IMPLICATIONS OF IFRS 16: LEASES – EVIDENCE FROM JSE-LISTED TELECOMMUNICATIONS COMPANIES

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I hereby declare that I have read and understood the regulations governing the submission of Master of Commerce dissertations, including those relating to length and plagiarism, as contained in the rules of the University, and that this dissertation conforms to those regulations.

SUPERVISOR: PROFESSOR GOOLAM MODACK
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ABSTRACT

This study investigates the implications of the new leasing standard, IFRS 16 *Leases,* on companies in the Telecommunications sector of the Johannesburg Stock Exchange. The International Accounting Standards Board's upcoming Post-Implementation Review of IFRS 16 is considered in this study (International Accounting Standards Board, 2023). IFRS 16, which is effective from 1 January 2019 (IFRS Foundation, 2016a), introduces requirements for lessees to present and disclose assets and liabilities that arise from leasing arrangements as part of their statement of financial position at initial recognition (IFRS Foundation, 2016a). The analysis of the impact is performed through a financial statement analysis, as well as financial ratio analysis, which is a different from the constructive capitalisation model developed by Imhoff et al. (1991, 1997). The findings of this study suggest that the implementation of IFRS 16 *Leases* led to a rise in reported assets and liabilities in the financial statements, which had an impact on key financial ratios for companies that rely on leased assets as part of their operations. The study's findings also show that as more leasing information is available, the implementation of IFRS 16 has led to financial statements that provide more transparent and comparable financial information.

PLAGIARISM DECLARATION

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1. This dissertation has been submitted to Turnitin (or equivalent similarity and originality checking software) and I confirm that my supervisor has seen my report and any concerns revealed by such have been resolved with my supervisor.
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3. This work has not been previously submitted in whole, or in part, for the award of any degree in this or any other university. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, and has been cited and referenced.

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CHAPTER 1 – INTRODUCTION

A lease contract gives one party the right to use the asset for the duration of the lease term and gives another party the right to lease payments from the party using the asset for the duration of the lease term (IFRS Foundation, 2016a). The International Accounting Standards Board (IASB) published IFRS 16 Leases (IFRS 16) in January 2016 (IFRS Foundation, 2016a).

The lack of comprehensive leasing financial information in the financial statements led the IASB to conclude that there was a need for change in the accounting for leases (International Accounting Standards Board, 2016) (Afsari, 2022), because of the accounting requirements in International Accounting Standard 17 for Leases (IAS 17), the predecessor leasing accounting standard (Cape, 2019). This exclusion resulted in investors and analysts having trouble in making comparisons between companies that purchase assets by spending large sums of money upfront, and those that choose to enter into lease contracts (Cape, 2019)(International Accounting Standards Board, 2016). The following example and tables illustrate the differences between IAS 17 and IFRS 16 (adapted from (Cape, 2019):

Example: Differences in the accounting treatment of leases between IAS 17 and IFRS 16

Entity A signs a five-year lease contract with Entity B to lease a storage building for Entity A's inventory. The lease payments that Entity A must make to Entity B are R500 000 per year in arrears. The incremental borrowing rate is 11.25% per annum. The storage building has a useful life of 20 years.

Under IAS 17, Entity A would account for an operating lease, because not substantially all the economic benefits will be obtained by Entity A. The useful life of the storage building is 20 years, and Entity B expects to receive economic benefits for 20 years, while Entity A will only receive a five-year benefit from the usage of the storage building. The economic characteristics are not similar to Entity A purchasing the asset, as the building has a 20-year economic life, Entity A will only have access to use the storage building for five years. Entity A will determine the sum of the lease payments

over the five-year period, which amount to R2 500 000, and then expense this amount at equal amounts to the statement of profit or loss. An operating lease expense of R500 000 per year will be recognised as an expense. Entity A may choose to disclose further information about this lease as part of the operating expenses note.

Under IFRS 16, the economic characteristics being similar to purchasing the asset are not considered. Entity A will discount the future minimum lease payments of R500 000 to determine their present value, using the incremental borrowing rate of 11.25% per annum. The calculated present value is R 1 836 386, which Entity A recognises at initial recognition as the value of the lease liability and right-of-use asset. Entity A recognises annual depreciation on the asset of R367 277 per year as presented in Table 2 below, and an interest expense on the lease liability balance, which will become smaller per year, as presented in Table 1 below.

Table 1: Lease Liability Amortisation

Year	Opening Balance	Interest expense at 11.25% per annum	Payments	Closing balance
1	(R1 836 386)	(R206 593)	R500 000	(R1 542 979)
2	(R1 542 979)	(R173 585)	R500 000	(R1 216 564)
3	(R1 216 564)	(R136 863)	R500 000	(R853 428)
4	(R853 428)	(R96 011)	R500 000	(R449 438)
5	(R449 438)	(R50 562)	R500 000	R0

Table 2: Right-of use asset amortisation

Year	Opening Balance	Amortisation of lease asset	Closing Balance
1	R1 836 386	(R367 277)	R1 469 108
2	R1 469 108	(R367 277)	R1 101 831
3	R1 101 831	(R367 277)	R734 554
4	R734 554	(R367 277)	R367 277
5	R367 277	(R367 277)	R0.00

At the end of the first reporting period, Entity A will present the following in the financial statements.

Statement of Financial Position	**IAS 17**	**IFRS 16**
Right-of-use assets	-	R1 469 108
Lease liability	-	(R1 542 979)
Total net asset effect	-	(R73 871)

Statement of Profit or Loss		
Operating lease expense	(R500 000)	-
Depreciation expense	-	(R367 277)
Interest expense	-	(R206 593)
Total net loss effect	(R500 000)	(R573 870)

Before IFRS 16 was published, authors had anticipated the effects of capitalising operating leases on financial statements, financial ratios and debt covenants using models like the constructive capitalisation model (Imhoff et al. 1991, 1997) (Dillon 2014) (Cape 2019) (Cumming 2019). Using the research questions below, this study aims to evaluate the actual implications of IFRS 16 on financial statements, financial ratios and debt covenants following the implementation of IFRS 16:

- How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for JSE listed companies in the telecommunications sector?
- How will the impact of IFRS 16 result in changes to certain financial statement ratios for JSE listed companies in the telecommunications sector?
- How will the implementation of IFRS 16 affect the compliance with debt covenants for JSE listed companies in the telecommunications sector?
- What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?
- How long will the impact of the implementation of IFRS 16, based on the first four research questions, affect the financial statements of JSE listed companies in the telecommunications sector?

The research questions will be answered through the analysis of audited financial statements of the companies in the JSE telecommunications sector. This study found that companies that place reliance on leasing had significant impacts on financial

statements and financial statement ratios, and that debt covenants were not significantly impacted. This study could be useful for the forthcoming post-implementation review of IFRS 16 and in determining if the IASB's objectives in publishing IFRS 16 were met.

CHAPTER 2 – LITERATURE REVIEW

This chapter assesses the literature on the predicted implications and the actual implications of IFRS 16 on companies.

Introduction

According to Merrill (2021), in a leasing an arrangement, the lessor of the asset usually owns the asset and will receive the asset back once the lease term is over. Throughout the lease term, the lessee is entitled to the asset's continuous usage. In this way, leasing is a major source of funding as it provides finance for capital intensive assets to lessees (McGregor et al., 1996).

Leasing has some of its origins in the United States of America (USA) during the seventeenth century with the leasing of wagons and horses (Sorrentino et al., 2020), and its other origins in Babylon, where agricultural land, dwellings and personal property were leased (Merrill, 2021). The USA has remained a dominant player in the leasing market ever since, according to the 2022 Global Leasing Report (GLR) (Hamilton, 2022). The GLR provides definitive analysis of country trading environments and trends in the leasing of assets and has been tracking the global leasing market for more than 30 years (Hamilton, 2022).

In the past 10 years, the leasing market has experienced growth of 125 percent. Hamilton (2022) found that the global leasing market declined in new business in 2020 after the Coronavirus disease (COVID-19) outbreak, following a 10-year period that showed continuous growth. The GLR showed a decline in the volume of leases in the top 50 countries, from US$1.36 billion to US$1.33 billion. North America experienced a decline of 6.7 percent, while Africa had a decline in growth of 39 percent between 2019 and 2020.

The leasing market showed resilience in 2020 which followed through to 2021, as the GLR found that new business activity had recovered and that the volume of activity in the leasing market will rebound to the levels before the pandemic (Hamilton, 2022). The GLR also found that North America, Europe, and Asia make up most of the global

leasing market (Sieverding, 2018), accounting for about 96.5 percent of the leasing market, while Africa makes up 0.6 percent of the global leasing market (Hamilton, 2022). In the ranking of the top 50 leasing countries, South Africa was placed 32nd, with an annual leasing volume of US$1.95 billion (Hamilton, 2022).

The property market's growth rate in South Africa is expected to increase at a slow pace due to the South African political and economic climate, coupled with rising inflation and the electricity crisis (PropertyWheel, 2022). Rentals in the South African office leasing market fell by seven percent in the fourth quarter of 2022. This market is in oversupply as many employees are working remotely because of COVID-19 (PropertyWheel, 2022). The South African industrial leasing market is noted by PropertyWheel (2022) as one of the best placed markets as it had low vacancies with rentals rising by 5.3 percent in the fourth quarter of 2022.

Segal & Naik (2019) argued that leasing is a finance-related decision that an entity will need to consider, as the entity would not need to buy an asset but would obtain the ability to use the asset over duration of the lease. Leasing limits the risks associated with owning that asset but continues to offer the benefit of the use of the asset (Segal & Naik 2019). Leasing has always been an attractive way of obtaining finance for the use of a productive asset (Imhoff et al., 1997). PWC (2016) stated that leasing allows for cash flow flexibility because large amounts of cash are not tied up in an illiquid asset, and it reduces the risk of obsolescence and residual value risk on assets.

If a lease was recognised as an operating lease, IAS 17 did not require the presentation of funding received from lease contracts (the ability of not incurring the full capital expenditure on assets up-front) and the benefit received from the utilising the asset (IFRS Foundation, 2022a). According to PWC (2016), IAS 17 disclosures of operating leases do not show any contractual commitments that relate to the lease contract.

PWC (2016) found that users of financial statements lacked comprehensive leasing financial information that that would have allowed them to determine how operating leases affected the company's cash flows, financial performance and financial position (International Accounting Standards Board, 2016). The presentation of operating

leases was only included in operating expenses in statement of profit or loss and other comprehensive income, and it made no reference to the right to use the asset, nor the liability incurred from the operating lease contract (Segal & Naik, 2019). This made it challenging to compare of two companies' financial statements (PWC 2016).

The IAS 17 classification, presentation and disclosure requirements resulted in financial statements that did not provide users with comprehensive, transparent, comparable, complete, and accountable information according to Tănase et al (2018) and Magli et al (2018). Magli et al (2018) further noted that in today's world, businesses are increasingly required to share financial information that is clear and transparent for the ease of comparison between financial years and other companies, among other reasons. One method to achieve effective communication of financial information is requiring companies to comply with regulatory requirements, many of which require the compliance with accounting standards that are published by an accounting standards body, such as the IASB (Magli et al., 2018).

IFRS 16 was created to address the drawbacks of IAS 17 (Magli et al., 2018) and to guarantee that financial statements are transparent, comparable, and accountable, (International Accounting Standards Board, 2016). Lessees are required to recognise all leases in their statement of financial position (balance sheet) in accordance with IFRS 16. Additionally, Tănase et al (2018) stated that this would require companies to present and disclose information regarding the economic benefits received from the assets, as well as the funding and commitment incurred to acquire the use of the asset.

The International Accounting Standards Board (IASB) and their role

The International Financial Reporting Standards (IFRS) Foundation is a public interest organisation that is not-for-profit that was founded to provide a set of high-quality, internationally recognised, comparable, understandable, enforceable reporting standards. The IFRS Foundation develops IFRS accounting standards through a standard-setting board, the IASB, and it sets the IFRS sustainability standards through the International Sustainability Standards Board (IFRS Foundation, 2022b).

The IFRS accounting standards guide companies in the preparation of financial statements. The IASB aims for financial statements to be transparent, accountable, and efficient all around the world. The IASB does this by establishing the main principles of financial statement information (Winiarska, 2020) (IFRS Foundation, 2022b). To achieve this, the standards must be comparable and of a high quality, to enable users to make economic decisions (IFRS Foundation, 2022b).

Financial statements must be prepared to reduce the information gap between capital providers and the business that they invest in. This will aid investors, and other stakeholders identify prospects and perils in financial statements across the world and improve the way they allocate their capital (IFRS Foundation, 2022b). The IASB's IFRS accounting standards are a mandatory requirement for companies that have been listed on over 80 national stock exchanges (Winiarska, 2020), including the Johannesburg Stock Exchange (JSE) in South Africa. The IASB notes that listed companies will be impacted by IFRS 16, as compliance with IFRS accounting standards is a listing requirement for many stock exchanges (International Accounting Standards Board, 2016).

In developing IFRS 16, the IASB collaborated with the Financial Accounting Standards Board (FASB) which is the regulatory board that sets accounting standards for companies in the USA (Financial Accounting Standards Board, 2023) (Winiarska, 2020). One of the incentives for changing the leasing accounting standard in the USA was due to an estimated US$ 1.25 trillion worth of leases that were off-balance sheet in the USA, made by the United States Securities and Exchange Commission (US SEC) (Winiarska, 2020). This was attributed to the FASB's previous leasing accounting standard, ASC 840. ASC 840 had similar criticisms as IAS 17, and as a result, in 2008, the FASB and IASB collaborated to develop new leasing accounting standards (Winiarska, 2020) (Kuzwayo, 2022).

Involvement of the Financial Accounting Standards Board (FASB)

The FASB is an independent not-for-profit organisation. It sets financial accounting and reporting standards for private sector companies that utilise Generally Accepted Accounting Principles (GAAP) (Financial Accounting Standards Board, 2023). The

FASB is designated as the USA's accounting standard setter for public companies (Financial Accounting Standards Board, 2023).

Under ASC 840, leases could be accounted under the operating leases classification with no requirement to capitalise lease assets and lease liabilities (IFRS Foundation, 2022a). Due to ASC 840 allowing straight lining of lease payments, the rental expense remained the same for each period that the lease was in effect for operating leasing (Winiarska, 2020).

In 2016, the FASB published ASC 842, which shares similar accounting requirements for the accounting of leases by lessees with IFRS 16 in many areas (Winiarska, 2020). Due to the differences in jurisdictions that FASB standards and IASB standards are used, the boards had some differences in the accounting requirements for lessors (Winiarska, 2020). The boards both hold a common view that lessees are required to recognise assets and liabilities that result from a lease contract, and that lessor accounting requirements were to remain the same. Winiaskra (2020) however found that the boards had different conclusions, which include the classification of leases, criteria for leases that are exempted from the scope of the standard and the establishment of discount rates.

IAS 17 and its challenges

The first known leasing standard was developed by the American Institute of Certified Public Accountants in October of 1949 for American entities and was called ARB 38 *Disclosure of Long-Term Leases in the Financial Statements of Lessees* (Sorrentino et al., 2020). Subsequently, the International Accounting Standards Committee (IASC) issued IAS 17 in 1982 (Liberati, 2020).

The IASC was one of the first professional international accounting bodies to set international accounting standards (IFRS Foundation, 2022b). In 2000, the IASC restructured itself into the IASB, which is under the supervision of independent trustees under the IFRS Foundation (IFRS Foundation, 2022b). The IAS 17 accounting standard was revised seven times between 1982 and 2009 by the IASB

(Altintas & Sari, 2016). This showed the IASB's commitment to developing an accounting standard to prescribe the accounting for leases (Sorrentino et al., 2020).

Leases could be classified as operating leases or finance leases under IAS 17 for both lessees and lessors (Dillon, 2014) (Veverková, 2019) (Baumann & Hegrestad, 2020). A straight-lined lease expense over the term of the lease would be an operating expense in the statement of profit or loss and other comprehensive income, and this would derive a prepaid lease expense or an accrued expense that affected the balance sheet for an operating lease (Le Roux, 2021). If the lease expense had been paid in excess, a current prepaid lease expense asset would be presented. If the lease expense had been underpaid, a current accrued lease expense liability would be presented (Le Roux, 2021).

Capitalising the right to utilise an asset would be how the economic benefit of a lease would be recognised when it is classified as a finance lease. In addition, a corresponding lease liability which represents the contractual commitment of making lease payments, would be recognised (Le Roux, 2021). Over the duration of the lease, the asset would be amortised, and the amortisation and finance costs relating to the liability would be presented in the statement of profit or loss and other comprehensive income (Le Roux, 2021) (Cape, 2019).

The IFRS Conceptual Framework for Financial Reporting (Conceptual Framework) describes the objective of, and the concepts for general purpose financial reporting for IFRS standards (International Accounting Standards Board, A13.SP1.1). The Conceptual Framework does not constitute an accounting standard, and it does not take precedence of any accounting standard (International Accounting Standards Board (IASB), 2018; Pannell Kerr Forster, 2018). It assists to develop accounting standards that have a consistent basis. It also states that providing information about the assets, liabilities, equity, income, expenses and cashflows to users of financial statements is the financial statements' objective, so that the entity's management of economic resources can be assessed, according to Barker & Teixeira (2018).

Before the revision of the Conceptual Framework in March 2018, an asset was defined as a resource that is controlled by the entity as a result of past events and from which

future economic benefits are expected to flow into the entity (International Accounting Standards Board (IASB), 2018). The debate around this definition, as raised by authors such as McGregor et al (1996) has been that many assets are excluded from the balance sheet because lessees do not secure substantially all of the risks and rewards of ownership as the assets are not owned by the entity, for example, leases that meet the classification of operating lease under IAS 17.

McGregor et al (1996) noted that the classification of leases was largely driven by who legally owned the asset in the lease contract which demonstrated control, and not the right to utilise the asset. Resultantly, entities only reported on economic benefits received from assets that are legally owned through their purchase in their financial statements (McGregor et al., 1996). Using the Conceptual Framework as a basis, if the risks and rewards associated with owning the asset were substantially passed on to the lessee, IAS 17 required that leases to be classified as finance lease (IFRS Foundation, 2022a).

Certain forms of leasing arrangements may have significantly transferred the risks and rewards of the asset to the lessee, however, because the lessor owned the asset, the operating lease classification would be applied (Kuzwayo, 2022) (McGregor et al., 1996). Similarly, the Conceptual Framework indicated that the leased asset is recognised if it is a resource controlled by the entity, and the entity has rights to the risk and rewards of the asset, which was a characteristic of control (Barker & Teixeira, 2018).

IAS 17 and the previous version of the Conceptual Framework formed the basis of the argument for many tangible assets to not be capitalised to the balance sheet under the operating lease classification (Górowski et al., 2022). Entities with lease contracts classified as operating leases could choose not to present these leases in their financial statements. The benefit from the use of the asset could be excluded in the balance sheet, resulting in incomplete financial statements that exclude the full financial information of the resources and funding used by the entity to generate its profits (Barker & Teixeira, 2018).

Before the revision of the Conceptual Framework, a liability was defined as a present obligation arising from past events and its settlement will result in an outflow of economic resources (International Accounting Standards Board (IASB), 2018) (Pannell Kerr Forster, 2018). This definition excluded an obligation that the entity cannot practically avoid (Pannell Kerr Forster, 2018). Under IAS 17, the obligation to make lease payments could be omitted in the balance sheet if the requirements of a finance lease are not met (IFRS Foundation, 2022a).

The revised Conceptual Framework of March 2018 aims to contribute to transparent reported information to so informed economic decisions may be made by financial statements users (International Accounting Standards Board (IASB), 2018). Excluding benefits received from leased assets and the obligation of making lease payments by applying the operating lease classification requirements in IAS 17 resulted in financial statements that are not transparent or complete, which may have had an impact on the economic decisions made by users (Magli et al., 2018).

The return on assets could be inflated because the total asset denominator that is used in calculating the return on assets would exclude the leased asset (Veverková, 2019). Information about the business' liabilities could be understated and gearing ratios would indicate a lower level of debt, as the obligation to make lease payments would be omitted from the balance sheet (International Accounting Standards Board, 2016).

The classification of a lease relied heavily on management's judgement under IAS 17, and this possibly led to a similar lease contract being classified, recognised, measured, presented, and disclosed differently by two companies (Segal & Naik, 2019). This means that two different firms could have a similar leased asset and obligation under a contract, but the two firms could account for the lease contract differently, either as a finance lease or an operating lease (Górowski et al., 2022).

Entities that classified leases as operating leases preferred this classification because this resulted in a better picture of their financial statements, they would exclude the leased assets and lease liabilities (Le Roux, 2021). Because the wording in IAS 17 allowed for different interpretations, lease contracts could be structured in such a way

that the entity would classify it as an operating lease. This could be done by including clauses in the lease contract so that the lessor remained with the risks and rewards of the asset (Cumming, 2019).

A firm is made up of contracts from agents (Kabir, 2010), such as shareholders, lenders, and managers. Managers run the day-to-day business, and they have access to all the historical financial data of the firm through accounting and management systems. Shareholders and lenders, who are external to the firm, do not usually have this information, and they must rely on the periodic information that the firm publishes, such as the Annual Financial Statements, to base their economic decisions on (Panda & Leepsa, 2017) (Górowski et al., 2022).

Some agents have asymmetrical access to information about the leases that a firm has if management has decided to classify them as operating leases (Cumming, 2019). The external agents would not know about the lease term, which asset is being leased and the benefit derived from it, as well as the substance of the lease contract, including payments and interest because the leased asset and the commitment to make payments would be excluded from the financial statements (Cumming, 2019).

Due to the above reasons, IAS 17 was criticised for not meeting the disclosure needs of financial statement users (Le Roux, 2021). The assets utilised by the entity through the lease and the unrecorded obligation to make lease payments that could not be avoided were not presented and disclosed, resulting in a set of financial statements that were not faithfully representing the leasing arrangement(s) (International Accounting Standards Board, 2016) (IASB, 2010).

Theoretical Framework - positive accounting theory

Positive accounting theory aims to enhance the understanding of phenomena that occur in accounting, together with any accounting issues (Watts & Zimmerman, 1990). Positive accounting theory is used to understand the reasons for the management of a company preferring a particular accounting choice, as this may be driven by management incentives (Kabir, 2010).

The positive accounting theory introduces the link between an accounting policy choice and management incentives. The theory links how management can manipulate a company's earnings in the financial statements by applying an accounting policy choice (Kabir, 2010). Accounting standards are crucial in capital markets because they reduce the agency problem (Morales-Díaz & Zamora-Ramírez, 2018).

Users of financial statements use them as a source of company financial information (Kabir, 2010). Users of financial statements assess companies using the knowledge of efficient markets and prices that reflect available information (Kabir, 2010) (Górowski et al., 2022). When making economic decisions by assessing a company's financial statements, an investor would not have the information on the financing that the company receives if the company has accounted for a leasing arrangement as an operating lease. The return on the leased asset and the effects on leverage could not be accurately measured by an investor (Górowski et al., 2022).

An agency problem may exist because leasing contracts are accounted for by the managers of the company as operating leases which are then reported to the shareholders (Górowski et al., 2022). Managers of a company have access to the lease contract and could prefer the operating lease classification, even though accounting policymakers set standards requiring that the substance of transactions to be accounted for (Le Roux, 2021). This is because the operating lease classification would result in a better financial position and financial performance which might be incidental to bonuses received (Kabir, 2010).

The positive accounting theory states that in developing accounting standards, management is essential because management determines the accounting policy choices that an entity makes. These accounting policy choices are influenced by incentives that are in the favour of management (Watts & Zimmerman, 1990) (Srivastava & Baag, 2020). Furthermore, the financial reporting function, which forms part management, is to limit management to act in favour of the shareholders' interests (Magli et al., 2018). This results in an agency problem (Srivastava & Baag, 2020). The positive accounting theory, which supports the objective of the IASB in developing financial reporting standards, may be used to understand the changes in the

classification of leases in IFRS 16 by enhancing transparency and comparability in financial statements, which limits the accounting policy choice for leases, resulting in a limited agency problem (Srivastava & Baag, 2020).

IFRS 16 provides one accounting treatment for lessees that have lease contracts, which addresses the challenge raised by Watts & Zimmerman (1990), that reported earnings reported may not be comparable because of the different interpretations of IAS 17 and resultantly, the leasing accounting policies used (Kabir, 2010). Users of financial statements will be able to compare leasing financial information and evaluate the impact of leases on the financial statements because IFRS 16 mandates a single accounting practices for leases (IFRS Foundation, 2016a). Studies on capital markets found stronger increases in comparability following the implementation of new accounting standards (Tarca, 2020). The Conceptual Framework also highlights comparability, which entails that company must be comparable to itself overtime, and using the IFRS accounting standards, one should be able to compare two companies together (Tarca, 2020).

The solution: IFRS 16 *Leases*

There had been long term dissatisfaction with IAS 17, and IFRS 16 was predicted to be a solution for financial statements to meet capital market requirements (Veverková, 2019). Lessees would be required to present all assets and resulting payment obligations relating to all lease contracts under IFRS 16 (Górowski et al., 2022). This will result in shareholders and lenders being more informed about the resources and the commitments that the company has, resulting in them making more informed decisions (Górowski et al., 2022). This information will aid in achieving a more efficient capital market as useful and relevant information will be available to market agents (Górowski et al., 2022)

The estimations made by users of financial statements in practice when capitalising operating leases have resulted lease impacts being overestimated when they are added as part of the balance sheet of an entity (International Accounting Standards Board, 2016). IFRS 16, which only allows a single classification of leases by lessees,

will assist investors to get a more transparent and accurate understanding of the lease related assets and liabilities (IFRS Foundation, 2016b).

The development of IFRS 16 *Leases*

When a new accounting standard is set, the IASB first undertakes a research project to gather evidence about the problem which is then assessed to determine whether the problem can be solved using an alternative solution before an accounting standard-setting project is started (IFRS Foundation, 2022c). If a feasible solution is not found, the IASB will then move the research project to an accounting standard-setting project to develop a new IFRS accounting standard (IFRS Foundation, 2022c). During the accounting standard-setting process, the IASB has meetings where it discusses treatment of transactions and how they affect financial statements and users based on the research project and the queries they receive from relevant stakeholders (IFRS Foundation, 2022c). In the case of leases, it was decided that a new accounting standard should be issued to deal with all the concerns of IAS 17 (International Accounting Standards Board & Financial Accounting Standards Board, 2009).

In developing a new accounting standard, the standard-setting process of the IASB is thorough and involves research, publishing discussion papers and incorporating comments received on discussion papers. A discussion paper is published by the IASB during the research project or accounting standard-setting project, which provides an overview of an issue with possible solutions. The discussion paper must show the different opinions and perspectives of the IASB members and comments received (International Accounting Standards Board, 2018).

The leasing discussion paper with the initial views on the creation of a common accounting standard for lease transactions was issued by the IASB in March 2009 (IFRS Foundation, 2016b) (Segal & Naik, 2019). The discussion paper's objective was to develop an accounting standard that mandates the recognition of all lease related assets and liabilities in the statement of financial position (IFRS Foundation, 2016b) (Segal & Naik, 2019). After the IASB's deliberations and research projects from 1996, the paper proposed a new possible way to account for leases (International Accounting

Standards Board & Financial Accounting Standards Board, 2009). The comment period for the discussion paper was open until September 2009 (IFRS Foundation, 2016b) (Segal & Naik, 2019).

Once the comments on the discussion paper have been considered by the IASB, an exposure draft will be published. An exposure draft is a pre-released draft of a proposed new accounting standard, and the IASB remains open to receiving comments from the potential users of that standard on the exposure draft (IFRS Foundation, 2022c) (Segal & Naik, 2019). An exposure draft includes the proposed requirements or amendments to an accounting standard, the basis of conclusions for the proposals and dissenting views to the proposed requirements or amendments (International Accounting Standards Board, 2018).

The IFRS 16 exposure draft was published in August of 2010 (IFRS Foundation, 2016b). The IASB received 600 comment letters on the exposure draft for IFRS 16 (Segal & Naik, 2019). After assessing the comments received and during the outreach performed on IFRS 16, an updated exposure draft was published in May 2013. IFRS 16 was finalised and published in January 2016, and it was effective for annual periods beginning on or after 1 January 2019 (IFRS Foundation, 2016b). The development of IFRS 16 has been summarised by the IASB in the following image:

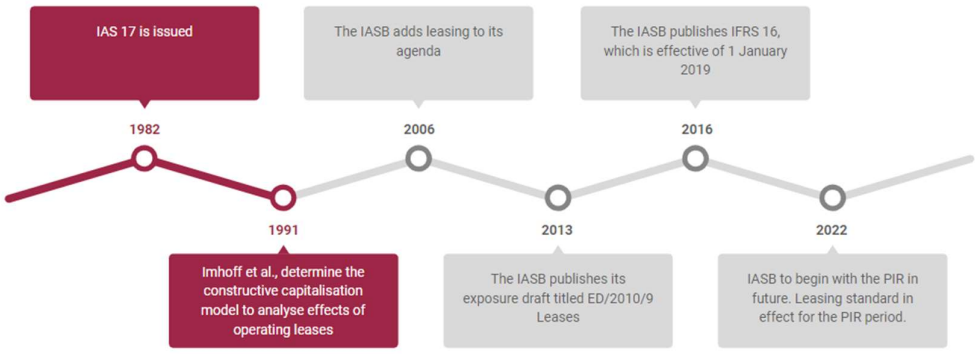

Diagram 1: The development of IFRS 16

(Source: https://www.ifrs.org/supporting-implementation/supporting-materials-by-ifrs-standards/ifrs-16/)

Companies would be required to provide users of financial statements with financial information that could be used to assess the effects of lease contracts under IFRS 16 (International Accounting Standards Board, 2016). It requires that all leases, for lessees, be capitalised to the balance sheet (IFRS Foundation, 2016a). The exception is for short term assets (those that have 12 month or less lease terms) and for low value assets (which are to be straight-lined and expensed in of profit or loss) (IFRS Foundation, 2016a).

IFRS 16 supersedes IAS 17, IFRIC 4 *Determining Whether an Arrangement Contains a Lease*, SIC 15 *Operating Leases - Incentives* and SIC 27 – *Evaluating the Substance of Transactions in the Legal Form of a Lease* (IFRS Foundation, 2016a). IFRS 16 will impact lessees more lessors (Tănase et al., 2018). According to Tanase et al (2018), lessor accounting does not change materially and resembles IAS 17 (Kuzwayo, 2022).

IFRS 16 defines a lease contract, from which firms are expected to recognise contracts (IFRS Foundation, 2016a). For the lessee, a lease liability and right-of-use asset is measured on initial recognition as the present value of the lease payments. The right-of-use asset initial measurement may include the direct initial costs of obtaining the asset, if any (Baumann & Hegrestad, 2020) (IFRS Foundation, 2016).

Additionally, the subsequent measurement for lessees includes depreciating or amortising the right-of-use asset the lease duration, using similar principles to IAS 16 *Property, plant and equipment*, and IAS 38 *Intangible Assets*. The lease liability, which is a financial liability, that will increase with interest incurred using a rate implied in the lease or the entity's incremental borrowing rate, and it will be decreased by the lease payments (IFRS Foundation, 2016). IFRS 16 also requires specific disclosures in terms of leases, including a maturity analysis for the liability, the nature of the leasing activities and restrictions or covenants imposed by lease contracts, and information on the right-of-use asset (Cape, 2019) (IFRS Foundation, 2016a).

Effects of IFRS 16 and capitalising operating leases

Tanase et al (2018) stated that the IFRS 16 implementation could inherently alter the financial, operational, and strategic decision making in entering into leasing arrangements. It may significantly impact companies with large exposure to property and other large value leases. While conducting the IFRS 16 effects analysis, the International Accounting Standards Board (2016) found that IFRS 16 could make it easier for users of financial statements to contrast between companies that choose to buy asset and those that prefer to lease assets.

The impact on lessees of capitalising all leases to the balance sheet has been studied before the IASB and FASB's collaboration to set new leasing accounting standards (Dillon, 2014). One of the studies by Imhoff et al. (1991, 1997) first investigated the effects of estimating and capitalising operating leases. The study developed the constructive capitalisation model (Dillon, 2014) (Cape, 2019). Imhoff's study developed a model because the lease related assets liabilities were excluded in the balance sheet and were not accurately presented under IAS 17, due to being described as short-term rental agreements (Imhoff et al., 1991).

However, research performed indicated that there were many operating leases reported in the financial statements (Imhoff et al., 1991, 1997). This indicated that firms were utilising more assets than what is presented in their balance sheets to generate revenues. Firms were in fact more leveraged than what their financial statements

presented. Imhoff's study developed a model where the amount of debt and assets resulting from operating leases were estimated and capitalised to the balance sheet to assess their impact on key financial ratios.

The model used by Imhoff et al., (1991, 1997) was utilised by other authors after that (Dillon, 2014) (Cape, 2019) (Cumming, 2019) (Altintas & Sari, 2016). The model discounted the minimum future lease payments using an estimated incremental borrowing rate and estimated remaining life (Imhoff et al., 1991). The present value of the minimum lease payments is calculated then the related unamortised operating lease assets are estimated (Imhoff et al., 1991). The capitalisation of McDonald's operating leases as investigated in Imhoff et al (1991)'s study using the 1988 financial statements, found that the operating lease capitalisation could significantly impact the comparisons between a firms' key financial statement ratios (Cape, 2019). The study indicated that capitalising operating leases results in increased assets and liabilities. Furthermore, return on assets decreased by 34 percent and leverage ratios increased by 47 percent. These effects on the reported financial statements of McDonald's were too material to ignore for comparisons and analysis of financial statements by shareholders and lenders (Imhoff et al 1991).

The method used by Imhoff et al., (1991, 1997) depended on companies using the FASB US GAAP reporting standards which required the future minimum lease payments that must be paid in every year after the financial year for five years to be disclosed (Dillon, 2014). In South Africa, where IFRS accounting standards are used, IAS 17 required that the total minimum lease payments due later than one year and not later than five years are disclosed as a single amount (Dillon, 2014). Dillon (2014) performed a similar study on South African JSE listed companies. However, this model was modified to convert the single amount showing lease payments that must be paid later than one year and not later than five years under IAS 17 into future minimum lease payments that decrease at a uniform rate. This model was inspired by Fülbier et al (2008) by using a geometric degression model. In other studies where IAS 17 was used in that jurisdiction, the single amount recorded was shared equally over the years of the operating lease to determine an equal lease payment (Dillon, 2014).

Before IFRS 16 was drafted, studies relied on the models developed for constructive capitalisation of operating leases (Dillon, 2014). Assumptions and estimates were used for discount rates, payments, and lease terms and adjustments were made to numbers presented in the financial statements (Dillon, 2014). However, although adjustments were made to financial statements, Cape (2019) states that previous studies were found to provide a reliable foundation for evaluating the impacts of capitalising operating leases. Similarly, Dillon (2014), stated that leases are similar to loans and capitalising them is important to determine the effects of the commitment to make lease payments in the future. Methods such as the constructive capitalisation models assisted in determining the obligation to pay lease payments over duration of the lease, as a liability (Dillon, 2014).

Fulbier, et al. (2008)'s study on German listed companies indicated IFRS 16 would result in notable changes in financial statement ratios, especially the ratios derived from the balance sheet. Capitalising operating leases would produce a more representative balance sheet which will show the company's full set of obligations. Fulbier, et al. (2008)'s study found that there would be a substantial increase in assets and liabilities and a decrease in the profits and EBITDA in the first two years of implementation (Fülbier et al., 2008). After this, the effects should not be significant.

Deloitte (2019) studied the effects of IFRS 16 and its impact on implied multiples and leverage ratios on 75 JSE listed companies across various sectors, excluding real estate and financial services. Deloitte (2019) determined that IFRS 16 would affect companies with large operating leases and will cause significant changes in debt ratios, return on capital employed and implied valuation multiples. Contrastingly, the study performed by Cumming (2019), indicated slight changes in market ratios due to the IFRS 16 changes in equity. Deloitte (2019) however, indicated that adopting IFRS 16 would complicate the comparability of valuation multiples, such as the net debt to earnings before interest, taxes, depreciation, and amortisation (EBITDA) ratios, due to the predicted increase in EBITDA.

PWC (2016) predicted that capitalising leases would affect commonly used financial metrics such as EBITDA and financial ratios such as the gearing ratio. PWC (2016) also predicted that IFRS 16 may change the behaviours of lessees and affect offerings

that are made by lessors by moving from offering physical assets in a lease to focus on offering services. The implementation of IFRS 16 will most likely have effects on the tax treatment of leases because tax treatment is usually based on accounting treatments (PWC, 2016). The changes that may need to be considered are depreciation rules, interest deductibility and transfer pricing principles (PWC, 2016). Moreover, Tanase et al (2018) concluded that IFRS 16 could potentially alter operational and strategic decision making as it could impact tax arrangements, hedging arrangements, supply arrangements, financial arrangements, and debt covenants.

PWC (2016) expected assets and liabilities to grow, gearing ratios to increase and capital ratios to also decrease. The retail industry was predicted to be affected the most, with a 98 percent increase in debt, followed by airlines and professional services (PWC, 2016). These industries are known to have a lot of leased assets with lease renewal options. PWC (2016) also noted that the telecommunications industries will have to apply a lot of judgement in applying IFRS 16 in determining if a lease is contained in a contract and the separation of components. Tănase et al. (2018) further stated that liabilities to equity ratios, return on asset ratios and current ratios would be adversely affected IFRS 16 leases (Cape, 2019).

Cumming (2019)'s study investigated the IFRS 16 impact on telecommunication and technology sector JSE listed companies in South Africa and the findings were inconsistent between the two sectors. Compared to the technology sector, debt ratios of the telecommunication sector companies had a higher increase (Cumming, 2019). Cumming (2019) concluded that there could be a difference because the telecommunications sector uses operating leases more. However, Cumming (2019) concluded that when assessed against significance levels, the telecommunication sector companies did not illustrate significant increases in the debt ratios. Significant changes were observed in the asset turnover ratio which decreased, EBITDA margins which increased, and a decreased return on capital employed. The only significant change noted in market value ratios was the market to book ratio (Cumming, 2019).

Veverková (2019) studied the implications of the IFRS 16 on 15 European listed airline companies as it was predicted that the airline industry would be the second most

affected industry, due to the large occurrence of leasing aircraft. In Veverkova (2019)'s study, depreciation and interest expense were higher because of IFRS 16, which increased earnings before interest and taxes (EBIT) and EBITDA ratios. Cape (2019)'s study on JSE listed companies had similar predictions of the impact that IFRS 16 to Dillion (2014)'s and PWC (2019)'s predictions. Food, airlines, and drug retailers were predicted to be the most affected because of the IFRS 16 (PWC, 2016).

Predicted effects on financial position

Deloitte (2019), through its study of the IFRS 16 valuation impact, predicted an increase of approximately R288 billion in net debt, which represented an increase of by 16 percent in liabilities. For 18 companies in the sample, Deloitte (2019) found that the increase in net debt was 50 percent and higher.

Similarly, Dillon (2014) found that there was an increase in total debt of 33.7 percent when capitalising operating leases due to the lease commitments being recognised as a liability. Dillion (2014) also found that there was a smaller increase in total assets of 11 percent. Dillon (2014) focused on the food and drug, retail, and general retail industries as these were anticipated to be the most impacted industries. The sample included South African JSE listed companies.

The study by Baumann & Hegrestad (2020) assessed and determined how IFRS 16 would impact selected financial ratios and if the change in accounting standards affected whether companies continued to use lease financing. This study assessed 66 Oslo Stock Exchange listed companies over the period 2015 to 2019. The financial ratios that Baumann & Hegrestad (2020) focused on are the debt, debt-to-equity, return on assets, interest coverage, price to earnings and lease intensity. Baumann & Hegrestad (2020) found that assets and liabilities increased with 3.1 percent and 4.8 percent respectively, due to the capitalisation of operating leases. When this study was performed, IFRS 16 had been effective for one year. Baumann (2020) used the constructive capitalisation model by Imhoff (1991, 1997)', and found that debt and assets had increased, and debt-to-equity ratios changes were more specific to certain industries.

The magnitude of the changes in income (4.07 percent), assets (25.71 percent), liabilities (9.89 percent) and equity (-3.65 percent) ratios were found to be more significant in the study by Veverkova (2019) than those found in other studies. Veverkova (2019) indicated that the added liability could also raise concerns of financial risks to lenders.

Predicted effects on financial performance

Deloitte (2019) determined that IFRS 16 could lead the to an increase in EBITDA because right-of-use asset depreciation and lease liability interest expense are now recognised. Accordingly, Tanase et al (2018) also found that the capitalising operating leases to the balance sheet resulted in additional depreciation and interest.

Deloitte (2019) approximated a total increase in EBITDA of R92 billion across the 75 JSE listed companies which represented an increase in EBITDA of 10 percent. Dillion (2014) found an even smaller impact on net profit of 2.4 percent because of IFRS 16.

Predicted effects on financial ratios

Skarphagen & Ericson (2015) found that capitalising operating leases would have substantial adverse effects on debt ratios, which could translate into devastating share prices, lower executive compensation, and threats to the going concern assumption. In contrast, Paik et al (2015) found that the capitalising operating leases may not cause adverse effects on financial ratios or violations of debt covenants.

Deloitte (2019) predicts that IFRS 16 will not change a company's equity or market value as there are the cash flows of the business do not change because of IFRS 16. Similarly, the IASB notes that the IFRS 16 changes will not change the contractual commitment of the company to make lease payments (International Accounting Standards Board, 2016). EBITDA ratios will increase, but only in the short term, and a decrease in return on capital will also occur. It is also expected that net debt and enterprise value may however be increased (Deloitte, 2019).

Tănase et al. (2018)'s study determined that there would be an increase in EBIT ratios which would lead to a definite impact on earnings per share. Other important ratios which will be affected include return on capital employed, return on equity, return on

assets, and interest cover ratio. This will be an area of interest in valuations and mergers and acquisitions because it raises additional considerations such as right-of-use depreciation and lease liability interest (Tănase et al., 2018). The implementation of IFRS 16 has the potential to change strategic decision making for those companies that are exposed to leases that have large values (Tănase et al., 2018)

Cape (2019)'s study found that the debt ratios did not increase as much as the debt-to-equity ratios, because when a lease liability was capitalised (debt), an asset of a similar amount was added. Debt covenants had not been breached for companies that disclosed them and the effects on covenants was both negative and positive (Cape, 2019).

Spånberger & Rista (2020) found significant changes in debt to equity (9.6 percent), liabilities and EBITDA multiple (-6.4 percent) on Swedish publicly traded companies, which were higher than other studies. This study found that the consumer services (retail, hotels, food, and education) sector was the most impacted by IFRS 16, and financial services was the least impacted. Assets, liabilities, and EBITDA increased substantially, and the statement of financial position changes had a larger magnitude. The changes to financial statement ratios will be an implication for users of financial statements because transparent financial information is important and the accounting standards are aimed to aid economic decision making (Spånberger & Rista, 2020).

A study was conducted on JSE listed retail companies in 2021 as retail companies rely heavily on leases (Le Roux, 2021). The study did not use the constructive capitalisation model as IFRS 16 was effective. Le Roux (2021) found that financial ratios changed significantly on the transition to IFRS 16 as return on assets decreased by 29.14 percent, debt to equity increased by 31 percent and EBITDA increased by 33.4 percent. Le Roux (2021) noted that IFRS 16 might alter financial ratios, however, this will not affect the risk status of a company. The limitations in this study were that only 12 out of 25 retail sector JSE listed companies could be investigated due to the unavailability of audited annual financial statements in 2021, as only a few companies had published annual financial statements that had adopted IFRS 16.

Assets and liabilities changed materially and subsequently caused the significant deterioration of financial ratios in a study based on energy and utilities sector companies listed on Warsaw Stock exchange (Górowski et al., 2022). This study was deemed important because the statement of financial position is usually a source of financial information for external stakeholders, who use financial statement ratios in making decisions (Górowski et al., 2022). In concluding, Gorowski et al (2022) indicated that there was a high level of consistency across all energy and utility sector firms, which solidifies the IASB's objective of comparable financial statements.

IFRS 16 transition allows for full retrospective and modified retrospective transition. It also poses certain challenges, such as determining an appropriate discount rate which requires information about the assets residual value and fair value. Determining a discount rate may be specifically difficult for firms for property, as property rates increase in nature, and this might not be reflected in the discount rate (Deloitte, 2016). Table 9 in appendix A shows the various predictions of the impacts of IFRS 16 and capitalising leases.

Key financial ratios and debt covenants

Baumann & Hegrestad (2020) state that financial ratios are important to show differences between companies on metrics that are important to investors. Financial ratios could be used by users of financial statements in determining the creditworthiness of the company (Segal & Naik, 2019). Financial ratios are used by users of financial statements make strategic decisions as financial ratio analysis may give insights into the solvency, liquidity, and the effectiveness of operations (Segal & Naik, 2019).

An increase in assets and liabilities on initial recognition of the lease, which results in a change to the financial ratios, may indicate that the company has higher levels of debt which lenders for example, may perceive as the company having an increased credit risk (Segal & Naik, 2019). According to Segal & Naik (2019), these changes to the ratios may also impact employees as users of financial statements because their incentive payments or bonuses may be based on financial ratios.

After IFRS 16 was published, the IASB published an effects analysis, which gives insights to the possible costs and benefits of IFRS 16 (International Accounting Standards Board, 2016). The IASB prepares the effects analysis using the insights gained during the process of developing a new standard, using their discussion papers, exposure drafts and the analysis and consultations with stakeholders (International Accounting Standards Board, 2016). The effects analysis was conducted by the IASB from the lessee perspective as lessor accounting for leases remained largely unchanged (International Accounting Standards Board, 2016).

The IASB found that the benefits of implementing IFRS 16 are greater than the costs. Among the benefits are more accurate depictions of the assets and liabilities of the company, more transparency on the levels of debt and capital employed, less rigorous assessments by investors to determine the effects of capitalising leases. As a consequence of IFRS 16, users will be able to compare companies that lease asset and those that buy assets more easily (International Accounting Standards Board, 2016).

Diagram 2 presents the listed companies that provided disclosures of off-balance sheet leases.

Listed companies only

Percentage of IFRS / US GAAP companies who disclose off balance sheet leases[21]	
North America	62%
Europe	47%
Asia / Pacific	43%
Latin America	23%
Africa / Middle East	23%
Total future minimum payments for off balance sheet leases *(undiscounted)*	US$2.86 trillion
Present value of future minimum payments for off balance sheet leases *(estimate)*[22]	US$2.18 trillion

Diagram 2: Percentage of IFRS/US GAAP companies that disclose off-balance sheet leases (International Accounting Standards Board, 2016, page 14)

The IASB's effects analysis of IFRS 16 indicated that of the 56 telecommunications industry companies that were evaluated, the present value of operating leases that

were disclosed was US$172 644 million (International Accounting Standards Board, 2016). Should these leases be capitalised to the balance sheet, the telecommunications industry would report an increase in EBITDA of 8.79 percent (International Accounting Standards Board, 2016).

The right-of-use asset's carrying amount expected to decrease quicker through amortisation than the lease liability's carrying amount, which is expected to decrease equity (International Accounting Standards Board, 2016). IFRS 16 was expected increase EBITDA and operating profit. The telecommunications sector reported EBITDA levels of US$399 328 million using IAS 17. If all leases were included in the balance sheet, the comparable EBITDA increases to US$434 452 million, with an increase in EBITDA of 8 percent.

Industry sector	EBITDA (in millions of US$)		Profit before interest and tax / total revenue		Increase in profit margin % before interest and tax (percentage points)
	Reported (IAS 17)	If all leases on balance sheet (IFRS 16)	Reported (IAS 17)	If all leases on balance sheet (IFRS 16)	
Airlines	51,624	73,849	6.33%	7.69%	1.36 (=136 basis points)
Retailers	270,403	347,716	6.01%	6.66%	0.65
Travel and leisure	50,299	63,279	11.80%	13.15%	1.35
Transport	71,177	87,580	10.00%	10.70%	0.70
Telecommunications	399,328	434,452	13.18%	13.80%	0.62
Energy	688,370	745,273	8.11%	8.42%	0.31
Media	118,156	128,959	17.70%	18.29%	0.59
Distributors	29,350	35,047	3.70%	3.94%	0.24
Information technology	298,655	312,392	18.28%	18.50%	0.22
Healthcare	254,616	265,181	15.41%	15.63%	0.22
Others	1,162,512	1,228,643	10.63%	10.83%	0.20
Total	**3,394,490**	**3,722,371**	**10.19%**	**10.58%**	**0.39**

Diagram 3: Increase in profit margin percentage before interest and tax (International Accounting Standards Board, 2016, page 47)

The IASB expected that recognising right-of-use assets would increase total assets and affect the asset turnover ratio. Recognising lease liabilities would impact financial leverage ratios. The additional depreciation and interest expenses would increase profit measures that exclude depreciation and interest (International Accounting Standards Board, 2016). The key ratios that are discussed in the effects analysis are the debt-to-equity ratio, current ratio, return on assets ratio, interest cover ratio and profitability ratios that use EBIT and EBITDA as a numerator.

As IFRS 16 requires a lease liability to be recognised, which will increase the liabilities of the company, there might be an impact on the cost of borrowing. The IASB argues

that the changes from IFRS 16 only change the presentation and disclosure of leases (International Accounting Standards Board, 2016). The use of methods such as the constructive capitalisation model by (Imhoff et al., 1991, 1997) was already employed by users of financial statements as to determine the true effects of the operating leases on debt ratios. The IASB states that banks determine interest rates based on the borrower's credit rating, and off-balance sheet leases are adjusted for by credit rating agencies when determining the credit rating. The IASB assumes that any effects on the costs of borrowing will be a result of the availability of more information that is accurate. This will better inform lenders about the company's true credit risk, which will enable them to better price the credit risk (International Accounting Standards Board, 2016).

The IASB noted that there could be changes to debt covenants as the IFRS accounting numbers that are used to calculate the debt covenants may change. However, the IASB found that there is evidence that suggests that debt covenants are calculated by already including the effects of operating leases, especially for companies with material operating leases (International Accounting Standards Board, 2016). During the IFRS 16 development, the IASB found in its consultations with banks that many debt covenants are not directly impacted by changes effected by new IFRS accounting standards (International Accounting Standards Board, 2016).

The IASB identifies that the change in the leasing accounting standard may alter the behaviours of companies when it comes to leasing or buying an asset. Due to the changes in IFRS 16, some entities may now elect to purchase assets rather than to lease them. The IASB does not believe that companies leased assets only for the benefit of off-balance sheet accounting. However, there were many more economic reasons for leasing assets, and the IASB believes that the other economic reasons will result in the continued use of leases by companies, even after IFRS 16 is effective (International Accounting Standards Board, 2016).

The ever-changing world and COVID-19

COVID-19 resulted in a lot of economic struggles which inhibited any economic activity (Erero & Makananisa, 2021). During the early stages of the pandemic, most

businesses could not operate and had to close resulting in a loss of income during that period (Teixeira, 2021). Lease concessions from lessors to lessees were encouraged due to the economic situation (Leoni et al., 2022). The relief provided by the lease concessions included allowing lessees payment holidays on lease payments for a specific period, making lease payments at a later date, switching rental payments from paying in advance to paying in arrears or reducing the lease payments for the remaining term (Teixeira, 2021). The relief would result in a lease modification under IFRS 16, which entails remeasuring the remaining lease payments using a revised interest rate that takes into account the updated payments. The lease liability and right-of-use asset are then updated with this adjustment (Teixeira, 2021).

Considering the situation, the IASB amended IFRS 16 in May 2020 after receiving feedback on the operational difficulties for lessees (da Silva et al., 2021). The amendment provides lessees with relief in the accounting treatment of rent concessions that are directly caused by of COVID-19 effective 1 June 2020 with earlier application being permitted (BDO, 2020) The amendment provides lessees with an optional exemption from accounting for a rent concession as a modification and provides simpler accounting for these concessions (BDO, 2020). Where the lessee elects to use the amendment, the rent concessions will be treated as variable lease payments in profit or loss, which will decrease lease liability with the value of the concession. The right-of-use asset continues to be amortised with no changes. The discount rate remains unchanged, and the additional disclosure required is to state the use of the amendment (BDO, 2020) These amendment does not change the original treatment of the lease (BDO, 2020).

Johannesburg Stock Exchange on IFRS 16

IFRS 16 became effective on 1 January 2019. However, the whole world was impacted by COVID-19 during 2020 and 2021, and the JSE shifted its focus on going concern and risk disclosure in the 9 November 2021 proactive monitoring report (JSE, 2021). The JSE proactive monitoring report discusses findings in the JSE's assessments of IFRS accounting standard application; and ensures the integrity and quality of financial statements of the companies listed on the exchange (JSE, 2021). In 2021, the JSE

noted that there were insufficient disclosures relating to the adoption of IFRS 16, which will be challenged in future.

The IASB's post-implementation review

After the IASB publishes a new IFRS accounting standard, the IASB undertakes a post-implementation review (PIR) of the standard. The PIR process involves the assessment of questions on IFRS 16, the consideration of the new requirements with the IASB placing focus on whether the new requirements of the accounting standard are working as intended (International Accounting Standards Board, 2023).

The IASB begins the PIR once the new requirements have been in effect for at least 24 months, which in practice, will reflect about 30 to 36 months after the effective date of the new accounting requirements (International Accounting Standards Board, 2023). The IFRS 16 PIR is one of the forthcoming projects that is yet to be started by the IASB. The results of this study may be used to determine the conclusions that may be reached once the IASB completes the PIR of IFRS 16.

The telecommunications sector

The telecommunication is a sector that provides digital communications, facilitates improved productivity, and encourages and boosts innovation in all markets. These benefits can be attributed to the intensive capital investments made by companies in the telecommunications sector for advancements in technology (Chivandire et al., 2019).

Many companies used applications such as Zoom and Skype during the COVID-19 pandemic, which highlighted the importance of the telecommunications sector (Tshuma, 2021). This indicated that companies in this sector are always investing in capital infrastructure to keep up with the capital demand of advanced and innovative technologies (Chivandire et al., 2019). The study performed by Tshuma (2021) found that, investing in capital assets through obtaining infrastructure licenses such as the 4G/LTE license by MTN Ghana in 2018, resulted in improved earnings and enabled MTN Ghana to list on a stock exchange.

Habibniya et al. (2022) found that in USA, the telecommunications sector had higher levels of debt in their capital structure, possibly due to the capital intensity of the sector, and that the high levels of debt significantly and negatively impacted on return on assets. The significant levels of debt and lower return on assets could be understated under IAS 17, as not all leased related assets and liabilities are recorded in the balance sheet (Górowski et al., 2022).

In the studies performed by Tshuma (2021) Habibniya et al. (2022) and Chivandire et al. (2019), the telecommunications sector companies' capital structure was investigated, and one of the common measures of financial performance was return on assets. The implementation of IFRS 16 will impact this measure, because right-of-use assets and lease liabilities are recognised (Górowski et al., 2022) (Cape, 2019).

Conclusion

In literature, the impacts seem to be significant in certain sectors, and insignificant in others. Most of the studies performed were before IFRS 16 was effective, while there are a few after it was effective. This indicates that there is a gap in research on the assessment of the impact of IFRS 16, after its implementation, which this study aims to address. Studies performed post the IFRS 16 implementation demonstrated that assets and liabilities increased, however the percentage changes and impacts varied. This study will also assess whether IFRS 16 has resulted in more information being available to users, as the assessed impact thereof is also limited.

CHAPTER 3 - METHOD

Introduction

This study adapted the methods from studies performed by Spånberger & Rista (2020) and Le Roux (2021) which make use of analysing the content of financial statements to investigate the effects of IFRS 16 implementation. The assessment included calculating the changes in assets, liabilities, equity, profit, and EBITDA, as well as key financial ratios before and after IFRS 16 was adopted. Where the IAS 8 disclosures of the expected impacts of IFRS 16 on the financial statements have been provided in the period before adoption, these have been compared to the actual impact from the year of adoption. The ratios in the base year (the year before adoption) were compared to the financial ratios for the years after adoption and the findings research conducted in prior research that had predicted the actual IFRS 16 impact.

Imhoff et al (1991, 1997), Cape (2019), Cumming (2019) and Dillion (2014), through the use of the constructive capitalisation model, were able to predict the impact of capitalising operating leases to evaluate the potential of unrecorded lease related liabilities and assets. This method determines a possible unrecorded lease liability and lease asset by using operating leases disclosed by the companies to estimate future minimum lease payments, using an incremental borrowing rate (Imhoff et al., 1991). The method further uses certain assumptions such as using an interest rate to discount the future minimum lease payments of 10 percent and a 15-year remaining useful life (Cumming, 2019). As this method used assumptions in certain areas; and given that at the time these studies were performed there were no requirements to capitalise leases or present and disclose lease commitments, these results may have not been precise (Le Roux, 2021). This research also aims to determine if the actual impacts of IFRS 16 are consistent with the findings of previous research performed using the constructive capitalisation model. Table 1 in appendix A shows the various predictions made by authors on the effects of IFRS 16 on financial statements.

The benefit of the timing of this study is that IFRS 16 has been adopted and has been in effect for at least 24 months for most companies. The study falls within the IASB's PIR timelines of 30 to 36 months post the adoption of IFRS 16 (International Accounting Standards Board, 2023), and sought to determine some conclusions that

IASB might reach on the PIR. The IASB's goal for market symmetry in terms of information presented about leases and lease commitments has been actioned into plan (IFRS Foundation, 2019), and all the information needed to calculate and evaluate the impact of IFRS 16 is required to be presented. This negates the need for the use of the constructive capitalisation model. Leasing financial information that is required under IFRS 16 to be presented and disclosed in the financial statements and will be used to determine a more precise evaluation of the impact of the IFRS 16 adoption.

The telecommunications sector

This study's objective sought to isolate and present the impacts of IFRS 16 on the JSE telecommunications sector, given that the telecommunications sector was predicted to be one of the industries that IFRS 16 would highly impact due to its capital-intensive nature (Deloitte, 2017) (PWC, 2016) (Le Roux, 2021). Prior research has shown that the world's largest telecommunication companies would add significant right-of-use assets and will experience a 15 to 20 percent increase in debt (Deloitte, 2017).

Additionally, the study by Cumming (2019) on the IFRS 16 impact on companies in the JSE telecommunications and technology sectors indicated that capitalising operating leases in the telecommunication sector companies showed greater increases in the debt ratios. This research sought to determine whether a similar impact could be observed in South Africa after IFRS 16 is effective.

Other prior studies on listed South African companies focused on JSE sectors such as the industrial transport, travel and leisure, general retailers and food and drug retailers (Cape, 2019). Villiers & Middelberg (2013) studied the effects of the capitalising operating leases on the JSE top 40 companies, which are categorised across all industries. Le Roux (2021)'s study assessed the IFRS 16 effects on companies in the JSE retail sector.

Most of the studies performed in South Africa on the IFRS 16 impact on financial statements were performed before the accounting standard became effective. The study by Le Roux, (2021) focused on the first-time implementation of IFRS 16 only

and its effects on financial ratios. This study will provide an investigation of these effects over a longer period of 24 to 36 months, which coincides with the period when the IASB conducts its PIR.

Research questions and objectives

The following research questions have been determined for the analysis:

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for JSE listed companies in the telecommunications sector?

RQ2: How will the impact result in changes to the following financial statement ratios for JSE listed companies in the telecommunications sector?

Debt ratio

The debt ratio, which divides the total amount of debt by total assets, determines an entity's use of debt to fund the assets that are used. High levels of debt are depicted by a higher debt ratio. A higher debt ratio indicates greater financial risk (Le Roux, 2021).

The debt ratio was predicted to increase upon the implementation of IFRS 16. It is predicted that the right-of-use asset will have a lower carrying amount than the lease liability for most of the lease term, which possibly indicates that the higher debt ratio may last for the lease contract duration (Segal & Naik, 2019).

Debt-to-equity ratio

The debt-to-equity ratio, which divides total debt by equity, measures how much debt is covered by funds received from shareholders (Villiers & Middelberg, 2023).An increased debt-to-equity ratio was predicted because of the addition of the liabilities(Dillon, 2014)(Cumming, 2019).

3.3, Return on Assets

ROA, which is revenues divided by total assets (Segal & Naik, 2019), computes how the assets of the company are used to produce profits (Le Roux, 2021)

IFRS 16 introduces a right-of-use asset, which increases the asset base from which revenue is derived. IFRS 16 may result in a more representative return on assets, as all the assets are now accounted for. Because the asset base increases, a decrease in the return on assets is expected.

Return on Equity (ROE)

ROE, which is net profit divided by shareholder's equity, measures the return that shareholders received from their investment (Le Roux, 2021). This measure is not expected to change as there are no changes to shareholder's equity as a result of IFRS 16.

Current ratio

The current ratio determines the entity's capacity to pay its short-term obligations using its current assets and is calculated by diving current assets by current liabilities, (Le Roux, 2021). An increased current ratio is predicted due increased current liabilities, because of the lease payments that must be paid within 12 months after the financial year end. According to Segal & Naik (2019), there will be no proportionate increase in current assets, which may negatively impact the current ratio.

Interest cover ratio

Interest cover ratio is calculated by dividing EBIT by the total amount of interest expense. Interest cover ratio depicts the ability of an entity to pay interest on its debt. It is also a multiple by which the company's EBIT may decrease to before the company is no longer able to meet its interest payment obligation (Villiers & Middelberg, 2023) (Job, 2023).

EBITDA Margin

This ratio is the company's EBITDA divided by revenue. As EBITDA considers the core activities of the company before taking the effects of debt, capital management and non-cash items, this ratio depicts how much of the revenue is converted into earnings for the company (Le Roux, 2021). IFRS 16 will result additional depreciation and interest expenses, resulting in increased EBITDA and EBIT (Le Roux, 2021). This will increase the EBITDA margin.

Debt to EBITDA ratio

This ratio is calculated by dividing the total liabilities of the company by EBITDA. This ratio determines the entity's ability to pay debts. According to Job (2023), if the result of this ratio is high, it may indicate that the company has high levels of debt, and this could be a potential risk in defaulting on debt obligations. Debt to EBITDA and the interest cover ratio are expected to increase because of the additional lease liability, and interest expense on the lease liability.

RQ3: How will the implementation of IFRS 16 affect the compliance with debt covenants for JSE listed companies in the telecommunications sector compliance with debt covenants?

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ1 to RQ4 affect the financial statements of JSE listed companies in the telecommunications sector?

Sampling

On the 30th of October 2022 when the information for the JSE listed companies in the telecommunications sector was obtained, the JSE had six listed companies in the telecommunications industry, namely MTN Group Limited, Telkom SA Limited, Vodacom Group Limited, Huge Group Limited, Blue Label Telecoms and TeleMasters Holdings Limited. All the JSE listed companies in the telecommunications sector were selected to be part of the sample for this research. The financial statements for this sample that were assessed are for the 2019, 2020, 2021 and 2022 financial years.

Method used

Step 1: Obtained the JSE listed telecommunications sector companies audited financial statements.

The table below details the companies assessed in this study:

Table 3: Telecommunication sector companies assessed

Company name	Financial year	Year IFRS 16 adopted	Year before IFRS 16 adopted (base year)	Financial years assessed
MTN Group Limited	1 January to 31 December	1 January 2019	31 December 2018	31 December 2019 31 December 2020 31 December 2021 31 December 2022
Vodacom Group Limited	1 April to 31 March	1 April 2019	31 March 2018	31 March 2019 31 March 2020 31 March 2021 31 March 2022
Telkom SA Limited	1 April to 31 March	1 April 2019	31 March 2018	31 March 2019 31 March 2020 31 March 2021 31 March 2022
Blue Label Telecoms	1 June to 31 May	1 June 2019	31 May 2019	31 May 2020 31 May 2021 31 May 2022
Huge Group Limited	1 March to 28 February	1 March 2019	28 February 2019	28 February 2020 28 February 2021 29 February 2022
TeleMasters Holdings Limited	1 July to 30 June	1 July 2019	30 June 2019	30 June 2020 30 June 2021 30 June 2022

Cumming (2019) indicated that the full financial information could not be obtained from sites such as Bloomberg, and the information required will be provided in the audited financial statements. Sites such as Bloomberg will also not give any qualitative information regarding the length of the leases, debt covenant breaches and the absolute value impact of IFRS 16.

This study follows Dillion (2014) and Cumming (2019)'s approach of downloading the respective companies audited financial statements from their websites, which are reputable sources. The South African Companies Act (Companies Act No 71, 2008,

2009) and the JSE Listing requirements (Johannesburg Stock Exchange, 2018) require companies to comply with IFRS, and require the audits conducted by the audit firms over these companies to be based on IFRS. The financial statements are ensured to be in compliance with IFRS if they are audited in compliance with the JSE listing requirements.

Step 2: Captured the information from the financial statements (including percentage changes from the year before adoption to the most recent financial year)

The data from the financial statements were transferred to Excel. A master sheet with all the companies was created in Excel, with certain fields that have been determined to aid in the evaluation of the impact of IFRS 16. Fields such as company name, year-end, year of adoption, first year after adoption and second year after adoption were listed. Then the financial information for each year were recorded under the following fields:

- Total assets
- The balance of right-of-use asset in the first year of adoption
- Current assets
- Total liabilities
- The balance of lease liabilities in the first year of adoption
- Current liabilities
- Equity
- Revenue
- Profit
- EBIT
- EBITDA
- Interest
- Depreciation

Other qualitative information regarding the adoption of IFRS 16 was noted on an ad-hoc basis, depending on whether the company has provided additional information in the financial statements. This would include information regarding debt covenants,

lease terms, the nature of the lease arrangements, type of assets leased and the predicted IFRS 16 impact on that specific company.

Step 3: Calculated and evaluated the key financial ratios, with any qualitative information in the financial statements to determine the impact of the adoption of IFRS 16

The ratios were determined by considering the effects of IFRS 16 adoption on the financial statements (Le Roux 2021). Financial statement lines that were directly affected, and their related ratios were determined to be key to evaluate in determining the impact.

The ratios selected for this study are similar to those used by Dillion (2014), Cumming (2019) and Le Roux (2021), so that the comparison of the impact of IFRS 16 determined in this study and in previous studies can be an appropriate comparison. The wide range of ratios also provides the research with a wide range for comparisons between the companies within the industry.

An evaluation of whether ratios increased or decreased was performed. The ratios for each year per company were compared to each other to determine the movement of the ratio. The ratio assessment used qualitative information in the audited financial statements where information had been provided. This assisted in understanding the nature of the leases that the company has, the length of the lease contracts and other information which assisted in determining the impacts of IFRS 16.

Step 5: Assessed the financial statements for any information about debt covenants and evaluate how the impact of IFRS 16 has affected the debt covenants

Any information on debt covenants that is provided in the financial statements was assessed where provided.

CHAPTER 4 – RESULTS AND DISCUSSION

Introduction

The results chapter will be detailing the data collected from companies that have been included in the sample, regarding the adoption of IFRS 16 on the JSE listed telecommunications sector companies. The data collected will then determine the responses to the research questions mentioned in the research methodology chapter.

This chapter includes an explanation of how the identified financial statement line items changed over the financial years assessed, as well as the ratios that will be calculated using the companies' financial statements.

Sector analysis

The tables below summarise the data collected from the companies that have been included in the sample and they detail the effects that the implementation of IFRS 16 has had on several financial statement line items.

Table 4: Sector analysis in year of adoption – Assets and liabilities

Company name	Change in total assets	Right-of-use assets recognised	Right-of-use assets percentage of total assets	Change in current assets	Change in total liabilities	Lease liabilities recognised	Lease liabilities percentage of total liabilities	Change in current liabilities
MTN Group Limited	R57 704 000 000	R44 984 000 000	15%	R17 406 000 000	R59 830 000 000	R46 327 000 000	21%	R11 269 000 000
Vodacom Group Limited	R36 580 000 000	R12 046 000 000	6%	R8 082 000 000	R22 898 000 000	R12 942 000 000	14%	-R1 421 000 000
Telkom SA Limited	R8 442 000 000	R4 502 000 000	7%	R1 532 000 000	R8 735 000 000	R4 775 000 000	15%	R708 000 000
Blue Label Telecoms	-R1 727 666 000	R87 852 000	1%	-R608 216 000	-R1 721 221 000	R141 123 000	2%	R22 010 000
Huge Group Limited	R104 158 380	R16 830 373	1%	R77 753 302	R60 357 068	R20 816 549	6%	R2 002 437
TeleMasters Holdings Limited	R7 555 802	R9 775 832	20%	-R453 622	R9 658 247	R10 021 306	65%	R2 217 926
Sector total	**R101 110 048 182**	**R61 646 458 205**	**11%**	**R26 489 083 680**	**R89 811 794 315**	**R64 215 960 855**	**19%**	**R10 582 230 363**
Sector total excluding Blue Label Telecoms	**R102 837 714 182**	**R61 558 606 205**	**10%**	**R27 097 299 680**	**R91 533 015 315**	**R64 074 837 855**	**17%**	**R10 560 220 363**

Table 5: Sector analysis in first year after adoption – Assets and liabilities

Company name	Change in total assets	Change in current assets	Change in total liabilities	Change in current liabilities
MTN Group Limited	R46 631 000 000	34 316 000 000	R26 506 000 000	R24 460 000 000
Vodacom Group Limited	-R18 244 000 000	-R1 519 000 000	-R3 864 000 000	R5 320 000 000
Telkom SA Limited	R2 445 000 000	-R385 000 000	R579 000 000	R225 000 000
Blue Label Telecoms	R1 096 773 000	R633 110 000	R348 542 000	R319 668 000
Huge Group Limited	R56 138 887	R1 805 480	-R27 069 032	-R15 624 365
TeleMasters Holdings Limited	R15 230 479	-R10 213 780	R14 437 968	R9 617 836
Sector total	**R32 000 142 366**	**R33 036 701 700**	**R23 556 910 936**	**R30 318 661 471**
Sector total excluding Blue Label Telecoms	**R30 903 369 366**	**R32 403 591 700**	**R23 208 368 936**	**R29 998 993 471**

Table 6: Sector analysis in second year after adoption – Assets and liabilities

Company name	Change in total assets	Change in current assets	Change in total liabilities	Change in current liabilities
MTN Group Limited	R16 856 000 000	R16 040 000 000	R8 099 000 000	R19 629 000 000
Vodacom Group Limited	R5 988 000 000	R4 210 000 000	R6 212 000 000	R15 597 000 000
Telkom SA Limited	R2 186 000 000	R194 000 000	- R517 000 000	R1 182 000 000
Blue Label Telecoms	R1 878 505 000	R1 200 309 000	R924 255 000	R377 940 000
Huge Group Limited	R444 867 901	-R136 928 953	-R142 736 477	- R74 684 993
TeleMasters Holdings Limited	- R5 824 103	-R4 258 292	-R8 280 546	- R6 043 080
Sector total	**R27 347 548 798**	**R21 503 121 755**	**R14 567 237 977**	**R36 705 211 927**
Sector total excluding Blue Label Telecoms	**R25 469 043 798**	**R20 302 812 755**	**R13 642 982 977**	**R36 327 271 927**

Table 7: Sector analysis in year of adoption – Profit and EBITDA

Company name	Change in EBITDA	Change in profit	Change depreciation	Change in interest expense
MTN Group Limited	R7 150 000 000	R1 114 000 000	-R8 100 000 000	-R6 734 000 000
Vodacom Group Limited	R5 976 000 000	R1 112 000 000	-R3 313 000 000	-R1 694 000 000
Telkom SA Limited	-R689 000 000	-R2 205 000 000	-R1 659 000 000	-R685 000 000
Blue Label Telecoms	R6 521 238 000	R6 841 303 000	R63 702 000	R15 969 000
Huge Group Limited	R19 319 543	R4 817 923	- R7 271 880	R36 911 878
TeleMasters Holdings Limited	R530 837	R46 572	R591 004	R319 929
Sector total	**R18 978 088 380**	**R6 867 167 495**	**-R13 014 978 876**	**-R9 059 799 193**
Sector total excluding Blue Label Telecoms	**R12 456 850 380**	**R25 864 495**	**-R13 078 680 876**	**-R9 075 768 193**

Table 8: Sector analysis in first year after adoption – Profit and EBITDA

Company name	Change in EBITDA	Change in profit	Change depreciation	Change in interest expense
MTN Group Limited	R27 624 000 000	R8 955 000 000	-R3 193 000 000	-R2 669 000 000
Vodacom Group Limited	R1 373 000 000	R427 000 000	-R1 162 000 000	R512 000 000
Telkom SA Limited	R2 369 000 000	R1 820 000 000	-R169 000 000	R321 000 000
Blue Label Telecoms	R709 804 000	R658 909 000	R431 000	R98 041 000
Huge Group Limited	-R78 148 722	-R52 909 466	R6 111 022	-R35 781 241
TeleMasters Holdings Limited	-R3 326 586	-R5 026 974	-R2 104 244	-R1 221 520
Sector total	**R31 994 328 692**	**R11 802 972 560**	**-R4 519 562 222**	**-R1 774 961 761**
Sector total excluding Blue Label Telecoms	**R31 284 524 692**	**R11 144 063 560**	**-R4 519 993 222**	**-R1 873 002 761**

Table 9: Sector analysis in second year after adoption – Profit and EBITDA

Company name	Change in EBITDA	Change in profit	Change depreciation	Change in interest expense
MTN Group Limited	-R5 361 000 000	-R2 653 000 000	R1 011 000 000	R4 080 000 000
Vodacom Group Limited	R361 000 000	R663 000 000	R460 000 000	-R39 000 000
Telkom SA Limited	R224 000 000	R203 000 000	-R58 000 000	R137 000 000
Blue Label Telecoms	R364 588 000	R213 981 000	R14 838 000	-R69 278 000
Huge Group Limited	R463 444 007	R475 228 916	R26 260 815	R4 957 976
TeleMasters Holdings Limited	R2 297 246	R1 960 945	R1 358 388	-R723 300
Sector total	**-R3 945 670 747**	**-R1 095 829 139**	**R1 455 457 203**	**R4 112 956 676**
Sector total excluding Blue Label Telecoms	**-R4 310 258 747**	**-R1 309 810 139**	**R1 440 619 203**	**R4 182 234 676**

Individual company analysis

The audited annual financial statements that have been published for the year before the IFRS 16 adoption are the financial statements amounts that have been assessed, and not the audited restated comparative amounts. The tables below summarise the impact of IFRS 16 on companies in the telecommunication sector of the JSE.

MTN Group Limited

Predicted impacts in the year before adoption

MTN Group Limited (MTN) has a 31 December year end, and it adopted IFRS 16 in the year beginning 1 January 2019 (MTN Group Limited, 2018). In the Accounting framework and critical judgements note in the 2018 financial statements, MTN states that IFRS 16 will be adopted on its effective date, and it anticipates that IFRS 16 will have significant impacts on the property and network site operating leases, which will increase the total assets and total liabilities (MTN Group Limited, 2018).

MTN expected EBITDA to increase because under IAS 17, the total operating lease expense would be expensed to the statement of profit or loss and other comprehensive income. Under IFRS 16, the group will split this expense into a depreciation charge and an interest charge, which are expenses that are not included in EBITDA.

MTN operates in other countries that use different currencies from its functional currency, which is the South African rand (MTN Group Limited, 2018). MTN expects that because right-of-use assets and lease liabilities are being recognised, the Group will be exposed to additional foreign exchange currency exposure risks from their foreign operations' leases which may result in a decrease in net profit after tax (MTN Group Limited, 2018).

The 31 December 2018 financial statements noted significant impacts to the EBITDA to net interest and net debt to EBITDA ratios with no quantitative measure (MTN Group Limited, 2018). The Group will use the simplified transition approach where the comparative amounts will not be restated (MTN Group Limited, 2018).

Impacts after adoption

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

On adoption, the remaining lease payments' present values were recognised as lease liabilities and were discounted using MTN's incremental borrowing rate over the remaining lease term at adoption date (MTN Group Limited, 2019). Under IAS 17, MTN recognised finance leases for vehicles and land and buildings (MTN Group Limited, 2019). The amounts determined under IAS 17 were the amounts used when measuring these assets and liabilities under IFRS 16 (MTN Group Limited, 2019).

On the transition date, MTN reported that there would be an increase of R44 689 million in total assets and total liabilities, where a weighted average discount rate was used (MTN Group Limited, 2019). MTN considers leasing a significant judgement for the year ended 31 December 2019 because some leases were noted to have renewal options. The assets that are leased include network infrastructure, retail stores, vehicle licences and office equipment. The lease terms range from two to 15 years (MTN Group Limited, 2019).

There was an increase in total assets, total liabilities, and equity from the year before adoption till the year ended 31 December 2021 as illustrated by the graph below:

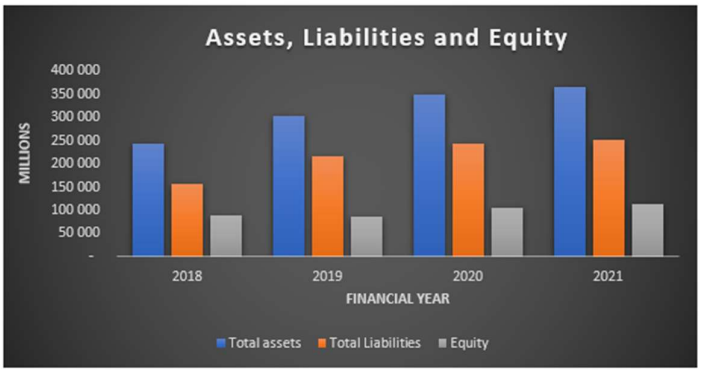

Diagram 4: MTN's assets, liabilities, and equity

There was a 24 percent increase in total assets largely because of IFRS 16 in the year of adoption, as the right-of-use asset accounts for 78 percent of the increase. This

illustrates that leasing is significant for the Group, considering the largest non-current asset balance, property, plant, and equipment makes up 33 percent of total assets and the right-of-use assets, which are the second largest class of assets, make up 15 percent of total assets (MTN Group Limited, 2019). The right-of-use assets increased by R 44 984 million, which is approximately R 309 million higher than the anticipated increase of right-of-use assets of R44 689 million reported in the year before IFRS 16 was adopted.

Total liabilities increased by 38 percent, and 77 percent of the change in liabilities is because of the lease liability recognised. In the year of adoption, lease liabilities at the end of the year were R46 327 million which constitute 21 percent of the total liabilities. Lease liabilities also had the second largest balance in total liabilities, which further illustrates the significance of leasing activities for the Group. The increase equity is as a result of the increased total assets and total liabilities which can be seen throughout the years from before adoption until the 2021 financial year.

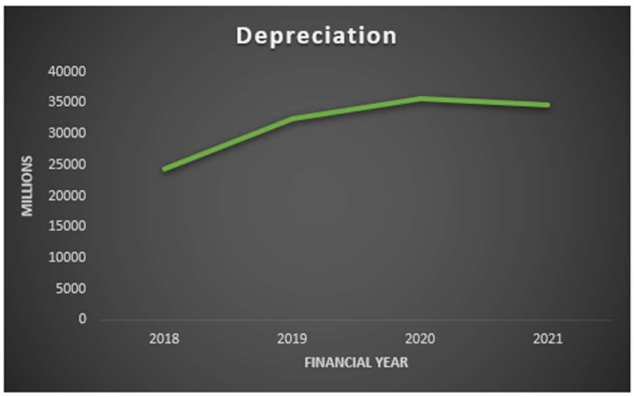

Diagram 5: MTN depreciation expense

The depreciation charge increased in the year of adoption by 33 percent, as a right-of-use asset depreciation expense was introduced. Interest expense increased by 65 percent. Interest expense is further discussed under RQ 4 below.

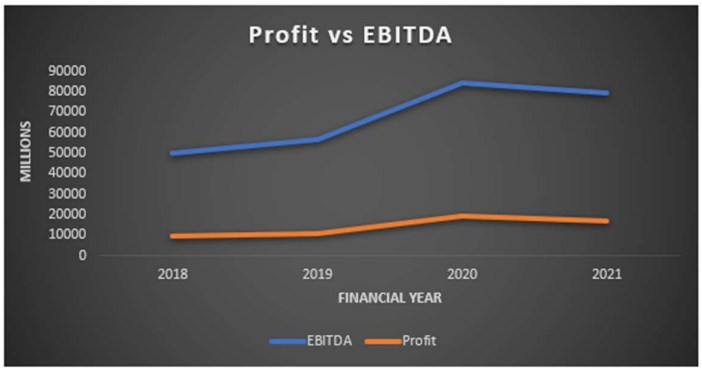

Diagram 6: MTN profit vs EBITDA

The changes in depreciation and interest expense partially resulted in EBITDA increasing by 14 percent in the year of adoption (MTN Group Limited, 2019). From the graph above, EBITDA increased from the year of adoption, and then a decline was noted in the 2020 financial year due to increases in operating costs in that year (MTN Group Limited, 2020). The increases in EBITDA are largely due the right-of-use asset depreciation and the lease liability interest expense, which further corroborates the anticipated impacts that MTN included in their 2018 financial statements.

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 10: MTN key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	64%	72%	70%	69%
Debt to equity	177%	251%	228%	218%
Current	0.80	0.90	1.01	0.98
EBITDA margin	37%	38%	47%	44%
Debt to EBITDA	3.15	3.80	2.87	3.17
Interest cover	2.45	2.03	2.47	2.84
Return on assets	55%	50%	51%	50%
Return on equity	153%	176%	169%	158%

The increased the total assets and total liabilities have caused an increased debt ratio and debt-to-equity ratios as indicated in the table above. The debt ratio increased from 64 percent to 72 percent in the year of adoption. This illustrates to the user of financial statements that assets are now funded by more liabilities than what was previously

presented in the financial statements. Debt to equity increased from 177 percent to 251 percent, which shows that the true nature of MTN's funding structure, as the debt used to finance leases is now presented in the financial statements.

The increased total assets have also contributed to a decrease in return on assets, as right-of-use assets are now recognised. The ratio depicts a more transparent metric after the adoption of IFRS 16*,* as the user is now aware of right-of-use assets which are also used in the generation of revenue for the company. Return on equity has increased because of a redemption of shares in the 2019 financial statements, and part of the increase in equity as caused by the increased total assets and total liabilities.

The current ratio deteriorated from 0.8 in 2018 to 0.9 in the year of adoption. This is caused by the recognition of a portion of the lease liability that is current that will be paid within the next 12 months. The addition of the current portion of the lease liability also illustrates to the user of financial statements whether current liabilities, which now transparently include lease liabilities, are payable with the use of current assets.

EBITDA margin increased in the year of adoption. Previously, under IAS 17*,* the rental expense would have been included in EBITDA. However, because IFRS 16 introduces a right-of-use asset depreciation expense and a lease liability interest expense, these two expenses are no longer included in EBITDA as they now form part of interest and depreciation. The increase in liabilities and EBITDA resulted in an increased debt to EBITDA ratio.

These changes that are caused by an increase in the lease liabilities would have previously been shown as operating lease commitments that were not part of the liabilities. This change gives more capital structure and financing information to users of financial statements as they can now assess credit risks with more relevant information.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

MTN Group Limited has not disclosed how the IFRS 16 changes affect the existing debt covenants. The financial statements mention debt covenants for other specific transactions, and they have been complied with throughout the financial years assessed.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

The graph below illustrates the interest expense incurred from the year before adoption till the 2021 financial.

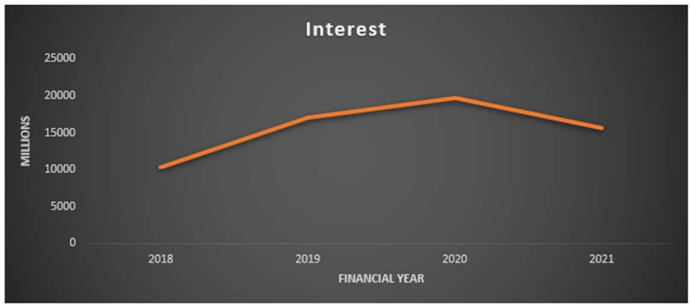

Diagram 7: MTN interest expense

MTN experienced a 65 percent increase in interest expense in the adoption year. Interest on the lease liability made up 33 percent of the interest expense for the 2019 financial year, which presents a more transparent interest expense representing the cost of leasing, and ultimately, the cost of debt. This may be considered significant, given that the lease liability interest expense is the second highest interest expense item, with borrowings being first.

The interest expense increased again in the first year after the adoption, which is consistent with the increase in lease contracts that the company entered, and the increased net foreign exchange losses incurred. In the second year after the adoption, the total interest expense for the company, including the lease liability interest expense decreased. The decrease in the lease liability interest expense is attributable to the decrease in the lease liability, which is because of the lease payments made by the company, which decrease the total balance of the lease liabilities as they are paid.

The interest cover ratio decreased in the year of adoption, from 2.45 to 2.03, indicating that the company has a higher interest expense. Under IAS 17, the lease liability interest expense is not included in the total interest expense, making the denominator of the ratio smaller than what it is. The recognition of the interest expense increases the denominator, resulting in a lower interest cover. The interest cover ratio is now more transparently depicted, as the earnings required to pay for interest expenses are now divided by an interest expense that includes the lease liability interest.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the second year of adoption, total assets increased mainly because of purchases of property, plant and equipment, right-of-use assets, and investments purchased. These increases, together with the depreciation expensed caused an overall net increase in total assets. There were also increases in current assets, such as receivables, current investments, deposits and cash and cash equivalents. The right-of-use assets and lease liabilities have increased at rates of 2 percent and 6 percent respectively in the first year after of adoption. In the second year after adoption, total assets increased by 5 percent, and total liabilities increased by 3 percent (MTN Group Limited, 2020). The increases in these balances in the two years after adoption of IFRS 16 was not as significant as in the year of adoption (MTN Group Limited, 2021).

Depreciation and interest expense also increased in the years after the adoption of IFRS 16, however, these increases are not as large as the increase in the year of IFRS 16 adoption.

Vodacom Group Limited

Predicted impacts in the year before adoption

Vodacom Group Limited (Vodacom) has a 31 March year end, and it adopted IFRS 16 in the year beginning 1 April 2019 (Vodacom Group Limited, 2019). In the 2019 financial statements, Vodacom included the anticipated IFRS 16 impacts (Vodacom

Group Limited, 2019). Vodacom, like MTN, also elected the transition relief by adopting IFRS 16 with the cumulative retrospective impact recorded as a restatement in the opening balance of retained earnings.

Vodacom expected to recognise additional lease liabilities of between R9.1 billion and R9.7 billion which represent an increase of about 14 percent in liabilities, and right-of-use assets of between R9.4 billion and R10 billion, which represent at most an increase of about 6.5 percent in assets (Vodacom Group Limited, 2019). The impact on the statement of profit or loss and other comprehensive income could not be forecasted in the year before IFRS 16 adoption, as the Group expected changes in terms of new leases, reassessments, and changes to exchange and discount rates. Vodacom did not anticipate the IFRS 16 adoption to impact cash flows, except for changes in the presentation of the lease payment between operating and financing cash flows.

Impacts after adoption

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

In the year of adoption, total assets increased by R36.5 billion or 24 percent, with R9.8 billion of the increase being attributable to right-of-use assets (Vodacom Group Limited, 2020). This lies within the Group's anticipated range of the increase in right-of-use assets. In the year of adoption, the right-of-use assets make up 5 percent of the total assets, and they form part of the smaller balances of assets, indicating that the Group does not engage in significant leasing activities.

Vodacom has leases for buildings for retail stores, offices and data centres, land and space for mobile base stations and fibre and other fixed connectivity assets (Vodacom Group Limited, 2020). Vodacom's property, plant, and equipment makes up 31 percent of total assets, while right-of-use assets only make up 5 percent of total assets (Vodacom Group Limited, 2020). This indicates that Vodacom prefers to own its assets, rather than to lease assets.

Total liabilities increased by 34 percent, with a balance of lease liabilities of R12.9 billion on the adoption, which exceeds the anticipated impact in the prior year's financial statements. Before the adoption of IFRS 16, Vodacom had recognised lease liabilities under the finance lease classification under IAS 17. The balance of the leases that came about because of IFRS 16 is R9.8 billion or a 15 percent increase, which is R100 thousand more than the higher end of the anticipated range.

Total assets, total liabilities and equity increased from the year before adoption till the 2021 financial year according to the graph below:

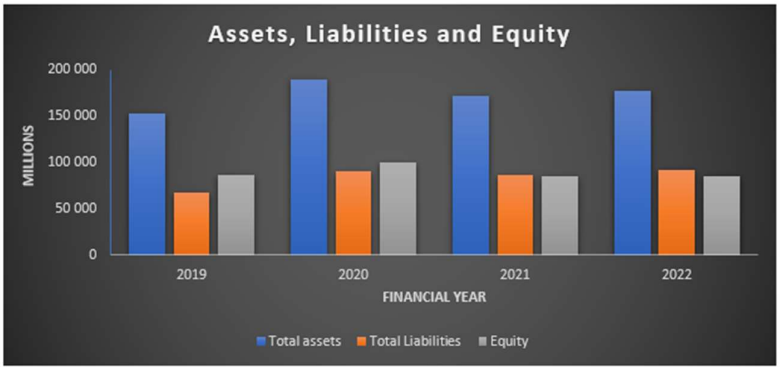

Diagram 8: Vodacom assets, liabilities, and equity

Depreciation increased by 31 percent in the year of adoption because of the right-of-use assets that are depreciated, as well as additional assets that were purchased by Vodacom. In the year of adoption, the right-of-use asset depreciation made up 23 percent of the total depreciation expense for the year, which is less than the depreciation expense on all other property, plant, and equipment, which makes up 76 percent of the total depreciation expense.

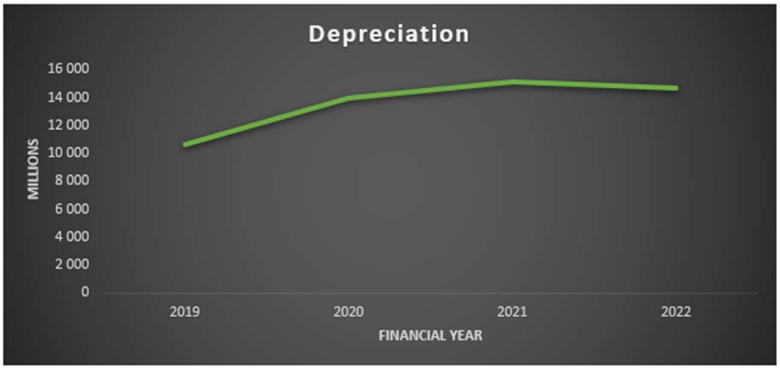

Diagram 9: Vodacom depreciation expense

The movement in the interest expense is further discussed under RQ4.

EBITDA margin increased from 41 percent to 46 percent because of these changes brought about by IFRS 16. In the year of adoption, EBITDA increased by 17 percent, which is in line with what was anticipated by previous authors.

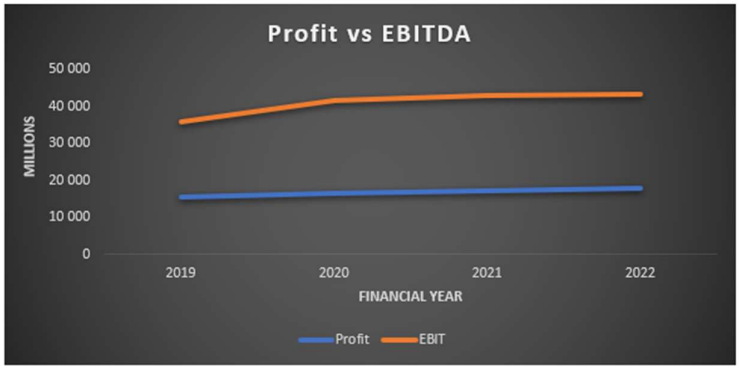

Diagram 10: Vodacom profit vs EBITDA

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 11: Vodacom key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	44%	47%	50%	52%
Debt to equity	78%	90%	101%	108%
Current	1.04	1.30	1.10	0.88
EBITDA margin	41%	46%	44%	42%
Net debt to EBITDA	1.88	2.16	2.00	2.13
Interest cover	8.34	5.90	6.68	6.81
Return on assets	56%	48%	57%	58%
Return on equity	100%	91%	115%	120%

The increases in liabilities and assets resulted in an increase from 44 percent to 47 percent in the debt ratio in the year of adoption. The company's funding structure changed because of the adoption of IFRS 16, because the debt-to-equity ratio

increased from 78 percent to 90 percent. This is because there was an increase in liabilities, which are used to fund the assets used to operate the business.

Return on assets decreased from 56 percent to 48 percent, indicating a decrease of 8 percent. This is because the value of assets that are being used to generate assets has increased. In the year of adoption, the EBIDTA margin increased because of the addition of depreciation and interest expenses.

Interestingly, Vodacom's current ratio increased, where the expectation was that the current ratio would decrease. This however is attributable to the payment in current borrowings, and the remaining R3 billion including the lease liability's current portion.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

Vodacom did not have any disclosures about debt covenants in their financial statements. Total interest expense increased by 56 percent, and R1.4 billion of the interest expense relates to lease liability interest and it makes up 29 percent of total interest and accounts for 81 percent of the increase in the total interest expense. The lease liability interest expense was the second largest amount making up the expense.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

Other impacts noted in the financial statements in the year of adoption are that interest expense will be higher in the beginning stages of the lease and will decline over the duration of the lease as lease payments decrease the capital portion of the lease liability. This is evidenced in the graph below:

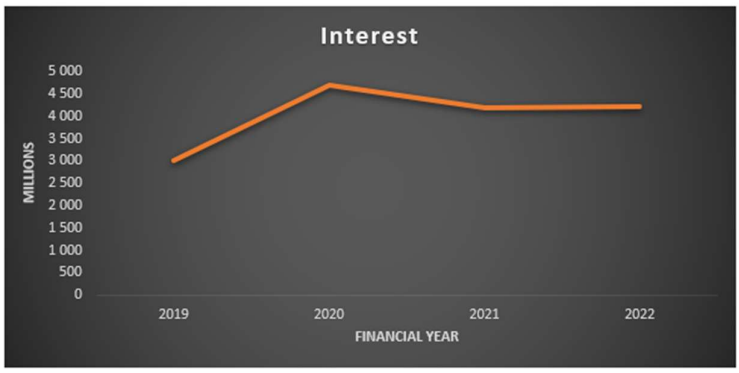

Diagram 11: Vodacom interest expense

In the year of adoption, most of the increase in the interest expense of approximately R 1 billion was attributable to the lease liability interest expense. The largest interest expense incurred was from the Group's borrowings, which made up 63 percent of the total interest expense. The lease liability interest expense makes up 29 percent of the total interest expense. This illustrates that although interest increased mainly because of the lease liability interest expense, the lease liability interest expense does not make up half of the interest on borrowings, illustrating a smaller impact from the effects of the new leasing accounting standard, as compared to MTN.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the first year after adoption, Vodacom presented a decrease in assets, with the largest difference between 2019 and 2020 being the effects of foreign currency translation differences (Vodacom Group Limited, 2022). The increase in the cost of the right-of-use assets relates to additions amounting to R20 million. The return on assets ratio increased from 48 percent to 57 percent, which can be explained by the decrease in assets.

Liabilities also decreased by four percent because of the lease payments reducing the lease liability, as well as payments of other borrowings. The current portion of borrowings increased as some of these amounts became payable within the 2020 financial year (Vodacom Group Limited, 2020). In the years after adoption, the

differences are not as large as the difference between the year before adoption and the year of adoption. The debt ratio increased by three percent from 47 percent to 50 percent (Vodacom Group Limited, 2021). The current ratio decreased from 1.30 to 1.1. EBITDA margin decreased by three percent, which is evident from the decrease in depreciation and interest in the first year after adoption.

In the second year after adoption, the debt ratio decreased by one percent from 70 percent to 69 percent. Return on assets increased by one percent from 57 percent to 58 percent. The debt-to-equity ratio increased from 101 percent to 113 percent. The current ratio decreased from 1.1 to 0.88 due to a portion of the liabilities being payable within 12 months of the 2022 financial year (Vodacom Group Limited, 2022).

Telkom SA Limited

Predicted impacts in the year before adoption

Telkom SA Limited (Telkom) has a 31 March year end, and IFRS 16 was adopted in the year ending 31 March 2020 (Telkom SA Limited, 2019). In the year before adoption, Telkom states that the Group will not be materially affected by the change in standards, apart from additional disclosures that will be required (Telkom SA Limited, 2019). The major classes of leases in the Group are network infrastructure leases, property leases and vehicle leases.

Telkom anticipated that earnings will be impacted by the higher interest expenses in the initial years after adoption. Telkom anticipated that EBITDA would increase which will impact EBITDA ratios, such as the net debt to EBITDA ratio (Telkom SA Limited, 2019). Telkom elected to transition to IFRS 16 using the modified retrospective approach (Telkom SA Limited, 2020). Before adoption, the Group had R1.9 billion non-cancellable operating lease commitments, which are made up of operating lease commitments of R4.1 billion, which are netted off by operating lease receivables of R2.2 billion. The present value of these commitments is not provided.

Impacts after adoption

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

The Group classifies right-of-use assets in the vehicles, property, and network equipment categories (Telkom SA Limited, 2020). The operating lease commitments disclosed in the 31 March 2019 financial statements, adjusted by prior period errors, IFRS 16 recognition exemptions, variable lease payments, lease term adjustments and non-lease components were used to determine the opening balance of the lease liability.

Diagram 12: Telkom assets, liabilities, and equity

Total assets increased by 16 percent and total liabilities increased by 38 percent in the year of adoption. The increase that relates to right-of-use assets is R4.5 billion, which accounts for 53 percent of the total increase in assets, while the increase relating to lease liabilities is R4.7 billion which accounts for 55 percent of the total increase in liabilities. Telkom has a large balance of property, plant and equipment which makes up 54 percent of total assets, and right-of-use assets make up 7 percent of the total assets. This could indicate that Telkom may prefer to own their assets rather than to lease them.

Depreciation increased by 34 percent in the year of adoption. The right-of-use asset depreciation was R 954 million which is less than the depreciation expense on the rest of the property, plant, and equipment, which was R 4.9 billion (Telkom SA Limited, 2020). The majority increase in depreciation expense in the year of adoption is not attributable to the depreciation expense brought about by the right-of-use asset. This

comparison further illustrates that Telkom may prefer to own their assets, rather than to lease them.

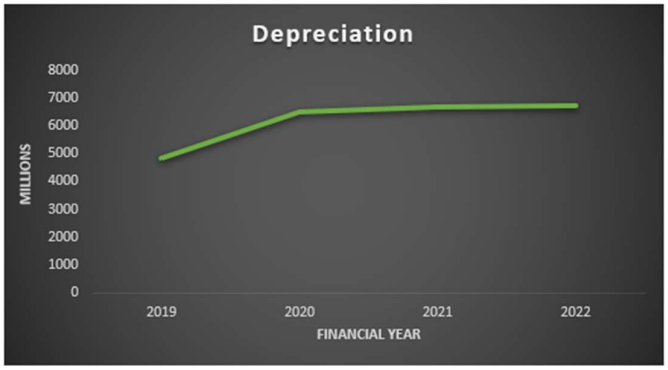

Diagram 13: Telkom depreciation expense

Impacts on interest expense are further discussed in RQ4.

Telkom presented a decrease in EBITDA of 12 percent. The decrease in EBITDA is caused by impairments of receivables, and increased other expenses (Telkom SA Limited, 2020).

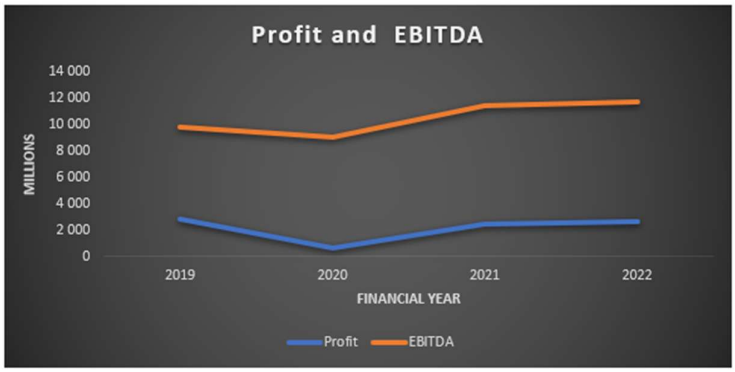

Diagram 14: Telkom profit vs EBITDA

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 12: Telkom key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	44%	52%	51%	48%
Debt to equity	78%	108%	104%	94%
Current	0.90	0.95	0.92	0.87
EBITDA margin	23%	21%	26%	27%

Net debt to EBITDA	2.38	3.53	2.85	2.75
Interest cover	5.60	1.62	3.80	4.42
Return on assets	79%	70%	68%	65%
Return on equity	140%	146%	138%	126%

These increases in the total assets and liabilities caused the debt ratio to increase from 44 percent to 52 percent, as the liabilities have increased in a greater proportion than the assets. Return on assets decreased from 79 percent to 70 percent. The 70 percent is more representative of the return on assets, as it includes the assets that were off-balance sheet. This provides the user with more transparent information regarding the usage of the assets to generate revenues.

The capital structure of Telkom changed, which is evidenced by an increased debt-to-equity ratio, partly because of the additional lease liability recognised. The debt-to-equity ratio increased from 78 percent to 108 percent, with 55 percent of the increase being attributable to the lease liability. This change illustrates that the company is in fact funded more by debt than what was previously presented as the lease liabilities were off-balance sheet.

Current assets and current liabilities increased by a small margin, which is evidenced by the change in the current ratio from the year before adoption to the year of adoption. Telkom recognised increased cash and cash equivalents, which increased the value of current assets. There was a corresponding increase in long-term debt, and because of this difference, the differences in the current ratio between these two years cannot be isolated to the effects of the IFRS 16 adoption. A portion of the increased current assets has also been absorbed by the decrease in current interest-bearing debt, which has decreased.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

In the year before adoption, Telkom is subject to debt covenants that stipulate a net debt to EBITDA of at least 3.1 to 1, and an EBITDA to finance charges of at least 3.5

to 1. These debt covenants were complied with in the year before adoption. Telkom reported that it complied with the financial covenants throughout the years assessed.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

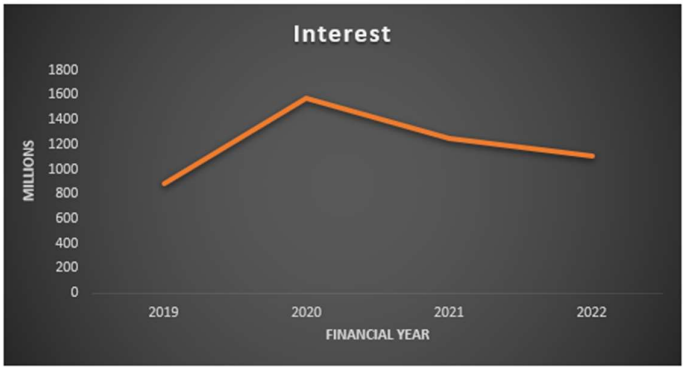

Diagram 15: Telkom interest expense

Telkom increased its local debt in the same year that the new leasing accounting standard was adopted. This resulted in increased interest expenses being incurred on the local debt, which made up approximately 70 percent of the total interest expense. The lease liability interest expense made up 20 percent of the total interest expense in the year of adoption.

After the increase in the year of adoption, interest expense has declined from the 2020 financial year until the 2022 financial year, and the movement in the expense in these years was smaller than the movement that occurred in the first year of adoption. The additional lease liability interest expense did not have a large impact on the total interest expense, as interest on local debt remained the largest interest expense throughout the years analysed.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the years after the effective date of IFRS 16, the total assets increases are significantly lower. In the year after the IFRS 16 was adopted, total assets increased

by four percent (Telkom SA Limited, 2021). In the second year after adoption, total assets increased by three percent (Telkom SA Limited, 2022). Both these increases are smaller than the increase recognised in the year of adoption. Total liabilities increased by two percent and one percent in the year after adoption and the second year after adoption respectively.

A decline in the debt ratio and the debt-to-equity ratio indicate that the lease liability balance is being decreased by lease payments. The current ratio has declined from 0.91 to 0.86 in the 2020 to the 2021 financial years. This decrease shows that there is an increase in current liabilities. This increase does however not relate to the current lease liability because it decreased from R1.2 billion to R1 billion but is as a result of an increase in current interest-bearing debt.

EBITDA seems to also show smaller patterns of fluctuation, as EBITDA margin moved from 27 percent to 28 percent in the two years after adoption. Return on assets shows a similar trend, with the ratio moving from 68 percent to 65 percent in the two years after adoption.

Blue Label Telecoms

Predicted impacts in the year before adoption

Blue Label Telecoms (BLT) has a 31 May year end, and it adopted IFRS 16 in the financial year ending 31 May 2020 (Blue Label Telecoms 2020, 2020). In the year before adoption, BLT leased office space and warehouses, which provide space to accommodate operations and employees who work in operations, retail stores and equipment (Blue Label Telecoms 2019, 2019). Commitments in the year before adoption amount to R143 million with an average remaining term for these leases is 25 months.

Some of the leased offices are non-cancellable leases, with a six-month termination clause. The retail stores are based in shopping malls and have an average remaining term of 24 months, with commitments of R26 million (Blue Label Telecoms 2019, 2019). The equipment leases have an average remaining term of 12 months and

commitments amount to R1 million. It is anticipated that BLT will have short-term leases that are accounted for similarly to operating leases under IAS 17 as a result of these short average remaining lease terms.

In the year before adoption, the Group could not reasonably quantify the effects of IFRS 16 (Blue Label Telecoms 2019, 2019). The Group states that it does not have significant leases across its operations, indicating that IFRS 16 will not significantly impact the Group (Blue Label Telecoms 2019, 2019). BLT plans to use the modified retrospective approach for transition.

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

Diagram 16: Blue Label Telecoms assets, liabilities, and equity

In the year of adoption, BLT reported a 14 percent decrease in total assets, and an 18 percent decrease in total liabilities (Blue Label Telecoms 2020, 2020). Other assets were the main cause for the small increase in assets, which were mainly negated by a decline in inventories and goodwill. The increase that relates specifically to the right-of-use assets is 5 percent, with the right-of-use assets making up 0.8 percent of the total assets in the year ended 31 May 2020. BLT has large balances of property, plant and equipment, intangible assets, goodwill, receivables, and customer advances, and when the right-of-use assets are compared to these balances, their balance is much smaller. This may indicate that BLT prefers to own its assets, rather than leasing them, similarly to Vodacom and Telkom.

Total liabilities decreased as a significant portion of the non-current borrowings were paid off by the Group in the year of adoption. The remainder of the borrowings balance

became a current borrowing as these borrowings are due within 12 months of the financial year (Blue Label Telecoms 2020, 2020). Lease liabilities account for eight percent of the increase in the total liabilities, and they represent 1.7 percent of total borrowings in the year of adoption, indicating that the impact of IFRS 16 is not as large as that of MTN.

As certain asset balances decreased in the year of adoption, there was a decrease in the depreciation expense (Blue Label Telecoms 2020, 2020). Although right-of-use assets were recognised for the first time, their balance only made-up one percent of the total assets balance, and the right-of-use asset depreciation R43 million is much less than the depreciation of property, plant and equipment and intangible assets of R78 million and R155 million, respectively.

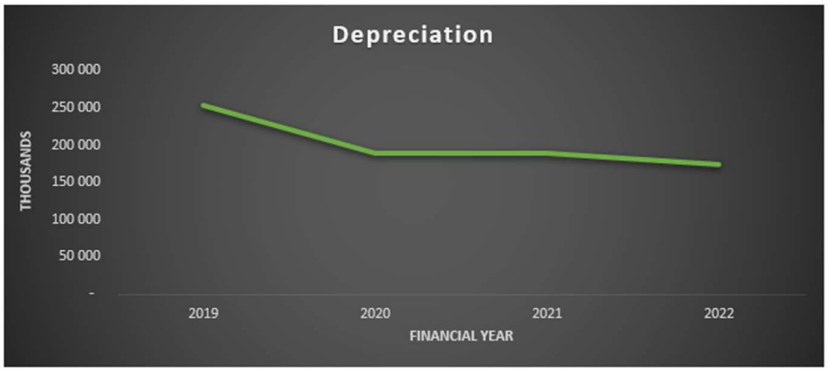

Diagram 17: Blue Label Telecoms depreciation

The right-of-use assets, intangible assets and property, plant and equipment balances were impaired in the year after the adoption, resulting in the depreciation expense for the year being less than the depreciation expense in the year of adoption. The depreciation further decreased in the second year after adoption.

In the year before adoption, BLT recorded a loss for the year, however, a profit was recorded in the year of adoption. Profit for the year increased by 103 percent and EBITDA increased by 112 percent. BLT had reported an EBITDA margin of -22 percent in the year before adoption, and in the year of adoption, it increased to three

percent. Interest expense decreased by seven percent, as material amounts of borrowings were paid off in the year ended 31 May 2020. This has been further discussed under RQ4.

The effects of the additional depreciation and interest expense had minimal effects on profits and EBITDA, as these expenses were smaller than the depreciation of other assets and interest expenses on other liabilities. Profit and EBITDA increased in the year of adoption because there were less impairment expenses for that year.

Profit and EBITDA continued to increase from the year of adoption of IFRS 16 until the second year after the adoption of IFRS 16, as less impairments to assets were recorded.

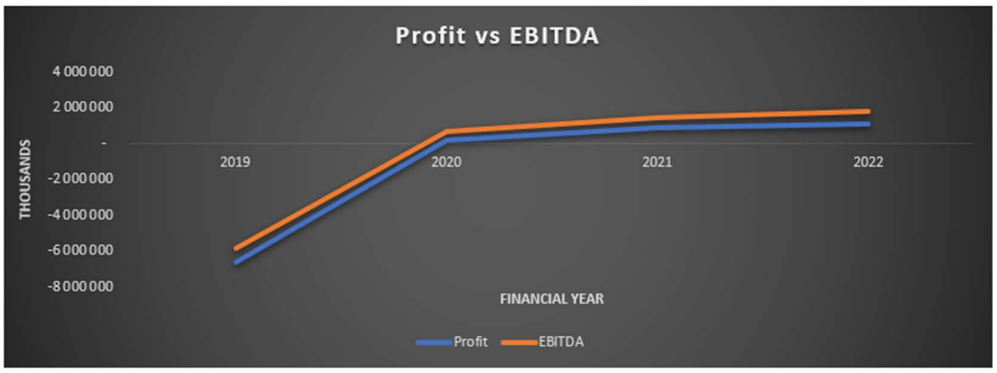

Diagram 18: Blue Label Telecoms profit vs EBITDA

From the BLT financial statements, the effects of the adoption did not have significant impacts on the Group. The impacts on the financial statement line items and their respective ratios due to IFRS 16 were minimal, with significant impacts being caused by other items other than those introduced by IFRS 16.

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 13: Blue Label Telecoms key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	79%	76%	72%	69%
Debt to equity	385%	317%	254%	218%
Current	1.13	1.04	1.08	1.18
EBITDA margin	-22%	4%	8%	10%

Net debt to EBITDA	-1.65	8.55	5.77	5.11
Interest cover	-24.64	3.18	9.35	8.02
Return on assets	214%	204%	161%	131%
Return on equity	1038%	850%	570%	415%

Return on assets decreased from 214 percent to 204 percent, because of the in revenue, which exceeded the decrease in total assets. Before adoption, the debt-to-equity ratio was 385 percent, indicating that the company is heavily geared. As a result of the movements in the liabilities, the ratio has decreased to 317 percent in the year of adoption. The decrease in liabilities has caused the debt ratio to decrease from 79 percent to 76 percent, with the lease liabilities only increasing the balance by two percent.

The Group stated that it does not anticipate IFRS 16 adoption to significantly impact the financial statements, which is supported by the absolute percentages that show the changes due to IFRS 16. Short-term leases amounting to R6 million were disclosed, which was expected, given the shorter average remaining terms that were disclosed in the year before adoption. This indicates that BLT prefers to own its assets rather than to lease them.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

BLT reports on their debt covenants and their compliance. Due to the high value of borrowings which caused high debt ratios, the Group must comply with debt covenants which are imposed on two facilities provided by a financial institution which included keeping the debt to EBITDA ratio below 2.5 times, among other requirements (Blue Label Telecoms 2020, 2020). These debt covenants have been consistent over the financial years assessed, and the Group reported that it has complied with the debt covenants over all four years assessed. However, when recalculating the debt to EBITDA ratio using total liabilities over EBITDA, the ratio exceeded 2.5.

IFRS16 did not impact the compliance with debt covenants, as the adoption of the standard had insignificant impacts on EBITDA and debt levels of the company. Furthermore, in the year of adoption, BLT paid off substantial amounts of their borrowings, which also ensured that debt covenants were met.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

The interest expense on the lease liability makes up a small portion of the interest expense in the years assessed. BLT continued to pay off borrowings from 2020 to 2021 (Blue Label Telecoms 2021, 2021), resulting in a decreased interest expense over the years. Due to the smaller lease liability interest expense, IFRS 16 did not have a significant impact on the interest expense charged to BLT.

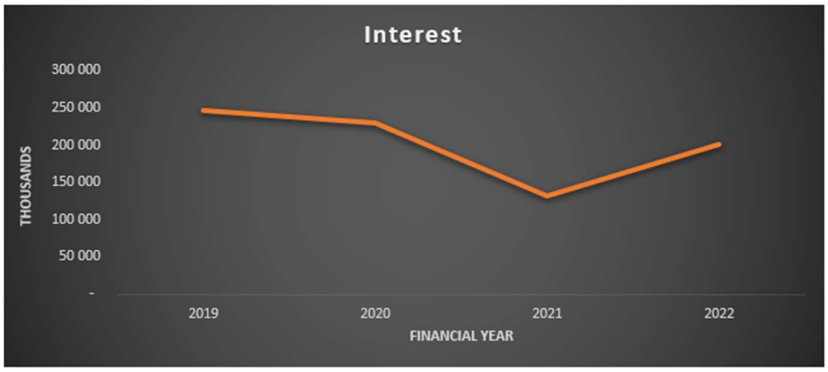

Diagram 19: Blue Label Telecoms interest expense

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the first year after adoption, the Group reported 11 percent total assets increase and eight percent total liabilities increase (Blue Label Telecoms 2020, 2020). The larger total assets increase resulted in the debt ratio decreasing from 76 percent to 72 percent. BLT's statement of financial position shows that right-of-use assets decreased and does not show a similar trend to the total assets amount. The increase in assets is mostly attributable to increased intangible assets and inventories. New

right-of-use assets were acquired in the year after adoption, however the depreciation expense and the impairments processed to the right-of-use assets have resulted in the right-of-use assets decreasing. The debt ratio continued to decrease to 69 percent in the second year after adoption (Blue Label Telecoms 2022, 2022).

The total liabilities increase is because of sharp increases in trade and other payables, year after adoption (Blue Label Telecoms 2020, 2020). Lease liabilities show a different trend as they have decreased because of lease repayments and lease modifications.

As BLT paid off their debt, the debt-to-equity ratio also improved from 317 percent in the year of adoption, to 218 percent in the second year after adoption. In the second year after adoption, similar changes as those recognised in the first year after adoption are evident, as total assets and total liabilities have increased within a similar range (Blue Label Telecoms, 2022).

Huge Group Limited

Predicted impacts in the year before adoption

Huge Group Limited (Huge) has a 28 February year end, and IFRS 16 was adopted in the financial year ending 28 February 2020 (Huge Group Limited 2020, 2020). In the year before adoption, Huge notes that higher interest expenses in the first few years of the lease term may be expected, as the principal amount of the lease liability would be greater at initial recognition, and it will decrease over time. The Group expects an increase in EBITDA because majority of the lease payments will now fall below the EBITDA line (Huge Group Limited 2019, 2019). A key ratio that has been mentioned in Huge's 2019 financial statements is the net debt to EBITDA ratio, as the increase in EBITDA will have a direct impact on this ratio.

Huge notes the statement of cash flows changes that IFRS 16 brings about. Under IAS 17, lease payments were presented as operating activities in the statement of cash flows. IFRS 16 requires the lease payment to be split into a portion that relates to the lease liability interest expense, which is presented as a financing activity, while the remainder of the payment is presented as an operating activity (Huge Group

Limited 2019, 2019). This will lead to an increased outflow of cash from financing activities, which depicts a transparent view of the use of the total lease payment. It depicts that the lease is a borrowing that incurs interest, and the total interest profile of the company may now be assessed with more transparent information.

Huge expects to transition using the modified retrospective approach (Huge Group Limited 2019, 2019). Huge did not disclose any anticipated financial impacts in the financial statements, however, IFRS 16 was noted to have a material impact on the financial statements upon adoption.

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

In the year of adoption, Huge disclosed renewal and termination options as part of significant judgments due to the level of judgment applied when determining the lease term (Huge Group Limited 2020, 2020). Huge notes that judgement applied when determining the lease term of a contract that contains a renewal option is based on the timing of the option, the planning cycle of the Group and historical records to establish trends for renewing and terminating leases.

Huge leases network infrastructure, premises and equipment with lease terms ranging from two to five years with renewal options (Huge Group Limited 2020, 2020). Huge has also recognised short-term and low-value leases.

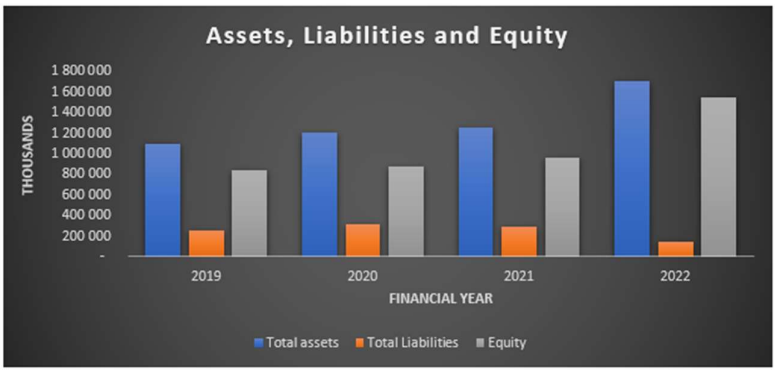

Diagram 20: Huge Group assets, liabilities, and equity

In the year of adoption, there was a nine percent increase in total assets and a 23 percent increase in total liabilities (Huge Group Limited 2020, 2020). These increases relate to other assets and liabilities that have increased, such as large increases in cash and cash equivalents, loans to associate companies, and deferred tax assets. The liabilities' increase relates to increases in interest bearing liabilities, deferred tax liabilities, loans payable and trade and other payables. In the year of adoption, the right-of-use asset made up 1.4 percent of the balance of total assets. The lease liabilities account for 50 percent of the increase in total liabilities, but they only make up six percent of the total liabilities. The low balance of lease liabilities may indicate that IFRS 16 may have not had a substantial effect on Huge as the group utilises only 1.4 percent of its total assets as right-of-use assets.

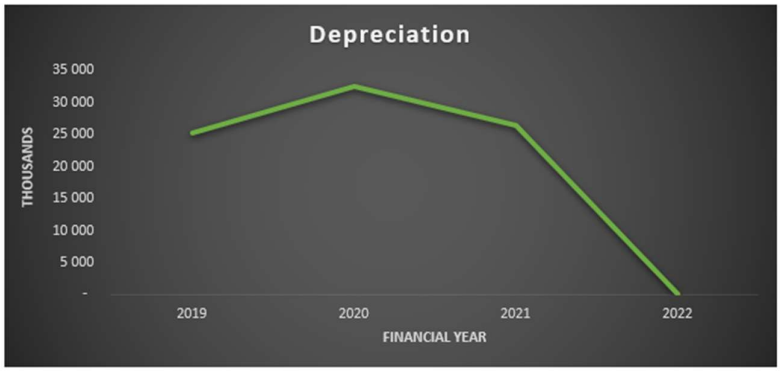

Diagram 21: Huge Group depreciation expense

There was an increase in interest and depreciation expenses of 27 percent and 20 percent respectively, and EBITDA increased by 12 percent, as anticipated by Huge in the year before adoption. The depreciation expense increased significantly in the year of adoption from R26.5 million to R32 million, and the right-of-use asset depreciation alone was R 6.8 million, which accounts for 21 percent of the total depreciation in the year of adoption. The depreciation in the year after the adoption decreased as the assets are depreciated. In the second year after the adoption, Huge classified itself as an investment entity, and no capital assets were reported, apart from a small balance of property, plant and equipment and no depreciation was reported.

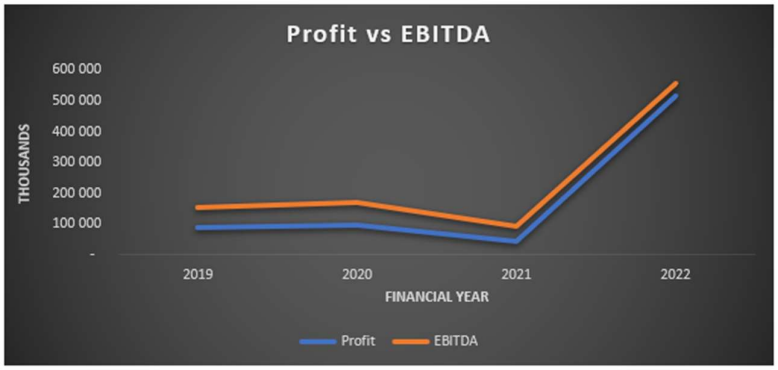

Diagram 22: Huge Group profit vs EBITDA

Profit marginally increased in the year that IFRS 16 was adopted, from R90 million to R95 million. This is because of the increase in revenue, other income, a profit on the sale of assets and a decrease in cost of sales. Although an additional R2 million lease liability interest expense was reported, the impact of IFRS 16 was not large as the lease liability interest expense makes up approximately 10 percent of the interest expense for the year. Compared to the interest-bearing liabilities interest of R17 million, the lease liability expense does not significantly affect Huge.

The exclusion of the lease expenses from EBITDA has resulted in an increase in the year of adoption, however due to the stronger revenues reported in the 2020 financial year, there was a small change in EBITDA and profits. In the 2021 financial year, EBITDA and profits decreased because a large expense relating to share-based payments was recognised. Profit and EBITDA increased in the 2022 financial year, and no right-of-use asset depreciation or lease liability interest was presented or disclosed as Huge classified itself as an investment entity.

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 14: Huge Group key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	24%	27%	23%	9%
Debt to equity	31%	36%	30%	10%
Current	0.81	1.42	1.64	1.21

EBITDA margin	35%	35%	20%	7851%
Net debt to EBITDA	1.71	1.86	3.13	0.27
Interest cover	8.32	-6.37	4.76	60.27
Return on assets	39%	41%	37%	0%
Return on equity	52%	56%	49%	0%

The increase in total liabilities has increased the debt ratio from 24 percent to 27 percent, which shows an increase of only three percent. The addition of the lease liabilities and other changes in total liabilities has resulted in a change in the capital structure of the company, with the debt-to-equity ratio increasing from 31 percent to 36 percent. This depicts the total and more transparent funding of the Group which includes lease liabilities, although the changes as a result of IFRS 16 are not as large as MTN and TeleMasters. The debt ratio decreased as the liabilities incurred interest and payments were made against them in the first year after adoption to 23 percent. The debt ratio further improved in the second year after adoption of IFRS 16 to nine percent as the entity classified itself as an investment entity.

Current assets increased in the year of adoption from R98 million to R176 million because of an increase in inventories and cash and cash equivalents. Current liabilities increased from R122 million to R124 million because of an increase in deferred income and trade and other payables. Huge did not report any current lease liabilities in the statement of financial position. The current ratio increased in the year of adoption, however, this change is not attributable to IFRS 16, as no current lease liabilities were recognised. In the year after adoption, the current ratio improved from 1.42 to 1.64, and a current lease liability was reported. However, similar to the year of adoption, lease liabilities are among the smaller balances in total liabilities, and the increase in current assets exceeded the increase in current liabilities. The current ratio improved in the second year after adoption as the entity classified as an investment entity.

Return on assets increased in the year that IFRS 16 was adopted from 39 percent to 41 percent because of an increase in assets which was less than the increase in revenues. Total assets increased in the first year after adoption, however, revenues decreased, resulting in the ratio decreasing to 37 percent. Because Huge classified

itself as an investment entity, no revenues were reported in the second year after adoption and thus the return on assets is zero percent.

The changes brought about by IFRS 16 did not seem to impact the return on assets ratio as much as other companies in the sector, such as the MTN Group, as the ratio moved in the opposite direction from the expectation.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

Huge reports on debt covenants that are imposed by the financial institutions that the Group banks with. These covenants include suretyship, subordination of loans, a debt to EBITDA of not more than 2.5, EBITDA to debit interest of not less than three, EBITDA to debt service of not less than 1.5 times, and it does not report on whether it has complied with these covenants. The Group has also not reported on any breaches of the debt covenants in the years assessed.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

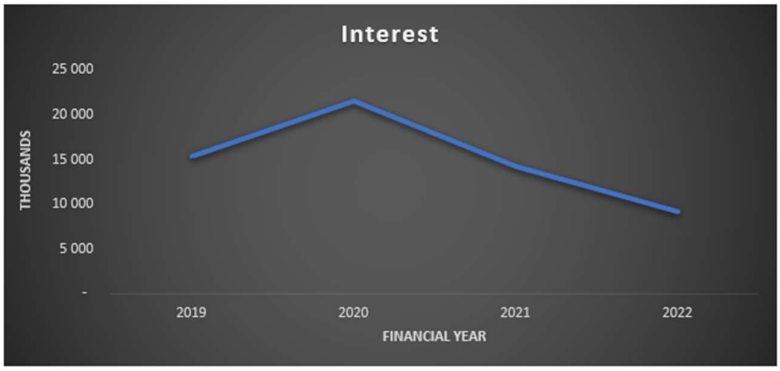

Diagram 23: Huge Group interest expense

In the year before adoption, Huge noted that the impact of the higher finance charges on the lease in its initial years would impact EBITDA and EBIT(Huge Group Limited 2019, 2019). Most of the increase in the interest expense in the year of adoption is due to an increase in interest bearing loans and shareholders' loans and the lease

liability interest only makes up 9.92 percent (R 2 million) of the total interest (R21 million) in the year of adoption.

In the second year of adoption, interest expense on leases makes up 9.23 percent (R1 million) of the total lease expense (R15 million), with majority of the interest expense resulting from the interest-bearing liabilities (Huge Group Limited 2021, 2021). Because the Group does not have large balances that relate to leases, the increase in the interest expense as a result of IFRS 16 is not significant and IFRS 16 did not affect the interest being charged to the group as much as the interest-bearing liabilities.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the first year after adoption, total assets have increased by five percent and total liabilities have decreased by eight percent (Huge Group Limited 2021, 2021). The right-of-use assets decreased mainly due to depreciation processed for the right-of-use assets. The lease liabilities balance also decreased due to the lease payments that have been made. These changes in the assets and liabilities have resulted in the debt ratio decreasing again by four percent, and the debt-to-equity ratio decreasing by six percent.

Huge's strategy revolves around acquiring and expanding companies, and in the 2022 financial year, it classified itself as an investment entity, which does not consolidate its subsidiaries in its financial statements but recognises them at fair value. Most of the operational assets and liabilities are recognised in Huge's subsidiaries, and therefor will not be presented in the Huge's financial statements. As a result, the effects of IFRS 16 could not be assessed for the second year after adoption.

TeleMasters Holdings Limited
Predicted impacts in the year before adoption

TeleMasters Holdings Limited (TeleMasters) has a 30 June year end, and it first adopted IFRS 16 in the financial statements of the year ended 30 June 2020 (TeleMasters Holdings Limited, 2020). The Group reported, in the year before adoption, that it is unlikely that IFRS 16 will cause material changes to the financial statements because the group enters short term leases (TeleMasters Holdings Limited, 2019). The group did not quantify the impacts of the adoption of IFRS 16.

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

In the year of adoption, TeleMasters did not note any aspects of the requirements of IFRS 16 that bring about significant judgements (TeleMasters Holdings Limited, 2020). The assets that are leased by the Group include buildings, vehicles and routers and handsets. The leases for these items do not contain extension or termination options, which decreases the estimation uncertainty involved in the lease contract.

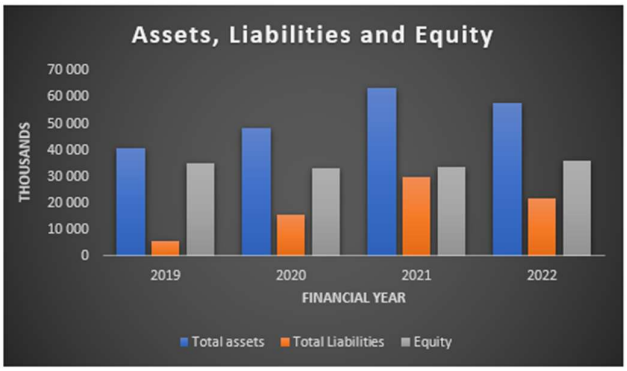

Diagram 24: TeleMasters assets, liabilities, and equity

In the year of adoption, there was an increase in total assets increased of 18 percent, while the increase in total liabilities increased was 165 percent (TeleMasters Holdings Limited, 2020). The increased total assets were caused by the introduction of right-of-use assets to total assets. The increase in total assets percentage is less than the total liabilities' increase because other assets such as property, plant and equipment, intangible assets and loans to subsidiaries decreased in the year of adoption. The right-of-use assets accounted for 129 percent increase in total assets, and their balances makes up 20 percent of total assets. Right-of-use assets are approximately

R2 million above the balance of property, plant, and equipment. This indicates that the group has significant leases are part of the larger balances in total assets.

Lease liabilities also make up a large portion of total liabilities, as they represent one of the large balances of liabilities. The lease liability accounts for 104 percent of the movement in the total liabilities balance, and it makes up 65 percent of the total liabilities balance. This indicates that the adoption of IFRS 16 had rather large impacts TeleMasters.

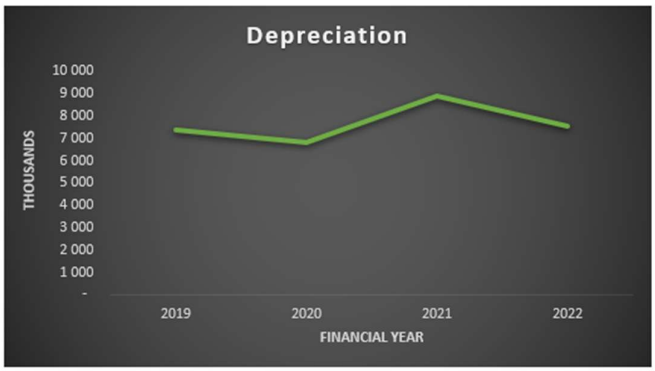

Diagram 25: TeleMasters depreciation expense

There was an increase in the depreciation and interest expenses in the year of adoption because of the additional right-of-use asset and the lease liability. The depreciation on the right-of-use asset constitutes 14 percent of the year's depreciation expense. In the year of adoption, the depreciation expense decreased due to a decrease in property, plant, and equipment as a result of disposals of property, plant, and equipment, as well as reclassifications of some motor vehicles and routers and handsets to right-of-use assets. However, the right-of-use asset depreciation accounted for 19.31 percent of the expense. The interest expense on lease liabilities, which increased by four percent in the year of adoption, makes up 99 percent of the interest expense for the year, showing a significant change because of IFRS 16.

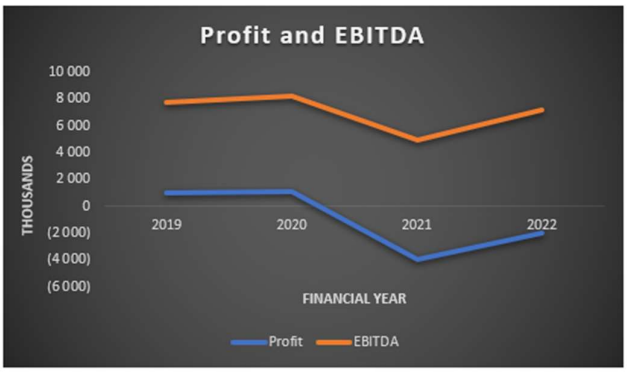

Diagram 26: TeleMasters profit vs EBITDA

The effects of the increase in interest and depreciation expenses are not representative of the decrease in the EBITDA margin, as revenues decreased, and operating expenses (employee costs and other remuneration costs) increased in the first year after adoption.

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 15: TeleMasters key financial statement ratios

Ratio	2018	2019	2020	2021
Debt	14%	32%	47%	37%
Debt to equity	17%	47%	89%	60%
Current	4.63	3.16	0.75	0.78
EBITDA margin	8%	10%	6%	11%
Net debt to EBITDA	0.76	1.89	6.12	3.01
Interest cover	1.32	3.59	-2.48	-0.15
Return on assets	244%	164%	119%	112%
Return on equity	285%	242%	225%	180%

The addition of the right-of-use asset has decreased the return on assets from 244 percent to 164 percent. The increase in total liabilities resulted in a change to the capital structure of the company, as the debt-to-equity ratio has moved from 17 percent before adoption, to 47 percent in the year of adoption. This gives the user of the financial statements a more holistic view of the funding of the company and a more precise amount of debt that is more indicative of the company's total financing. The

introduction of the right-of-use asset's depreciation and lease liability interest expense have resulted in an increase in the EBITDA margin from eight percent to 10 percent.

The leasing standard had larger impacts on the TeleMasters Holdings Limited's current ratio, because of the additions of current lease liabilities being repayable within 12 months of the reporting date. Current liabilities increased by two percent, which led to a decline in the current ratio from 4.63 to 3.16. Although the current ratio is still above one, the 1.2 decrease in the current ratio transparently determines the ratio, indicating to the user that the company has more current liabilities than what was previously reported under IAS 17.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

TeleMasters does not have any disclosures about debt covenants in their financial statements.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

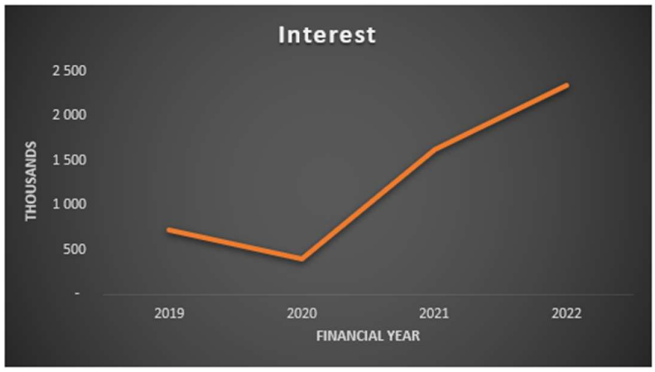

Diagram 27: TeleMasters interest expense

Interest expense decreased in the year of adoption due to other interest costs being Rnil in the year of adoption (TeleMasters Holdings Limited, 2020). Before the adoption of IFRS 16, TeleMasters has interest charges on lease liabilities that were recognised

under IAS 17. In the year of adoption, the interest expense on the lease liabilities decreased from R426 thousand to R392 thousand, which improved the interest cover ratio.

In the year after adoption, interest expense increased exponentially (TeleMasters Holdings Limited, 2021), as the group entered more leasing contracts, resulting in an increase in right-of-use assets and lease liabilities. This indicates that TeleMasters places a lot of reliance on leases. The right-of-use assets almost doubled in the year after adoption, with interest expenses on lease liabilities making up 77 percent of the interest expense.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

In the first year after adoption, TeleMasters acquired additional interests in subsidiaries (TeleMasters Holdings Limited, 2021), including their right-of-use assets. The right-of-use assets make up 33 percent of the total assets, which is an increase from the 20 percent recognised in the year of adoption. Right-of-use assets seem to be significantly used by the Group, as this balance far exceeds that of property, plant, and equipment. A new classification of right-of-use assets, racks, were acquired to meet the growing demand for data centre business activities. The increase in total assets resulted in the return on assets ratio decreasing from 164 percent to 119 percent, which illustrates that the assets that generate revenues have increased, together with the impact of a decline in revenue. This information indicates that leasing is an integral part of the business, and further amplifies the significant impacts of IFRS 16 for TeleMasters.

Total liabilities increased by 90 percent, with large portions of the increase being attributable to contingent consideration recognised and new leases entered. The debt-to-equity ratio deteriorated from 47 percent to 87 percent, illustrating that the group is heavily geared with more liabilities funding the business than equity. The debt ratio has also deteriorated from 32 percent to 46 percent, indicating that a larger portion of the assets have been funded through debt.

The decrease in current assets such as cash and cash equivalents, and the increase in current liabilities such as lease liabilities and contingent consideration have caused the current ratio to further decline from 3.16 to 0.75. Current lease liabilities which make up 26 percent of the total current liabilities in the first year after adoption, increased by 157 percent because of the new leases that the Group has entered. Although other factors such as the large amount of contingent consideration, and the decrease in the current assets, have affected the current ratio, current lease liabilities have increased significantly, showing the significant impact that IFRS 16 had on TeleMasters.

As expected, due to additional leases recognised, depreciation expense increased by 33 percent, with the depreciation on right-of-use assets making up 38 percent of the depreciation expense for the year. Interest expense increased by 309 percent, and the interest expense on the lease liability makes up 77 percent of the total interest expense for the year. The disclosure requirements of IFRS 16 provide more meaningful information (International Accounting Standards Board, 2016), as users of financial statements have a more transparent view of the cost of debt that the Group incurs.

In the second year after the adoption, total assets and total liabilities have decreased (TeleMasters Holdings Limited, 2022). Right-of-use assets have decreased because of depreciation, lease adjustments and reclassifications, and lease liabilities have decreased because of lease repayments. The debt ratio has improved from 46 percent to 38 percent, and the debt-to-equity ratio has improved from 87 percent to 61 percent. The depreciation and interest expenses appear to be consistent with the ranges from the year of adoption and the first year after adoption. The current ratio has decreased, however by a smaller margin of 0.03 percent.

Telecommunications sector analysis

RQ1: How will the implementation of IFRS 16 impact total assets, total liabilities, net profit, and EBITDA for listed companies in the JSE telecommunications sector?

The total reported assets and liabilities increased for the sector, even though BLT recorded a decrease in total assets and total liabilities in the year of adoption. In the year of adoption, MTN recorded the highest increase in total assets, followed by Vodacom. The sector's total assets increased by 22 percent or R101 billion. This finding is consistent with previous research which found that companies were utilising more assets than what was presented in their balance sheets (Imhoff et al., 1991, 1997).

The right-of-use assets recognised in the year of adoption make up 61 percent or R61.6 billion of the increase in total assets. MTN had the biggest balance of right-of-use assets in the year of adoption, while TeleMasters had the smallest balance in the sector. Although TeleMasters had the smallest balance, right-of-use assets makes up 20 percent of its total assets in the year of adoption, while MTN's right-of-use assets make up 15 percent of its total assets. Both MTN and TeleMasters have substantial balances of right-of-use assets.

Telkom's right-of-use assets make up seven percent of its total assets balance. According to this and the individual company analysis, MTN and TeleMasters place more reliance on leases, than Vodacom, Telkom, BLT and Huge. MTN and TeleMasters experienced bigger impacts to their balance sheets as a result of IFRS 16 implementation, and they appear to rely more on leasing, as the right-of-use balances were among the highest asset balances. Although the increase in assets in Cumming (2019)'s study was not significant, the results in this study show that higher reliance on leasing results in significant increases in assets.

The right-of-use assets made up significant portions of total assets for MTN, BLT and TeleMasters, as they accounted for more than 10 percent of total assets and they were one of the larger balances under non-current assets in the statement of financial position. Vodacom, Telkom, Huge and BLT did not experience significant increases in right-of-use assets, as right-of-use assets made up less than 10 percent of the total assets.

The total liabilities for the sector increased by 35 percent or approximately R90 billion. The sector recognised lease liabilities which make up 19 percent or R64.2 billion of

total liabilities. The lease liabilities percentage of total liabilities is higher than the right-of-use asset percentage of total assets, which can be attributed to right-of-use assets being amortised, while interest is incurred on the lease liability balance and lease payments are made, which is consistent with Dillon (2014)'s findings.

MTN has the highest lease liability balance in the sector, while TeleMasters has the smallest lease liability balance. TeleMasters' lease liabilities however make up 65 percent of its total liabilities, indicating that IFRS 16 has the largest lease liability impact on TeleMasters in the sector. MTN's lease liabilities make up 21 percent of total liabilities, which makes MTN the second most impacted company in the sector. BLT's lease liabilities make up only two percent of the total liabilities, illustrating that BLT does not place much reliance on leasing.

The sector reported an increased depreciation and interest in the year of adoption. Telkom reported the highest increase of 34 percent or R1.6 billion in depreciation, followed by MTN with an increase of 33 percent or R8 billion. Although Telkom has the highest increase in depreciation, the majority of the depreciation expense was attributable to other capital assets, and not the right-of-use asset depreciation. For MTN, depreciation on the right-of-use asset increased the depreciation expense for the year by larger percentages than the other companies in the sector. This is consistent with Tanase et al (2018)'s findings, which indicated that additional right-of-use assets would result in additional depreciation expenses.

As a result of the changes to interest and depreciation expenses, the sector's EBITDA increased by 21 percent or approximately R19 billion, which is consistent with the approximated increase found by Deloitte (2019). Profit for the sector increased by 32 percent or R6.8 billion.

RQ2: How will the above impacts result in changes to the following classes of financial statement ratios for listed companies in the JSE telecommunications sector?

Table 16: Telecommunication sector key financial statement ratios

Ratio	Year before adoption	Year of adoption	First year after adoption	Second year after adoption
Debt	55%	61%	62%	62%
Debt to equity	123%	159%	163%	160%
Current	0.9	1.02	1.03	0.95
EBITDA margin	31%	35%	41%	40%
Net debt to EBITDA	2.87	3.19	2.63	2.82
Interest cover	3.42	2.80	3.27	3.79
Return on assets	62%	54%	57%	55%
Return on equity	139%	140%	149%	143%

The total liabilities increase of the sector resulted in the debt ratio increasing from 55 percent to 61 percent in the year of adoption. Debt-to-equity ratio increased from 123 percent to 159 percent, indicating more debt funding in the capital structures of the companies in the sector. Although companies such as Vodacom, Telkom BLT and Huge did not place much reliance on leasing as MTN and TeleMasters, the recognition of lease liabilities in these companies accounted for big proportions of the change in total liabilities. The recognition of current lease liabilities resulted in the deterioration of the current ratio for the industry.

EBITDA margin increased from 31 percent to 35 percent, which is caused by the increased interest expenses as well as an additional depreciation expense on the right-of-use asset. Net debt to EBITDA decreased from 2.87 to 3.19, showing that the increase in net debt was much higher than the increase in EBITDA. Interest cover decreased from 3.42 to 2.80, indicating that interest expense is higher in the year of adoption.

Return on assets decreased in the year of adoption from 62 percent to 54 percent, as the sector is now reporting on right-of-use assets that are used in generating revenues.

RQ3: How will the implementation of IFRS 16 affect listed companies in the JSE telecommunications sector compliance with debt covenants?

MTN, Telkom, BLT and Huge reported that they have complied with its debt covenants throughout the financial years assessed. Vodacom and TeleMasters did not disclose

debt covenant information for the years assessed. The adoption of IFRS 16 in the sector did not cause any of the companies to breach their debt covenants.

RQ4: What effect does the implementation of IFRS 16 have on the interest expense financial statement line item of JSE listed companies in the telecommunications sector?

The sector reported an increase in interest expenses of 62 percent or R9 billion in the year that IFRS 16 was adopted. Telkom reported the highest increase in the sector, however, the interest expense on its lease liabilities only made up a small portion of the total interest expense. MTN reported the second highest increase in interest expenses, and the lease liabilities interest expense made up 33 percent of the total lease expense. MTN's interest expense increased as more lease contracts were entered into.

When the interest cover ratio is considered for the sector, the ratio decreased in the year of adoption, indicating that there was a higher interest expense in that year. In the first year after the adoption of IFRS 16, the interest cover ratio improved to 3.27, which is closer to the value it was before adoption. In the second year after adoption, the ratio is 3.79 for the sector, illustrating that interest rates and ultimately the interest expense charged to the sector have not been materially impacted by the adoption of IFRS 16.

RQ5: How long will the impact of the implementation of IFRS 16 based on RQ 1 to RQ4 affect the financial statements of listed companies in the JSE telecommunications sector?

The debt-to-equity ratio, net debt to EBITDA, interest cover and current ratio have increased from the year of adoption to levels higher than what the ratios were before adoption. The debt ratio remains higher than what it was before the adoption of IFRS 16, demonstrating that lease liabilities are now recognised in the statement of financial position and that they do have an impact on the capital structure of the company.

Return on assets remains lower than what it was before the adoption of IFRS 16, illustrating that right-of-use assets are now recognised in the statement of financial position.

CHAPTER 5 - CONCLUSION

The study's aim was to determine the actual effects of the IFRS 16 adoption on companies listed on the JSE in the telecommunications sector. The results indicate that the adoption of IFRS 16 had large implications on companies that rely on leasing arrangements for their operations in the sector. Companies that rely more on owned assets were not significantly impacted by the change to IFRS 16.

Effects on the statement of financial position

Recognising right-of-use assets and lease liabilities increased assets and liabilities for all the companies in the sample, as predicted by Imhoff et al. (1991). The increase in total liabilities for the sector is higher than the findings of the study by Dillon (2014). However, this study found an increase in assets that is much higher than the findings of Dillon (2014). The study by Deloitte (2019) found a lower increase in liabilities for than that of this study.

The right-of-use assets and lease liabilities recognition in the statement of financial position resulted in the return on assets decreasing and leverage ratios increasing. Imhoff's results yielded a decrease in return on assets of 34 percent in the study on McDonald's capitalisation of operating leases (Imhoff et al., 1991, 1997). This study found that there was a decrease in return on assets of 8 percent for the sector in the year of adoption, which also is lower than the decrease in the study by Le Roux (2021) of 29.14 percent for retail companies listed on the JSE. The decrease of 8 percent contradicts the findings of Cumming (2019), that observed significant changes in return on assets. The only company in the sample which recorded an increase in return on assets is Huge, as its revenues increased at a higher rate than the rate that assets increased at in the year of adoption. All other companies reported a decrease in return on assets in the year that IFRS 16 was adopted.

The study by Imhoff et al. (1991) established a resulting increase in leveraging ratios of 47 percent. The debt ratio for the companies in the sample increased by 6 percent, while the debt-to-equity ratio increased by 36 percent, which is less than the result of Imhoff's study. Imhoff's study is supported by the results of the study by Cumming (2019), which found that the telecommunications sector did not illustrate significant

increases in the debt ratios. However, the findings of Cape (2019) corroborate the larger increase in the debt-to-equity ratio than the increase in the debt ratio in this study.

Effects on the statement profit or loss and other comprehensive income

The recognition of lease liabilities and right-of-use assets influenced the statement of profit or loss and other comprehensive income, as well as financial statement ratios. The recognition of the right-of-use assets and lease liabilities in the sector resulted in an increase in the depreciation and interest expenses, which decreased operating profit, but increased other earnings measures such as EBIT and EBITDA, as predicted by Tănase et al. (2018) and Veverková (2019). Companies that relied more on leasing reported higher interest expenses in the year of adoption, as well as higher depreciation expenses.

The study by Le Roux (2021) found that there was an increase in EBITDA of 33.4 percent, however this study's sample yielded an increase in EBITDA for the telecommunications sector of 21.43 percent, which is consistent with the findings of Cumming (2019). EBITDA margin increased from 31 percent to 40 percent in the years assessed for the companies in the sample. From the year of adoption to the first year after adoption, EBITDA margin increased by six percent, and in the second year after adoption, it decreased by one percent. Net debt to EBITDA increased in the year that IFRS 16 was adopted, but it however decreased in the first year after adoption and in the second year after adoption, it was 0.5 less than the ratio before IFRS 16 was adopted. This is consistent with the findings of Deloitte (2019) and Fülbier et al. (2008), that EBITDA ratios will increase in the short term.

Effects on debt covenants

Similar to the study by Cape (2019), this study found that in the six companies in the sample, only four companies reported on their debt covenants, and none of them were breached. This is consistent with the findings of Le Roux (2021) that the adoption of IFRS 16 will not alter the risk status of the company.

Overall effects

The disclosure of the right-of-use asset and lease liability in the financial statements of the companies in the sample provided more comprehensive financial information about the assets and liabilities used in their operations. It also provided comparable financial information on the leasing activities on the company, and the financial statements did not require any other adjustments to determine the impact of the companies' leasing arrangements.

Furthermore, the accounting requirements of IFRS 16 result in financial statements that are transparent, as users of financial statements can access qualitative and quantitative financial information about leases, showing an enhancement to the understanding of leasing activities, as highlighted by the positive accounting theory.

This study's analysis further illustrates the improved comparability as intended by the International Accounting Standards Board (2016), as conclusions may be made, for example that MTN relies more on leases than Vodacom. The revenues and profits generated by Vodacom, which relies more on its owned assets, could be compared to MTN, which places some reliance on leased assets.

Limitations of the study and further research

In 2020, COVID-19 pandemic affected most parts of the global economy at large (Erero & Makananisa, 2021). Due to the slowed down economic activity, financial information from the years 2020 to 2021 may have not been the most accurate to use to determine the impact of IFRS 16. The effects of the pandemic were not considered in this study. Future research on this topic could incorporate the effects of the pandemic and focus on a longer period after adoption to be able to investigate the effects of the pandemic on leasing.

The IASB issued an amendment to IFRS 16, which included the accounting treatment for lease concessions that arose strictly from the pandemic (BDO, 2020). The effects of lease concessions were not considered in this study. Further research could investigate the effects of the IFRS 16 amendment on leasing financial information and the transparency of information during the pandemic.

The impact of the implementation of IFRS 16 were assessed for companies in the telecommunications sector of the JSE only. Further research could determine what the impact of adopting IFRS 16 is on other JSE sectors, and comparisons between the sectors could also be researched.

REFERENCES

Afsari, A. (2022). *Some observations of the first-time adoption of IFRS 16 in the context of lessee airlines* [Thesis]. Cankaya University.

Altintas, T., & Sari, E. S. (2016). The effect of the IFRS 16: constructive capitalization of operating leases in the Turkish retailing sector. *Pressacademia*, *5*(1), 138–138.

Barker, R., & Teixeira, A. (2018). Gaps in the IFRS Conceptual Framework. *Accounting in Europe*, 15(2), 153–166.

Baumann, J. K., & Hegrestad, T. G. (2020). The effect of IFRS 16 on key financial ratios and financing decisions. BI Norwegian Business School.

BDO Global. (2020). IASB Issues Amendments to IFRS 16: COVID-19 Related Rent Concessions. Retrieved March 30, 2022, from www.bdo.global/getmedia/5dc32444-ab3c-4960-aba3-4a695eb852b7/IFRB-2020-08-IASB-issues-amendments-to-IFRS-16-COVID-19-related-rent-concessions.aspx.

Blue Label Telecoms. (2019). Annual Financial Statements. Retrieved: October 10, 2022, from https://www.bluelabeltelecoms.co.za/online_results/annual-results-2019/pdf/afs-full-2019-new.pdf.

Blue Label Telecoms. (2020). Annual Financial Statements. Retrieved: October 10, 2022, from https://www.bluelabeltelecoms.co.za/online_results/annual-results-2020/pdf/afs-full-2020-new.pdf.

Blue Label Telecoms. (2021). Annual Financial Statements. Retrieved: October 10, 2022, from https://www.bluelabeltelecoms.co.za/online_results/annual-results-2021/pdf/afs-full-2021-new.pdf.

Blue Label Telecoms. (2022). Annual Financial Statements. Retrieved: October 10, 2022, from https://www.bluelabeltelecoms.co.za/online_results/annual-results-2022/pdf/afs-full-2022-new.pdf.

Cape, J. (2019). A Study on the Possible Impact of Constructive Lease Capitalisation on Selected Listed South African Companies' Financial Statements, in Light of IFRS 16 Leases [Thesis]. University of Cape Town.

Chivandire, G., Botha, I., & Mouton, M. (2019). The impact of capital structure on mobile telecommunication operators in Africa. *The Journal of Private Equity*, *23*(1), 1–28.

Cumming, C. (2019). The Implementation Impact of IFRS 16: Leases on JSE Listed Technology and Telecommunication Companies Using a Constructive Capitalisation Model [Thesis]. University of Kwa-Zulu Natal.

da Silva, D., Schutte, D., & Surujlal, J. (2021). Unpacking the IFRS implications of COVID-19 for travel and leisure companies listed on the JSE. *Sustainability,* 13(7942), 1–20.

Deloitte. (2016). *IFRS* industry insights: Property occupiers Implications of the new leasing standard. Retrieved March 30, 2022, from www.iasplus.com.

Deloitte. (2017). IFRS industry insights: Telecommunications sector. Retrieved August 14, 2022, from www.iasplus.com.

Deloitte. (2019). IFRS 16 Valuation Impact What you need to know now. Retrieved March 31, 2022, from https://www.deloitte.com/za/en/services/financial-advisory/analysis/ifrs-16.html.

Dillon, J. (2014). Impact of Constructive Capitalisation of Operating Leases on South African Companies Considering New Proposed Lease Accounting Rules [Thesis]. University of Cape Town.

Duke, J. C., Hsieh, S. J., & Su, Y. (2009). Operating and synthetic leases: Exploiting financial benefits in the post-Enron era. *Advances in Accounting*, *25*(1), 28–39.

Erero, L. J., & Makananisa, P. M. (2021). Impact of Covid-19 on the South African economy: A CGE, Holt-Winter and SARIMA model's analysis. *Turkish Economic Review*, *7*(4), 193–213.

Financial Accounting Standards Board. (2023). About the FASB. Retrieved May 21, 2023, from www.fasb.org.

Fülbier, R. U., Silva, J. L., & Pferdehirt, H. (2008). Impact of lease capitalization on financial ratios of listed German companies. *Schmalenbach Business Review*, 60, 122–144.

Górowski, I., Kurek, B., & Szarucki, M. (2022). The Impact of a New Accounting Standard on Assets, Liabilities and Leverage of Companies: Evidence from Energy Industry. *Energies*, 15, 1–15.

Habibniya, H., Dsouza, S., Rabbani, M. R., Nawaz, N., & Demiraj, R. (2022). Impact of Capital Structure on Profitability: Panel Data Evidence of the Telecom Industry in the United States. *Risks*, 10(8)157.

Hamilton, D. (2022). 2022 Global Leasing Report. Retrieved April 15, 2023, from www.solifi.com.

Huge Group Limited. (2019). Integrated Report. Retrieved October 17, 2022, from https://www.hugegroup.com/financials.

Huge Group Limited. (2020). Integrated Report. Retrieved October 17, 2022, from https://www.hugegroup.com/financials.

Huge Group Limited. (2021). Integrated Report. Retrieved October 17, 2022, from https://www.hugegroup.com/financials.

Huge Group Limited. (2022). Integrated Report. Retrieved October 17, 2022, from https://www.hugegroup.com/financials.

International Accounting Standards Board. (2023). IASB post-implementation reviews. IFRS Foundation. Retrieved June 5, 2023, from https://www.ifrs.org/projects/post-implementation-reviews/.

IFRS Foundation. (2016a). International Financial Reporting Standard 16 Leases. Retrieved March 30, 2022, from https://www.ifrs.org/issued-standards/list-of-standards/ifrs-16-leases/.

IFRS Foundation. (2016b). Leases. IFRS Foundation. Retrieved April 15, 2023, from https://www.ifrs.org/projects/completed-projects/2016/ifrs-16-leases/#about.

IFRS Foundation. (2022a). IAS 17 Leases. IFRS Foundation. Retrieved March 26, 2023, from https://www.ifrs.org/issued-standards/list-of-standards/ias-17-leases/#about.

IFRS Foundation. (2022b). IFRS - Who we are. IFRS Foundation. Retrieved March 26, 2023, from https://www.ifrs.org/about-us/who-we-are/.

IFRS Foundation. (2022c). Research and Standard setting IASB. IFRS Foundation. Retrieved April 15, 2023, from https://www.ifrs.org/projects/work-plan/#research-and-standard-setting.

Imhoff, E. A., Lipe, R. C., & Wright, D. W. (1991). Operating Leases: Impact of Constructive Capitalization. *Accounting Horizons*, *5*(1), 51–63.

Imhoff, E. A., Lipe, R. C., & Wright, D. W. (1997). Operating Leases: Impact of Constructive Capitalization. *Accounting Horizons*, *11*(2), 12–32.

International Accounting Standards Board. (2016). IFRS 16 Leases Effects Analysis. Retrieved April 15, 2023, from www.ifrs.org/content/dam/ifrs/project/leases/ifrs/published-documents/ifrs16-effects-analysis.pdf.

International Accounting Standards Board. (2018). Discussion Papers and Exposure Drafts (28; Staff Paper). Retrieved April 15, 2023, from https://cdn.ifrs.org/content/dam/ifrs/meetings/2018/february/iasb/ap28-exposure-drafts-discussion-papers.pdf.

International Accounting Standards Board, & Financial Accounting Standards Board. (2009, March 19). IASB and US FASB publish proposals to improve the financial reporting of leases. Retrieved March 30, 2022, from www.fasb.org.

International Accounting Standards Board (IASB). (2018, March 1). Conceptual Framework for Financial Reporting. IFRS Standards - A Guide through IFRS Standards. Retrieved March 30, 2023, from https://www.ifrs.org/issued-standards/list-of-standards/conceptual-framework.html/content/dam/ifrs/publications/html-standards/english/2023/issued/cf/.

Job, N. (2023). Limitations of debt to EBITDA and Interest Coverage Ratio. Moore South Africa. Retrieved June 25, 2023, from https://www.moore-southafrica.com/news-views/february-2023/limitations-of-debt-to-ebitda-and-interest-coverage.

Johannesburg Stock Exchange. (2018). JSE Limited Listings Requirements. In *LexisNexis South Africa*.

Johannesburg Stock Exchange. (2021). Reporting back on proactive monitoring of financial statements in 2021. Retrieved March 3, 2022, from

https://www.jse.co.za/sites/default/files/media/documents/financial-statements/November%202021%20Report%20Back%20on%20Proactive%20Monitoring%20of%20Financial%20Statements%20in%202021.pdf.

Kabir, M. H. (2010). Positive Accounting Theory and Science. *Journal of Centrum Cathedra*, *3*(2), 136–149.

Kuzwayo, B. (2022). The Historical Development of the Concept of Lessee Accounting in Financial Reporting [Dissertation]. University of Johannesburg.

Le Roux, R. (2021). *Analysis of the effect of the implementation of IFRS 16 Leases on the financial ratios of retail companies listed on the JSE* [Dissertation]. North West University.

Leoni, G., Lai, A., Stacchezzini, R., Steccolini, I., Brammer, S., Linnenluecke, M., & Demirag, I. (2022). The pervasive role of accounting and accountability during the COVID-19 emergency. *Accounting, Auditing and Accountability Journal*, 35(1), 1–19.

Liberati, C. (2020). IFRS 16: The impact of lease accounting on the GEDI Group Performance [Dissertation]. Libera Universita Internazionale degli Studi Sociali.

Magli, F., Nobolo, A., & Ogliari, M. (2018). The Effects on Financial Leverage and Performance: The IFRS 16. *International Business Research*, *11*(8), 76.

McGregor, W., Australian Accounting Standards Board, Canadian Accounting Standards Board, International Accounting Standards Committee, New Zealand Accounting Standards Review Board, New Zealand Financial Reporting Standards Board, United Kingdom Accounting Standards Board, & United States Financial Accounting Standards Board. (1996). *Accounting for Leases: A New Approach*.

Merrill, T. W. (2021). The Economics of Leasing. *Journal of Legal Analysis*, 12, 221–272.

Morales-Díaz, J., & Zamora-Ramírez, C. (2018). IFRS 16 (leases) implementation: Impact of entities' decisions on financial statements. *Aestimatio, The IEB International Journal of Finance*, 17(4), 60–97.

MTN Group Limited. (2018). Annual Financial Statements. Retrieved October 17, 2022, from https://www.mtn.com/annual-reports/.

MTN Group Limited. (2019). Annual financial statements. Retrieved October 17, 2022, from https://www.mtn.com/annual-reports/.

MTN Group Limited. (2020). Annual Financial Statements. Retrieved October 17, 2022, from https://www.mtn.com/annual-reports/.

MTN Group Limited. (2021). Annual Financial Statements. Retrieved October 17, 2022, from https://www.mtn.com/annual-reports/.

Paik, D., Lee, B., van der Laan Smith, J., Yoon, S. (2015). The Relation between Accounting Information in Debt Covenants and Operating Leases. *Accounting Horizons,* 29.

Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of theory and evidence on problems and perspectives. *Indian Journal of Corporate Governance*, 10(1), 74–95.

Pannell Kerr Forster. (2018). Revised Conceptual Framework for Financial Reporting. Retrieved March 30, 2023, from https://www.pkf.com/media/8d8a1c92419bab9/guidance-revised-conceptual-framework-for-financial-reporting.pdf.

PropertyWheel. (2022). The State of SA Property Market Q4 2022. PropertyGroup. Retrieved April 15,2023, from https://propertywheel.co.za/2022/12/the-state-of-sas-property-market-q4-2022/.

PWC. (2016). The leases standard is changing, are you ready. Retrieved March 30, 2022, from Www.Pwc.Com.

Companies Act No 71, 2008, Pub. L. No. 32121, Republic of South Africa 1 (2009). Retrieved November 22, 2023, from https://www.gov.za/documents/companies-act.

Rey, A., Maglio, R., & Rapone, V. (2020). Lobbying during IASB and FASB convergence due processes: Evidence from the IFRS 16 project on leases. *Journal of International Accounting, Auditing and Taxation*, 41.

Segal, M., & Naik, G. (2019). The expected impact of the implementation of International Financial Reporting Standard (IFRS) 16 – Leases. *Journal of Economic and Financial Sciences*, *12*(1), 2–12.

Sieverding, A. (2018). A critical analysis of the accounting for sale and lease back transactions under the new IFRS 16 [Thesis]. Universidade Católica Portuguesa.

Skarphagen, R., Ericson, J. (2015). Capitalisation of Operating Lease and its impact on Financial Ratios [Dissertation]. Jönköping University.

Sorrentino, M., Smarra, M., & Farina Briamonte, M. (2020). Lease Accounting: Back into the Past—A General Review of Different Theoretical Approaches. *International Journal of Business and Management*, *15*(2), 136.

Spånberger, J., & Rista, M. (2020). Implications of IFRS 16 adoption Evidence from Swedish publicly listed firms [Thesis]. Uppsala Universitet.

Srivastava, J., Baag, P. (2020). Positive Accounting Theory and Agency Costs: A Critical Perspective. *AIMS Journal of Management. 14,* 101Tănase, A. E., Calotă, T. O., & Oncioiu, F. R. (2018). The Impact of IFRS 16 on the Companies' Key Performance Indicators: Limits, Advantages and Drawbacks. *Academic Journal of Economic Studies*, 4(1), 54–59.

Tarca, A. (2020). The IASB and Comparability of International Financial Reporting: Research Evidence and Implications. *Australian Accounting Review*, 30(95), 231–242.

Teixeira, A. (2021). Accounting for leases – lessons from COVID-19. *Pacific Accounting Review*, 33(2), 238–245.

TeleMasters Holdings Limited. (2019). Integrated Report. Retrieved October 17, 2022, from www.sharedata.co.za/data/009018/pdfs/TELEMASTR_ar_jun19.pdf.

TeleMasters Holdings Limited. (2020). Integrated Annual Report. Retrieved October 17, 2022, from www.sharedata.co.za/data/009018/pdfs/TELEMASTR_ar_jun20.pdf.

TeleMasters Holdings Limited. (2021). Integrated Annual Report. Retrieved October 17, 2022, from www.sharedata.co.za/data/009018/pdfs/TELEMASTR_ar_jun21.pdf.

TeleMasters Holdings Limited. (2022). Integrated Annual Report. Retrieved October 17, 2022, from www.sharedata.co.za/data/009018/pdfs/TELEMASTR_ar_jun22.pdf.

Telkom SA Limited. (2019). Annual Financial Statements. Retrieved October 17, 2022, from www.telkom.co.za/ir.

Telkom SA Limited. (2020). Annual Financial Statements. Retrieved October 17, 2022, from www.telkom.co.za/ir.

Telkom SA Limited. (2021). Annual Financial Statements. *Retrieved October 17, 2022*, from www.telkom.co.za/ir.

Telkom SA Limited. (2022). Annual Financial Statements. Retrieved October 17, 2022, from www.telkom.co.za/ir.

Tshuma, N. N. (2021). Determinants of financial performance of South African businesses in Africa: Evidence from JSE listed telecommunications companies [Minor Dissertation] University of Johannesburg.

Veverková, A. (2019). IFRS 16 and its impacts on aviation industry. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 67(5), 1369–1377.

Villiers, R. R., & Middelberg, S. L. (2023). Determining The Impact of Capitalising Long-Term Operating Leases on The Financial Ratios of The Top 40 JSE-Listed Companies. *International Business & Economics Research Journal*, 12(6), 1–16.

Vodacom Group Limited. (2019). Consolidated Annual Financial Statements. Retrieved October 17, 2022, from https://www.vodacom.com/annual-results.php.

Vodacom Group Limited. (2020). Consolidated Annual Financial Statements. Retrieved October 17, 2022, from https://www.vodacom.com/annual-results.php.

Vodacom Group Limited. (2021). Consolidated Annual Financial Statements. Retrieved October 17, 2022, from https://www.vodacom.com/annual-results.php.

Vodacom Group Limited. (2022). Consolidated Annual Financial Statements. Retrieved October 17, 2022, from https://www.vodacom.com/annual-results.php.

Watts, R. L., & Zimmerman, J. L. (1990). Positive Accounting Theory: A Ten-Year Perspective. In *THE ACCOUNTING REVIEW,* 65(1), 131-156.

Winiarska, K. (2020). Differences Between New IFRS and US GAAP Lease Standards and their Effects on Publicly Listed Companies. *Financial Internet Quarterly*, *16*(2), 14–23.

Appendices

Appendix A

Table 17: Predicted impacts of IFRS 16 before effective date and those observed post effective date

Based on a sample of prior literature, the following analyses were made with regards to the impacts of IFRS 16:

Author and Year	Industry	Industry predicted to be most impacted	Assets	Liabilities	Equity	Effect on ratios	Effect on debt covenants
Predicted impacts before IFRS 16: Leases was adopted							
(Imhoff et al., 1991, 1997)	Not industry specific- Focused on McDonald's	Airlines, Retail Groceries, retail food chains, fast-food chains, hotel and motel chains, railroad, and trucking (Imhoff et al., 1991, 1997)	Increase in assets, however, the increase will be less than the increase in liabilities	Increase in liabilities	No impact	Return on assets declined, and debt to equity increased	Not discussed
(Fulbier et al., 2008)	Not industry specific	Fashion and retail would have the largest impacts.	Increase in assets due to the right-of-use asset.	Increase in liabilities.	Decrease due to the increase in interest expense.	Debt to equity increased by 22% and the profitability ratios indicated a small change, with return on	Adverse

						assets increasing by 0.1%(Fülbier et al., 2008)	
(Duke et al., 2009)	S&P 500 index	Not applicable	Increase of 4% in assets	Increase of 11% of liabilities	Improved retained earnings of 7.14% due to an increase in EBIT	Debt to equity and debt ratio increased. The credit rating would be negatively impacted because of the increase in liabilities (Duke et al., 2009)	Debt covenants could be breached.
(Dillon, 2014)	JSE Listed companies in General Industrials, Industrial Transportation, Food & Drug retailers, General Retailers, Travel and leisure	Food & drug retail, and general retail	Increase in total assets of 11.3%	Increase in liabilities of 33.7%	Decrease due to a decrease in net profit after tax of 2.4%	All leverage ratios increased, with debt to equity experiencing an increase of 74.7%. The current ratio decreased by 10.6% and profitability	Not mentioned

						ratios had smaller changes compared to balance sheet ratios (Dillon, 2014).	
(PWC, 2016)	Not industry specific	Retail, airlines, professional services, Healthcare, wholesale, transport and technology	Increase in assets	Increase in liabilities	Increase due to an increase in EBIT.	Gearing ratios will increase and capital ratios will decrease. Performance metrics will improve (PWC, 2016).	Changes in ratios may affect debt covenants, credit ratings and borrowing costs
(Tănase et al., 2018)	Not industry specific	Not mentioned	Increase	Increase	No impact	Key financial indicators that will increase are EBIT, EBITDA. There are no impacts on EBITDAR, and Earnings per share may increase or	Changes may affect debt covenants.

						decrease (Tănase et al., 2018).	
(Cumming, 2019)	Telecommunications and technology	Not mentioned	No impact	No impact	No impact	Market ratios have the largest proportion in changes. Debt ratio increased with 4.16%. Current ratio deteriorated (Cumming, 2019)	Not mentioned
(Cape, 2019)	Industrial transportation, food and drug retailers, general retailers, travel and leisure	Not mentioned	Increase	Increase	Decrease	Adverse effects on debt to equity (Cape, 2019)	Covenants not disclosed in sample
Predicted impacts after IFRS 16: Leases was adopted							
Author and Year	**Industry**	**Industry predicted to be most impacted**	**Assets**	**Liabilities**	**Equity**	**Effect on ratios**	**Effect on debt covenants**

(Spånberger & Rista, 2020)	All industries	Consumer services	Increase in total assets in the year of implementation of 10.1%	Increase in liabilities in the year of implementation of 21.7%	Increase due to increase in EBITDA of 39.6%.	Increase in debt to equity due to increased liabilities (Spånberger & Rista, 2020)	No impact mentioned
(Le Roux, 2021)	Retail	Retail	Increase in assets being recognised	Increase in liabilities	Slight decrease in equity because of the decrease in net profit	Return on equity and return on assets increased with an average of 8.89% and 6.99% respectively (Le Roux, 2021)	No impact on risk profile of company

Appendix B

Table 18: Financial ratios in the year before the adoption of IFRS 16

Company name	Debt ratio	Debt-to-equity ratio	Return on total assets (ROA)	Return on equity (ROE)	Current ratio	Interest cover ratio	EBITDA margin
MTN Group Limited	64%	177%	55%	153%	0.80	2.45	37%
Vodacom Group Limited	44%	78%	56%	100%	1.04	8.34	41%
Telkom SA Limited	44%	78%	79%	140%	0.90	5.60	23%
Blue Label Telecoms	79%	385%	214%	1038%	1.13	-24.64	-22%
Huge Group Limited	24%	31%	39%	52%	0.81	8.32	35%
TeleMasters	14%	17%	244%	285%	4.63	1.32	8%
Sector total	**55%**	**124%**	**62%**	**139%**	**0.90**	**3.42**	**30.93%**
Sector total excluding Huge	**55%**	**124%**	**62%**	**140%**	**0.90**	**3.41**	**30.93%**

Table 19: Financial ratios in the year of adoption of IFRS 16

Company name	Debt ratio	Debt-to-equity ratio	Return on total assets (ROA)	Return on equity (ROE)	Current ratio	Interest cover ratio	EBITDA margin
MTN Group Limited	72%	251%	50%	176%	0.90	2.03	38%
Vodacom Group Limited	47%	90%	48%	91%	1.30	5.90	46%
Telkom SA Limited	52%	108%	70%	146%	0.95	1.62	21%
Blue Label Telecoms	76%	317%	204%	850%	1.04	3.18	4%
Huge Group Limited	27%	36%	41%	56%	1.42	-6.37	35%
TeleMasters	32%	47%	164%	242%	3.16	3.59	10%
Sector total	**61%**	**158%**	**54%**	**140%**	**1.02**	**2.80**	**35%**
Sector total excluding Huge	**61%**	**159%**	**54%**	**140%**	**1.02**	**2.79**	**35%**

Table 20: Financial ratios in the first year after the adoption of IFRS 16

Company name	Debt ratio	Debt-to-equity ratio	Return on total assets (ROA)	Return on equity (ROE)	Current ratio	Interest cover ratio	EBITDA margin
MTN Group Limited	70%	228%	51%	169%	1.01	2.47	47%
Vodacom Group Limited	50%	101%	57%	115%	1.10	6.68	44%
Telkom SA Limited	51%	104%	68%	138%	0.92	3.80	26%
Blue Label Telecoms	72%	254%	161%	570%	1.08	9.35	8%
Huge Group Limited	23%	30%	37%	49%	1.64	4.76	20%
TeleMasters	47%	89%	119%	225%	0.75	-2.48	6%
Sector total	**62%**	**162%**	**57%**	**149%**	**1.03**	**3.27**	**41%**
Sector total excluding Huge	**62%**	**163%**	**57%**	**150%**	**1.03**	**3.27**	**41%**

Table 21: Financial ratios in the second year after the adoption of IFRS 16

Company name	Debt ratio	Debt-to-equity ratio	Return on total assets (ROA)	Return on equity (ROE)	Current ratio	Interest cover ratio	EBITDA margin
MTN Group Limited	69%	218%	50%	158%	0.98	2.84	44%
Vodacom Group Limited	52%	108%	58%	120%	0.88	6.81	42%
Telkom SA Limited	48%	94%	65%	126%	0.87	4.42	27%
Blue Label Telecoms	69%	218%	131%	415%	1.18	8.02	10%
Huge Group Limited	9%	10%	0%	0%	1.21	60.27	7851%
TeleMasters	37%	60%	112%	180%	0.78	-0.15	11%
Sector total	**62%**	**160%**	**55%**	**143%**	**0.95**	**3.79**	**40%**
Sector total excluding Huge	**62%**	**161%**	**55%**	**144%**	**0.95**	**3.76**	**39%**