Convertible bonds

Agenda

- Introduction to convertible bonds
- IFRS - convertible bonds
- US GAAP – convertible bonds

What are Convertibles?

- Convertible is a loan with an embedded derivative allowing conversion into equity
- Either hold to maturity and redeem bond at par or exercise the option and receive shares
- Lower cash interest costs compared to a standard loan due to embedded equity option
- The embedded option element is accounted for separately (unless you elect a fair value option – rare)
- Depending on the exact terms of conversion the accounting might treat the convertible as a liability or equity
- If accounted as a financial liability then record at fair value with changes through the income statement

Most holders will exercise close to the expiry date to capture as much of the time value in the option as possible

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IFRS: Liability or Equity Classification

IFRS standards: IAS 32 (classification)

Debt	Equity
Unavoidable obligation to deliver cash or another financial asset	No contractual obligation to deliver cash or another financial asset
Settled with a variable number of the company's shares	Settlement uses a fixed number of the company's shares

Convertibles can have elements of both

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IFRS: Simple Split Between Bond and Option Component – Option Treated as Equity

+	Take the issue value (fair value of the convertible note)
-	Value the bond element
=	The residual value is the option value

Convertible bond

Total instrument	
Convertible fair value	105.0

Bond element	
Par value	100.0
Coupon	5.0
Yield for comparable bond	6.0%
Maturity	4
Valuation (using =PV)	96.5
Option value	8.5

Transaction costs are allocated to a liability or equity on a pro-rata basis

If repaid for either cash or shares and with a cash coupon then the bond element will be treated as a financial liability

If the option is for a fixed number of shares treat as equity

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IFRS: Conversion of bond Assuming Option Converts into a Fixed Number of Shares

In most countries the cash transaction costs and cash coupon will be tax deductible so it's likely the structure will result in a deferred tax liability

				Carrying value of liability			
Convertible value	105.0			Year 1	Year 2	Year 3	Year 4
Par value of bond	100.0		Beginning	91.3	93.3	95.4	97.6
Transaction costs	2.0		Interest	6.0	6.1	6.2	6.4
Coupon	4.0		Coupon	(4.0)	(4.0)	(4.0)	(4.0)
Maturity	4		Ending	93.3	95.4	97.6	100.0
Comparable bond yield	6.0%						
Fair value of bond component	93.1		At conversion at the end of year 4				
Option component	11.9		Assets		Liabilities and equity		
Transaction costs to liability	1.8				Convertible bond		(100.0)
Transaction costs to equity	0.2				Equity		100.0
Effective interest rate	6.5%		Or				
			Cash	(100.0)	Convertible bond		(100.0)

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IFRS: Reasons the Option May Fail Equity Treatment

- Number of shares issued varies
- Script dividends and stock splits excluded from triggering failure
- Amount of cash or liability that converts into shares varies
- Ratchets where an anti-dilution clause adjusts conversion ratio if new shares are issued
- Convertible note is denominated in a foreign currency – resulting in a variable amount of cash
- Conversion price limited to a cap and floor

Generally if the holder of the conversion have rights different to existing shareholders the option will be treated as a financial liability

IFRS: Convertible Bonds Where the Option is Treated as a Financial Liability

- For most convertibles option liability treated separately from bond
- Typically account for bond using the amortized cost method
- Embedded liability will be accounted at fair value with gains and losses going to the income statement

+	Take the issue value (fair value of the convertible note)
-	Fair value of embedded derivative
=	Fair value of debt liability

IFRS: Conversion of bond Assuming Option Converts into a Variable Number of Shares

Assume Margot Inc. issues a 1,000 par value convertible bond with a 3 year maturity. The bond has a 10% coupon. The holder has the option to get cash or convert into shares at the weighted average share price over 90 days prior to expiry. The fair value of the option component is 50 and transaction costs are 20.

				Carrying value of liability		
Fair value of option component	50.0			Year 1	Year 2	Year 3
Par value of bond	1,000.0		Beginning	931.0	951.3	974.2
Transaction costs	20.0		Interest	120.3	122.9	125.8
Coupon	100.0		Coupon	(100.0)	(100.0)	(100.0)
Maturity	3		Ending	951.3	974.2	1,000.0
Fair value of bond component	950.0					
Transaction costs to bond	19.0		FV of option	20.0	10.0	50.0
Transaction costs to option (expensed immediately)	1.0					
Bond net of transaction costs	931.0		Income statement			
Effective interest rate	12.9%		Interest exp.	(120.3)	(122.9)	(125.8)
			Option exp.	30.0	10.0	(40.0)

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IFRS: Complexities

Early conversion
Calculate as though at maturity date

Modification to induce conversion
Calculate fair value of revised offer

Difference between revised and original fair value is expensed

Early repurchase
Calculate fair value of liability for repayment

Expense the difference between the fair value and the carrying amount

Residual treated as equity

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IFRS: Other Issues

Equal value conversion	Callable convertibles	In the money convertibles	Mandatory convertibles	Contingent convertibles
If the conversion note allows issuance of shares equal to liability then the option has no value	Callable convertibles (where the issuer can call) – no separate accounting for call option	Notes issued to management with an in the money option will incur a share based payment expense	Mandatory convertibles will only treat the PV of the coupon payments as a financial liability	Contingently convertible notes will still have a liability component unless the conversion is unconditional

US GAAP: Convertible Accounting Options

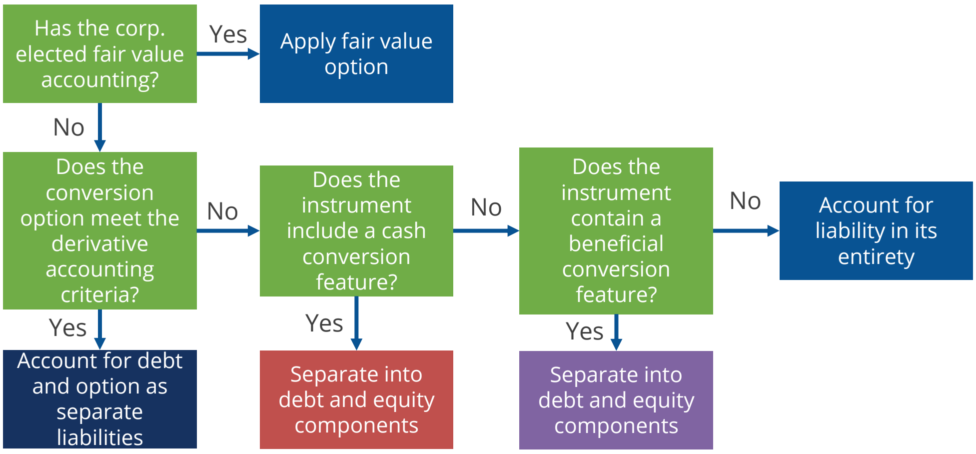
Single instrument
- Can be fair value option (relatively infrequent)
- Liability = proceeds from issuance
- Amortize any discount or premium in the same way as normal debt
- Conversion option not recorded until settlement

Derivative separation
- Determine fair value of embedded option
- Account for option at fair value with changes to the income statement
- Remaining liability record as regular debt

Cash conversion option separation
- Estimate fair value of debt liability using comparable bond
- Proceeds less fair value of debt add to APIC
- Treat remaining liability as regular debt

Beneficial conversion feature (BCF)
- Estimate BCF based on in-the-money value
- BCF value added to APIC
- Treat remaining liability as regular debt
- Relatively unusual

US GAAP: Convertible Accounting Flowchart



US GAAP: Derivative Separation

Requirements for accounting treatment

- Economic characteristics of the option are not clearly and closely related to the economic characteristics of the host contract
- Instrument not measured at fair value
- A separate instrument with the same terms would be treated as a derivative

Convertible debt hosts with equity conversion options are not closely related

Derivatives need to be readily convertible to cash on settlement

Accounting

- Record derivative as a financial liability at fair value
- Subsequent fair value changes recorded on the income statement as gains and losses

Other potential 'options' which might need to be separated

- Contingent conversions
- Fundamental change e.g. change of control
- Parity provision
- Convertible into a subsidiary's stock
- Convertible into a variable number of shares

US GAAP: Derivative Separation - Issuance

Assume Margot Inc. issues a 1,000 par value convertible bond with a 5 year maturity. The bond has a 5% coupon. The conversion price is 100 and the current share price is 85. Fair value of option is determined to be 200. One year later the option value is 250.

Par value of convertible	1,000.0		Accounting at issuance			
Maturity	5.0		**Assets**		**L&E**	
Coupon	5.0%		Cash - issuance	1,000.0	Derivative liability	200.0
Conversion price	100.0				Debt	800.0
Current share price	85.0					
Option FV	200.0		Balance sheet changes one year later			
Fair value of bond component	800.0		**Assets**		**L&E**	
			Cash - coupon	(50.0)	RE - interest expense	(82.6)
IRR of debt	10.3%				Debt - amortization of discount	32.6
	=RATE(C10,C11*C9,-C15,C9)				Derivative liability	50.0
					RE - derivative loss	(50.0)

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US GAAP: Derivative Separation - Conversion

Assume Margot Inc. issues a 1,000 par value convertible bond with a 5 year maturity. The bond has a 5% coupon. The conversion price is 100 and the par value of shares are 1. At the end of five years the share price is 150. Fair value of option is recorded on the balance sheet at 500. The bond is converted into stock at maturity.

	Assets		**L&E**	
Accounting at converstion			Debt	(1,000.0)
			Derivative liability	(500.0)
			Common stock	10.0
			APIC	1,490.0

If early conversion the derivative liability should be revalued to reflect loss of time value

If the convertible is paid off using cash and the derivative liability and bond on the BS is less than the reduction in cash expense the difference

As the convertible bond gets more in the money then derivative liability should increase and be expensed

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US GAAP: Cash Conversion Option

Requirements for accounting treatment

- Conversion in whole or part in a combination of cash or stock
- Option element does not meet derivative accounting rules

Even instruments with a small portion of cash conversion as a percent of total conversion value

Estimate the debt liability by taking the yield of a non-convertible bond with a similar risk and maturity

Accounting

- Debt liability is measured first and option value is derived by issue price – debt
- Option recorded into APIC – no subsequent remeasurement

Debt is measured at amortized cost going forward

Typically include in diluted EPS

US GAAP: Cash Conversion Option - Issuance

Assume Margot Inc. issues a 1,000 par value convertible bond with a 7 year maturity but puttable by investors in year 5. The bond has a 5% coupon. The conversion price is 100 and the current share price is 85. Similar non-convertible bonds have a yield of 8%. The bond will be settled at conversion with cash up to the principal amount and shares equal to the value of the conversion option.

Accounting at issuance				
	Assets		**L&E**	
	Cash - issuance	1,000.0	Debt	880.2
			APIC	119.8
Balance sheet changes one year later				
	Assets		**L&E**	
	Cash - coupon	(50.0)	RE - cash interest expense	(50.0)
			RE - amortization of discount	(20.4)
			Debt - amortization of discount	20.4

US GAAP: Cash Conversion Option - Conversion

Assume Margot Inc. issues a 1,000 par value convertible bond with a 7 year maturity callable by the issuer in year 5. The bond has a 5% coupon. The conversion price is 100 and the share price at year 3 is 150. Similar non-convertible two-year bonds have a yield of 6%. The bond will be settled at conversion with cash up to the principal amount and shares equal to the value of the conversion option. The par value of the shares is 2.

Par value	1,000.0	Accounting at conversion			
Coupon	5.0%	**Assets**		**L&E**	
Years until maturity	2.0	Cash	(1,000.0)	Debt	(959.6)
Yield on similar non-convertible bonds	6.0%			Loss on debt extinguishment	(22.1)
IRR on original bond	7.2%			Common stock	
Carrying value of bond after 5 years	959.6			APIC	
Fair value of non-convertible 2 year bond	981.7				
Value of cash conversion element	1,000.0				
Value of conversion stock element	500.0				
Conversion price	100.0				
Current share price	150.0				
Par value	2.0				
Shares issued					

Diluted Earnings Per Share

IFRS

If converted method

Adjust income statement for loss of interest and tax shield

Adjust weighted share number as if converted even if out of the money (review income and share impact together)

Contingently convertible bonds are not included in DEPS until the contingent event has occurred

US GAAP

If converted method

Adjust income statement for loss of interest and tax shield

Adjust weighted share number as if converted even if out of the money (review income and share impact together)


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