run trading desks or trading books will designate assets as a part of the trading book. There is no fun in designating an asset as a trading asset – on the contrary, this is the most volatile item from valuation viewpoint. So, unless the entity really considers an asset as tradable, it does not give a trading classification.

### **Available for sale assets (AFS):**

This is the residual category for assets – anything which is not a loan and receivable, or is not positively intended to be held to maturity, or is not a part of trading stock, is held for sale asset. That is, if opportunity or need arises, the entity will be willing to sell the asset.

### **Trading liabilities:**

Liabilities having a liquid market which are issued for re-acquisition in the short term, for example, to take advantage of an increase in interest rates, may be classified as trading liabilities. A good example is issuance of certificates of deposit by banks.

### **Non-trading liabilities:**

All other liabilities are non-trading liabilities.

### ***At what value should subsequent measurement be done?***

The valuation approaches are essentially the following:

- **Fair value through P&L (FVTPL):**
  - All derivatives
  - All trading assets
  - All non-trading liabilities
- **Fair value through OCI (FVTOCI):**
  - Available for sale assets, other than unquoted equity

- **Amortised cost**
  - All loans and receivables
  - All HTM investments

## **FVTPL**

FVTPL basically means that the asset/liability will be regularly fair-valued, and will be carried in books at fair values, and the changes in fair values are taken to current P&L. That would mean historical values become completely irrelevant. For instance, say I am holding a portfolio of equities as a part of my trading book. Equities appreciate in value – I book a gain on a regular basis. Equities prices slide – I book a loss on a regular basis. Consequently, the returns by way of dividends are also a part of the trading profits/losses. Since FVTPL treatment is meant only for assets/liabilities for which quotes are readily available, there should be any difficulty in marking these instruments to market on regular basis. In fact, it is in context of traded instruments only that the word “mark-to-market” has relevance – for other assets, the word “fair value” would be more appropriate.

As we noted above, FVTPL is applicable to both trading assets and trading liabilities. If liabilities are issued for short-term reacquisition, a decline in the market value of the liability, due, perhaps, to increase in interest rates, also needs to be booked as a gain, and vice versa, as a loss.

All derivatives, including embedded derivatives that have been separated, require FVTPL. This is one of the reasons why derivatives require a separate treatment (the other reason is the possibility that a derivative may be a hedging instrument). For example, in case of a convertible bond, the embedded equity option being a derivative will be FVTPL-ed, and the remaining investment in fixed income bonds may be classed as AFS.

The accounting standard also spends a bit of space on assets that are optionally treated under FVTPL category – that is to accommodate market practice, essentially emanating from the rigors of the Standard, whereby entities optionally chose to treat assets not requiring fair value treatment also as subject to fair value. This is a matter of detail – we avoid that to keep this article simple.

## **FVTOCI**

The difference between FVTPL and FVTOCI is simple and apparent: in the latter case, the asset is fair valued, but the gain or loss on valuation is not taken to current profit. It is kept in “other comprehensive income” in the shareholders’ equity. What this means is that these gains/losses do not affect current reported profits – nevertheless, they affect the balance sheet and net worth of the entity. Assets get reflected at fair values – hence, unrealized gains remain in OCI. These gains/losses are brought into current profit/loss when the asset in question is sold. All AFS assets are valued on FVTOCI. An exception is made in case of unquoted equity, where determination of fair value is difficult – here, historical cost valuation is permitted.



## **Amortised cost:**

Loans are carried in books at amortised cost. Is that anything different from carrying the loan at outstanding principal value? Yes, it may be. “Outstanding principal” has to do with contractual distinction between interest and principal. Amortised value of the loan, on the other hand, is computed by applying “effective interest rate” or IRR of the loan. For example, a loan that does not have any contractual interest for 6 months will still have an IRR, and hence, an income will be booked over those 6 months too, causing the outstanding amortised value of the loan to go up. Another situation where there is a difference between amortised value of a loan and outstanding principal is where a loan was fair valued at inception – we took the example of a subvention loan where due to below-market rate of interest, the fair value of the loan is less than the principal value. In such case, the IRR will be arrived at based on the inception fair value, which will be different from the contractual interest rate.

In case of HTM investments, of course, the amortised value may be different from the nominal value of the investment, as the investment may have been acquired at more, or less, than the par.

## **Over to derivatives:**

### ***The dichotomy in case of hedging derivatives:***

Entities get into derivative deals presumably for hedging purposes, though the fact is that the market for derivatives is predominated by deals done with trading motive. If a derivative is a hedge against an on-balance sheet asset/liability, the FVTPL rule applicable to derivatives may cause an inconsistency. So, the standard-setters created an inconsistency, and then brought a very complex rule to take care of the inconsistency so created.

Let us understand the inconsistency. Say I am carrying a fixed interest liability of Rs 100 million in books. As it is at fixed interest, I have an interest rate risk in case interest rates decline in the market. In order to hedge that risk, I enter into an interest rate swap (IRS) for a notional value of Rs 100 million, where I pay fixed and receive floating. Now, interest rates in the market go down. The IRS, being a derivative, is required to FVTPL-ed regularly. As interest rates decline, the valuation of the derivative leads to a gain. But what does this gain actually denote? The gain is only a compensation for the loss on the liability where I am paying a fixed interest. The liability is not being marked to market. But the derivative is. That would mean, I would be booking a false gain here.

One may visualize the same with any other on-balance sheet asset or liability where a risk is being hedged by a derivative. Of course, the inconsistency is not applicable in case of an asset or liability which itself is being FVTPL-ed.

### ***Hedging treatment:***

To correct this dichotomy, the standard provides that in case of a derivative which is a hedging instrument, against an on-balance sheet item (a hedged item), if the conditions of

“hedge effectiveness” are satisfied, the hedged item and the hedging instrument may both be FVTPL-ed. For instance, in the case above, the loan liability and the IRS may both be FVTPL-ed, with the result that the gains on valuation of the IRS will be offset with the loss on valuation of the liability, so as to neutralize the effect on the current profits.

Just saying that a derivative is a hedge is not enough: the hedge has to be established to be effective. “Effective” means the value of the derivative moves opposite or symmetrical to the value of the hedged item, and the anticipated changes in the two values take a proportion between 80:125. For example, if the value of the derivative gains by 4, and the value of the asset declines by 5, the proportion is 80:100, which is acceptable. If the value of the derivative gains by 4, and the value of the asset declines by 7, the proportion is 80:140, which means the hedge is not effective. Though it is a matter of detail, but it may be noted that it is not entire value of an asset or liability that can be designated as a hedged item. For example, the change in the value of a loan may happen due to interest rate change, as also credit quality of the loan. So, the hedge may be connected only with the change due to interest rates, or only to credit spreads, and so on.

### ***Types of hedges:***

Hedges as commonly concern entities are fair value hedges, and cashflow hedges. A hedge against the variability of cashflows is a cashflow hedge. For example, if I am carrying a floating rate liability, the fact that the base rate may go up will affect my cashflows. To hedge the same, I enter into a floating-to-fixed IRS. This transforms my cashflows from variable to fixed cashflows –hence, it is a cashflow hedge. Lots of forex derivatives are also cashflow hedges. On the other hand, a hedge against fair value of an asset or liability is a fair value hedge. Simplest example is a fixed-to-floating IRS, or credit default swap, etc. Here, it is not variability of the cashflows that I was concerned with, rather movements in the fair value of the asset/liability.

In case of fair value hedges, what affects the entity is the change in fair value. As much as the hedge is effective, it would offset exactly against changes in the fair value of the hedged item. Hence, the effective part of the change in fair value of the hedging derivative, and the hedged item, are both taken to P/L, where they neutralize each other.

If the hedge is a cashflow hedge, the effect on revenue is only to the extent the cashflows have changed during the year. For example, if I convert a floating rate liability into fixed rate by floating-to-fixed IRS, the current revenue is affected only by the increased interest for the accounting period that has come into the P/L. However, the change in the fair value of the IRS includes valuation of cashflows for the entire term of the swap. So, changes in the fair value of the cashflow hedging derivative are taken to OCI, from where they are periodically released as the changes in interest cost going to P/L affect current revenues. In practice, this may be quite complicated thing to do.

There is a third type of hedge – net investment in foreign enterprise, but being relatively uncommon, we omit discussion on that in this article.

## **So, what is fair value?**

The above discussion gives a broad and extensive idea about what assets, liabilities, and derivative contracts require fair valuation.

What is fair value? If the value of an instrument is available in a ready and liquid market, the market value is the fair value. In case of instruments where market values are not available, or the market is not liquid, the valuation techniques rely on discounted cashflow (DCF) techniques. DCF techniques seem easy, but in practice, may be quite daunting. For instance, what is the discounting rate at which cashflows are to be discounted? How is the volatility of cashflows to be taken into consideration? For details of computation of present values, see my article on NPVs at [www.vinodkothari.com/tutorials/resources.html](http://www.vinodkothari.com/tutorials/resources.html)

In case of derivatives, fair valuation techniques for valuation of options/swaps or forwards, as may be applicable, shall be applied.

Since fair valuation may involve substantial extent of assumptions, AS 32 corresponding to IFRS 7 requires the fair values to be classed into 3 levels based on transparency of the valuation. Level 1 is where the valuation is done as per the market – hence, is unquestionable. Level 2 is where valuation is based on inputs taken from the market – for example, forward interest rates taken from the yield curve. Level 3 is where the valuation is based on assumptions done by the entity, hence the level of subjectivity is the maximum here.

## **Impairment:**

Fair valuation is not all that AS 30 requires. It requires continuous monitoring of impairment losses too. One wonders, if the Standard anyway requires fair valuation, why should it talk about impairment at all? There are some significant differences between impairment and fair valuation that need to be understood:

- First, impairment relates to an expected cashflow itself, whereas fair valuation relates to the fair value of a cashflow. For example, fair value of a fixed rate loan may go down due to upward movement of interest rates. Credit spreads for the borrower going up might lead to fair value coming down. However, impairment relates to apprehended losses on collection of the cashflow itself. If a loan, or portfolio of loans, may suffer losses due to bad debts or delinquencies, that is a case of impairment.
- Impairment relates to assets only, whereas fair valuation pertains to both assets and liabilities.
- Impairment cannot lead to a gain – fair valuation can be a gain or a loss.

Impairment will affect assets being carried at cost, amortised cost, or FVTOCI.

In case of assets being carried at cost or amortised cost, loss due to impairment will be taken to current P/L, and effective rate of return will be recomputed based on re-estimated cashflows.

In case of assets being FVTOCI-ed, to the extent of impairment loss, the gain if any lying into OCI will be brought into current P/L.

In case of assets that are FVTPL-ed, presumably the changes in market value have captured all impairment losses too.

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