THE HARDEST CYCLE CLIMB AT TCC: A FINANCIAL INSTRUMENTS CASE

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Abstract

TCC AG is a fast-growing bicycle production company and is headed by an ambitious top management team that wants to reinforce the firm's expansion strategy with a sophisticated financial funding scheme. However, combined with an income decline, the financing strategy unexpectedly poses an existential threat to TCC. Complex accounting questions arise including the likely breach of a financial covenant, the detailed contractual clauses of a prospectus and the execution of a debt-for-equity swap. The underlying accounting requirements cover the recognition, the measurement and the disclosures of non-derivative financial instruments according to the International Financial Reporting Standards (IFRS). To foster a holistic understanding of financial instruments, the educational resource further combines the accounting concepts with related corporate finance theory. With this integrative approach, the case intends to encourage students' critical reflection upon the far-reaching economic consequences resulting from accounting decisions.

Keywords: Financial Instruments, Restructuring, Debt-for-Equity Swap, Covenant, IFRS

1. INTRODUCTION

The case is built around TCC AG, a fast-growing bicycle production company and headed by an ambitious top management team that wants to reinforce the growth strategy with a sophisticated funding scheme. Whereas the characters and the dates of events are fictitious, the accounting challenges resulting from financial restructurings are derived from real-life situations. Anchoring the case in a corporate scenario of financial distress[3] allows the lecturer to discuss the interdependencies between the complex accounting for financial instruments, the mechanisms of financial restructurings and the related theories on capital structure.

Students are introduced to the commonly applied corporate finance toolset of financial covenants and of debt-for-equity swaps. Both play a central role in the restructuring context where financial covenants – as contractually agreed upon monitors of the borrower's profit and liquidity situation – can act as early warning signals of potential financial bottlenecks (Nash, Netter and Poulsen, 2003). Alongside such measures as time extensions or waivers on debt repayments, debt-for-equity swaps represent a common out-of-court procedure to revert an imminent illiquidity crisis (Weston, Mitchell and Mulherin, 2004).

Aside from their importance within the realms of financial restructuring, we decided to implement these tools in our story so that an integrated understanding of the accounting for financial instruments could be fostered. To achieve this purpose, students need to apply their knowledge to a diverse set of case scenarios involving financial instruments and are challenged by considering the wider economic consequences resulting for TCC's corporate finances. A first such consequence is triggered by the classification of the newly issued financial instrument as a liability (instead of equity) that raises TCC's interest expenses and, combined with the revenue decline, leads to the breach of a financial covenant. The infringement, in turn, initiates the need for financial restructuring whereby the imminent crisis can be resolved by exchanging the loan provided by the regional business development bank into equity. Students are thus faced with a reclassification scenario.

[3] In our definition of "financial distress", we follow Ross, Westerfield and Jaffe (2005) who state: "Financial distress is a situation where a firm's operating cash flows are not sufficient to satisfy current obligations […]. Financial distress may lead a firm to default on a contract, and it may involve financial restructuring between the firm, its creditors, and its equity investors" (p.830).

2. CASE METHODOLOGY AND LEARNING OBJECTIVES

The authors' teaching experience has shown that students are so caught up in the mentioned accounting technicalities regarding financial instruments that they lose sight of the broader economic consequences that result from a change in capital structure. In order to be well prepared for the practical realities, however, an in-depth knowledge of accounting for financial instruments should cover not only their respective recognition and measurement, but also their effects for contractual relations with lenders, for communication with capital markets and for the value of the firm itself. Therefore, we chose an integrated case approach that not only spans the recognition, measurement and disclosure of financial instruments, but also shows the economic consequences of accounting decisions. That there is a great need for such an integrative approach is emphasized by Barth (2008) who states:

"Financial reporting educators also need to ensure their students learn the foundational theories that underlie financial reporting. These theories include micro- and macroeconomics, finance, information economics, the role and effects of incentives, rational expectations, and portfolio pricing. The conceptual framework states that the objective of financial reporting is to provide information useful for making economic decisions (IASB 2001, para. 12). Thus, it is clear that understanding economic concepts, including those relating to information for investors and creditors, is fundamental to understanding financial reporting" (p.1164).

Accordingly, the learning objectives of the underlying teaching resource are:

1. *To learn the accounting provisions for non-derivative financial instruments according to the IFRS.*

The objective is achieved by applying the accounting standards IAS 32 and IFRS 9 for the initial recognition and the subsequent measurement of non-derivative financial instruments (section 1.5.1 and 1.5.2 of the requirements).

2. *To understand the interlinkages between recognition, measurement and disclosure of non-derivative financial instruments under the IFRS.*

Students learn that the subsequent measurement of financial instruments is determined by their initial recognition (section 1.5.1 and 1.5.2) and that business incidents trigger disclosure requirements (section 1.5.3 of the requirements).

3. *To raise students' awareness for the economic consequences of accounting decisions on non-derivative financial instruments.*

This objective is achieved by showing how decisions on the classification and measurement of non-derivative financial instruments can affect relations with capital providers (in the form of financial covenants, section 1.5.2) and the firm's capital structure as a whole (section 1.5.4 of the requirements).

4. *To study the common financial restructuring measure of a debt-for-equity swap and its accompanying accounting treatment.*

Students get to know the common restructuring tool of a debt-for-equity swap whose implications are evaluated from both an accounting (section 1.5.1) as well as a corporate finance perspective (section 1.5.4 of the requirements).

5. *To strengthen students' analytical skills by having them assess different negotiation outcomes and the corresponding business consequences.*

With the case, students learn to critically assess different business scenarios and are asked to evaluate the outcomes from both an accounting perspective (section 1.5.1) and from a corporate finance perspective (section 1.5.4 of the requirements).

3. REGULATORY BACKGROUND AND LITERATURE REVIEW

Although the International Accounting Standards Board (IASB) has overhauled the IFRS on financial instruments completely within the last ten years[4], the standards still pose a huge challenge for students, practitioners and standard setters. These challenges stem from the inherent complexities and the ongoing amendments of the financial instrument standards (Ernst & Young, 2015). Considering the usefulness of case-based teaching (see Boyce, Williams, Kelly and Yee, 2001; Chen, 2013) and the aforementioned educational and practical difficulties, the case at hand covers the most current IAS / IFRS on financial instruments: IAS 32 "Financial instruments: presentation", IFRS 7 "Financial instruments: disclosure" and IFRS 9 "Financial instruments".

In particular, IAS 32 attracts considerable attention from the standard setters and various interest groups (IASB, 2008). One of the main reasons is its purpose to regulate the recognition of capital issuances as equity or debt in the financial statements. Therefore, the standard effectively determines the loss-absorption capacity of an economic entity. Despite its central role, the standard is, however, very difficult to apply, because of its widely criticized complexity (IASB, 2008; IASB, 2009) mainly originating from its casuistic nature[5], which as a matter of fact struggles to capture all existing funding structures. Keeping this shortcoming in mind, we added specific indications of the relevant accounting standards and paragraphs to the case requirements to ensure that students spend time on the application of accounting standards instead of on finding the correct paragraphs.

The requirements of section 1.5.1 encourage a detailed discussion on the recognition of financial instruments (IAS 32) asking students for the definitions of financial instruments and their applicability. Following the structure of accounting standards, the requirements continue with the subsequent measurement (IFRS 9) and the notes to the consolidated financial statements (IFRS 7) in sections 1.5.2 and 1.5.3. This integrative approach of combining recognition, measurement and disclosure along one business transaction is often missing in accounting text books and is consequently underrepresented in the curriculum (Ruhl and Smith, 2013).

4 IFRS 7 was published in 2005 and replaced disclosure requirements previously incorporated in IAS 32. The IASB subsequently published versions of IFRS 9 that introduced new classification and measurement requirements (in 2009 and 2010), a new hedge accounting model (in 2013) and a final version in July 2014.

5 See, for example, the specific exemptions in IAS 32.16A – F.

As the central means to motivate students' interest in financial instruments accounting, the case highlights the significance of accounting decisions for the financial rescue of a financially distressed firm. All financial measures to avert the imminent illiquidity are centred on the core question of TCC's capital structure and funding strategy. Students working on the restructuring case experience how contract details change throughout negotiations and how important a continuous and proactive accounting assessment is for a successful financial restructuring.

There is one strand of recent case studies that covers the accounting treatment of capital measures such as stock buybacks (Kimmel and Warfield, 2008; Mohrmann and Stuerke, 2014) or preferred stocks issuances (Margheim, Hora and Kelley, 2008). Other cases are centred on derivatives accounting as part of hedging relationships (Smith and Kolbeck, 2008; Ebrahim, Schultz and Hollister, 2010). Whereas all of these cases deal with financial instruments, they are mainly focused on isolated accounting discussions according to the US-GAAP and do not include an assessment of the resulting economic consequences.

To our best knowledge, the case at hand is the first comprehensive educational resource that deals with the complex financial instruments accounting according to the IFRS in a financial restructuring setting. The case targets the specific needs of an integrative accounting and finance curriculum raising students' awareness for the economic consequences of accounting decisions (Bianco, Levy, Marcel, Nixon and Osterheld, 2014). Therefore, we understand our case as an innovative contribution to the existing educational literature on accounting.

4. EMPIRICAL RESULTS FROM CASE IMPLEMENTATION

The case was implemented twice in an advanced accounting course of the Master of Sciences program at the authors' graduate business school. The course is an accounting elective with the learning objective of deepening students' understanding for the IFRS. Students at this stage of the curriculum are required to know the accounting basics and to have attended corporate finance classes dealing with the fundamental theories of capital structure and firm value. If students are not familiar with the foundations of capital structure theory, the modular setting of the case requirements allows instructors to leave out section 1.5.4. Nevertheless, we encourage instructors to debate the capital structure theories at least briefly during the in-class discussion of the case, because the learning outcome seems to – as is intended by our case design – be positively impacted by integrating the topic with financial instruments accounting (see further details in section 2.4 Student Assessment).

We provided students with the case and the relevant accounting standards four weeks in advance of the in-class discussion. In order to set an incentive to work on the case at home and to actively participate in the case discussion, we informed students via the course outline that one-sixth of the final exam would relate to the accounting concepts covered by the case. To ensure a basic knowledge on the relevant accounting topics, we gave a comprehensive introduction on accounting for financial instruments under the IFRS one lecture before the in-class discussion. This mandatory preparation session took 90 minutes and was sufficient for covering all foundations.

The discussion revealed that the understanding of the accounting technicalities was significantly improved by encouraging a reflection upon the economic consequences resulting from accounting decisions and judgements. Thereby, all accounting aspects were analysed in the case framework of TCC's efforts to restructure its financial position. During the entire class, we encouraged students to discuss the corporate finance implications of the accounting decisions and asked whether and how accounting alternatives could be realized by TCC's management. Furthermore, the international heterogeneity of our graduate students inspired a discussion of the participation certificate in the context of different corporate governance structures. Due to the fact that for the majority of the class the discussed funding instrument was unknown, students had to assess the extracts from the prospectus in great detail to be able to respond to the asked for accounting consequences during the in-class discussion.

For the exam, we asked questions on case-related topics like accounting for debt-for-equity exchanges and the assessment of contractual clauses with regards to the IAS 32 classification. In previous accounting classes, where no case-based teaching was implemented, the exam results for financial instruments questions were significantly lower than the average outcomes in our exams. This observation is in line with the high complexity of financial instruments accounting (Ernst & Young, 2015). Furthermore, the significantly better exam results and students' oral feedback provide initial evidence that the integrated nature of case-based teaching helped to achieve this improved learning outcome. The effectiveness of the underlying case was, however, further analysed with a structured survey, the results of which are presented in the following section.

While the authors chose the in-class discussion for case implementation, the structure of the pedagogical resource also allows for various alternatives. An in-class discussion that is moderated by the students themselves could be particularly effective as it would foster an independent elaboration of the accounting issues. The answers to the different requirement blocks regarding recognition, measurement, disclosure and corporate finance could be presented by student groups via a presentation leaving the interrelations and economic consequences up for a discussion moderated by the lecturer.

Following the effectiveness testing of recent case studies, we assessed the pedagogical usefulness of the case with a structured survey (see Churyk and Stenka, 2014; Davis and Matson, 2014; Holtzblatt and Tschakert, 2014). A questionnaire with 12 statements similar to the one used by Detzen, Hoffmann and Zülch (2013) as well as Detzen, Stork genannt Wersborg and Zülch (2015) was distributed to students after the in-class discussion. Students were asked to indicate their level of agreement based on a five-point Likert-type scale with one indicating strong- and five weak agreement. Table 1 presents the results of our survey.

Table 1. Aggregated Student Responses to Questionnaire

Statement N = 47	*Strongly Agree (1)*	*Agree (2)*	*Neutral (3)*	*Disagree (4)*	*Strongly Disagree (5)*	*Average*
1. In general, case studies are useful for learning accounting.	35	12	0	0	0	1.26
2. Prior to the case, my understanding of the accounting treatment of financial instruments was weak.	11	28	6	1	1	2.00
3. The case increased my knowledge of the accounting treatment of financial instruments.	15	29	2	1	0	1.77
4. The case study provided "real-world" application of what I learned in class.	20	20	6	1	0	1.74
5. The case required me to integrate knowledge of several accounting topics.	10	25	11	1	0	2.06
6. The integration of corporate finance topics helped me to understand the practical application of accounting standards on financial instruments.	15	24	7	1	0	1.87
7. The case study was too difficult.	1	8	17	18	3	3.30
8. The case was too easy.	0	1	17	21	8	3.77
9. Overall, the case provided a beneficial learning experience.	12	31	2	2	0	1.87
10. Overall, the case study served the purpose of this course well.	10	33	2	2	0	1.91
11. I enjoyed working on the case study.	11	26	8	2	0	2.02
12. The case study enhanced my problem-solving skills.	11	18	15	3	0	2.21

Source: Own creation following Detzen et al. (2013; 2015)

Notes: The table above illustrates our effectiveness questionnaire and summarizes for each of the 12 questions the level of agreement by the in total 49 surveyed students.

As the table above shows, the vast majority of students expressed the opinion that case studies are highly useful (average of 1.26) for learning accounting. Furthermore, statements 2 and 3 of the survey indicate that participants' knowledge in accounting for non-derivate financial instruments according to the IFRS was improved by the implementation of our teaching resource also via the application of the learned accounting technicalities to a realistic case scenario (see statement 4). Consequently, we see our first formulated learning objective (LO) of the case approved by the student-feedback.

Moreover, the learning experience seemed to be particularly enhanced via embedding related accounting and corporate finance topics in a real world restructuring context. The strong results for statements 4 to 6 approve the integrative nature of our case that is defined by LO 2 to LO 4. The holistic understanding of financial instruments relating to the accounting interlinkages, the respective application to the restructuring environment and the resulting economic consequences is, in our opinion, highly important for business students to practice because they are likely to face such complex situations along their potential career paths in the banking- and consulting industry.

Overall, working on case studies in general was perceived as effective (LO 5) and the level of difficulty – taking into account the complexity of financial instruments and financial restructuring – was approved as being appropriate. This appropriateness was underpinned by students' feedback that they spent 4.2 hours on average preparing the in-class discussion.

5. CASE

5.1. Introduction

From his office, Stephen Mayer was watching the third shift of workers arriving at the site of "The Cycle Company" – TCC in short – Germany's leading bicycle manufacturer. Located in the sleepy town of Teterow, out in the county in Mecklenburg-Western Pomerania, TCC was not only the most important employer of the region but also received exceptional news cover-age. With its successful turnaround strategy from a low-cost bicycle producer to Germany's avantgarde manufacturer of high-quality and electric bikes, TCC regularly hit the national headlines of the leading business newspapers reading.

For TCC to accomplish its turnaround strategy, significant investments into new production lines and software as well as the acquisition of a startup company were necessary. To raise the required funding, various external sources had to be tapped introducing a new complexity to TCC's corporate finance and accounting departments. Working long hours had therefore become the new norm for Stephen, the CFO of TCC. However, tonight Stephen is observing the working crowd with a, for him, unusual trace of resignation as July 15, 2014 could enter into TCC's history as the sudden turning point of its success story.

In the afternoon, the German postal service announced that it had started to develop and pro-duce its own bike series for its crew of postmen. Consequently, neither the envisaged regular production of 20 000 high-quality bikes nor the special order of 15 000 e-bikes would be allocated to TCC. The cancelation came as a shock since the German postal service had been one of TCC's major clients. They had regularly ordered a great batch of custom-made bicycles that were expected to contribute nearly 30% of revenues and 50% of profits in 2014.

An emergency meeting with Peter Schulz, head of accounting, uncovered even more bad news: Due to the drastic collapse in forecasted income, some of TCC's contractual loan agreements would be breached triggering the early repayment of a significant share of the company's debt by the end of the year. After the evening session with Peter, Stephen was sorting his thoughts trying to find a way out of the seemingly hopeless situation that could drive TCC into bankruptcy. Although he felt tired of going through the corporate finance toolbox again to make TCC's strategy work, he was sure that capital and financial restructuring measures would be at the very top of his agenda for the coming months.

A knock on the door from his personal assistant, who wanted to call it a day, interrupted his pondering: "Could you just get me Thomas on the phone before leaving?" Stephen needed to desperately discuss his thoughts with someone. After three rings, Thomas answered the phone with "Silverman Sachs, capital markets advisory, Thomas Claasen speaking." – "Hi Thomas, this is Stephen."

5.2. Background

Founded as a family business in the 1870s, TCC had produced bicycles consistently for the past 140 years spanning all different kinds of clients from the Prussian postal service in the Wilhelminian era to the racing cyclists of the 1972 Summer Olympics. In the 1990s, TCC shifted its focus from the complete production of two-wheelers to the pure assembly of bicy-cle parts that, in the course of globalization, could be imported at a much lower cost from the Eastern European and Asian markets.

Following a mass production approach, TCC continuously expanded its output and gained a market share of a quarter of the total German bicycle production. Thereby, the majority of TCC's production consisted of low-budget city and mountain bikes that were sold to German discounter chains. To generate profits in this very low margin business, the assembly processes were geared towards efficiency and working capital management was declared a top priority. Nevertheless, to secure favorable pricing in the international markets, bicycle parts were procured in batches weighting heavily on TCC's inventory position while the payment terms were largely dictated by the discounter chains limiting TCC's influence upon receivables.

Although TCC generated positive returns due to its large production output und the resulting economies of scale, profits had stagnated in recent years. To trigger a new phase of earnings growth, TCC decided in 2011 to exploit the potential of higher priced racing and city bikes. Industry experts had long predicted great expansion opportunities in this segment as the two-wheeler was expected to turn into a lifestyle product. Convinced of the growth outlook; TCC started building a new assembly line that – with the promise of regional job creation – was financed by the business development bank of Mecklenburg-Western Pomerania.

While the construction proceeded smoothly, the company faced great challenges with designing a lifestyle product, establishing it in the market and finding the appropriate distribution channels. Only with the German postal service could a major order be arranged that was in need of high-quality, tailor-made bicycles for its crew of postmen. To advance its product placement capabilities and polish up its stale brand reputation, TCC acquired the trendy Ber-lin-based bike and e-bike startup, ESpeed, in June 2012. The transaction was financed with the stock-listing of TCC in the beginning of 2012 that was also used by the then controlling shareholders to exit their engagement. Due to the good relation to the target, the takeover was executed in a timely fashion and all accounting implications were processed by the end of 2013.

As part of the takeover agreement, the target's founder, Andreas Mann, became the new CEO of TCC and the personifying figure of the company's turnaround strategy. As the CEO's first act, ESpeed's well-known brands were rolled out in TCC's new production facilities, multiplying the output of the highly demanded bikes. To further integrate and expand ESpeed's margin-rich e-bike production, Andreas Mann was planning on a second new assembly line to be built in 2014, for which funding was still needed. Since TCC's cash reserves were strained by the interest payments for the loan of the business development bank, external funds would need to be raised in order to stabilize TCC's financial situation and to invest in the next ex-pansion phase.

TCC has a credit rating of BBB- and prepares its consolidated financial statements according to the International Financial Reporting Standards (IFRS). Its fiscal year covers the months from January to December.

5.3. Funding the expansion of TCC

Going one year back in time, TCC's future looked all too bright with no signs of financial distress ahead…

Since nine o'clock sharp, Stephen was waiting for the CEO, Andreas Mann, known as Andy, who was already running five minutes late. The two had arranged an appointment to go over Andy's storyline for the meeting with Thomas Claasen. Thomas was an old university friend from Stephen's days at EAA Business School who was now working in the capital markets advisory division of the investment bank Silverman Sachs in London. Just three months ago, they had met at an alumni gathering in Barcelona, where Thomas talked extensively about his new girlfriend and to Stephen's greater interest, about his unusually empty deal pipeline.

When Stephen told him that TCC was in need of capital to finance its e-bike expansion strategy, they decided to stay in close contact and after consultations with Andy set up a meeting in TCC's headquarters for today, September 12, 2013 at 11 am. Stephen felt very content about the forthcoming collaboration with Thomas as, on the one hand, he trusted in the fairness and support of his old university friend during the deal. On the other hand, Silverman Sachs was one of the best known market intermediaries providing TCC access to a promising pool of funding. Just recently, Silverman Sachs had launched a new broker platform targeted at companies in the lower ranks of investment grade ratings. In times of zero interest yields, investors' increasing risk appetite encouraged such placements and Thomas was keen to stand up as a rainmaker and present TCC in front of the board of Silverman Sachs.

Ten minutes past nine, the bell of the elevator rang and Andy exited accompanied by the newest trial version, the trendy e-bike TX5005 that he was testing as a pilot driver. In a good mood, he passed his personal assistant and entered his office greeting Stephen with a: "Sorry for running late, so much traffic this morning!" Stephen tried his best to respond with a smile as one actually needed to search for cars on the empty roads of Teterow. After

Andy's obligatory first cup of coffee, the two finally got down to preparing today's presentation.

5.4. Corporate financing tactics

For Thomas to get a more detailed picture of the company, a virtual data room was established containing all types of documents like TCC's annual reports, its recent budget plans, its loan contracts and its articles of association. Although Stephen knew most of these documents, he also needed to prepare for the meeting. First and foremost, he had to gain a better understanding of how the different types of funding instruments would affect TCC's corporate finances. He was especially focused on the leverage ratio, as he knew that an increase would further deteriorate TCC's rating and raise its capital costs due to the adverse effects of indebtedness.

To enter the negotiations thoroughly prepared, Stephen instructed Peter Schulz, head of accounting, to evaluate the most likely funding scenarios. Peter explained during the CFO briefing that in a first scenario a bond could be issued. This would raise TCC's leverage ratio and as the instrument was expected to trade on the broker platform of Silverman Sachs, the bond would enter the balance sheet at its prevailing market value in each reporting date. Any fair value adjustments would be included in the income statement and change the amount of equity thus impacting TCC's leverage ratio. Although Stephen knew it would be an uphill battle to explain to the other executive board members why the fair value adjustments impact TCC's financial performance, he was convinced that issuing a bond on the broker platform would be proof of TCC's professionalism in the corporate finance sphere.

Regarding the capital costs of the instrument, Peter was advocating a zero bond to avoid fur-ther straining the company's cash flows on top of all the ongoing investments. Nevertheless, a zero bond – of this Peter was sure – would still impact the income statement although no cash interest payments would occur. As soon as the terms were known, he would definitely need to dive into the exact calculation approach!

In a second scenario, Peter was considering a mezzanine funding instrument called a participation certificate that was a particularity of the German capital markets. The certificate's payments were usually fixed but also included a step up clause in the form of a right to partic-ipate in a company's profits. Peter recalled that this alternative construct would classify as equity if (1) the maturity of the participation certificate was perpetual, (2) TCC held the right to terminate the certificate and (3) the full amount of payments was triggered by the distribution of dividends to common shareholders.

The head of accounting proclaimed that the charm of the latter solution was twofold: On the one hand, the equity instrument would improve TCC's capital structure due to its classifica-tion as equity. On the other hand, the full amount of annual costs could be influenced by TCC, because the participation rights would be directly linked to the company's dividend policy. Peter dived further into the logic explaining that in years of greater investment needs, TCC could decrease its distributions to shareholders and in this way, also lowers its payments to participation holders. Therefore, TCC would be able to retain enough capital to internally fund its strategic initiatives – also with the participation certificates! Combined with the infinite lifetime of the mezzanine instrument that could be terminated only by TCC the contractual obligation for repayment could be managed very flexibly.

Even without looking into the numbers, the outlined options mixed with the accounting jargon sounded quite complex to Stephen. For the negotiations with Thomas, he decided to stick to his key take-away of Peter's briefing, namely to link the annual repayments of the new investments to TCC's dividends. To Stephen, this appeared to be the optimal financing strategy as it would grant the company a great degree of financial leeway in the years of its ambitious e-bike expansion project.

5.5. The negotiation

Thomas arrived punctually at the production site with a cab from Rostock airport. Stephen greeted him personally at the entrance of the administration tower and guided him up to the conference room, where Andy was already waiting. After distributing the slides and going through the agenda, Stephen handed over to the CEO who started to supplement the sales figures with his story on TCC's past turnaround strategy from a producer of low-budget to high-quality bikes. He continued his presentation by talking about the next milestone: the expansion into the e-bike segment that was expected to generate sales of 40 000 e-bikes in 2014 and 80 000 by 2018.

With the intention of preparing the following negotiation session, Stephen politely interrupted the strategic part of the presentation leading over to the financials with the question: "And what does the boost in sales mean for TCC's results? This brings us to the next slide."

Figure 1. Financial performance, 2012-2018e

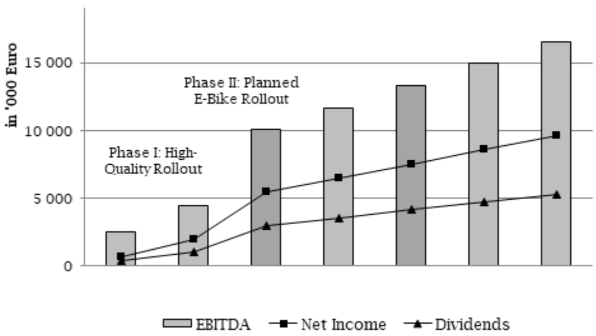

Table 2. Selected financial numbers, 2012-2018e

	EBITDA in 000 €	*Net income in 000 €*	*Dividents in 000 €*
FY2012	2513	691	380
FY2013	4448	1948	1072
FY2104e	10058	5432	2988
FY2015e	11678	6485	3567
FY2016e	13298	7538	4146
FY2017e	14918	8591	4725
FY2018e	16538	9644	5304

Source: own creation

Stephen illustrated that with the expansion into the margin-richer e-bike segment, TCC would not only expand its total volumes sold, but also planned to double its EBITDA results with a target of 10 million euro for 2014 and net income of 5.4 million euro. For the following years, the slide showed a continuous increase in EBITDA and net income, of which more than half was assumed to be distributed to TCC's shareholders. Stephen used the promising profit fore-casts to announce his proposal: "With TCC's growth outlook, we see great potential for inves-tors to participate in the company's success and therefore, suggest funding our capital needs with participation certificates."

Thomas seemed surprisingly content about the proposal, but asked for a short break to under-take some calculations mumbling: "Assuming a nominal amount of 35 million euro, a risk-adjusted interest rate of approximately 7% and a maturity of five years…" After a couple of minutes, the negotiations resumed. Thomas reopened the meeting explaining that the terms looked acceptable to him but as Silverman Sachs would underwrite the issue he needed to reconfirm with the risk guys back in London. From experience, he was already sure that they would want a covenant as to better monitor the financial situation of TCC for the duration of the investment.

Concretely, Thomas was advocating the interest coverage ratio, being defined as EBITDA over total interest expenses, as a covenant. To bring the well-developing negotiations to a concise conclusion, Stephen reassured that such a contractual add-on should not be a problem. TCC was already following this ratio very closely in its internal reporting systems because of its loan agreements with the business development bank of Mecklenburg-Western Pomerania.

Thomas remembered having seen the loan documentation in the data room, but asked Stephen to remind him of the exact conditions. The CFO recalled the key points of the contract: "10 million euro borrowed in January 2011 at an annual interest rate of 7% and with a maturity of 10 years including the covenant ratio EBITDA over net interest expenses with a threshold level of 350%. If the ratio falls below this level, the bank has the right to withdraw its fund-ing."

Again Thomas sank into calculations, but after a few seconds concluded: "Ok, that should be fine. We would include a not that restrictive threshold level of 250%. As to the other terms, I will talk to my colleagues and get back to you, Stephen, with the final terms within the next weeks." After closing the meeting, Andy insisted on showing Thomas the production facili-ties. However, Thomas had to catch the next flight and get back to his office for an all-nighter.

One week later, Thomas sent the contract and the prospectus for the upcoming road shows. In his e-mail, he expressed his confidence in being able to raise the 25 million euro within the coming months or during the expected Christmas rally, at the latest. For its advisory and issu-ance services, Silverman Sachs would charge a transaction fee of 1% of the nominal value of the bond. With the exact documentation and a copy of the signed contract in hand, Stephen asked Peter to double-check the papers. However, the head of accounting proclaimed not to be an expert on the complex classification of financial instruments and proposed to get an external opinion. Therefore, Stephen approached a trusted financial auditor who directly clas-sified the issued financial instrument as a liability.

The CFO was surprised by this outcome as according to the external opinion the initially as-sumed equity instrument somehow had turned into a financial liability. He wondered where Peter had gone wrong in his assessment. Or did Stephen miss out on something amongst all the complex accounting assertions? Should he have asked Peter to join the meeting?

5.6. Can financial restructuring avert the crisis?

TCC's complex capital structure combined with its operational difficulties causes the CFO quite a headache on the night of July 15, 2014…

Stephen was relieved to hear his old friend at the other end of the line and continued the con-versation: "I am calling as we have a problem here at TCC and at this late hour I better get straight to the point." – "Sure, fire away Stephen. I am all ears." Stephen briefly illustrated the happenings of the day with the order cancellations of the German postal service. He knew that he would not need to go into the details in order to receive a well-founded advice as Thomas had extensively studied TCC's financials for the bond issue one year ago.

Therefore, Stephen focused his description on the effects of the lost customer. He explained that although the negative accounting consequences concerning impairments could be held at a minimum, the sales collapse in the margin-rich bikes segment would weigh heavily on the company's EBITDA figures for 2014 and the foreseeable future. Combined with the higher interest expenses due to the bond issue, TCC's adjusted forecasts predicted a breach of the loan covenant with the business development bank.

Table 3. Revised Income Statement for 2014e

in 000 €	*2014e*
Sales	118 250
EBITDA	7 328
EBIT	6 328
Net Income	3 658
Dividends	0

Source: own creation.

According to the contractual agreements, the breach would grant the counterparty the right to reclaim the outstanding loan by the end of the year. However, within just four months, TCC would not be able to raise the necessary capital especially not in its current crisis state. Thomas had a fast solution at hand: "Get rid of the loan by executing a debt-for-equity swap! The terms are much too restrictive – quasi a relic of the financial crisis. However, that said, I would not get involved in renegotiations of the conditions or even a postponement of the fi-nancial covenant. In the end, you might even have to report this mess and thus raise uncertain-ties in the capital markets. Just get the loan swapped into tangible equity before the end of the reporting period. The number of new shares should definitely lie within the ranges of your articles of association so that you don't even need a shareholder vote."

Table 4. Term sheet debt-for-equity swap

in 000 €	*As of July 2014*
Book Value Loan	10 000
Fair Value Loan	8 000
Fair Value of Additional Equity	8 000
Advisory Fees	100

Source: Own creation.

To Stephen, the call uncovered a, to date, unconsidered way out of imminent insolvency. He asked Thomas to put together an official document with a summary of the necessary actions so that Peter could prepare the negotiations with the business development bank. Stephen ended the call by insisting on a bill for the probably company-saving advice.

Calmed down, Stephen left his office shortly before midnight. After a good night sleep, he would arrange a meeting with the bank tomorrow. Then, TCC's future and the jobs of 1 200 people would lie in the hands of the county of Mecklenburg-Western Pomerania.

5.7. Requirements

5.7.1. Presentation of financial instruments

1) Please provide the definition of a financial instrument according to the International Financial Reporting Standards (IFRS).

2) What are the prerequisites according to IAS 32.11 and IAS 32.16 to classify a financial instrument as equity? Please ignore the specific exemptions in IAS 32.16A-F for your answer.

3) Do you agree with Peter that the participation certificate discussed in the CFO briefing classifies as equity? For your answer, interpret how the following three characteristics influence TCC's contractual obligation according to IAS 32.16 (a):

- The issuer's right to terminate the participation certificate.
- The determination of payment to participation holders.
- The maturity of the participation certificate.

4) Consider the final terms of the participation certificate in the prospectus and explain:

- Why the financial auditor classifies the participation certificate as a liability.
- What role the included financial covenant plays for the classification according to IAS 32.25.

5) What is the correct accounting treatment of the debt-for-equity swap according to IFRIC 19? Please provide the booking entries for the transaction detailed in Table 4.

5.7.2. Measurement of Financial Instruments

1) Is Peter right that the fluctuating market values of the bond have to be reflected in the income statement? What alternative accounting treatment would be possible?

2) Due to the zero bond structure of the bond, TCC has to apply the effective interest method according to IFRS 9.B5.4.1-B5.4.7. Please complete the table in the appendix (Table 6) assuming that no dividends will be paid by TCC for the duration of the bond.

3) Calculate the interest coverage ratio for the years 2014 and 2015 as defined in the pro-spectus in Table 5 of the appendix. Include the EBITDA forecasts of Table 2 in your calculations.

4) How does the sales collapse impact the interest coverage ratio? Please use the revised income statement from Table 3 for your calculations.

5.7.3. Disclosure of financial instruments

1) Why is Thomas pressuring to close the debt-for-equity swap before the end of the fiscal year? What disclosures would otherwise be needed according to IFRS 7.18?

2) What year-end fair value disclosure would be necessary for the loan according to IFRS 7.25?

5.7.4. Related corporate finance issues

1) What is the optimal leverage ratio for TCC according to the Modigliani and Miller proposition I?

2) Please challenge your answer to the previous question with the trade-off theory.

3) What kind of signals do equity issuances convey to the capital market? Please discuss your answer within the pecking order theory.

4) Which corporate finance measure does TCC use to resolve the capital structure issue? Which of the above capital structure theories best explains TCC financial restructuring decision?

Detailed solutions to the requirements are available from the authors by request. Send a mail to josefine.boehm@hhl.de

6. CONCLUSION

The resolution of financial distress often entails deleveraging the capital structure of a firm in payment default via financial measures such as debt-for-equity swaps. While analysing and understanding such complex corporate scenarios is a difficult task by itself, the cumbersome accounting treatment comes on top and poses an additional challenge for students. An integrated teaching case like the one at hand offers instructors the chance of teaching the relation between the corporate finance mechanisms and intertwined accounting treatments based on a real-life situation. The storyline of the case thereby introduces–with TCC's various lenders, investment banking advisors as well as financial accountants–a set of relevant stakeholders for the company's restructuring and demonstrates their different mindsets and understanding of the situation.

Even though the teaching case methodology is a popular pedagogical approach in business schools, the interdependency between corporate finance and accounting has so for not been properly reflected in precedent teaching cases. In order to fill this educational research gap, students are asked in this case to solve a number of intertwined corporate finance and accounting issues. By working their way through the teaching case, students are expected to gain a thorough understanding on the accounting provisions of financial instruments under the IFRS. Furthermore, the instructional resource asks students to apply financial restructuring measures and reflect upon the resulting economic consequences. Last but not least, the case methodology is designed to strengthen students' analytical skills by following complex business negotiations and assessing different business scenarios.

These objectives are confirmed by the empirical results of an effectiveness survey undertaken in two in-class teaching implementations at a graduate business school. The student responses to the structured questionnaire show that case studies in general are perceived as a useful learning tool. Furthermore, the results show that the case increases the accounting knowledge on financial instruments and that the integration of corporate finance topics helps to understand the complex accounting technicalities. The results of the pedagogical usefulness could be further underpinned by improved exam results after the implementation of the teaching case relative to previous years.

Although the authors' practical and theoretical experiences are focused on corporate finance and accounting issues, the implementation and the resulting learning takeaways of the teaching case provide ample insight into the usefulness of teaching cases in general. In particular, this manuscript shows that the integration of overlapping business issues can significantly improve students' overall learning experience. Arguably, the wider application of teaching cases as integrative teaching resources covering strategic management and managerial accounting for example should be a fruitful research venue in the field of case-based teaching.

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APPENDIX TO CASE MANUSCRIPT

Table 5. Participation certificate conditions (excerpts of the prospectus)

Issuer:	The Cycle Company
Specified Currency:	EURO
Nominal Amount:	35 000 000
Issue Amount:	25 000 000
Issue Date:	01.01.2014
Maturity Date:	31.12.2019
Interest Basis:	Zero Coupon

Table 6. Effective interest method template

Fiscal Year	*Opening Balance in €*	*Interest Expenses in €*	*Closing Balance in €*
2014			
2015			
2016			
2017			
2018			

§ 9

(Termination of Participation Certificates)

1. During the lifetime of the instrument, TCC reserves the right to terminate the partic-ipation certificates at the end of each calendar year, with the first date being 31.12.2014.
2. In the event that the interest coverage ratio should amount to less than 250%, the holder is granted the right to terminate the certificate and demand immediate re-demption.

"Interest coverage" ratio is thereby defined as (1) earnings before interests, taxa-tion, depreciation and amortization over (2) net interest expenses of the consolidated financial statements. Net interest expenses equal the sum of all interests, compensa-tions and commissions that relate to the liabilities recognized in the balance sheet, irrelevant of whether these costs are capitalized or expensed.

§ 10

(Determination of Participation Right)

1. Starting from fiscal year 2014, holders of the certificate will additionally receive a right to participate in TCC's profit development. The yearly payment will amount to 35% of paid cash dividends per common share.
2. Should no dividends be distributed to common shareholders, TCC is also not re-quired to make any payments to the holders of the participation certificate.
3. In case of a negative consolidated net income, no share of loss will be attributed to the holders of the certificate.

Source: Own creation