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Embedded Derivatives seemingly innocuous contracts under the microscope?

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Bombay Chartered Accountant Journal, the widely read guide for professionals, published "Embedded Derivatives: seemingly innocuous contracts under the microscope?" in its February issue. This article has been co-written by Anand Banka and S. Deepika from BDO India's Global Knowledge Services (IFRS) department.

The article elucidates the new IFRS concept: 'Embedded Derivatives' and gives practical examples of how we can help our clients identify embedded derivatives and when embedded derivatives require separate accounting.

Historically, in India, a well-drafted contract could mean designing one's financial statements. Even if there is no specific need or desire to let contract terms dictate how the balance sheet looks, it is clear that our accounting pronouncements often fail to capture the true representation of the substance of transactions. One such transaction is a contract containing embedded derivatives.

Recognizing the increasing usage of such complex contracts worldwide, a comprehensive solution in the form of detailed measurement, accounting, presentation and disclosure norms has been prescribed in International Accounting Standard (IAS) 39 Financial Instruments: Recognition and Measurement.

From India's standpoint, these specific norms for accounting of financial instruments are expected to be one of the major impact on convergence with International Financial Reporting Standards (IFRS). Come 2011, entities will have to exercise diligence when drafting contracts, bearing in mind their accounting repercussions. The implication can be best understood with an example: a vanilla convertible debenture will no longer be merely disclosed as a 'Secured Loan' with its Terms of Redemption or Conversion in parenthesis. Now, based on its substance and true economic effect, it will be accounted as two contracts- a 'debt instrument with an early settlement provision' and 'warrants to purchase equity shares', with both elements being assigned their fair values.

This need not be perceived as a conceptual whirlwind. By unlearning what has been learnt and letting go of structured thinking, the exemplified explanation that follows will be enlightening and would help understand the true meaning of 'Substance over form'!

Derivatives

As per IAS 39, a 'derivative' is a financial instrument or other contract with all three of the following characteristics:

- a) its value changes in response to the change in an underlying variable such as interest rate, commodity or security price;
- b) it requires no initial investment, or one that is smaller than would be required for a contract with similar response to changes in market factors; and

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- c) it is settled at a future date.

Futures contracts, forward contracts, options and swaps are the most common types of derivatives. Examples of underlying relative to derivative contracts include:

- Interest rates
- Security prices
- Commodity prices
- Foreign exchange rates
- Market indices
- Other variables like sales volume indices created for settlement of derivatives
- Non financial variables (for eg. climatic or geological condition such as temperature or rainfall)

Derivative instruments may either be free-standing or embedded in a financial instrument or non-financial contract.

Embedded derivatives

Literally, the term 'embedded derivative' would lead one to believe that it is a derivative embedded in another contract. However, an 'embedded derivative is just a modification of cash flows (the definition of derivative, as can be seen above, focuses only on change in value).

IAS 39 describes an embedded derivative as 'a component of a hybrid (combined) instrument that also includes a non-derivative host contract—with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.'

To put it in simple terms, embedded derivative is part of a host contract (a clause or section) i.e. a contract feature which causes the cash flows from that contract to be modified, based on any speci-

fied variable such as interest rate, security price, commodity price, foreign exchange rate, index of prices or rates or other variables which frequently change.

For example, an Indian company enters into a sales contract with another Indian company, creating a host contract. If the contract is denominated in a foreign currency, such as USD, to be settled at a future date, an embedded derivative viz. a foreign exchange forward contract is created.

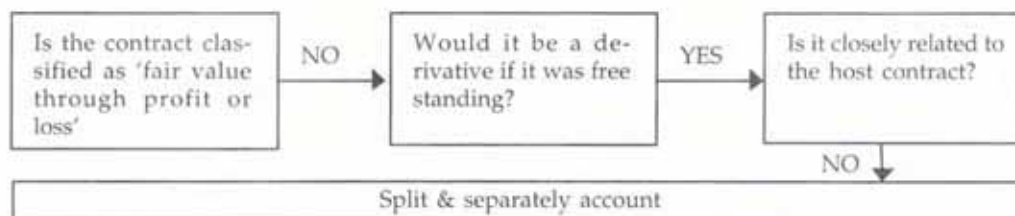
In practice, there are generally a handful of common types of host contracts that have embedded derivatives.

When an embedded derivative is required to be separated from a host contract, it must be measured at fair value on balance sheet date, with changes in fair value being accounted for through the income statement, consistent with the accounting for a freestanding derivative. The host contract's carrying value initially is the difference between the consideration paid or received to acquire the hybrid contract and the embedded derivative's fair value.

If an entity finds it difficult to determine the fair value of the embedded derivative, the entity will have to fair value the entire contract with gains and losses recognised in the income statement.

Instrument	Host Contract	Embedded Derivative
Equity Instrument		
Irredeemable convertible preference shares	Ordinary shares/ Equity shares	Written call option
Debt Instrument		
Convertible bond	Debt instrument	Call option on equity securities
Callable Debt	Debt instrument	Prepayment Option
Leases		
Lease payments indexed to inflation in a with reference to inflation-related index different economic environment	Operating lease	Payment determined with reference to inflation-related index
It is important to note that although the requirement to separate an embedded derivative from a host contract applies to both parties to a contract, the accounting treatments in the books of both the parties might differ. For example, in the above case, if the lessor and lessee are in different economic environments and the lease payments are determined with reference to inflation-related index of the lessor's economic environment, only the lessee would be required to separate the embedded derivative		

Instrument	Host Contract	Embedded Derivative
Operating lease payable in foreign currency	Operating lease	Foreign currency denominated rent payments- foreign exchange forward contracts
Contingent rentals based on related sales in operating lease contract Executory Contracts	Operating lease	Contingent Rentals
Purchase/ sale of goods in foreign currency	Purchase/ sale contract	Foreign exchange forward contract
Purchase/ sale of goods with option to make payment in alternative currencies Convertible bond	Purchase/ sale contract	Option to make payment in alternative currencies



Accounting & Measurement - separation of embedded derivative from host contract

An embedded derivative is required to be separated from the host contract if, and only if all three conditions are met:

- the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract;
- a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and
- the entire contract is not measured at fair value with changes in fair value recognised in income statement i.e. if the entire contract is fair valued, then separation of embedded derivative is not required.

These requirements are designed to ensure that mark-to-market through the income statement cannot be avoided by including – embedding – a derivative in another contract or financial instru-

ment that is not marked-to-market through the income statement.

What does "Closely related" mean?

IAS 39 does not define 'closely related'. Instead, the Application Guidance to the standard provides examples of situations where the embedded derivative is, or is not, closely related to the host contract (some of these examples have been discussed below).

In general terms, an embedded derivative that modifies an instrument's inherent risk would be considered as closely related (such as fixed rate to floating rate swap – where the inherent risk of change in fair value of loan is modified to interest rate risk & where both the risks depend on the market rate of interest). Conversely, an embedded derivative that changes the nature of the risks of a contract would not be closely related (such as operating lease contract with contingent rentals based on related sales – where one risk of change in lease rentals is modified to risk of change in demand of a product, unrelated to the former risk).

Common Transactional Examples

Leverage embedded features in host contracts

Even if the embedded derivative is closely related to the host contract, it would have to be separated from the host if there is a 'leverage' effect. IAS 39 does not define the term 'leverage'. In general, a hybrid instrument is said to contain embedded leverage features if the cash flows are modified in a manner that multiply or otherwise exacerbate the effect of changes in underlying.

Example Leverage embedded features

ABC Ltd. takes a loan with a bank. The contractually determined interest rate is calculated as [15% - 3 X LIBOR]

Here, had the interest rate been [15% - LIBOR], the embedded derivative would have been said to be closely related to the underlying LIBOR rate and hence not separable. However, since the rate of interest depends on a multiple of LIBOR (called 'leverage' effect), the embedded derivative shall be separated.

Conclusion: Leverage embedded features ⇒ Separate accounting

Debt host contracts

The value of a debt instrument is determined by the interest rate that is associated with the contract. The interest rate stipulated is usually a function of the following factors:

- Risk free interest rate
- Credit risk
- Expected maturity
- Liquidity risk

Thus, the embedded derivatives that affect the yield on debt instruments because of any of the above factors would be considered to be closely related (unless they are leveraged i.e. or do not change in the same direction).

Example Issuer's call option (similar to a loan payable on demand)

ABC Ltd. issues five year zero coupon debt for proceeds of Rs. 8 crores (face value of Rs. 10 crores). The debt is callable at face value in the event of a change in control.

The application guidance to IAS 39 explains that such options embedded are not closely related unless the option's exercise price is approximately equal to the host debt instrument's amortised cost on the exercise date.

Here, if the debt is called by the issuer, the option's exercise price (face value) would not be the same as the debt's amortised cost at exercise date.

Conclusion: Not closely related ⇒ Separate accounting

Example Pre-payment option

ABC Ltd. takes a fixed rate loan with a bank for Rs. 10 crores. It is repayable in quarterly installments. There is a pre-payment option that may be exercised on the first day of each quarter. The exercise price is the remaining capital outstanding plus a penalty of Rs. 1 crore.

An entity may opt to pre-pay if the potential gain (say fall in interest rate) from pre-payment is more than the penalty.

Here, as ABC Ltd. makes repayments, the amortised cost of the debt will change. Given the penalty payable is fixed, the option's exercise price (outstanding principal + penalty) will always exceed the debt's amortised cost (present value of outstanding principal) at each exercise date.

Conclusion: Not closely related ⇒ Separate accounting

Example Term extending option

ABC Ltd. issues 9% fixed rate debt for a fixed term of 2 years. The entity is able to extend the debt before its maturity for an additional 1 year at the same 9% interest.

IAS 39 prescribes that such an option to extend the term is not closely related to the host debt instrument, unless there is a reset of interest rate to current market rate.

Here, ABC Ltd. can extend the term at the same interest rate and there is no reset to current market rates. Hence it is not considered to be closely related to the debt host. It is clearly a derivative that gives the option to the issuer to refinance the debt at 9% if the market rates are rising.

Conclusion: Not closely related ⇒ Separate accounting

Example Equity conversion features

ABC Ltd. invests in 10,000 debentures of XYZ Ltd. ABC Ltd. has the option to convert each debenture after 1 year into one equity share per debenture at Rs. 500.

ABC Ltd. perspective (investor)

Such an option represents an embedded call option on the issuer's equity shares. Here, the host contract is the debentures and the underlying is the equity shares and equity is never closely related to debt.

Conclusion: Not closely related ⇒ Separate accounting

XYZ Ltd. perspective (issuer)

The written equity conversion option is an equity instrument.

Conclusion: Accounted as equity

Lease host contracts

Embedded derivatives may be present in lease host contracts, whether the lease is an operating lease or a finance lease. The approach for determining whether the derivative is closely related is similar to that used for a debt host.

As evident from the table above, rent payments determined with reference to local consumer price index and foreign currency denominated rent payments could represent embedded derivatives in a lease host contract.

It is to be noted that since lease host contracts are not financial instruments, the question of the contract being classified as 'fair value through profit or loss' doesn't arise. Therefore, in such cases, if the embedded derivative is not closely related to the lease host, separate accounting would be mandatory.

Example Inflation indexed rentals

ABC Ltd. (India) leases a property in UK to XYZ Ltd. The rentals are paid in pounds and increase annually with the increase in inflation in UK.

As per AG 33(f) of IAS 39, an embedded derivative

is closely related to its host lease contract if it is an inflation-related index (such as an index of lease payments to a consumer price index) provided

- lease is not leveraged (inflationary adjustment in a lease contract does not have an effect of increasing the indexed cash flow by more than the normal rate of inflation) and
- the index relates to inflation in the entity's own economic environment (i.e. the economic environment in which the leased asset is located)

Here, the rent payments will change in response to changes in the inflation index of UK. The embedded derivative is not leveraged and relates to the economic environment in which the leased asset is located. Therefore, it is closely related to the host lease.

Conclusion: Closely related ⇒ No separate accounting

Example Rentals based on sales

ABC Ltd. leases a property in India to XYZ Ltd. The rentals consist of a base rental of Rs. 100,000 plus 5% of the lessee's sales.

As per AG 33(f) of IAS 39, lease contracts may include contingent rentals that are based on sales of the lessee. Such an embedded derivative is considered to be closely related to the lease host contract.

Conclusion: Closely related ⇒ No separate accounting

In the Indian scenario, though many lease contracts have an escalation clause that is an estimate of inflation, seldom is it directly related to an inflation index. Thus, we may henceforth be required to compare the escalation with the inflation index to decide whether the derivative is closely related.

Further, the termination clause in the lease agreement that allows the lessee to terminate the contract on payment of a penalty is also an embedded derivative. This situation is similar in substance with the prepayment option in debt instrument discussed above.

Executory contracts

Executory contracts are not financial instruments and are scoped out of IAS 39. However, the following executory contracts may contain embedded derivatives:

- Contracts to buy or sell non-financial assets
- Commitments to meet expected purchase, sale or usage requirements and expected to be settled by physical delivery
- Service contracts

Price adjustment features, inflation related features (similar to lease contracts) and volume adjustment features are examples of embedded derivatives in executory contracts.

Example Coal purchase contract linked to changes in the price of electricity

ABC Ltd. enters into a coal purchase contract that links the price of coal to changes in the prevailing electricity price on the date of delivery.

The coal purchase contract is the host contract. The pricing formula is the embedded derivative.

In assessing whether the embedded derivative is closely related to the host executory contract, it would be necessary to establish whether the underlying in a price adjustment feature is related or unrelated to the cost/fair value of the goods or services being sold or purchased.

Here, although coal may be used for the production of electricity, the changes in electricity prices do not affect cost or fair value of coal. Therefore, the embedded derivative (the electricity price adjustment) is not closely related to the host contract.

Conclusion: Not closely related ⇒ Separate accounting

Example Variable penalty on non-fulfillment of buyer's commitment

ABC Ltd. enters into a contract guaranteeing to purchase 50 cars for 'own use' from XYZ Ltd. during 2010. Subsequently, ABC Ltd. decides not to purchase the cars from XYZ Ltd. A penalty of 20% of the market price of the cars on the date of payment of penalty is charged.

A minimum annual commitment does not create a derivative as long as the entity expects to purchase all the guaranteed volume for its 'own use'. However, if it becomes likely that the entity will not take the product and, instead pay a penalty under the contract based on the market value of the product

or some other variable, an embedded derivative will arise. On the other hand, if the amount of penalty is fixed or pre-determined, there is no embedded derivative.

Here, changes in market price of the cars will affect the penalty's carrying value until the penalty is paid. Since it has become clear that non-performance is likely, the embedded derivative needs to be separated.

Conclusion: Not closely related ⇒ Separate accounting

Reassessment of Embedded Derivative

International Financial Reporting Interpretations Committee (IFRIC) 9 Reassessment of Embedded Derivative, while addressing the question of whether separation is required to be reconsidered throughout the life of the contract, describes that an entity shall assess whether an embedded derivative is required to be separated from the host contract and accounted for as a derivative when the entity first becomes a party to the contract.

Subsequent reassessment is prohibited unless there is a change in the terms of the contract that significantly modifies the cash flows.

IFRS 9: Phase 1 of new standard to replace IAS 39

In November 2009, International Accounting Standards Board issued IFRS 9 Financial Instruments on classification & measurement of financial assets. This Standard will eventually replace IAS 39 and is effective from 2013. Consequent to its introduction, once the new Standard is applied, majority of the contracts would be measured as a whole (i.e. host contract and embedded derivative) at fair value, and hence no separation would be required.

However, in India, ICAI has issued AS 30 Financial Instruments: Recognition and Measurement, which is based on IAS 39. From the Indian standpoint, all entities other than Small and Medium-sized Entities would have to apply the provisions of AS 30/ IAS 39. This implies that gaining knowledge of identification and separation of embedded derivatives is absolutely inevitable for all accountancy professionals.

Takeaways

Convergence with IFRS, by implication, would mean that entities will have to completely change the way contracts are drafted and accounted for. In a nutshell, for every contract, one would have to follow a systematic process involving some basic tenets:

- Identify embedded derivatives in contracts,
- Assess whether separate accounting is required, and
- Fair valuation, where required, with changes recorded in profit & loss account

