14 October 2022

GN-001: IMPACT OF IFRS 16 ON VALUATION ANALYSIS

1. Introduction

1.1. International Financial Reporting Standards ("IFRS") 16: Leases, was approved for issue by members of the International Accounting Standards Board ("IASB") in January 2016.

1.2. IFRS 16 sets out the principles for the recognition, measurement, presentation, and disclosure of leases, with the objective of ensuring that both the lessees and lessors provide relevant information that faithfully represent those transactions.

1.3. Entities shall apply the requirements of IFRS 16 for annual reporting periods beginning on or after 1 January 2019[1]. IFRS 16 superseded International Accounting Standards ("IAS") 17: Leases, as of the same effective date of IFRS 16.

1.4. The IASB issued IFRS 16 after joint deliberations with the Financial Accounting Standards Board[2] ("FASB"), which issued a similar standard, Accounting Standards Codification ("ASC") 842: Leases. There are differences, however, between the IASB and FASB standards such as the way lessees classify leases as finance or operating leases. Careful considerations should therefore be taken in dealing with valuation analyses that involve certain transactions being accounted for under IFRS 16, ASC 842 or under other non-IFRS standards to ensure that cash flows and valuation metrics are evaluated on a like-for-like basis.[3]

2. Objective of the guidance note

2.1. This note guides how valuation analyses are affected by changes in accounting arising from the implementation of IFRS 16.

2.2. The following sections aim to guide valuation professionals concerning the implications of IFRS 16 in their valuation practices.

2.3. This guidance note has the following key sections:

i. IFRS 16's impact on cash flow and discount rate calculations; and

ii. IFRS 16's impact on the market multiples.

[1] Earlier application is permitted for entities that apply IFRS 15, *Revenue from Contracts with Customers*, at or before the date of initial application of IFRS 16. In accordance with IFRS 16 Appendix C paragraph C1, an entity shall disclose whether it adopted earlier application of the standard.

[2] FASB is the designated accounting standard setter for public companies in the US. FASB standards are also recognised as authoritative by many other organizations in the US, including Boards of Accountancy among the states and the American Institute of Certified Public Accountants ("AICPA"). See https://www.fasb.org/facts/.

[3] The differences between IFRS 16 and ASC 842 is not the focus of this Guidance Note. Please refer to relevant resources for additional understanding of the said matter.

3. Changes introduced by IFRS 16 and impact on valuation analysis

3.1. IFRS 16 requires lessees to recognise assets and liabilities on a lease-by-lease basis for most leases and present them on-balance sheet, similar to how entities account for finance leases under IAS 17.

3.2. All leases within the scope of IFRS 16 are required to recognise on-balance sheet both a 'Right-of-Use' ("ROU") asset and a related 'Lease liability' at the commencement of the lease.

3.3. IFRS 16 introduced a shift in the lease expense classification in the lessees' income statements or statements of profit or loss. Given that a 'Right-of-use' asset is recognised, the lease expenses are no longer recognised in the income statements under the operating lease model. Lessees instead record the related (a) depreciation or amortisation expense associated with the 'Right-of-use' asset and (b) principal repayment and interest expenses associated with the 'Lease liability.'

3.4. In addition, with the recognition of a 'Lease liability,' the operating lease expenses under the operating lease model in IAS 17 are now split into two different components under IFRS 16 — principal repayment cash flow and interest expense. The principal repayment cash flow is a financing cash flow, while the interest expense is generally recorded as financing or operating cash flow.

3.5. The changes discussed have impacted how cash flows are presented in the financial statements, which, in practice, have impacted the reference inputs used to calculate the free cash flows to the firm ("FCFF") in valuation analysis. These changes also affected how capital structures are calculated and presented in the financial statements, impacting how discount rates are calculated. In addition, the calculation of valuation-related market or transaction multiples is also affected. For example, the changes in the statement of profit or loss imply that the corresponding measure of key operating metrics such as Earnings Before Interest, Taxes, Depreciation and Amortisation ("EBITDA") and Earnings Before Interest and Taxes ("EBIT") have also changed.

3.6. As discussed in Section 3, cash flows from operating activities under IFRS 16 no longer show rental payments associated with operating leases. These leases are now treated like finance leases under the previous IAS 17 (i.e., as debt-like items).

3.7. With these changes in the classification of cash flows, lessees see operating income increase notwithstanding the lack of any corresponding change in the commercial activities of these businesses. The increase is more notable for entities that present cash flows related to interest expense on leases as financing cash flows (as operating cash flows appear to be even more significant).

3.8. Consequently, cash flows used in financing activities also appear to increase due to the recognition of 'Lease liability' associated with the leases brought on-balance sheet.

3.9. The impact of IFRS 16 requirements has been more pronounced in entities operating in specific sectors that have historically relied heavily on operating leases, which were previously off-balance sheet financing arrangements. These sectors include airline, retail, transportation, telecommunication, and energy.

4. Impact of IFRS 16 on valuation analysis

4.1. IFRS 16's impact on the cash flow

4.1.1. While the aggregate cash flows of the business are not expected to change with the adoption of IFRS 16, **specific issues on cash flows used in valuation analysis, however, arise in practice. These issues vary depending on the valuation approach and methodology** used in valuing certain assets. In this guidance note, the guidance is centred in particular on the calculation of FCFF used when an income approach to valuation is adopted to calculate enterprise value ("EV").

4.1.2. The type of cash flow used should be consistent with the type of interest being valued when an income approach based on discounted cash flow ("DCF") methodology is used. EV is derived using cash flows before debt and debt servicing costs, calculated by using FCFF. On the other hand, equity value is derived using residual cash flows to shareholders calculated by using free cash flows to equity ("FCFE")[4].

4.1.3. The impact of IFRS 16 is apparent when determining the EV of companies subject to valuation using FCFF. When FCFF is used as the starting point of the valuation analysis, the underlying cash-free, debt-free cash flows are generated from the operating activities of the business. Due to IFRS 16, the cash flows related to operating leases are classified under financing and operating activities, and the FCFF (which excludes financing and lease-related cash flows) would increase. EV, in effect, grows as a consequence of higher FCFF.

4.1.4. EV under IFRS 16 does not include the impact of operating lease liabilities, effectively making it a gross EV ("GEV"). Similarly, the EBITDA metric under IFRS 16 is before rent expenses, effectively making it an Earnings Before Interest, Taxes, Depreciation, Amortisation, and Rent ("EBITDAR").

4.1.5. In principle, equity value should remain unchanged. In bridging EV to equity value, the increase in EV should theoretically be offset by the net financial debt arising from the lessee's recognition of 'Lease liability' at adopting IFRS 16. In particular, the GEV calculated is reduced by net financial debt that <u>includes</u> the fair value of operating leases. However, when operating lease payments are captured in FCFF, the EV calculated is an EV that is net of operating lease liabilities (i.e., "Net EV"). In this case, the Net EV is reduced only by the net financial debt (<u>without</u>[5] the fair value of operating leases) in determining equity value.

4.1.6. While we mentioned that equity value is theoretically not expected to change, there are, however, issues that arise in practice. The problems arise from the change in the profile of annual lease-related expenses, given that the application of the *effective interest method* to the 'Lease liability' results in front-loading of interest expenses in the earlier years of the lease. As the 'Lease liability' is amortised in subsequent periods, there is a decline in both the liability balance and the related interest expense.

[4] IVS 200 Business and Business Interests par. 60.4.

[5] For avoidance of doubt, "without" here means that Net debt = Borrowings – Excess cash only (where leases are not included in the definition of borrowings).

Exhibit 1: Case facts and illustrative financial statements

In a valuation assignment, you have requested for historical financial information for your financial statement analysis. The historical periods include financial year ("FY") ending 31 December 2019, which is the first FY when the impact of IFRS 16 is reflected in the financial statements.

Key areas in the financial statements where the impact of IFRS 16 is notable are highlighted in the excerpts below.

Illustrative statement of profit or loss

	2018	2019	2020
Revenue during the year	200,000	300,000	150,000
Depreciation of property plant and equipment	(20,000)	(20,000)	(20,000)
Depreciation of right of use asset	–	(52,000)	(52,000)
Operating lease expenses	(60,000)	0	0
Selling expenses	(20,000)	(30,000)	(15,000)
General and administrative expenses	(10,000)	(15,000)	(20,000)
Other expenses	(5,000)	(10,000)	(15,000)
Operating income	**85,000**	**173,000**	**28,000**
Finance costs – Loans	(500)	(500)	(500)
Finance costs – Lease liability	0	(13,000)	(11,000)
Profit before tax	**84,500**	**159,500**	**16,500**
Tax expense	(14,000)	(27,000)	(3,000)
Profit for the year	**70,500**	**132,500**	**13,500**

In local currency. Simplified income statements, for illustration purposes only.

Illustrative statements of cash flows

	2018	2019	2020
Cash flows from operating activities			
Profit for the year	70,500	132,500	13,500
Adjustments for:			
Depreciation of property plant and equipment	20,000	20,000	20,000
Depreciation of right of use asset		52,000	52,000
Change in net working capital	(5,000)	1,000	(20,000)
Cash flows generated from operating activities	**85,500**	**205,500**	**65,500**
Cash flows from financing activities			
Debt issued	0	0	100,000
Lease payments	0	(60,000)	(60,000)
Issuance of common stock	50,000	0	0
Dividends paid	(20,000)	(20,000)	(10,000)
Cash flows generated from (used in) financing activities	**30,000**	**(80,000)**	**30,000**

In local currency. Simplified cash flows from operating activities section, for illustration purposes only.

Valuation professionals should ensure that proper consideration and attention are given to the key areas that could affect the valuation analysis. Additional information related to these items are typically disclosed in the notes to the financial statements, particularly in the first financial statements affected by IFRS 16 requirements.

Exhibit 2: Lease expense profiles

Comparative lease expense profiles	20x1	20x2	20x3	20x4	20x5
Operating lease expense, pre-IFRS 16:					
Total operating lease expenses	*60,000*	*60,000*	*60,000*	*60,000*	*60,000*
Lease-related expenses under IFRS 16:					
ROU asset, opening balance	260,000	208,000	156,000	104,000	52,000
ROU depreciation[1]	*(52,000)*	*(52,000)*	*(52,000)*	*(52,000)*	*(52,000)*
ROU asset, ending balance	**208,000**	**156,000**	**104,000**	**52,000**	**0**
Lease liability, opening balance[1]	260,000	212,916	163,494	111,616	57,160
Principal portion[2]	(47,084)	(49,423)	(51,878)	(54,455)	(57,160)
Lease liability, ending balance[3]	**212,916**	**163,494**	**111,616**	**57,160**	**0**
Interest expense[4]	*12,916*	*10,577*	*8,122*	*5,545*	*2,840*
Interest expense + principal repayment	*60,000*	*60,000*	*60,000*	*60,000*	*60,000*
ROU depreciation + interest	*64,916*	*62,577*	*60,122*	*57,545*	*54,840*

Notes: In local currency. Numbers are rounded for illustration purposes.

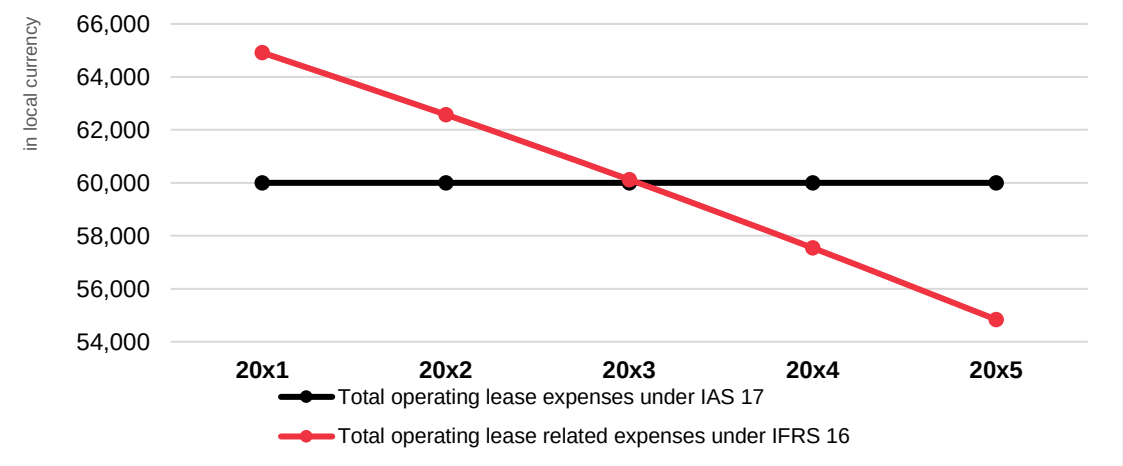
1 – Spread over 5-year remaining term (example only). Fair value of lease liability is approximately 260,000 (Using 60,000/year for 5 years at 5% discount rate).

2 – Principal portion = Annual lease payment of 60,000 less interest expense for the year.

3 – Ending balance = Opening balance less principal component of the annual lease payment.

4 – Interest expense = Opening balance x 5.0% interest rate. Interest expenses are higher at earlier years and lower at latter years.

Comparative total operating lease expense profiles



Notes: Total operating expenses under IAS 17 amount to the annual lease expense. Under IFRS 16, the total operating lease expenses are comprised of ROU depreciation and interest expense.

4.1.7. During the entire lease term, the total operating lease expenses are expected to equal the aggregate of (a) depreciation of ROU assets and (b) interest expenses. Due to the change in the lease expense profile, however, the earlier years in the forecast horizon will show greater lease-related expenses before they gradually decline in subsequent periods.

4.1.8. Caution should be exercised when the said front-loading of lease-related expenses has other consequences on the cash flows, such as any potential impact on the timing and amount of income taxes.

4.1.9. Valuers should also consider the impact of IFRS 16 on cash flows in calculating terminal value. In particular, valuers should consider the effect of lease renewal to maintain the operating capacity of the business being valued. In the illustrations that follow, it is assumed that operating leases are renewed for the purpose of calculating terminal value.

4.2. Consistency between the way FCFF is calculated and the corresponding discount rate to use

4.2.1. Valuers should ensure consistency between the cash flows and discount rates used in valuation analyses.

4.2.2. The principle is that the valuation impact of cash flows relating to operating leases needs to be captured either as part of the cash flows or valued and capitalised separately and deducted (as a component of net financial debt) from EV when calculating equity value. Where lease payments are captured in the cash flows, the discount rate should not include a lease financing component. Conversely, where lease payments are not captured in the cash flows, the discount rate should include a lease financing component.

4.2.3. The following illustrations demonstrate ways to calculate FCFF and the discount rate consistently in a valuation analysis:

i. One approach is to <u>capture the impact of leases in the cash flows</u> rather than in the discount rate, where lease expenses are deducted from earnings in calculating FCFF (in both the explicit forecast period and terminal period) and the cash flows are discounted by a rate that considers only the costs of capital from debt and equity financing (i.e., the weighted average cost of capital or "WACC" composed of debt and equity); or

ii. Another approach is to <u>capture the impact of leases in the discount rate</u> rather than in the cash flows, where lease payments are excluded from the calculation of FCFF (i.e., EBITDAR is used where operating lease expenses are not part of EBITDA) and cash flows are discounted by a discount rate that already considers the impact of lease financing (i.e., WACC composed of debt, equity and lease financing). Correspondingly, the fair value of related 'Lease liability' *(calculated as fair value of lease liability in perpetuity as lease renewals are necessary to maintain the business)* is included in the net financial debt when adjusting EV to calculate equity value.

Exhibit 3: Key considerations adopted

	First Approach	Second Approach	Hybrid Approach
Where is the impact of leases captured in the analysis?	Cash flows (*in both forecast period and terminal period)*	Discount rate	Cash flows *(in terminal period only)*
Are operating lease expenses deducted in the cash flows?	Yes	No	Yes *(in terminal period only)*
What is the earnings measure adopted in FCFF?	EBITDA	EBITDAR	EBITDA
What are the components of WACC?	Debt and equity	Debt, equity, and leases	Debt and equity
What is the nature of enterprise value ("EV") calculated?	Net EV[1]	Gross EV[2]	Net EV[1]
Deduct fair value of lease liability from EV?	No	Yes[2]	Yes *(operating lease balance in the balance sheet only)*

Note 1: Net EV is equal to EV from DCF where FCFF is net of leases (or otherwise calculated as equity value + debt - cash).
Note 2: Gross EV is equal to EV from DCF where lease payments do not affect FCFF (or equity value + debt + fair value of lease liability assuming renewal to perpetuity).

4.2.4. An alternative approach to either of the two illustrations above is a hybrid method where lease expenses are only included in the terminal cash flows to calculate terminal value. The cash flows in the explicit forecast period, in contrast, do not have lease expenses similar to the second illustration in paragraph 4.2.3.ii. This is typically performed when the impact of leases in the explicit forecast period is assessed by the valuer to be not material. However, there is a need to consider the lease renewal in the terminal value to sustain the business into perpetuity. In this manner, a material portion of the cash flows in the terminal value captures the impact of leases. Hence, the discount rate used only considers the costs of capital from debt and equity financing (similar to the discount rate in the first illustration in paragraph 4.2.3.i above).

4.3. Illustration 1: When leases are captured in the cash flows by deducting lease expenses from earnings

4.3.1. In calculating equity value under the first illustrative approach, the following key steps are recommended:

i. Include all lease-related payments (i.e., from both operating and finance leases) in the cash flow projections as part of the cash outflows;

ii. Calculate the periodic FCFF during the explicit forecast period and any FCFF corresponding to the terminal period;

iii. Determine the appropriate discount rate that excludes the effect of leases in the relevant discount rate parameters (e.g., unlevered beta, relevered beta, and debt-equity ratio);

iv. Calculate the operating value[6] or EV[7] by discounting the FCFF as at valuation date using the relevant discount rate; and

v. Calculate equity value by (i) adjusting for any nonoperating net assets where appropriate; and (ii) deducting net financial debt from EV, whereby the net financial debt (net cash) excludes[8] the fair value of the 'Lease liability.'

4.3.2. The fair value of 'Lease liability' is excluded from the net financial debt under this approach because its impact on value is already captured in the DCF when all lease-related payments are deducted when free cash flows are calculated.

4.3.3. To illustrate how this first approach is implemented, please refer to the illustration below.

Exhibit 4: Cash flow composition using the first approach

You have been engaged to value Company ABC as at 31 December 20x0, which has an FY ending 31 December. Company ABC has adopted IFRS 16. The lease is expected to expire in 20x5 and is assumed to renew into perpetuity. The fair value of the lease liability is 1,200,000.

Selected financial information of the lease liability and Company ABC's balance sheet appears in the table below.

Lease-related data	
Expiry date of existing lease (pre-renewal)	1 Jan 20x5
Remaining term of existing lease	4
Lease payment frequency	Yearly
Applicable discount rate for the lease	5.0%
Annual rental payments	60,000
Escalation rate during discrete projection period	0.0%
Long-term growth rate	1.0%

Notes: In local currency.

To illustrate using the first approach, the composition of FCFF, net financial debt, and equity value is presented below.

Composition of FCFF using the first approach					
	20x1	**20x2**	**20x3**	**20x4**	**20x5**
FCFF, before leases	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150
Lease payments	(60,000)	(60,000)	(60,000)	(60,000)	(60,000)
FCFF, net of leases	**1,440,000**	**1,590,000**	**1,755,000**	**1,936,500**	**2,136,150**

Notes: In local currency. Simplifying assumptions: a) 10.0% growth in FCFF (before leases) and nil in lease payments from 20x1-20x5, b) No taxes and c) Lease renewal into perpetuity, with long-term growth rate of 1.0%. For illustration only.

Exhibit 4: Cash flow composition using the first approach *(continued)*

[6] Operating value is the present value of FCFF, which could be equal to the enterprise value when there are no non-operating net assets.

[7] EV = Operating value plus/minus fair value of non-operating net assets, as applicable. It is the market value of invested capital (typically adjusted to remove all or a portion of cash and cash equivalents) and other nonoperating assets. See International Valuation Glossary – Business Valuation.

[8] Net financial debt = Long-term borrowings – Excess cash only (where leases are not included in the definition of long-term borrowings).

EV calculation using the first approach					
	20x1	**20x2**	**20x3**	**20x4**	**20x5**
FCFF, net of leases	1,440,000	1,590,000	1,755,000	1,936,500	2,136,150
Terminal value					35,958,525
Long-term growth rate	*1.0%*				
Discount rate	*7.0%*				
Discount factor	*0.93458*	*0.87344*	*0.81630*	*0.76290*	*0.71299*
Present value of FCFF	**1,345,794**	**1,388,768**	**1,432,603**	**1,477,347**	**27,160,977**
EV	**32,805,000**				

Notes: In local currency. Simplifying assumptions: a) No non-operating assets and liabilities, b) Long-term growth rate of 1.0% and c) Rounded to nearest thousands. Terminal value is calculated using Gordon Growth Model, assuming 1.0% long-term growth rate.

The discount rate of 7.0% is based on WACC composed of debt and equity only and excluding leases, as discussed in paragraph 4.2.3.i. Please refer to the related subsection below on the impact of IFRS 16 to discount rate calculation for further guidance.

Net debt and equity value calculations are presented below.

Net debt calculation using the first approach	
Long-term borrowings	300,000
Less: Surplus cash	(80,000)
Net debt (excluding lease liabilities)	**220,000**

Notes: In local currency. Long-term borrowings, for avoidance of doubt, exclude any lease liabilities.

Equity value calculation under the first approach	
EV (Net EV)	32,805,000
Less: Net financial debt	(220,000)
Equity value	**32,585,000**

Notes: In local currency.

4.4. Illustration 2: When lease payments are not deducted from the cash flows (but captured in the discount rate)

4.4.1. In calculating equity value under the second approach, the following key steps are recommended:

i. Exclude all lease-related payments, whether operating or finance lease, in the cash flow projections;

ii. Calculate the periodic FCFF during the explicit forecast period and any FCFF corresponding to the terminal period;

iii. Determine the appropriate discount rate and include the impact of leases on the corresponding discount rate parameters (e.g., unlevered and relevered beta in cost of equity, cost of debt, cost of lease finance, and relative weights of debt, lease finance and equity in the capital structure);

iv. Calculate the operating value or EV by discounting the FCFF as at valuation date using the relevant discount rate discussed above;

v. Estimate the fair value of future lease payments that are not captured in the cash flow projections, and include it in the calculation of net financial debt (net cash); and

vi. Calculate equity value by (i) adjusting for any non-operating net assets and (ii) deducting net financial debt from the EV, whereby the net financial debt includes the fair value of future lease payments.

4.4.2. The fair value of future lease payments is calculated by discounting future lease payments by the market cost of lease finance. The future lease payments associated with the lease includes cash flows during the explicit period corresponding to the term of existing leases and any cash flows related to future lease renewals. Under the second approach, the fair value of future lease payments captures the lease renewals into perpetuity to maintain the operating capacity of the business *(which results in a fair value that is larger than the balance of operating lease liability on the balance sheet)*.

4.4.3. To illustrate how this second approach is implemented, please see below.

Exhibit 5: Cash flow composition using the second approach

Using the same case facts presented in Exhibit 4:

Composition of FCFF using the second approach					
	20x1	**20x2**	**20x3**	**20x4**	**20x5**
FCFF, before leases	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150
Lease payments	n/a	n/a	n/a	n/a	n/a
FCFF	**1,500,000**	**1,650,000**	**1,815,000**	**1,996,500**	**2,196,150**

Notes: In local currency. Lease payments not included in the cash flows.

EV calculation using the second approach					
	20x1	**20x2**	**20x3**	**20x4**	**20x5**
FCFF	1,500,000	1,650,000	1,815,000	1,996,500	2,196,150
Terminal value					40,329,300
Discount rate	*6.5%*				
Long-term growth rate	*1.0%*				
Discount factor	*0.93897*	*0.88166*	*0.82785*	*0.77732*	*0.72988*
Present value of FCFF	**1,408,451**	**1,454,738**	**1,502,546**	**1,551,926**	**31,038,511**
Gross EV	**36,956,000**				

Notes: In local currency. Simplifying assumptions: a) No non-operating assets and liabilities, b) Nil long-term growth rate, c) Lease renewal into perpetuity and d) Rounded to nearest thousands. Terminal value is calculated using Gordon Growth Model, assuming 1.0% long-term growth rate.

Fair value of lease liability, assuming lease renewal into perpetuity					
	20x1	**20x2**	**20x3**	**20x4**	**20x5**
Lease payments	60,000	60,000	60,000	60,000	60,000
Terminal value					1,515,000
Lease discount rate	*5.0%*				
Terminal growth rate	*1.0%*				
Discount factor	*0.95238*	*0.90703*	*0.86384*	*0.82270*	*0.78353*
Present value	**57,143**	**54,422**	**51,830**	**49,362**	**1,234,054**
FV of Lease Liability	**1,447,000**				

Notes: In local currency. Simplifying assumptions: a) Long-term growth rate of 1.0% and b) Rounded to nearest thousands.

Exhibit 5: Cash flow composition using the second approach *(continued)*

Net debt calculation using the second approach	
Borrowings	300,000

Add: Fair value of future lease payments	1,447,000
Less: Surplus cash	(80,000)
Net debt including lease liabilities	**1,667,000**

Notes: In local currency. Long-term borrowings, for avoidance of doubt, exclude any lease liabilities.

Equity value calculation using the second approach	
Gross EV	36,956,000
Less: Net financial debt	(1,667,000)
Equity value	**35,289,000**

Notes: In local currency.

4.5. Additional considerations when assessing impact on cash flows

4.5.1. Valuation professionals should also consider further investigating the components of lease-related cash flows. This is because certain arrangements may not be straightforward, and some may contain elements that could affect cash flow calculations. Please see the excerpt below from IFRS 16 on the components of lease payments.

Exhibit 6: Excerpt from IFRS 16 – Components of the lease payments

70 At the commencement date, the lease payments included in the measurement of the net investment in the lease comprise the following payments for the right to use the underlying asset during the lease term that are not received at the commencement date:

(a) fixed payments (including in-substance fixed payments as described in paragraph B42), less any lease incentives payable;

(b) variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;

(c) any residual value guarantees provided to the lessor by the lessee, a party related to the lessee or a third party unrelated to the lessor that is financially capable of discharging the obligations under the guarantee;

(d) the exercise price of a purchase option if the lessee is reasonably certain to exercise that option (assessed considering the factors described in paragraph B37); and

(e) payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease.

4.5.2. Valuation professionals should also consider whether the forecast for ROU assets is consistent with the business plan as the entity's management might have projected capital expenditures for fixed assets only and not for the ROU assets. This is particularly important when the leased assets are essential in achieving the revenue projections, all else being constant.

4.6. Additional considerations in assessing discount rate in the valuation analysis

4.6.1. Valuation practitioners should exercise professional judgment in determining which approach to use based on the facts and relevant circumstances surrounding the valuation analysis. These factors include the nature of the industry, and the significance of the ROU asset and related 'lease liability' to the overall valuation results.

4.6.2. When using the first approach, for instance, it is important to consider finance leases. Recall that finance leases have been recorded on the balance sheet, even before IFRS 16 was effective. With the implementation of IFRS 16, both operating and finance leases are capitalised on the balance sheet and no longer differentiated.

4.6.3. Valuation professionals should also exercise caution when dealing with financial statements prepared under non-IFRS GAAPs, especially when screening for comparable companies and comparable transactions in valuation analysis. The objective is to ensure comparability of the metrics used before applying them to the valuation analysis.

4.6.4. Operating leases, for example, are also recognised on the balance sheet under US GAAP. However, the associated operating lease expenses continue to be recognised in the statements of profit or loss on a straight-line basis over the lease term. In addition, the same expenses are still included in the operating section of the cash flow statements. These are not the case under IFRS 16, where lease liabilities are amortised using the *effective interest method* (rather than *straight-line amortisation method*), and lease expenses are often shown in the financing section of the cash flow statements.

4.6.5. Consideration should also be given to the length of the look-back period when selecting data points used in the beta calculation and in ensuring that the analysis is performed on a like-for-like basis. Since the adoption of IFRS 16 happened only in 2019 or close to three (3) years ago, valuers using 5-year monthly data points in the beta calculation should ensure proper adjustments to the D/E ratios have been made. When adjustments are not possible due to data limitations, valuers should assess any impact of using data points within the shorter look-back period.

4.7. IFRS 16's impact on market multiples

4.7.1. Valuation metrics

4.7.1.1. As previously stated (see paragraph 4.1.5), equity values, in principle, should remain unchanged since changes in accounting standards do not provide the market with new commercial information. Hence, this guidance note focuses on market multiples attributable to the entire enterprise (e.g., EV/EBITDA, GEV/EBITDAR, or EV/EBIT).

4.7.1.2. A market multiple consists of a valuation metric in the numerator (e.g., EV or equity value) and an appropriate financial metric in the denominator (e.g., EBITDA or EBIT). Under IFRS 16, market multiples may be skewed if the impact of changes is not dealt with consistently in both the valuation metric in the numerator and the financial metric in the denominator.

4.7.1.3. Additionally, the remaining lease terms of existing operating leases brought on-balance sheet may vary significantly among comparable companies, resulting in significantly different capitalised lease liabilities that affect the EV calculated. As a result, EV-based market multiples may be skewed and not comparable.

Exhibit 7: Impact of lease terms to capitalised lease liability

When the remaining lease terms differ significantly across comparable companies, the resulting capitalised lease liabilities could vary significantly even if the annual lease payments are more or less comparable.

Comparable Company	Annual Lease Payment	Remaining Lease Term	Capitalised Lease Liability[1]
Company AA	37,500	20	**491,000**
Company BB	40,000	15	**436,000**
Company CC	42,500	10	**345,000**
Company DD	45,000	5	**205,000**

Notes: In local currency. For illustration purposes only.

1 - Present value of annual lease payments over the remaining lease term, using 5.0% incremental borrowing rate.

When balances are largely different among comparable companies, both levels of ROU asset depreciation and interest expense in subsequent years are affected, which could skew the impact to market multiples.

4.7.1.4. Similar to what was explained in paragraph 4.2.1, adjustments to the valuation multiples are necessary to ensure like-for-like comparison when calculating market multiples.

4.7.2. Illustrative Example 1: Calculating market multiples, where lease payments are deducted from earnings

4.7.2.1. To ensure like-for-like comparison, valuers should prepare the financial information and the related valuation metrics consistently before calculating the relevant market multiples. This is particularly important to valuations performed as at and after 1 January 2019 when IFRS 16 was already effective.

4.7.2.2. In the first illustrative example, market multiples (e.g., EV/EBITDA or EV/EBIT) of the comparable companies are calculated in such a way where

i. the valuation metric in the numerator (e.g., EV) does not include any capitalised lease liability; and

ii. the financial metric in the denominator (e.g., EBITDA) is net of lease payments.

4.7.2.3. When applying the selected market multiple to the financial metric of the subject company, the said financial metric should be similarly adjusted to be on the same basis as the financial metrics of the comparable companies. Please refer to the discussions below for illustrative examples.

4.7.2.4. As IFRS 16 requires extensive disclosures, notes to financial statements related to transition effects of IFRS 16 adoption are one of the valuable references on adjustments to financial information and valuation metrics. IAS 17 disclosures also provide pre-IFRS 16 lease commitments such as minimum lease payments.

Exhibit 8: Using the first illustrative example in calculating market multiples
(where lease payments are deducted in the denominator)

You are engaged to value a company involved in managing and operating food courts and coffee shops as at 31 December 20x0. You know from your understanding of the business that the company have had significant operating leases prior to 2019 and it has made significant adjustments upon first time adoption of the standard.

When you profiled the EV/EBITDA from comparable companies, you have confirmed that these multiples are based on post-IFRS 16 financial information.

Please see table below for the market multiples that you have profiled.

Comparable Company	GEV	Reported EBITDA (or EBITDAR)	GEV/EBITDAR
Comparable company 1	7,500	800	**9.4x**
Comparable company 2	9,000	1,125	**8.0x**
Comparable company 3	12,000	1,200	**10.0x**
Comparable company 4	10,000	800	**12.5x**
Comparable company 5	15,000	1,400	**10.7x**
Average	**10,700**	**1,065**	**10.1x**
Median	**10,000**	**1,125**	**10.0x**

Financial information for illustration purposes only.

You know that when the first approach is used, the financial metrics in the denominator should be net of operating lease payments (i.e., rental expenses on operating expenses are part of the operating expenses) and the valuation metric in the numerator should be on the same basis for a like-for-like analysis.

To adjust the EV/EBITDA multiples that you have obtained from the comparable companies, the following adjustments are made:

— Under IFRS 16, recall that the EV is calculated by adding back total net financial debt (that includes lease liabilities) to equity value. Hence, lease liabilities should be taken out from that net financial debt to exclude them from EV.

Exhibit 9: Using the first illustrative example in calculating market multiples
(where lease payments are deducted from earnings)

— Reported EBITDA under IFRS 16 does not include annual lease payments in the total operating expenses (i.e., EBITDAR). Under the first illustrative example, therefore, lease-related payments will be deducted from IFRS 16 EBITDA.

Adjusting the enterprise value under this approach:

Comparable Company	GEV	Less: Leases (captured in the GEV)	Net EV[1] (First illustrative approach)
Comparable company 1	7,500	500	**7,000**
Comparable company 2	9,000	1,250	**7,750**
Comparable company 3	12,000	1,500	**10,500**
Comparable company 4	10,000	800	**9,200**
Comparable company 5	15,000	2,500	**12,500**
Average	**10,700**	**1,310**	**9,390**
Median	**10,000**	**1,250**	**9,200**

Financial information for illustration purposes only.
Note 1: Net EV is used interchangeably with EV, to refer to the traditional EV before IFRS 16.

Exhibit 9: Using the first illustrative example in calculating market multiples *(where lease payments are deducted from earnings) (Continued)*

Adjusting the post-IFRS 16 reported EBITDA to a pre-IFRS 16 EBITDA:

Comparable Company	EBITDAR	Less: Estimated Lease Payments	EBITDA
Comparable company 1	800	120	**680**
Comparable company 2	1,125	290	**835**
Comparable company 3	1,200	350	**850**
Comparable company 4	800	180	**620**
Comparable company 5	1,400	580	**820**
Average	**1,065**	**304**	**761**
Median	**1,125**	**290**	**820**

Notes: The estimated lease payments are expected to equal the rent expenses related to operating leases.

Calculating for the pre-IFRS 16 EV/EBITDA:

Comparable Company	EV	EBITDA	EV/EBITDA (First illustrative approach)
Comparable company 1	7,000	680	**10.3x**
Comparable company 2	7,750	835	**9.3x**
Comparable company 3	10,500	850	**12.4x**
Comparable company 4	9,200	620	**14.8x**
Comparable company 5	12,500	820	**15.2x**
Average	**9,390**	**761**	**12.4x**
Median	**9,200**	**820**	**12.4x**

Notes: Financial information for illustration purposes only.

Using the first illustrative example, therefore, entails the need to ensure that the numerator and the denominator in the market multiple and the financial metric that will be multiplied by this market multiple are all based on the same basis.

4.7.3. Key considerations when adopting the first illustrative example in calculating market multiples

4.7.3.1. There may be situations when inputs to perform the adjustments is unavailable. In this case, valuation practitioners could estimate the annual lease expense in the analysis. Information about these inputs could be requested from the entity's management as it is likely they have this information available.

4.7.3.2. In the inputs to estimate annual lease expenses are not available, the following possible methods can be considered:

i. When principal repayment and the related interest expense on the 'Lease liability' are disclosed, use their sum to determine an indicative level of annual lease expense;

ii. When the depreciation of the 'Right-of-use' asset and the related interest expense on the 'Lease liability' are disclosed, use their sum to determine an indicative level of annual lease expense. Note that this approach would be susceptible to the front-loading effect explained earlier in this Guidance Note;

or

iii. When the average duration of the lease liabilities and the discount rate are disclosed, those information may be used together with the lease liability balance to back out and estimate the annual lease expense.

4.7.3.3. Given that EBITDA is net of lease payments under the first illustrative example, EV of comparable companies should also exclude the lease liabilities. EV should be calculated as equity value (or market capitalisation) plus net financial debt (without the leases) as at valuation date.

4.7.3.4. With the adoption of IFRS 16, companies no longer separately distinguish operating leases from finance leases. All leases brought to the balance sheet are now captured under one line item in the financial statement (only presented in either the current or noncurrent portion). Therefore, the adjusted market multiples under the first illustrative example may not be comparable with the historical market multiples where both operating and finance leases coexist[9]. This is particularly important when finance leases are significant, and the valuation analysis is recurring. Valuation professionals should, therefore, exercise caution and professional judgment to determine whether further adjustments are required.

4.7.3.5. Not all comparable companies may have the same extent and breadth of disclosures in their respective financial statements. Valuation professionals should consider the impact of this limitation when estimating adjustments. Valuation professionals should also be aware of the potential discrepancies that may arise across valuation analyses due to differences in how the financial statements are presented. For instance, some financial statements may not distinguish between current and noncurrent lease liabilities[10]. Additionally, the extent to which disclosures are made in the notes to financial statements varies by company.

4.7.4. Illustrative Example 2: Calculating market multiples, where lease payments are <u>not</u> deducted from earnings

4.7.4.1. Under this second illustrative example in calculating market multiples, the same like-for-like principle should be followed, as explained earlier. The objective is to ensure that the valuation metric in the numerator and the financial metric in the denominator are both on post-IFRS 16 bases.

4.7.4.2. An example of a post-IFRS 16 market multiple is GEV/EBITDAR. GEV is calculated as the aggregate of equity value, net financial debt, operating leases, and finance leases. EBITDAR, on the other hand, is already the EBITDA under IFRS 16.

4.7.4.3. Under this approach, valuers should calculate the market multiples as follows:

i. Calculate the market multiples (e.g., EV/EBITDA, GEV/EBITDAR, or EV/EBIT) of the comparable companies, where both the valuation metric in the numerator and the financial metric in the denominator are already on a post-IFRS 16 basis (i.e., EV in the numerator is inclusive of the lease liability and the financial metric in the denominator is gross of lease payments).

[9] This is particularly applicable to IFRS-compliant financial statements prepared after effectivity of IAS 17 but before effectivity of IFRS 16.

[10] This is typical when financial information is sourced from management accounts or presentations, for example.

ii. Select the appropriate post-IFRS 16 market multiple to be used in the valuation analysis and apply the same to the post-IFRS 16 financial metrics of the subject company. For example, use the GEV/EBITDAR multiple from the comparable companies and multiply the same by the subject company's EBITDAR in calculating GEV as at valuation date.

iii. To estimate the subject company's equity value under the second illustrative example, valuers should ensure that the lease liabilities are included in the net financial debt and subtract the same from GEV to arrive at equity value.

4.7.4.4. As the 'Lease liability' included in net financial debt (net cash) in the numerator depends on the remaining term of the leases, market multiples may be skewed. They may not be comparable across companies even when they belong to the same industry. Therefore, when adjusting market multiples to a post-IFRS 16 basis, valuation professionals should evaluate the risk of over- or undervaluation if the average lease term of the subject company being valued materially differs from that of the comparable companies.

Exhibit 10: Using the second illustrative example in calculating market multiples
(where lease payments are <u>not</u> deducted from earnings)

Using the same example in Exhibit 13 where the EV/EBITDA from comparable companies are extracted as at 31 December 20x0 is shown again below.

Comparable Company	GEV	Reported EBITDA (or EBITDAR)	GEV/EBITDAR
Comparable company 1	7,500	800	**9.4x**
Comparable company 2	9,000	1,125	**8.0x**
Comparable company 3	12,000	1,200	**10.0x**
Comparable company 4	10,000	800	**12.5x**
Comparable company 5	15,000	1,400	**10.7x**
Average	**10,700**	**1,065**	**10.1x**
Median	**10,000**	**1,125**	**10.0x**

Financial information for illustration purposes only.

Under this approach, there is no need to adjust the enterprise value and the LTM EBITDA as reported. Both the valuation and the financial metrics are already stated on their respective post-IFRS 16 basis. Valuation professionals should only ensure that the LTM EV/EBITDA above that is on post-IFRS 16 basis is multiplied to the post-IFRS 16 EBITDA of the subject company being valued.

4.7.5. Key considerations when adopting the second illustrative example in calculating market multiples

4.7.5.1. There may be situations where comparable companies do not prepare financial statements under IFRS, such as those that adopt US GAAP in their financial reporting. These may give rise to inconsistencies when calculating financial information and valuation metrics on a post-IFRS 16 basis.

4.7.5.2. Given the impact of the remaining lease term on the comparability of market multiples, it is recommended that valuation professionals review the average remaining lease terms of each comparable company and consider whether they are materially different compared to the average remaining lease term of the subject company, so to evaluate the risk of over- or undervaluation under the

second illustrative example. In the event the average lease terms are significantly different to impact the market multiples in a material way, the first example may be considered.

4.7.6. Other considerations in calculating market multiples

4.7.6.1. Valuation practitioners shall use professional judgment regarding which approach to use based on the facts and relevant circumstances of the valuation analysis performed. These considerations may include the nature of the industry and significance of ROU assets and the related ‘Lease liability’ to the overall results of the valuation analysis.

Appendix 1 – Defined terms in IFRS 16

commencement date of the lease (commencement date)
The date on which a **lessor** makes an **underlying asset** available for use by a **lessee**.

economic life
Either the period over which an asset is expected to be economically usable by one or more users or the number of production or similar units expected to be obtained from an asset by one or more users.

effective date of the modification
The date when both parties agree to a **lease modification**.

fair value
For the purpose of applying the **lessor** accounting requirements in this Standard, the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

finance lease
A **lease** that transfers substantially all the risks and rewards incidental to ownership of an **underlying asset**.

fixed payments
Payments made by a **lessee** to a **lessor** for the right to use an **underlying asset** during the **lease term**, excluding **variable lease payments**.

gross investment in the lease
The sum of:

(a) the **lease payments** receivable by a **lessor** under a **finance lease**; and

(b) any **unguaranteed residual value** accruing to the lessor.

inception date of the lease (inception date)
The earlier of the date of a **lease** agreement and the date of commitment by the parties to the principal terms and conditions of the lease.

initial direct costs
Incremental costs of obtaining a **lease** that would not have been incurred if the lease had not been obtained, except for such costs incurred by a manufacturer or dealer **lessor** in connection with a **finance lease**.

interest rate implicit in the lease
The rate of interest that causes the present value of (a) the **lease payments** and (b) the **unguaranteed residual value** to equal the sum of (i) the **fair value** of the **underlying asset** and (ii) any **initial direct costs** of the lessor.

lease
A contract, or part of a contract, that conveys the right to use an asset (the **underlying asset**) for a period of time in exchange for consideration.

lease incentives
Payments made by a **lessor** to a **lessee** associated with a **lease**, or the reimbursement or assumption by a lessor of costs of a lessee.

lease modification

A change in the scope of a **lease**, or the consideration for a lease, that was not part of the original terms and conditions of the lease (for example, adding or terminating the right to use one or more **underlying assets**, or extending or shortening the contractual **lease term**).

lease payments

Payments made by a **lessee** to a **lessor** relating to the right to use an **underlying asset** during the **lease term**, comprising the following:

(a) **fixed payments** (including in-substance fixed payments), less any **lease incentives**;

(b) **variable lease payments** that depend on an index or a rate;

(c) the exercise price of a purchase option if the lessee is reasonably certain to exercise t

(d) payments of penalties for terminating the **lease**, if the lease term reflects the lessee ex

For the lessee, lease payments also include amounts expected to be payable by the lessee under **residual value guarantees**. Lease payments do not include payments allocated to non-lease components of a contract unless the lessee elects to combine non-lease components with a lease component and to account for them as a single lease component.

For the lessor, lease payments also include any residual value guarantees provided to the lessor by the lessee, a party related to the lessee or a third party unrelated to the lessor that is financially capable of discharging the obligations under the guarantee. Lease payments do not include payments allocated to non-lease components.

lease term

The non-cancellable period for which a **lessee** has the right to use an **underlying asset**, together with both:

(a) periods covered by an option to extend the **lease** if the lessee is reasonably certain to

(b) periods covered by an option to terminate the lease if the lessee is reasonably certain

lessee

An entity that obtains the right to use an **underlying asset** for a period of time in exchange for consideration.

lessee's incremental borrowing rate

The rate of interest that a **lessee** would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the **right-of-use asset** in a similar economic environment.

lessor

An entity that provides the right to use an **underlying asset** for a period of time in exchange for consideration.

net investment in the lease

The **gross investment in the lease** discounted at the **interest rate implicit in the lease**.

operating lease

A **lease** that does not transfer substantially all the risks and rewards incidental to ownership of an **underlying asset**.

optional lease payments

Payments to be made by a **lessee** to a **lessor** for the right to use an **underlying asset** during periods covered by an option to extend or terminate a **lease** that are not included in the **lease term**.

period of use

The total period of time that an asset is used to fulfil a contract with a customer (including any non-consecutive periods of time).

residual value guarantee

A guarantee made to a **lessor** by a party unrelated to the lessor that the value (or part of the value) of an **underlying asset** at the end of a **lease** will be at least a specified amount.

right-of-use asset

An asset that represents a **lessee's** right to use an **underlying asset** for the **lease term**.

short-term lease

A **lease** that, at the **commencement date**, has a **lease term** of 12 months or less. A lease that contains a purchase option is not a short-term lease.

sublease

A transaction for which an **underlying asset** is re-leased by a **lessee** ('intermediate lessor') to a third party, and the **lease** ('head lease') between the head lessor and lessee remains in effect.

underlying asset

An asset that is the subject of a **lease**, for which the right to use that asset has been provided by a **lessor** to a **lessee**.

unearned finance income

The difference between:

(a) the **gross investment in the lease**; and

(b) the **net investment in the lease**.

unguaranteed residual value

That portion of the residual value of the **underlying asset**, the realisation of which by a **lessor** is not assured or is guaranteed solely by a party related to the lessor.

variable lease payments

The portion of payments made by a **lessee** to a **lessor** for the right to use an **underlying asset** during the **lease term** that varies because of changes in facts or circumstances occurring after the **commencement date**, other than the passage of time.