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| **BUSINESS COMBINATIONS** |
| **When do we do consolidation?** When **acquirer** obtains **controlling interest in equity (>50%)** of acquiree**Power** Actual voting rights, control over investee’s key management, potential voting rights (options), contractual agreement that gives investor rights, control over another entity that directs relevant activity, special rls (investee’s key mgmt personnel are investor’s current or previous employees, related parties, investee’s ops are dependent on investor, sig portion of investee’s activities conducted on behalf of investor) **Ability** to use power to affect the amount of returns substantive right (current & practical ability), unilateral right to direct most significant activity, not acting as an agent, must be current although not currently exercisable **Exposure or right to variability of returns** potential to vary as a result of investee’s performance **Effective interest** Use eff int to allocate NCI’s share of profit after establishing control using PAR |
| **(A) CJE Calculations** |

**Goodwill = FV of consideration transferred + FV of NCI + FV of acquirer’s prvsly held i/r – (FV of INA + DTA - DTL)**

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| (1) FV of con transferred (det on **acqn** **date,** when acquirer **obtains control**) = FV of assets transferred + FV of liabilities incurred (owed to former owners of subsidiary e.g. deferred consideration) + FV of equity issued by acquirer +/- FV of contingent con (refund)  |
| **\*NB:** To OWNERS, not acquiree! (As still exist in books if so). **Dr/Cr below is in acquirer’s books before consol** |
| * Non-cash assets 🡪 acquirer to measure to FV first, and recognize any gain or loss in its own books P/L
* FV of equity 🡪 (1) shares issued by acquirer, or (2) shares acquired 🡪 # of shares issued by P x mkt price per share after acqn = issued shares / new total shares x FV of P’s equity = FV of S equity x % control
* Deferred A / L 🡪 measured by PV of future cash outflows 🡪 Dr Unamort disc on loan Cr Loan payable 🡺 Amortization table
* Contingent **consideration** (CC) 🡪 obligation of **acquirer** to transfer additional assets if specified event occurs
	+ = PV of expected value (probability of contingent event occurring x consideration + don’t occur x 0) 🡪 use payer’s WACC as i/r
	+ Dr Unamortized disc on CC Cr CC payable
	+ Amortization table = PV of loan / CC x effective i/r 🡪 i/r expense for the year
	+ Subsequent years: Dr i/r expense Cr Unamortized disc on loan / CC
	+ On settlement of CC: Dr Loss on settlement Dr CC Cr cash OR Dr CC Cr Gain on settlement
* **EXCLUDES** acquisition-related costs (legal fees, stamp duties, due diligence) 🡪 expensed off
	+ Cost of issuing equity: Dr Equity Cr Cash
	+ Cost of issuing debt: Dr Unamortized debt issuance cost Cr Cash (amortized over life of loan)

**= Investment in S Co.**  |
| (2) FV of NCI = measured at FV at acqn date (entity theory) |
| (3) FV of INA = BV of recog INA + FV changes of recog INA + unrecog intangible asset (e.g. cost savings from existing operating lease contracts, customer/subscriber list & R&D) – unrecog contingent liab (if present obligation and FV is reliably measureable, even if outcome not probable) + DTA / - DTL [= net DTA / DTL x tax rate]* For assets 🡪 FV > BV = DTL and vice versa; For liabilities 🡪 FV > BV = DTA and vice versa
 |

**GW attributable to PARENT** =FV of con transferred - % x FV of INA - % share of impairment loss (if any)

**GW attributable to NCI** = FV of NCI - % FV of INA - % share of impairment loss (if any)

**CJE1: Eliminate Investment in Subsidiary Co.**

**Dr** RE **Dr** Share capital **Dr** Other equity **Dr** Goodwill **Dr** Intangible asset **Dr** Undervalued asset **Dr** Overvalued liab **Dr** DTA

**Cr** Investment in S Co **Cr** NCI **Cr** Contingent liab **Cr** Overvalued asset **Cr** Undervalued liab **Cr** DTL

**CJE2: Allocation of Post-Acq RE / OCI / RR of Subsidiary Co. to NCI**

**Dr** ORE / OCI / RR **Dr** Share of current OCI / RR (OCI at y/e **less** OCI at beg of year) **Cr** NCI

RE of S as at beginning of current year 🡪 **Less**: RE of S as at acquisition date = **Change in RE** 🡪 **NCI’s share at %**

**CJE3: Reenactment of Past Events 🡪 Current Year Consolidation Entries + Tax Effects**

**FV Adjustments on OV/UV Assets & Liabilities 🡪 Reversed when used (dep/amort) or disposed (sold)**

**CJE Adjustment to past depreciation / amortization on UNDERVALUED (FV > BV) fixed assets / intangibles**

**Dr** ORE **Dr** NCI 🡪 **Dr** Depreciation / amortization expense **Cr** Accumulated depreciation / amortization \*Vice versa for **overvalued** **assets**

**CJE Adjustment for sale of UNDERVALUED inventory / fixed assets / land**

**Dr** ORE **Dr** NCI 🡪 **Dr** COS [= (FV- BV) x % sold for inv] **Cr** Inventory [= (FV- BV) x % remaining inv]

**Dr** ORE **Dr** NCI 🡪 **Dr** Profit on sale [= (FV- BV) x % sold] **Cr** land / FA [(FV – BV)\* RemUL]

**CJE Reverse contingent liability/provision**

**Dr** Contingent liability / provision; **Cr** Litigation exp / loss on settlement (to reverse entry in separate FS) **Cr** Gain on settlement (If Final Settlement < Provision, the difference is a “gain” to the GRP and vice versa🡪 compare with gain / loss on settlement with LEGAL)

**\*NB: If inventory / fixed asset is FULLY resold / disposed off in the same year, NO ADJUSTMENT CONSOLIDATION!!!**

**Intercoy Inventory Transfer: Unrealized Profit for Upstream (NCI Impact) Sale**

|  |  |  |  |
| --- | --- | --- | --- |
| **% Inventory left in PY / CY** | **Legal Entity** | **Group** | **Difference** |
| **Carrying Amt (%)** in PY / CY | TP | OC | For CA, adjust for PY impairment if anyAdjustments to Inventory (unrealized gain/loss) based on LCNRV difference  |
| **NRV (%)** in PY / CY | Higher of FV less cost to sell and value in use |
| **LCNRV**  | If Grp > legal, means have unrealized loss  |
| **Impairment loss** (CA – LCNRV) | If Grp > Legal, Dr impairment loss; If Legal > Grp, Cr Reversal on excess impairment loss 🡪 COS |

**CY & PY CJE Eliminate intercoy sales and adjust for unrealized profit / loss from upstream sale**

**Dr** ORE **Dr** NCI (from PY table: Previous year unrealized profit figure = PY “LCNRV” difference less prvs write-offs if not included in COS)

**Cr** Cost of sales [% **realized** in current year = % of inv SOLD in c/y x unrealized profit / loss from PY table + excess impairment of legal > grp]

**Cr** Inventory [from CY table: Current year **unrealized** profit / loss = CY “LCNRV” difference]

**Cr** Inventory write-offs (= unrealized profit from PY table x % write-offs in current year) \*Can add to COS instead

\*Tax effect: COS 🡪 Dr tax expense (reversal from p/y); Inventory 🡪 Dr DTA; Cr ORE; Cr NCI

**If CY transfer only, instead of ORE / NCI 🡪 Dr Sales (at transfer price); If downstream 🡪 NO EFFECT ON NCI!**

**Intercoy Fixed Asset Transfer: Unrealized Profit / Loss for Upstream Sale \*NCI Impact**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Legal Entity** | **Group** | **Difference** |
| **Carrying Amt** in PY / CY | TP | OC | Always reinstate FA to OC; Diff btw LCRA 🡪 Reverse out to gain / loss on sale; Acc dep = original AD + impairment |
| Less: **Accumulated dep** | Usually nil at inception | xxx |
| **NBV** | Proceeds – NBV = Gain (loss) on sale |
| **Lower of Cost and RA** | **RA**: Higher of FV less cost to sell and value in use |
| **Impairment loss** (CA – LCRA) | If Grp > Legal, Dr impair loss; If Legal > Grp, Cr Reversal on excess impair loss 🡪 Acc Dep |

**CY CJE Adjustment for profit / loss on sale attributed to upstream transfer of FA**

**Dr** Equipment (Reinstate to original cost: OC - TP) **Cr** Accumulated depreciation (Reinstate original AD + recognize any impairment loss for grp)

**Dr** Profit on sale (TP – NBV) or **Cr** Loss on sale (Full artificial loss: NBV- TP; partial artificial loss: see table)

**CY CJE Adjustment for over / under depreciation of transferred FA**

**Dr** Accumulated depreciation **Cr** Deprecation expense (Excess dep = Unrealized profit / RemUL; Under dep = Unrealized loss / RemUL)

**Construction Contracts (Upstream)**

**CJE Elimination of past & current unrealized profit from construction of warehouse**

**Dr** ORE **Dr** NCI (**past** cumulative profits) **Dr** Construction Revenue (**current** revenue)

**Cr** Construction Cost (**current** cost) **Cr** Construction WIP (total cumulative profits recognized) \*Tax effect: Construction WIP 🡪 Dr DTA

**CJE Elimination of progress billings as capitalized cost and reclassification of actual cost to warehouse \*not req if PBs are closed**

**Dr** Progress billings (**cumulative** progress billings incurred) **Dr** / **Cr** Warehouse WIP (bal figure) **Cr** Construction WIP (**cumulative** cost incurred)

**CJE Adjustment of under-depreciation of warehouse for 20X\_**

**Dr** Depreciation expense [(cum PB – cum cost incurred)/Rem UL] or [Profit/Rem UL if PBs are closed] **Cr** Accumulated depreciation

**CJE4: Allocation of Income for Current Year to NCI: Dr** Income to NCI (I/S) **Cr** NCI (BS)

**Unadjusted net profit of S Co. after tax** (**CURRENT YEAR** ADJUSTMENTS ONLY)

Add/Less: Current year FV adjustments after-tax

Less (add): Unrealized profit (loss) on UPSTREAM sale for **CY** **transfer** ⬄ Add: Realized profit on UPSTREAM sale (+ impair) from **PY** after-tax

**Adjusted net profit of S Co. after tax 🡪 NCI’s % Share of NPAT @ \_\_\_\_**

**CJE5: Elimination of Dividend Income Received from S during Current Year Dr** Dividend income (P) **Dr** NCI **Cr** Dividends declared (S)

**Analytical Check for NCI:**

1) Book value of net assets as at 31 Dec 20X\_ + Adjustments to BV of net assets:

 = SC + RE + Other Equity **LESS** **unrealized** **profits (loss)** from **UPSTREAM** sale **ADD deferred tax on unrealized profit (loss)**

2) Unamortized balance of FV adjustments of INA, after-tax: e.g. unimpaired balance of intangible asset

**Adjusted net assets as at 31 Dec 20X\_: (1) + (2) 🡪NCI’s share of net assets: % x adjusted net assets**

3) NCI’s share of GW = Acqn date FV of NCI less % x Acqn date FV of INA less % share of cum impair 🡪 (if no ctrl premium, = % of total GW)

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| **(B) Equity Consolidation**  |
| **When do we do equity accounting? Associate** investor has **significant influence** over an entity (power to participate in financial and operating policy decisions of investee but not control/joint control over those policies) **Significant influence (20% < voting power < 50%)** of investee, disclose if not 🡪Other evidence: representation on BOD, participation in policy-making processes of investee, operational sources of power (material transactions between investor/investee, interchange of managerial personnel, provision of essential technical information) |

**EA1: Recognize Share of Post-Acquisition RE / OCI / RR of Associate Co.**

**Dr** Investment in A **Cr** ORE

RE of A as at beginning of current year 🡪 Less: RE of A as at acquisition date = Change in RE 🡪 Parent’s share of A’s change in RE

**Dr** Investment in A **Cr** Share of current OCI / RR [(OCI of A at y/e – OCI of A at beginning of current year) \* % of Parent’s share]

**Cr** OCI / RR (OCI of A as at beg of c/y 🡪 Less: OCI of A as at acqn date = Change in OCI 🡪 Parent’s share of A’s past change in OCI)

**EA2: Reenactment of Past Events (adjustment x % share in A co. x net of tax)**

**EA Adjustment of past dep on undervalued assets / intangibles Dr** ORE (excess depreciation x % share in A x 80%) **Cr** Inv in A

**Adjustments for Unrealized Profit / Loss in FA or Inventory Transfers 🡪 \*NB Transactions not eliminated, but recognized only to extent of the UNRELATED INVESTOR’S interest if profit/loss capitalized in FA or Inv**

**EA Adjustment for past unrealized profit in fixed assets transfer Dr** ORE (profit on sale x % share in A x 80%) **Cr** Inv in A

**EA Adjustment for past depreciation on unrealized profit in fixed assets transfer Dr** Inv in A **Cr** ORE (excess dep x % share in A x 80%)

**EA3: Reclassify Div Income as a Reduction of Investment (no tax effect) Dr** Div income (in A’s books x % share in A) **Cr** Investment in A

**EA4: Recognize Share of Current Profit after Tax of A Co. 🡪 Not in EA2**

**Dr** Investment in A **Cr** Share of profit of A

**1) Profit after tax of A**

**2) Adjustments:** (i) FV Adjustments on OV/UV Assets & Liabilities: Add back excess depreciation, Less tax effect on excess depreciation

(ii) Adjustments for Unrealized Profit/Loss in FA / Inventory Transfers

Less (Add) unrealized profit both US and DS in CY (realization of profit in beg inventory), Add (Less) tax effect

Add excess impairment loss of inventory (for US transfer only; if DS, investor have to recog full loss hence no adjustment)

**Adjusted profit after tax of A: (1) + (2) 🡪 Share of adjusted profit after tax of A: % x adjusted profit after tax of A**

**Analytical Check for Investment in A Co.**

1) Book value of shareholder’s equity of A + Adjustments to BV of net assets:

= SC + RE + Other Equity **LESS** **unrealized** **profits (loss)** from **upstream & downstream** transfer (net tax)

**Adjusted BVE of A Co as at 31 Dec 20X\_**

2) Unamortized balance of FV adjustments of INA, after-tax: e.g. unimpaired balance of intangible asset

**Adjusted net assets as at 31 Dec 20X\_: (1) + (2) 🡪 P’s share of A’s INA: % x adjusted net assets**

3) Implicit goodwill in investment in A = Investment in A Co. less % x Acqn date FV of INA (BV + FV adj at acqn) less % share of cum impairment

 **Investment in A Co as at 31 Dec 20X\_: P’s share of A’s INA + (3)**

**Analytical Check for Retained Earnings (for both Subsidiary & Associate)**

**1) Closing RE:** P (100%) + P’s share of S Co’s RE = % x (Closing RE – Pre Acq RE) + P’s share of A Co’s RE = % x (Closing RE – Pre Acq RE)

**2) Cumulative (re-enacted + current) amortization of FV – BV (net tax):** P’s share of cum amort of intangible assets in S Co = % x 80% x \_\_\_

**3) P’s share of unrealized profit at y/e from both US (% share) and DS (100% for subsidiary; if associate % share)**

**Consolidated Closing Retained Earnings: (1) + (2) + (3)**

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| **GAIN OR LOSS IN CONTROL & CHANGE IN OWNERSHIP INTERESTS IN SUBSIDIARIES** |
| **Gain of control (e.g. 30% to 90%):** (1) re-measure prvsly held interests 🡪 gain/loss to P/L + (2) recognize new GW and NCI 🡪 inv in associate to zero 🡪 **JE1:** Re-enact post acqn change in equity: **Dr** Investment **Cr** ORE (30%); **JE2: Dr** Investment **Cr** Re-measurement gain

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| --- | --- | --- |
|  | **Separate FS** | **Consolidated FS** |
| **Investment in subsidiary**  | FV of con + FV of prvs acq i/r | Nil |
| **Goodwill** | NA | FV of con transferred (60%) + FV of NCI (10%) + FV of prvsly acquired i/r (30%) – FV of INA |
| **Re-measurement gain/loss of 30%** | NA | FV of prvsly acquired i/r – (OC + share of post acqn change in equity) |

 |
| **Loss of control (e.g. 70% to 20%):** as if bought new NCI of 20% and sold controlling i/r of 70% = (1) re-measure retained investment of 20% to FV 🡪 unrealized gain/loss to P/L + (2) recognize gain or loss on sale on 50% to P/L (3) GW and NCI 🡪 0; **JE1:** **Dr / Cr** Loss / gain on sale **Dr** / **Cr** Re-measurement loss / gain **Dr / Cr** Investment (Bal: re-measure of inv to FV) **Cr** ORE (add P’s share of S’s post acqn RE (70%))

|  |  |  |
| --- | --- | --- |
|  | **Separate FS** | **Consolidated FS** |
| Proceeds | Same | Same |
| Less: Carrying amt (of sold 50%) | Initial cost (FV of consideration) | Initial cost + share of post acqn profits (50%/70% of OC + 50%/70% of subsi post acqn profit) |
| **Gain / loss on sale (P/L) on 50%** | Dr / Cr difference for consol adjustments to reflect consolidated FS figure |
| **Investment (no longer subsi) of 20%** | Cost i.e. decrease inv to 6 | FV of retained investment |
| **Goodwill & Equity (NCI)** | NA | 0 (derecognized) |
| **Re-measurement gain/loss on 20%** | NA | FV of retained inv – (20%/70% \* initial cost + 20%/70% \* share of post acqn profit) |

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| **No gain or loss in control**: changes in parent’s ownership i/r in subsidiary that do not result in loss of control are accounted for as equity transactions (with owners in their capacity as owners) 🡪 the CA of the controlling and non-controlling i/r shall be adjusted to reflect changes in their relative interests in the subsidiary; any difference btw amt by which NCI are adjusted and the FV of considered paid/received shall be recognized directly in equity and attributed to owners of the parent |
| **Increase in ownership interest 🡪 No gain of control (90% to 95%)** – no re-measurement of prvsly held i/r; no re-measurement of FV of INA for 90%; no new GW recognized separately 🡪 NCI decreased from 10% to 5% **🡪 JE:** **Dr** Loss on purchase **Dr** NCI **Cr** Investment (eliminate incremental investment i.e. we eliminated initial cost in CJE1 already)**Decrease in ownership interest 🡪 No loss of control (e.g. 90% to 60%)** – gain or loss on sale of 30% not taken to P/L but equity 🡪 **JE:** **Dr** Investment (Cost \* 30%/90%) **Dr** Gain on sale (as calculated below) **Cr** Equity (gain on sale) [reclassifying] **Cr** NCI

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| --- | --- | --- | --- | --- |
|  | **Separate FS** | **Separate FS** | **Consolidated FS** | **Consolidated FS** |
| **Investment in subsidiary** | Cost | Cost \* 60%/90% | 0 (eliminated) |  |
| **Goodwill** | No change (only recognized for consolidated) |
| **P’s I/S (gain / loss on sale)** |  | Proceed - Cost \* 30%/90% |  | 0 (eliminated) |
| **Equity (NCI)** | NA | NA | Decrease by 5%/10% \* BV of NCI | Increase by 30%/90% \* share of equity 90% |
| **Equity** **(Gain/loss on purchase)**  | NA | NA | Con paid to NCI – 5%/10% \* BV of NCI | Proceeds - 30%/90% \* share of equity 90% |

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| **CURRENCY TRANSLATION** |
| **Foreign currency** “Other than the functional currency of the entity” **Functional currency** “Currency of the primary econenvironment in which the entity operates” – Not “free choice” “most faithfully represents the econ effects of the underlying tranx, events and conditions” – Judgmental**Determination of functional currency: Primary indicators – (demand)** currency mainly influence sales price; **(supply)** currency mainly influence costs; **(DD: regulated companies / SS: monopolies)** country whose competitive forces & regulations mainly det sales price; **Secondary indicators –** currency of **financing** activities (debt / equity issues); currency in which **receipts** **from operating activities** are retained; **(r/s btw P & S)** use parent functional currency if ops of S is an extension of P, intercoy trans high proportion of S operations, high impact of S CF on P, low self-sufficiency of S **Presentation currency** “Currency in which the financial statements are presented” – Free choice |
| **Monetary items:** units of currency held and A + L to be received or paid in a fixed or determinable no. of units of currency [intent is not impt] • There must be a right to receive/obligation to deliver a fixed/determinable number of units of currency (FRS 21:16) counterparty must exist• A contract to receive/deliver a variable no. of the entity’s own equity instruments or a variable amt. of assets in which the FV to be received/delivered equals a fixed/determinable # of units of currency is a monetary item**E.g. of Monetary items:** cash, fixed deposit, AP, AR, variable rate i/r loan, marketable debt securities (AC [L&R, convertible bond], FVTPL, FVOCI [AFS debt]), cont consideration, (cash) dividends receivable, pensions & other e/m benefits paid in cash, provisions settled in cash**Non-Monetary items:** absence of a right to receive (or an obligation to deliver) a fixed or determinable number of units of currency 🡪 **2 types:** (1) Historical cost balances denominated in a foreign currency at expressed in functional currency using historical FX rate(2) Re-measured at FV balances are expressed in the functional currency using the FX rate at the date the FV was determined transaction;**E.g. of Non-Monetary items:** (1) inventory, intangibles, prepaid ex, unearned rev, non-refund deposits, convertible pref shares, MRPS, provisions settled by delivery of non-mon asset (2) equity trading securities (FVTPL), AFS equity (FVOCI), PPE (revaluation of FA to FVOCI) |
| **Balance Sheet** | **CRM** | **TM** |
| **Share Capital, pre-acq RE, OCI, RR** (later of revaluation date and acqn date)  | HR | HR |
| **Post-acq RE** | Cum figure | Cum figure |
| **Monetary A + L** (cash, fixed deposits, AR, AP, div receivable, tax payable, debt security [AC (sep FX effect on PA & unamort prem), FVTPL (use CA, FV changes lump tgt with FX loss), OCI (use CA, sep FV changes with FX loss)], contingent consideration)  | CR | CR (FX gain/loss at end of reporting period) |
| **Non-monetary items at historical cost** (fixed assets, inv at cost, prepaid items, unearned rev, inventory, intangibles, non-refundable deposits, MRPS)  | CR | HR (no FX gain/loss on settlement) |
| **Non-monetary items at FV** (equity trading securities: [FVTPL], revaluation of FA [FVOCI])NB: FV changes lump tgt with FX gain/loss (P/L or OCI) | CR | Rate at date of FV |
| **Translation gains/losses** \* If revaluation gain/loss taken to equity | Equity (FCTR) | P/L or Equity\*  |
| **Income Statement**  | **CRM** | **TM** |
| **“Equity”: Sales, purchases, expenses and other income items** that result in inflow / outflow of monetary items e.g. settlement of MA / ML | Act/Avg R | Act/Avg R |
| **Cost of sales** (non-monetary) | Act/Avg R | HR (inv purchase date) |
| **Depreciation, amortization,** and any allocation of non-monetary items  | CR | HR or FVR |
| **Dividends** (monetary) and other appropriation of profits  | Act R | Act R |

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| **(A) Translation of Foreign Operations – Closing Rate Method (Functional 🡪 Presentation)** |

**(A) Translating BVE of Subsidiary**

**1. Reconstruct BS in p/y to determine beginning RE in c/y income statement**

\***NB:** if only NPAT is given, double check if all income and expenses use the same rate. If not, separate first.

USD = **Equity**: Share Capital + beg RE + ending RR of p/y **=** **Net assets**

SGD = **Net assets** \* CR1 – [**SC** \* AcqnR – **Cumulative** **RR** \* ActR (Acqn R if arose before acqn) +/- **FCTR b/f**] = **Beginning RE in c/y in SGD**

**2. FCTR reconciliation check from c/y balance sheet**

**Beg RE in c/y + Profit retained = Closing RE in c/y = Pre-acqn RE @ AcqnR + Post-acqn RE 🡪 B/S, work backwards 🡪 FCTR on BVE**

* **Net assets of p/y @ CR0 + Movement in net assets during c/y = Balance per movement**
	+ Movement in NA = NPAT @ AVR – Dividends declared @ ActR +/- RR arising in c/y @ ActR
* **ΔFCTR =** Balance per movement (closing NA in SGD calculated above) – Closing NA for c/y (USD) translated at CR1
* **Ending FCTR =** Beginning FCTR +/- ΔFCTR

**Analytical check: ΔFCTR** = (A0 – L0) \* (CR1 – CR0) – [Δ Equity (rev/exp, dividends, others) \* (CR1 – Act R)]

**(B) Determination of Goodwill and (C) FV Adjustment arising on Acquisition Date**

**FRS 21:47:** (1) treated as A + L of the foreign ops (2) expressed in the functional currency of the foreign ops (3) translated at the closing rate

**Goodwill at acquisition date**

**GW0 (in USD) @ AcqnR** = Con transferred + FV of NCI - FV of INA (SC + RE + RR + FV adj and tax effects)

**ΔFCTR** = Translation gain/loss = GW at c/ye @ CR – (GW0 @ AcqnR – Impairment loss of GW @ AVR)

**GW attributable to parent** = Con transferred - % of FV of NCI @ CR; **GW attributable to NCI** = FV of NCI - % of FV of NCI @ CR

**FV – BV / DTA / DTL adjustments**

(FV-BV) as at acquisition date @ AcqnR – (FV-BV) @ ActR (Realized Rate e.g. COS, depreciation for all years since acqn!) = **A**

(FV-BV) as at c/ye @ CR = **B**

**ΔFCTR** **= Translation gain/loss = B - A**

**3. Consolidation entries (additional) 🡪 for old consol entries, use ActR/AVR, except CJE1 at Acqn R**

a. Recognize translation gain/loss on GW and FV adjustments**: Dr** FCTR (Equity) **Dr** (translation gain e.g. DTL) **Cr** (translation loss e.g. GW)

b. Allocate FCTR to NCI: **Dr** FCTR (when there is a translation gain) **Cr** NCI

**Amt to NCI** = **(1)** % x ending FCTR from BVE + **(2)** translation loss/gain on GW (GW att to NCI \* (CR – Acqn R) + **(3)** % x total translation loss/gain in FV adj (after-tax) + **(4)** % x reclassified exchange losses (after-tax)

c. Quasi-equity loan: Exch gain/loss forms part of entity’s net inv (int inc based on imputed mkt int rate at inception) in foreign op (interco LT i/r free loan payable w/o fixed repmt terms or repmt unlikely to occur in foreseeable future, not ST trade rec/pay):

* + - Reclassify exchange loss to equity: **Dr** FCTR (Equity) **Dr** Tax on exchange loss **Cr** Exchange loss (P/L)

c. NCI Check 🡪 % x BVE of NA from translated BS, % x Unamortized FV-BV after-tax @ CR, GW attribute to NCI @ CR

**3. Equity accounting entries (additional) 🡪 for old equity entries, use ActR / AVR, except EA1 at AcqnR**

a. Share of post-acquisition FCTR: **Dr** Investment in Associate **Cr** FCTR

**FCTR arise from:** **(1)** % x ending FCTR from BVE **(2)** translation loss/gain on GW = Implicit GW @ CR – Implicit GW @ AcqnR (**Implicit GW** = [FV of con - % share of FV of INA] x CR) **(3)** % x FV – BV adjustments after-tax (see workings) **(4)** % x reclassified exchange losses (after-tax)

b. Check of investment in associate 🡪 % x BVE of NA from translated BS, % x Unamortized FV-BV after-tax @ CR, Implicit GW @ CR

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| **(B) Translation from Foreign to Functional Currency – Temporal/Re-measurement Method** |
| **During the year,** JEs of trans are @ SR0 (which can be Act R or AVR) 🡪 identify which is non-MA / which is MA: Non-MA when “used” e.g. prepaid insurance, dep @ HR; MA settlement @ SR1🡪 **at the end of the year**, recognize FX gain/loss to P/L from monetary item, AND FV changes to non-MA @ FV (either P/L or OCI)  |

**MONETARY ITEMS: Re-measurement gain/loss at end of year: \*\*Cash receipt from sale = Beg AR + CY sale – end AR – impairment in AR**

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| USD Payables as at beg of c/y @ CR0 + Purchases @ AVR – Payments @ AVR = **A**Translated at y/e rate: USD Payables as y/e @ CR1 = **B**Exchange gain / loss = A – B 🡪 P/L | USD Bank balance as at beg of c/y @ CR0+ **\*\***Cash receipts/pmt from AR (AP) – Prepmt + Cash i/r income @ActR / AVRTranslated at y/e rate: USD Bank balance as y/e @ CR1 Exchange gain / loss = A – B 🡪 P/L |

**Reconcile total exchange gains / losses with movement of net monetary assets:**

\*Identify transactions with single-sided effect (i.e. one monetary, another non-monetary)

**Net MA at beg of CY in USD @ CR0** + Equity / Non-MA amt from c/y (single-sided) @ ActR / AVR for i/r income **= Net MA at end of CY in SGD**

**Net MA at end of CY in USD @ CR1 - Net MA at end of year in SGD = Exchange gain / loss**

**Comprising of:** Ending balance of AR / AP / Bank / Other monetary items @ CR1

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| **(C) Change in Functional Currency** |
| **(1)** Apply new functional currency prospectively; **(2)** Translates all items using the exchange rate at date of change (A-L) x SR\* = E x SR\*; **(3)**The resulting translated amts for non-monetary items are treated as their new HC i.e. Dep = [NBV x SR\*] / Rem UL; **(4)** Prev Year’s comparatives translated from the then functional currency to the new functional currency 🡪 CRM (also for c/y income statement) |

**1. Statement of Financial Position: c/y** 🡪 translate all at SR\*; **p/y** 🡪 translate using CRM (FCTR arises)

**2. Income Statement:** Translate both c/y and p/y at their respective AVR

**3. Statement of Changes in Equity:** (1) Share capital for both c/y & p/y translate @ HR; Ending bal for c/y @ SR\* 🡪 diff = translation adjustment

(2) Retained earnings (pre-acq) @ HR *assuming incorporated last year only;* + NPAT of c/y from income statement

Ending bal for c/y translate @ SR\* 🡪 diff = translation adjustment

**4. Foreign Currency Translation Reserve 🡪 Balance at c/ye = 0**

**Bal at beg of year** = FCTR from p/y financial statements translated using CRM

**Add: Translation adjustments for the year:** Opening NA = (SC + beg RE) \* (SR\* - CR0) + Income [RR] for c/y = NPAT \* (SR\* - AVR1 [ActR])

**Less: Effect of change in functional currency:** Adjustment to FCTR to share capital + Adjustment to FCTR to RE + Adjustment to FCTR to OCI

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| **FINANCIAL INSTRUMENTS PART I** |
| **FRS 32: Financial instrument:** any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. *Accounting for equity instruments from the issuer’s perspective is outside of the scope of FRS 39 (only FA and FL)* |
| **Definitions of Financial Assets/Liabilities** |
| **Financial Assets** | **Financial Liabilities** | **Equity** |
| * Cash
* Contractual right to receive cash [AR, loans receivable] **or** exchange FA or FL under conditions that are potentially favorable to entity [options held]
* Equity instru of another entity [stocks, shares]
* Right to receive own equity (mainly **variable** quantity of shares, FRS 32:11 conditions) [to receive $10m in shares (fixed $ variable qty)]
 | * Contractual obligation to pay cash [AP, loan payable] **or** exchange FA or FL under conditions that are potentially unfavorable to entity [options sold]
* Obligation to deliver own equity (mainly **variable** quantity of shares, FRS 32:11 conditions) [mandatorily redeemable pref shares]
 | Residual (if not FA / FL) interests in NA of entity = SC; RE; OCI; Contracts to issue/buy back **fixed** qty of shares [treasury stock, convert pref shares redeem at option of issuer] |
| **Derivatives** not settled by fixed amt of cash/FA for fixed qty of shares |  |
| **FA + FL:** Callable bond (bond + right to buy back from holder); Gold futures | **FL + Equity:** Convertible bond (MA) |
| **Classification of Financial Instruments under FRS 39** |
| **Financial Assets** |
| **Fair value model****(1) FVTPL =** (1) held for trading (ST gain) e.g. trading equity security (non-MA); trading debt security (MA) 🡪 derivatives not for hedging, or expressed/implied intention; (2) designated (FV option) 🡪 accounting mismatch, perf evaluation **🡪** Changes in FV and dividends to P/L**(2) AFS (FVOCI) =** Non-derivative (no trading intent/evidence), either designated or residual (not in other 3 categories) **NB**: If AFS is a hedged item of a FV hedge 🡪 FV changes (debt or equity) goes to P/L**🡪** Bal in equity transferred to P/L when AFS is sold* + **(a) Debt (MA):** Changes in FV to OCI except FX gain/loss on AC and amortized i/r and impairment losses to P/L (reversible via P/L)
	+ **(b) Equity (non-MA):** Changes in FV and FX gain/loss to OCI; impairment losses (reversible via OCI but not P/L) and div income to P/L
	+ Impairment loss = Acqn cost – prepmt – amortization on debt; so recognize in OCI FV change first then reverse out impairment to P/L

**Amortized cost model****🡪** Amort i/r, impairment (reversible via P/L), and FX gain/loss to P/L**(3) Loans & Receivables =** Non-derivative, unquoted, fixed/determinable pmts, and not design as FVTPL/AFS**(4) Held to maturity (HTM) = Intent & ability to hold to maturity**, non-derivative, fixed maturity, fixed/det pmts, and not design as FVTPL / AFS + don’t meet defn of loans & receivables * + **TAINTING IF INTENTION + ABILITY NOT DEMONSTRATED**
	+ **Intention** **not demonstrated if**: intend to hold for only an undefined period, enterprise ready to sell FA in response to changes in mkt condition, risks, liquidity needs, alt yields or financing, **OR** issuer has a right to settle at an amt sig below its AC
	+ **Ability not demonstrated if:** coy does not have financial resources avail to continue to finance the inv until maturity; **OR** is subject to an existing legal or other constraint that could frustrate its intention to hold the FA to maturity

**Exceptions:** ≈ maturity, has alr collected most principal pmts, sig. deterioration justifying sale, unanticipated non-recurring event **Penalties for “tainting”** If sold during the c/y or during the two preceding financial years, more than an insignificant amount of HTM (cumulative) 🡪 (1) FRS39:9 Barred from classifying any new FA as HTM (for next 2 yrs); (2) FRS39:52 Remaining HTM reclassified to AFS |
| **To P/L for all 3 components:** (1) Amortized interest; (2) FX gain/loss on AC (AFS dpd on debt or equity); (3) Impairment loss |
| **Financial Liabilities: FVTPL** 🡪 Trading or FV option; **All other financial liabilities** 🡪 Amortized cost |
| **FRS 39 “Incurred loss” model = cannot provide for future, impairment = RA – CA when “trigger” occurs**Only when there is objective evidence of impairment as a result of “Loss event(s)”. E.g. Financial difficulty of issuer, Default of payments, Lender granting special concession to borrower because of latter’s financial difficulty, Borrower’s probable bankruptcy, Disappearance of an active market because of financial difficulty, Observable data on measurable ↓ in estimated future CFs 🡪 sig. & prolonged ↓ in value 🡪 non-transitory loss of value/earnings |

**FRS 39 CLASSIFICATIONS**



**FRS 9 CLASSIFICATIONS**

Meet any 1 of the 3:

All 3 have to be met:

All 3 have to be met:



**1. Amortized cost (to collect CCF model):** meet BM test and contractual CFs are solely principal or i/r on principal outstanding (only debt) 🡪 amort i/r, impairment loss FX gain/loss on AC all to P/L

**2. FVTPL (for sale):** Debt 🡪 fails BM test, not held to CCF and for sale; and fail CCF test; Equity 🡪 those not elected for FVOCI 🡪 Dividends, FV change and FX gain/loss to P/L

**3. FVOCI (to collect CCF and for sale):** Debt 🡪 held to collect CCF and for sale; Equity 🡪 not held for trading + FVOCI elected 🡪 Dividends to P/L, FV change to OCI, FX change on debt to P/L, FX change on equity to OCI

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| --- |
| **FRS 9 “Expected loss” model = loan loss provision, based on expected future credit loss & est future CF calculated continuously****Stage 1:** no observable event to indicate possible future default / no sig deterioration in credit quality 🡪 probability of default in nxt 12 mths \* expected life time losses **Stage 2 (pf basis):** observable event indicate possible future default of pf / sig deterioration BUT no evidence of credit loss event for individual assets 🡪 expected life time loss provision for pf (prob-weighted), i/r rev still on **gross** CA **Stage 3 (specific):** similar to incurred loss 🡪 obj evidence of impairment of indiv asset🡪 expected life time loss provision for asset, i/r rev on **net** CA |

**(1) MONETARY FINANCIAL INSTRUMENTS: DEBT SECURITY — If Principal > PV 🡪 Discount; If PV > Principal 🡪 Premium**

**How to calculate PV of debt security** = Cpn pmt per period \* PVIF + Principal / notional \* PVF (using market i/r)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Cash i/r (A)****@ ActR** | **Effective i/r (B)** **@ AVR** | **Amort Premium (C)****@ AVR** | **Unamort Premium (D)** **@ ActR ≠ HR** | **Carrying Amt** **@ ActR ≠ HR** |
| End of period | Cpn R \* PA | Effective R \* Opening CA= i/r income or expense | Premium: A – B Discount: B - A | Opening bal – (C) | Premium: PA + (D)Discount: PA – (D) |

**(a) Investment in AFS Debt Security (MA) 🡪 FVOCI: (same as FVTPL debt except** FV changes to P/L (can combine with FX gain/loss)

**Inception**: **Dr** AFS debt (CA/PV) @ ActR **Cr** Cash (CA/PV) @ ActR

**End of Period:** Receipt of i/r income **Dr** i/r receivable [cash i/r] @ CR / ActR **Dr** AFS debt [amort disc for the year, Cr if unamort premium] @ AVR **Cr** i/r income [effective i/r] @ AVR **Dr / Cr** Exchange loss / gain on i/r (P/L): Bal = i/r receivable in USD x (CR / ActR – AVR)

**End of Period:** Recognize FV change and FX gain/loss **Dr** Exch loss (P/L) only on AMORTIZED COST, not FV **Dr** Deferred loss in equity / OCI (FV – CA [if revalued before, new CA = FV **–/+** c/y amort premium/discount) **Cr** AFS debt (C + F)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Exchange loss to P/L | USD | Rate | SGD | FV change to OCI | USD | Rate | SGD |  |
| Beginning CA (Amort Cost) | xxx | ActR / CR0 | xxx | Beginning CA (p/y FV) | xxx | CR0 | xxx |
| Amortization of disc / (prem) | xxx | AVR | xxx | Amortization of disc / (prem) | xxx | AVR | xxx |
| Balance of AFS Debt  | xxx |  | A | Balance of AFS Debt | xxx |  | C |
| Y/E Translated AFS Debt | xxx | CR1 | B | New FV of AFS Debt | xxx | CR1 | D |
| **Exchange loss in SGD** | A – B = **C** | **FV Change in SGD** | D – E – C = **F** |

**Impairment loss** (objective evidence of loss event) **Dr** Impairment loss (P/L) [= Acqn cost @ HR +/- Amortization @ Act R +/- Principal repmt – any previous impairment loss in P/L (only for AFS debt) – Current FV @ Act R] **Cr** Deferred loss from AFS (equity)

**Sale (revalue to new FV first): Dr** Cash (proceeds) @ ActR **Cr** AFS debt and **Dr** OCI (cum deferred gains/losses @ HR) **Cr** Realized gain (P/L)

**(b) Investment in Held-to-Maturity Debt (MA) 🡪 Amortized Cost**

**Inception @ ActR:** **Dr** Inv in HTM (Principal) **Dr** Unamo prem (PV-Principal) **Cr** Cash (PV)

**End of period:** Receipt of i/r income **Dr** i/r receivable [cash i/r] @ CR / ActR **Dr** Unamortized disc [Cr if unamort premium] @ AVR **Cr** i/r income [effective i/r] @ AVR **Dr / Cr** Exchange loss / gain on i/r (P/L): Bal = i/r receivable in USD x (CR / ActR – AVR)

**End of Period:** Recognize FX gain/loss **Dr** Exch loss (P/L) **Dr / Cr** Unamort premium [c/y unamort premium ending bal \* CR – (p/y unamortized premium ending bal \* CR0 – c/y amortization @ AVR)] **Cr** HTM [PA \* (CR1 - CR0 / ActR)]

**Sale** (recognize FX gain/loss first)**: Dr** Cash @ ActR **Cr** Investment in HTM **Cr** Unamortized premium **Cr** Profit on sale @ ActR

**(c) Interest-Below-Market-Rate Loans**

**Inception @ HR:** **Dr** Loans receivable (principal) **Cr** Cash (principal), **Dr** Deferred staff benefit (principal – PV) **Cr** Unamort discount

**End of period @ HR:** Recognized staff exp for the year **Dr** Staff exp [(principal – PV) / period] @ HR **Cr** Deferred staff benefit;

**End of period:** Receipt of i/r income **Dr** i/r receivable [cash i/r] @ CR / ActR **Dr** Unamortized disc [Cr if unamort premium] @ AVR **Cr** i/r income [effective i/r] @ AVR **Dr / Cr** Exchange loss / gain on i/r (P/L): Bal = i/r receivable in USD x (CR / ActR – AVR)

**(2) NON-MONETARY ITEMS @ HISTORICAL COST: Convertible Preference Shares (Equity)**

**Issue: Dr** Cash @ HR, **Cr** Convertible pref shares @ HR

**Conversion of shares:** **Dr** Convertible pref shares @ HR **Cr** Share capital @ HR

**Full redemption by issuer:** **Dr** Convertible pref shares @ HR **Dr** Loss on redemption (equity) = bal figure **Cr** Cash @ SR

**(3) NON-MONETARY ITEMS @ FV: Gain/loss on NM item recognized in equity**, exchange gain/loss recognized in equity. **Gain/loss on NM item recognized in PL,** exchange gain/loss recognized in PL. (FRS 21:30); **At each revaluation (e.g. financial y/e):** Exchange gain/loss recognized in equity (FA/land reval, AFS equity security) or P/L (investment property) 🡪 **(FV0 \* FVR0) – (FV1 \* FVR1)**

**Investment in AFS Equity Security (non-MA); if equity trading security 🡪 all FV changes goes to P/L**

**Purchase: Dr** AFS equity = OC @ Historical SR, **Cr** Cash @ Historical SR

**Decrease in FV:** **Dr** OCI **Cr** AFS (OC \* HSR – FV1 \* FVR1)

**Subsequent decrease in FV:** **Dr** OCI **Cr** AFS equity (FV1 \* FVR1 – FV2 \* FVR2) `

**COMPOUND FINANCIAL INSTRUMENT (HOST + EMBEDDED DERIVATIVE 🡪 Separate via Incremental method)**

From **holder’s** perspective FRS 39 – a financial asset, may be treated as a single asset at FVTPL or “bifurcated” (debt at AC and derivative option at FVTPL); from the **issuer’s** perspective FRS 32:28 – the elements, debt & equity, have to be separated, so as not to distort debt/equity ratio

**Example: Convertible Bond @ a Discount**

**1. Calculate PV of bond** = Coupon pmt per period @ PVIF (Eff i/r) + Principal @ PVF (Eff i/r) 🡪 Use **effective / mkt** **i/r** of a pure FL

**2. Value of equity** = Proceeds – PV of bond

**3. JE at Inception @ HR: Dr** Cash (proceeds) (MA) **Dr** Unamort disc (Principal – PV) (MA)

**Cr** Bond payable (principal) (ML) **Cr** Equity options (Proceeds – PV of bond) (Equity)

**4. Recognition of i/r expense: Dr** i/r expense (effective i/r) @ AVR **Cr** i/r payable (cash i/r) @ Act R **Cr** Unamort disc (amort disc) @ AVR

**Dr / Cr** Exchange loss / gain on i/r (P/L): Bal = i/r payable in USD x (CR / ActR – AVR)

**5. Recognize FX gain/loss on convertible bond Dr** Exch loss (P/L) **Dr / Cr** Unamort disc [c/y unamort disc ending bal \* CR – (p/y unamortized disc ending bal \* CR0 – c/y amortization @ AVR)] **Cr** Bond payable [PA \* (CR1 - CR0 / ActR)

**6. Partial conversion: Dr** Bond payable (20% converted \* Principal) @ Act R = Cancel bond **Dr** Equity option (20% \* Equity option) @ HR = Utilized EO **Cr** Ordinary shares (balancing figure = unamort bond bal unpayable + equity option used) **Cr** Unamort disc (20% \* p/y unamort discount i.e. before conversion) @ AVR = Cancelled

**7. Redemption/inducing early conversion: Dr** Bond payable (PA) **Dr** Equity option (Proceed - FV of non-C bond) **Cr** Unamort disc
**Dr** Bond redemption exp (FV of non-C bond - CA) **Cr** Cash (Proceeds)

**Dr** Inducement exp (Incremental sh\*Current sh price) **Cr** Share capital (Residual)

If **HOLDER** of convertible bond, FV of bond is residual (Cash pmt – FV of equity option) 🡪 recog call otion as FVTPL, bond dpd on classification

|  |
| --- |
| **FINANCIAL INSTRUMENTS II – HEDGE ACCOUNTING** |
| **Derivatives:** fin instrument or other contract with all 3 characteristics: **(1)** value changes in response to change in a specified variable (underlying) **(2)** requires no or relatively small initial net investment as compared with other similar contracts (initial net inv / FV of asset = 0) **(3)** settled at a future date (can be large amt) If Fin Instrument (net settlement giving rise to exchange of cash or other fin instruments)🡪 **FRS 39** 🡪 **Default assumption:** trading security with FV changes to P/L; **UNLESS** designated as effective hedge 🡪 hedge accounting applies |
| **FRS 39:86(a)** **FV Hedge (“Tree”):** hedge of exposure to Δ in FV of a recognized A/L (e.g. inventory, AFS, fixed rate debt) OR an unrecognized firm commitment (e.g. non-cancellable purchase / sale contract) OR an identified portion of such an asset, liability or firm commitment that is attributable to a particular risk and could affect PL [e.g. FX risk, mkt i/r risk (causes change in FV/price)]**FRS 39:89(a) 🡪** **ΔFV (both IV and TV) of hedging instrument to PL** 🡪 Gain / loss from remeasuring hedging instrument at FV (derivative hedging instr.) OR the foreign currency component of its carrying amount (non-derivative hedging instr.) shall be recognized in PL**FRS 39:89(b) 🡪 Overrides original measurement basis 🡪** **ΔFV of hedged item to PL** 🡪 Gain / loss on the hedged item attrib. to the hedged risk shall adj the carrying amount of the hedged item and be recognized in PL 🡪 Even when hedged item is **(1) measured at cost** **e.g. inventory**: carried at original amt +/- ΔFV attr. to hedge risk *instead of LCNRV*; **debt at amort cost**; and **(2) AFS security** 🡪 *instead of OCI*, Δ in FV goes to PL also  |
| **FRS 39:86(b)** **CF Hedge (“Fruit”):** hedge of exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability (such as all or some future int payments on variable rate debt) OR a highly probably forecast transaction (e.g. forecast sales trnx) and could affect PL [e.g. interest rate variability]**FRS 39:95 🡪 *Hedging instrument*: effective portion** **(ΔIV)** taken to equity (OCI) \*Adjusted to cost of hedged item or taken to P&L subsequently (FRS 39:97&98); **ineffective portion (ΔTV)**  taken to PL **Hedged item: not recorded during hedging period****CF hedge in equity** 🡪**hedged item:** (1) FA/FL (e.g. floating rate debt):take to PL in period when e.g. i/r income/expense is recognized on FA/FL**;** (2) forecasted trnx resulting in recognition of A/L (non-financial) or firm commitment: can be netted off from initial carrying amt of A/L when recognized; **OR** deferred to P&L when the asset is amortized/depreciated | **Hedge Effectiveness (Delta ratio):** *degree to which Δ in FV or CF of hedged item that are attributable to a hedged risk are offset by changes in FV or CF of hedging instrument*  **(Δ in FV or CF of hedged item)****(Δ in FV or CF of hedging instr.)***\*actual effectiveness should be 80-125%* **Perfect hedge 🡪** amount match, timing match, negative correlation |
| **Hedge** | **Hedging Instrument** | **Hedged Item** | **Subseq adj to B/S or PL** |
| FV Hedge | Δ in FV from (both IV and TV) 🡪 PL  | Δ in FV attrib. to the hedged risk 🡪 PL; applies even if hedged item is **(1)** measured at amort cost or is an **(2)** AFS security  | Cumulative Δ in FV of firm commitment is adj to sales or cost of A/L |
| CF Hedge | Δ in FV for effective portion (ΔIV) 🡪 OCI; Δ in FV for ineffective portion (ΔTV) 🡪 PL | Not recorded during the hedging period | (1) Equity reserve adj to **cost of non-FA/FL** or to **PL** in same periods the A/L affects PL;(2) Equity reserve adj to **PL** in the same periods FA/FL affects PL |

**1. Forward Contract = MA**

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| --- | --- | --- |
| **2 Types:** | **1. Forward purchase contract** | **2. Forward sale contract** |
| Fair Value  | Qty \* [(CurrentFR – ContractFR)]/(1+r)t | Qty \* [(ContractFR – CurrentFR)]/(1+r)t |
| ∆FV | (FR1 - FR0) \* Notional Amt | (FR0 – FR1) \* Notional Amt |
| ∆TV | [(FR1-SR1) - (FR0-SR0)] \* Notional Amt | [(SR1-FR1) - (SR0-FR0)] \* Notional Amt |
| ∆IV | (SR1-SR0) \* Notional Amt | (SR0 - SR1) \* Notional Amt |
| CurrentFR>ContractFR | FV is positive, gain recorded, FPC is asset | FV is negative, loss recorded, FSC is liability |
|  | **FV Hedge on Inventory** | **FV Hedge on Firm Commitment** | **CF Hedge** |
| 1. Inception | Nil. No initial net investment paid on forward |
| 2. Each Y/E or event (Forward contract) | **Dr** Loss in time value on forward contract (P&L)**Cr** Forward contract (BS) Δ in TV = [(FR1 – SR1) – (FR0 – SR0)] x Amt | **Dr** Loss in FV**Cr** Forward contractΔ in FV = (FR1 – FR0) x Notional Amt | Same as FV Hedge, except IV changes goes to EQUITY;TV changes still goes to PL--------------------------------------**Dr** Deferred loss (Equity)**Cr** Forward contract (BS)Δ IV = (SR1 – SR0) x Amt |
| **Dr** Loss in intrinsic value on forward contract (P&L) **Cr** Forward contract (BS) Δ in Intrinsic Value = (SR1 – SR0) x Amt |
| 3. Each Y/E or event(Hedged item) | **Dr** Inventory (BS)**Cr** Gain on Inventory (P&L)Gain in Inventory = (SR1 – SR0) x Notional Amt | **Dr** Firm commitment (BS)**Cr** Gain in Firm commitment (P&L)Gain in Firm Commitment = (SR1 – SR0) x Notional Amt | Nil |
| 4. Firm Commitment (CF Hedge) / Sales / Delivery \*Repeat 2 & 3 above | **Dr** Cash **Cr** Sales (@ SR1) | **Dr** Equipment (amt x current SR) **Cr** Accounts Payable | Either transfer deferred gain or loss in equity to PL or adjust to cost or CA (below):**Dr** Deferred gain (equity)**Cr** Equipment / FC*\*can be amortized over useful life of equipment also* |
| **Dr** COGS **Cr** Inventory (@Cost – Cumulative FV Adj due to hedging)  | **Dr** Firm commitment (trnsfer of full bal.) **Cr** Equipment (adj agnst CA)Effective cost of equipment = cost of equipment at beg FR – time value (beg FR-SR) 🡪 Lock in rate = beg SR |
| 5. Sales / Delivery / Settlement of AP \*Repeat 2 above |  Nil, assume immediate delivery | **Dr** Exchange Loss (if liability currency appreciates) **Cr** Accounts Payable(SR1 – SR0) x Notional Amt | Same as FV Hedge, but note that for repetition of Step 2, both IV and TV changes goes to PL now (as forecast transaction has already resulted in recognition of an A/L/Firm Commitment earlier) |
| **Dr** Accounts Payable (@ SR1)**Cr** Cash |
| 6. Settlement of Forward contract | **Dr** Cash **Cr** Forward contract FV of Forward contract = SR at maturity – contracted FR (opposite if liability 🡪 **Dr** Forward contract **Cr** Cash) |

**2. Options = MA (always an asset in buyer/holder’s perspective – as IV or TV is never negative; and vice versa for writer)**

|  |  |  |
| --- | --- | --- |
|  | **FV Hedge on Sale of AFS Equity** | **FV Hedge on Firm Commitment** |
| 1. Work out table **FV = TV + IV**If FV hedge, don’t need separate TV and IV in JE, FX gain / loss also lump tgt |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Put Option** | **Mkt Price / SR** | **Ex Price** | **FV** | **IV** | **TV** | **ΔIV** | **ΔTV** |
| **At the $** | Same price | given | 0 | = FV |  |  |
| **Out of $** | Mkt Price / SR > Ex Price | given | 0 | = FV or time |  |  |
| **In the $** | Mkt Price /SR < Ex Price | = IV | MP - ExP | 0 (at maturity) |  |  |

**For Holder** = **Call option**: right to buy at exercise price, gain when prices rise; **Put option:** right to sell at exercise price, gain when prices fall 🡪 unlimited gains but losses limited to premium paid upfront; **vice versa for writer****TV** diminishes with time 🡪 if no info, assume straight line**In the $** = **IV is Positive** 🡪 Call = (MktP – ExP)\*Qty; Put = (ExP – MktP)\*Qty; **At the $ or Out of $** = **IV is 0** |
| 2. Purchase of \_\_\_ | **Dr** AFS security (any FV adj to OCI) **Cr** Cash (@ Current Mkt Price) | No entry required on inception of firm commitmentUnless CF hedge: OCI bal transfer to FC |
| 3. Buy option @ SR | **Dr** Put option (FV from table) **Cr** Cash  | **Dr** Call option (FV from table) **Cr** Cash |
| 4. Each Y/E or event (option)  | **Dr** Loss in time / intrinsic value (ΔTV or ΔIV from table)**Cr** Put option | **Dr** Loss in time / intrinsic value (ΔTV or ΔIV from table)**Cr** Call option |
| Initial IV x (SR1-SR0) = FX loss (PL), ΔIV @ SR1; ΔTV = SR1 x current TV – SR0 x prior TV (no need separate JE) |
| 5. Each Y/E or event (hedged item) | **Dr** AFS Security **Cr** Gain in FV of AFS Security (P/L)\*\*\*\* = (MP1 – MP0) \* # of shares | **Dr** Exchange loss on firm commitment (P/L)**Cr** Firm commitment (BS) = (SR1 – SR0) x Notional Amt |
| 6. Sale / Delivery\*Repeat 4 & 5 above | **Dr** Realized loss in AFS security (P/L) **Cr** Deferred loss in AFS security (BS) from OCI to P/L | **Dr** Equipment (amt x current SR) **Cr** Accounts Payable (settlement as above) |
| **Dr** Cash (@ Current Mkt Price)**Cr** AFS security  | **Dr** Firm commitment (trnsfer of full bal.) **Cr** Equipment (adj agnst CA) |
| 7. Settlement of option contract | **Dr** Cash (\*always a receipt i.e. option always an asset)**Cr** Put option (FV from table @ ActR) | **Dr** Cash \*no entry if out of money**Cr** Call option (FV from table @ ActR) |
| \* Check | **Total cash receipts** should be equal to the **higher** of the ExP or Mkt P given the **put option** Cash proceeds from sale of AFS Cash proceeds from put option Total cash proceeds | **Total cash pmts** should be equal to the **lower** of the ExP or SR, given the **call option** Pmt of A/P @ SRCash proceeds from call option Effective cash pmt at ExP as ExP < Spot |

**3. Interest Rate Swaps = MA**

|  |  |
| --- | --- |
| **FV Hedge on Fixed Rate Debt** | **CF Hedge on Floating Rate Debt** |
| Fixed rate debt = Pays fixed 🡪 Swap = Pays variable + Receives fixed [Hedging the FV change of the fixed rate debt. FV of debt vary inversely with i/r]NOT A HEDGE ITEM IF POSITION DOES NOT CANCEL OFF | Floating rate debt = Pays floating 🡪 Swap = Pays fixed + Receives floating [taken to equity if it is an effective hedge] [split TV + IV]FV of a floating rate debt is fixed as it is exposed to CF change onlyFloating rate asset = Receives floating 🡪 Swap = Pays floating – Receives fixed [taken to equity if it is an effective hedge] |
| **1. Work out table:**   |
|

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Period** | **Floating Rate** **(÷ by 4 if quarterly)** | **Floating rate pmt / receipt** | **Fixed rate receipt / pmt @ x0%** | **Net receipt (pmt)**  | **n** | **FV** | **ΔFV** |
| 0 | x0% | “ | “ | 0 | 3 | 0 | Nil |
| 1 | x1% | a1 = x0% \* Principal | b = x0% \* Principal | a1 – b  | 2 | FV1 | FV1 – 0  |
| 2 | x2% | a2 = x1% \* Principal | b = x0% \* Principal | a2 – b  | 1 | FV2 | FV2 – FV1 |

 |
| **FV1:** i/r = x1% PMT = a2 – b Periods to maturity = 2 |
| **2. Period 1****Dr** i/r expense **Cr** Cash / accrued i/ri/r pmt on fixed rate loan = x0% \* Principal | **Dr** i/r expense / receivable **Cr** Cash / accrued i/r / i/r incomei/r pmt / receipt on floating rate loan / asset = a1 |
| **Dr** i/r swap asset **Cr** FV gain (PL)FV gain on swap = FV1 – 0**Dr** FV loss (PL) **Cr** Fixed rate debt (BS) FV loss on hedged item = FV1 – 0 | **Dr** FV adjustment (OCI)**Cr** i/r swap liabilityUnfavorable FV adjustment = (FV1-0) \*If favorable, swop around  |
| **3. Period 2****Dr** i/r expense **Cr** Cash / accrued i/ri/r pmt on fixed rate loan = x0% \* Principal | **Dr** i/r expense / receivable **Cr** Cash / accrued i/r / i/r incomei/r pmt / receipt on floating rate loan / asset = a2 |
| **Dr** Cash **Cr** Interest expense Receipt of swap differential = (a2 – b) | **Dr** Interest expense / interest income **Cr** Cash Settlement of swap differential = (a2 – b) |
| **Dr** FV loss (PL) **Cr** i/r swap asset / liabilityFV loss on swap = FV2 – FV1**Dr** Fixed rate debt (BS) **Cr** FV gain (PL)FV gain on hedged item = FV2 – FV1  | **Dr** i/r swap liability / asset**Cr** FV adjustment (OCI)Favorable FV adjustment = (FV2 – FV1) |
| **3. Pmt of accrued i/r: Dr** Accrued int (∑Accrued int) **Cr** Cash OR **3. Receipt of i/r receivable: Dr** Cash (∑Int receivable) **Cr** i/r receivable |

**Intercoy Bond Transfer: Unrealized Profit on Upstream (NCI Impact) Sale of Bonds (Holder)**

**CJE To eliminate profit on sale on bonds transfer Dr** Profit on sale (Sales proceed – CA of bond when sold) **Cr** Bond (CA)

**CJE To adjust unrealized profit on sale of bonds by adding back interest income differential**

**Dr** Interest income **Cr** Unamortized discount (difference btw effective interest income for P and S)

**Differing interest income and expense e.g. Loan = $1mil, P borrow from bank at 5%, and lends to S at 6% per annum
CJE To eliminate i/r income and internal i/r capitalized in FA & capitalize external i/r in self-constructed FA**

**Dr** Interest income 60k; **Cr** Fixed asset in progress 10k 🡪 **Dr** ORE **Dr** NCI (total 10k); **Cr** Interest expense 50k

🡺 Depreciation adjustments only start once FA is completed \* Can apply to service fees capitalized too 🡪 **Dr** Fee income **Cr** FA in progress