Has damage from goodwill impairment grown in China? Analysis and response

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1. Introduction

M&A in China plays an important role in restructuring, transformation and upgrading of state-owned enterprises, ‘Made in China 2025’, the globally oriented Belt and Road Initiative and supply-side structural reform and many other challenges and opportunities. According to Wind database, the total amount of M&A transactions of listed companies in China exceeded 2.28 trillion yuan in 2019, of which goodwill accounted for nearly 10%, and the amount of goodwill of some companies has exceeded their equity or market value, but it is not common for goodwill to bring sustained excess profits after M&A. On the contrary, a ‘too little, too late’ issue exists with respect to the impairment of goodwill under the existing impairment-only model, and an enterprise will often confirm a lump of accrued goodwill impairment in an untimely manner. Accounting for goodwill impairment has increasingly raised concerns (Zhang & Zhu, 2019), with Ramanna and Watts...
finding that the subjectivity in fair value estimation of goodwill assets is more significant in comparison to other assets, such as accounts receivable and property, plant and equipment (PPE), making the write-off amount nearly unverifiable. At the end of 2018, the China Securities Regulatory Commission (CSRC) issued Accounting Regulatory Risk Alert No. 8 – Goodwill Impairment, which requires enterprises to flag signs of goodwill impairment, test this in a timely manner, and standardise the accounting and disclosure of goodwill impairment. According to the 2018 Annual Accounting Supervision Report of Listed Enterprises issued by the CSRC, there are three serious problems regarding the disclosure of goodwill and goodwill impairment. First is failure to consider the performance commitment and insufficient recognition of identifiable net assets, which lead to excessively high goodwill in the initial measurement. Second is no impairment tests of goodwill nor consideration of the impact of goodwill allocated to minority stockholders’ interests, and an arbitrary allocation of goodwill to asset groups. Third is insufficient disclosure of goodwill, goodwill impairment testing and confirming of impairment. In January 2019, after the Accounting Standards committee of the Ministry of Finance asked for feedback on whether to reintroduce amortisation of goodwill, nearly 900 listed enterprises confirmed accrued goodwill impairment of over 0.17 trillion yuan for 2018 – a quadrupling of the impairment reported for 2017, and some 14 times the impairment reported for 2016. In addition, the carrying amount was above 1.37 trillion yuan. Together with the increasing trend in the amount of goodwill and goodwill impairment, it is questionable whether the existing impairment test is sufficiently ‘rigorous and operational’ to justify the non-amortisation of goodwill and provide relevant information to users of financial statements.

Accounting standards are considered institutional arrangements to reduce transaction costs. However, high-quality accounting standards differ from high-quality accounting information (Qu et al., 2017). The existing impairment-only model reflects the wide use of fair value, which helps to improve the value relevance of goodwill accounting information (Godfrey & Koh, 2009). Although the intention is to enhance the informativeness of financial statements, the discretion allowed in estimating fair market values has incentivised earnings manipulation, which eventually harms the value relevance of goodwill impairment (K. K. Li & Sloan, 2017; Han et al., 2021). Henning et al. (2000) find that goodwill is a mix of asset-attribute and expense-attribute assets, and that acquirers’ overpayment is linked to the expense-attribute component of goodwill, for which a ‘too little, too late’ issue exists under the impairment-only model. For the asset-attribute component, goodwill is only recognised as part of a business combination; thus, economic goodwill exists beyond its recognition in the balance sheet (e.g. self-initiated (internally generated) goodwill of the acquirer). However, as the initial measurement of goodwill depends on the indirect method rather than the direct method, it is difficult to distinguish the internally generated goodwill of the acquirer from the acquired goodwill. After the M&A, goodwill is tested for impairment as part of the cash-generating unit to which the goodwill has been allocated. Therefore, the headroom of a cash-generating unit¹ can shield acquired goodwill against impairment.

¹The headroom of a cash-generating unit is the amount by which its recoverable amount exceeds the carrying amount of its recognised net assets – including goodwill.
Based on the debate, this paper first analyses the theoretical research on goodwill accounting at home and abroad. Second, to explore the shielding effect of headroom in the impairment test, we select high-quality acquirers (e.g. A + H listed enterprises), and assume that the internally generated goodwill exists based on the financial position and the quality of accounting information prior to the M&A. By observing the reactions of investors and analysing the performance of the companies’ market-to-book ratio before the recognition of goodwill impairment, we explore the motives of companies’ reluctance to take goodwill impairment in a timely manner. Third, using a case study, this paper delves into the deep-rooted reasons for and internal logic of high goodwill and high goodwill impairment, and then outlines the economic consequences. Finally, this study offers suggestions to improve impairment testing, M&A transactions, off-balance sheet information disclosure and corporate governance.

The paper makes two key contributions. First, it conducts an innovative, in-depth study from the perspective of high-quality acquirers (having generated goodwill). Henning et al. (2000) divide goodwill into asset-attribute and expense-attribute components, and find that expense-attribute goodwill is expensed in a ‘too little, too late’ manner under the impairment-only model. In the scope of asset-attribute goodwill, based on signalling theory, Godfrey and Koh (2009) argue that the impairment test method provides managers with financial reporting discretion, which can be used to convey timely private information to investors, such as on business strategy and future cash flow, and thus, increase the value relevance of the accounting information. However, using the indirect method of goodwill measurement in M&A transactions, it is hard to ‘peel off’ the generated goodwill of the acquirer from a business combination. Therefore, the headroom of a cash-generating unit can shield acquired goodwill against impairment (M. Li & Peng, 2021). By selecting high-quality acquirers (with generated goodwill), this study finds that good enterprises are not willing to deduct goodwill impairment in a timely manner, and the reaction of investors implies the low value relevance of goodwill impairment disclosure. Further, the trend in the market-to-book (MTB) ratio indicates that the market absorbs the goodwill impairment information before its disclosure (K. K. Li & Sloan, 2017). Overall, in contrast to Beatty and Weber (2006), Godfrey and Koh (2009), and Han and Tang (2019), even in terms of good enterprises, managers delay confirming goodwill impairment for defensive reasons, and there is no evidence that confirming goodwill impairment increases value relevance. Ramanna (2008) finds that members of the US Congress pressured the FASB to abolish pooling accounting and issue the SFAS 142 impairment-only method. Prall (2019) is also against that goodwill is a wasting asset. In any case, standard setters should continue conversations regarding how to improve the impairment approach without compromising reporting quality.

Second, in the specific case study, this study delves into and verifies the reasoning behind goodwill, goodwill impairment and related economic effects. Based on agency theory, some scholars argue that managers reap private benefits and conceal goodwill impairment information via financial reporting discretion, which reduces the value relevance of goodwill impairment. The empirical findings have tended to support the argument that the impairment test method for goodwill reduces the value relevance of accounting information and distorts financial reporting (K. K. Li & Sloan, 2017; Z. Li et al., 2011). However, these empirical studies lack in-depth analysis of the reporting incentives concerning goodwill impairment, and, especially in China, there exists
a prominent agency problem between large shareholders and minority shareholders, which makes the reporting incentives behind goodwill impairment more complex. Therefore, compared with empirical studies, the case analysis in this paper enables us to delve into insiders’ motivations regarding goodwill impairment, especially under the background of the current merger waves in China, and hence contributes to previous studies and theory on goodwill impairment.

IASB (2020) argues that headroom can arise from (1) items that are already present in a business at the date it acquires another business if goodwill is allocated to the combined business, and (2) items generated after the acquisition. If the acquired business has been combined with the acquirer’s business for impairment testing, headroom could be generated by the acquired business, the acquirer’s business or both. Following this logic, excepting high-quality acquirers (with generated goodwill), this study selects a case of a transboundary M&A, for which combining the businesses of the acquirer and acquiree can represent a challenge. Therefore, this can reduce the shielding effect of headroom (e.g. internally generated goodwill of the acquirer, synergies of the two parties). This paper provides evidence of managers avoiding timely goodwill write-offs in circumstances where the controlling shareholder has agency-based motives to do so. In the case firm, the owner of the acquiree in the M&A became the largest shareholder of the listed enterprise after completion of the deal, the benefits of which were closely tied to the bidding price, goodwill recognition and impairment. Therefore, the large shareholder of the case firm has an incentive to conceal bad news and delay the disclosure of goodwill impairment during the period of performance commitment. The case analysis also contributes to the literature on agency conflicts between large and minority shareholders (Bertrand et al., 2003; Jiang et al., 2010).

2. Literature review

The term goodwill first appeared in An Introduction to Corporate Accounting Standards, written by Paton and Littleton (1940), which classifies goodwill as an intangible asset. By studying the essence of goodwill from the perspective of its intrinsic components, different views have been put forward, such as favourable value, synergetic effect and core competence (Hendriksen, 1965). Though different, all these concepts have in common that they regard goodwill as a kind of intangible asset. From the perspective of direct measurement, Paton and Littleton (1940) believed that goodwill reflects the excess profitability of enterprises; that is, the capitalised value of the enterprise’s excess earning capacity that cannot be identified as an intangible asset. From the perspective of indirect measurement, researchers consider goodwill the difference between the overall value of a business and its identifiable assets (i.e. Master Valuation Account). Du and Du (2011) proposed the concept of ‘cleaned’ goodwill, and believed that goodwill includes goodwill generated by the merger premium and internal goodwill recognised by the target enterprise’s merger. Y. Li et al. (2010) believed that the measurement of goodwill recognition should be based on a comprehensive external evaluation of an enterprise’s profitability and capability of generating cash flows, including its own ability, risk and transaction cost. In recent years, with more and more enterprises confirming high levels of goodwill during M&As, scholars have also begun to study the consequences and causes of high goodwill. Barth and Clinch (1996) found that goodwill has value relevance, and the
level of goodwill is significantly related to stock price and excess returns of shareholders. Dionne et al. (2015) found through a study of 1,026 M&As that asymmetric information affects the merger premium and thus leads to high goodwill. Gu and Lev (2011) found that when the stock price of an enterprise is overvalued, executives have a strong motivation to take full advantage of its overvalued stock price by acquiring another enterprise, which leads to overestimation of the acquisition price and goodwill. Xu et al. (2020) found that firms imitate their peers in the initial recognition of goodwill, and this tendency for imitation is positively associated with the proportion of goodwill recognised. The peer effect in the initial recognition of goodwill and the overestimation of goodwill arising from imitation tendencies can be explained by managers’ opportunistic motivations. Bugeja and Loyeung (2015) find that when CEO compensation is related to accounting earnings, the share of the acquisition price allocated to goodwill will increase. Aktas et al. (2013) showed that overconfident management leads to the recognition of more goodwill in M&As.

The subsequent measurement of goodwill has always been a controversial topic. Jennings and Thompson II (2001) found that there was only a weak relationship between the amortisation scale of goodwill and stock prices. Henning et al. (2000) divided goodwill into two parts: goodwill caused by synergies and excess goodwill caused by irrationally high premiums. The stock market value is found to have a significant negative correlation only with the amortised value of excess goodwill caused by irrationally high premiums. In contrast, the goodwill impairment test system is complex and the execution cost is high, impairment of goodwill is uncertain and difficult to verify and audit, and the most complex accounting estimates are subject to significant managerial discretion (Ramanna and Watts, 2012; Andreicovici et al., 2020; K. K. Li & Sloan, 2017). Beatty and Weber (2006) found that management delays the recognition of goodwill impairment loss based on the motivations of debt contract, manager compensation, manager reputation and avoiding the delisting regulation of exchanges. Bostwick et al. (2016) showed that when an enterprise recognises and reveals goodwill impairment information, it is releasing information on likely future cash flow reductions. Creditors such as banks thus regard goodwill impairment as ‘bad news’ on enterprise value impairment, and shorten the debt maturity of the enterprise. On the contrary, if an enterprise does not provide goodwill impairment information and avoids the release of bad news, external stakeholders such as investors cannot see through the (false) overestimation of the goodwill balance (K. K. Li & Sloan, 2017). The comparison of subsequent goodwill measurement methods is interpreted in Table 1.

To sum up, goodwill is a complex economic concept, and its practical estimation is fraught with uncertainties, conflicting motivations and ample room for discretion. In theory, the choice of goodwill amortisation or impairment is not complicated. If goodwill is an asset with a defined life, the accounting treatment option should be amortisation. On the contrary, if goodwill is an asset with an uncertain life that reflects the future economic benefits of a merger, amortisation is not the appropriate accounting treatment. Obviously, the life of goodwill and the future economic benefits represented by goodwill are highly uncertain, and it is difficult to reliably estimate an appropriate amortisation period. Therefore, theoretically, impairment of goodwill is a more reasonable way to deal with the subsequent measurement of goodwill. As far as the capital market is concerned, goodwill mainly arises from M&As. The IFRS and China’s ASBE choice for goodwill value assessment is the indirect method rather
than the direct measurement method. This means that any acquirer paying consideration for an acquisition in excess of the fair value of the acquiree’s identifiable net assets is required to recognise the residual difference as goodwill. Henning et al. (2000) showed that goodwill assets include two components: an asset-attribute component and an expense-attribute component. The stock market reacts positively to the asset-attribute component, but negatively to the expense-attribute component, which implies the complexity and the different economic implications of these components of goodwill assets. Gu and Lev (2011) showed that acquirers tend to overpay in M&As when the stock price is overvalued, and such overpayment leads to overestimation of the goodwill asset in the balance sheet, which consequently leads to a higher level of subsequent goodwill impairment. The overpayment part of the goodwill asset is consistent with the expense-attribute component of goodwill. Therefore, the components of goodwill are complicated, and the current standards and subsequent measurement method do not fully consider the complexity of the goodwill asset.

As pointed out by the IASB in *The Post-implementation Review* in 2018, there are many defects regarding the goodwill impairment process: it is costly and subjective; future cash flow forecasts for the cash-generating unit are often too rosy; information confirming goodwill impairment often lags; and when the impairment loss is finally recognised, the information provided is of little value to investors. In recent years, studies at home and abroad have adopted empirical methods to study the quality of accounting information regarding goodwill. Qu et al. (2017) pointed out that high-quality accounting standards do not necessarily produce high-quality accounting information. The discretionary power of managers affects the quality of goodwill disclosure, and the implementation effect of goodwill impairment accounting standards largely depends on monitoring, inside and outside the enterprise (Han et al., 2021). Although those empirical studies have shown that firms have incentives to conceal goodwill impairment disclosure and undertake a ‘big bath’, little is known about why or how the current accounting standards on goodwill and its subsequent measurement can provide firms with the freedom and discretion to conceal goodwill impairment and engage in earnings management. In addition, there is a difference between acquirers of good and bad quality. High-quality acquirers are likely to have a large amount of self-initiated (internally generated) goodwill, which is beyond recognition in the balance sheet. In impairment testing, it is hard to distinguish quantitatively self-generated goodwill of the acquirer from total goodwill of the combination.
Hence, those empirical studies are unclear on whether complex accounting standards or the abuse of impairment testing leads to the scenarios outlined in IASB’s 2018 Post-implementation Review.

Therefore, this paper selects high-quality enterprises with confirmed goodwill impairment, and investigates the disclosure of goodwill impairment and investor response. High-quality enterprises are more likely to have internally generated goodwill assets beyond the balance sheet. Therefore, we seek to offer insights into whether the reluctance of enterprises to make goodwill impairment provisions is an opportunistic behaviour due to the discretion of stakeholders or a defensive behaviour of managers in line with the fact that impairment of goodwill may distort the accounting information of the enterprise and reduce the relevance of accounting information. From an objective point of view, this paper reveals the defects of goodwill recognition and measurement under the current standard framework. Further, considering that empirical studies only reveal the cause-and-effect relationship between relevant economic variables, and the research conclusions are unable to provide sufficient and systematic decision-making guidelines for standard setters, this paper focuses on case studies to provide an in-depth and detailed setting for goodwill and goodwill impairment research.

3. Goodwill and its impairment of China’s A-share listed enterprises

3.1. Information disclosure under the impairment testing method in A + H-share markets

High-quality enterprises are more likely to have internally generated goodwill assets beyond the balance sheet. Wang et al. (2008) argued that enterprises from cross-border listings have competitive advantages, such as good-quality information disclosure and long-term profits (Yuan & Chen, 2018). For high-quality enterprises, it is much more likely that determining the presence of goodwill impairment is a defensive behaviour of managers, rather than a discretionary accounting practice. Thus, this study analyses the information disclosure of goodwill impairment and investor reactions in the A-share and H-share (A + H-share) capital markets. Among the total 124 A + H-share cross-listed enterprises, 10 had goodwill impairment provisions in 2017. The goodwill impairment disclosure of these 10 enterprises is presented in Table 2.

For A + H-share cross-listed enterprises, there were many varieties of defects regarding goodwill impairment disclosure. Almost all of the 10 enterprises specified accounting policies related to goodwill in their annual reports, yet policy disclosure was essentially based on the accounting standards for enterprises rather than on the specifics of any individual enterprise. As far as disclosing goodwill impairment information about determination of parameters, the numbers of A + H-share cross-listed enterprises were relatively higher than those of A-share listed enterprises. Unfortunately, the disclosure was still one-sided because these enterprises mentioned only some key parameters used in testing rather than all of them and their bases.

Moreover, this study finds that most A + H-share cross-listed enterprises did not discuss the effect of goodwill impairment nor disclose the reasons for goodwill impairment. Only Weichai Power and Petrochina Enterprise Limited disclosed the reasons for goodwill
| Enterprise                     | Goodwill impairment (¥10,000) | Reason for impairment | Effects of impairment on operating conditions | Goodwill accounting policies | Results of goodwill allocation to the asset group | Calculation method of recoverable amount | Determination of parameters (e.g. growth rate, discount rate) | Assessment results of recoverable amount | Evaluation agency | Financial information required for valuation | Fully accrues impairment | Parameters disclosed |
|--------------------------------|-------------------------------|------------------------|-----------------------------------------------|------------------------------|-----------------------------------------------|-----------------------------------------|-----------------------------------------------|-------------------------------------------|----------------|---------------------------------------------|-----------------------------|---------------------|
| Weichai Power                 | 23,807.14                     | Acquisition of other enterprises | X                               | √                           | √                                           | √                                       | Disclosed important parameters such as discount rate | X             | X                                          | X                                          | X                   | 0.098 |
| Petrochina Enterprise Limited | 370,900.00                    | Acquisition of subsidiaries | √                               | √                           | X                                           | √                                       | Disclosed important parameters such as discount rate | X             | X                                          | X                                          | X                   | 0.002 |
| Shanghai Electric             | 1,573.10                      | -                       | X                               | √                           | √                                           | √                                       | Disclosed important parameters such as discount rate and growth rate | X             | X                                          | X                                          | X                   | -0.015 |
| CIMC                          | 3,800.00                      | -                       | X                               | √                           | √                                           | √                                       | Disclosed important parameters such as discount rate | X             | X                                          | X                                          | X                   | -0.035 |
| Metallurgical Corporation of China Ltd. | 158.90                   | -                       | X                               | √                           | X                                           | √                                       | Disclosed important parameters such as discount rate | X             | X                                          | X                                          | X                   | 0.017 |
| COSCO SHIP HOLD               | 209.03                       | -                       | X                               | √                           | X                                           | X                                       | Only disclosed the basis for parameter determination | X             | X                                          | X                                          | X                   | -0.042 |
| Shanghai Pharma               | 5,269.45                      | -                       | X                               | √                           | √                                           | √                                       | Disclosed important parameters such as discount rate | X             | X                                          | X                                          | X                   | 0.095 |

(Continued)
Table 2. (Continued).

| Enterprise                        | Goodwill impairment (¥10,000) | Reason for impairment | Effects of impairment on operating conditions | Goodwill accounting policies | Results of goodwill allocation to the asset group | Calculation method of recoverable amount | Determination of parameters (e.g., growth rate, discount rate) | Assessment results of recoverable amount | Evaluation agency | Financial information required for valuation | Fully accrues impairment | Parameters disclosed | CAR_{[-5,5]} |
|-----------------------------------|-------------------------------|-----------------------|-----------------------------------------------|-------------------------------|-------------------------------------------------|----------------------------------------|------------------------------------------|----------------------------------------|------------------|---------------------------------------------|--------------------------|------------------|---------|
| Everbright Securities Enterprise Limited | 21,681.75                   | -                     | X                                             | √                            | X                                               | √                                      | X                                        | X                                      | X                | X                                           | X                        | 0.036            |
| BBMG Corporation                  | 948.29                       | -                     | X                                             | √                            | X                                               | √                                      | X                                        | X                                      | X                | X                                           | X                        | 0.018            |
| CRRC Corporation Limited          | 2,072.40                     | -                     | X                                             | √                            | X                                               | Disclosed important parameters such as discount rate | X                                        | X                                      | X                | X                                           | X                        | -0.007           |

Notes: √ means yes, means no, – means not mentioned. CAR_{[-5,5]} (cumulative abnormal return) is used to show the investor reaction to goodwill impairment disclosure of enterprises in the capital market, calculated using the market adjusted method. The specific calculation steps are as follows: First, determine the window period \([-5,5]\) for the research event during which the enterprise disclosed goodwill impairment information. Second, calculating the expected return \(E(R)\) of the enterprise’s stocks. The formula for calculating this is \(AR = R - E(R)\), where \(R\) is the actual return on the stocks of the sample enterprise and \(E(R)\) is the expected normal stock return on the assumption that the enterprise discloses. The market adjustment method assumes that the market return on the day is the \(E(R)\) of the enterprise. Third, calculate the cumulative abnormal return \(CAR_{t} = \sum_{t=-5}^{5} AR_{t}\). Only one firm released an interim report with goodwill impairment; the CAR around the interim reporting date is added in the parentheses.
impairment, which arose from acquisition of other enterprises or subsidiaries. Most A + H-share cross-listed enterprises disclosed the calculation of recoverable assets, but failed to provide information on the calculation of the recoverable amount. Only half the A + H-share cross-listed enterprises disclosed the identification of asset groups. In summary, the disclosure of goodwill impairment by A + H-share cross-listed enterprises is fraught with defects. First, there is a lack of unified standards for disclosure, offering flexibility in determining the presence of goodwill impairment. Second, the information disclosed is excessively broad, making it hard to interpret. Third, the lack of information about impairment testing makes it challenging for statement users and regulators to judge the validity and accuracy of impairment losses on goodwill.

From the perspective of capital market reaction, investors’ reactions to the disclosure of impairment losses on goodwill differed. $\text{CAR}_{[-5,5]}$ of A + H-share cross-listed enterprises were also positive and negative, implying no consistent investor reaction on information disclosure and the low value relevance of goodwill impairment disclosure. In addition, the study depicts the trend in MTB ratio before the disclosure of impairment losses on goodwill in Figure 1; the MTB ratio experienced a decline before impairment disclosure. According to K. K. Li and Sloan (2017), the trend in the MTB ratio indicates that the market was likely to realise and absorb goodwill impairment information before disclosure, and that firms disclosed goodwill impairment in an untimely fashion, leading to low value relevance.

![Figure 1](image-url)
3.2. Information disclosure under the impairment testing method for the Shenzhen exchange

China’s ASBE No. 8 (Assets Impairment) stipulates that goodwill impairment must be tested at least once annually, whether there is any trace of it or not. Enterprises should not only present their means of division and recovery of asset groups but also key parameters, valuations and the basis for determination in the process of impairment testing. A + H-share cross-listed enterprises are usually large-scale, high-quality corporate groups with superior performances. No matter how time-consuming or expensive impairment testing is, it is believed that those enterprises should conscientiously test goodwill impairment annually. For large-scale, high-quality enterprises, disclosures of impairment losses on goodwill is more likely a defensive behaviour of managers. However, as one of the most complex accounting standards, goodwill impairment testing largely depends on the manager’s personal judgment, offering flexibility in determining the presence and amount of goodwill impairment (Han et al., 2021). On the basis of the cost–benefit principle, for medium and minor listed enterprises, further analysis is needed.

Medium and minor listed enterprises are concentrated in the Shenzhen Stock Exchange (SZSE). Keeping up with A + H-share cross-listed enterprises, this study selects high-quality enterprises on the SZSE based on the following criteria: (1) good profitability (ROE above 6%\(^2\)); (2) high-quality information disclosure (disclosure quality of A and B in the five years prior to the merger\(^3\)); (3) according to the relevant major asset restructuring, enterprises with high goodwill and goodwill impairment.

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\(^2\)According to the securities law of the People’s Republic of China, public issuing of A-shares requires the listing enterprise’s return on net assets (ROE) to reach 6%.

\(^3\)SZSE announces the information disclosure grades of listing enterprises annually, across four ‘ABCD’ levels.
Based on the above criteria, this paper selects 10 small and medium-sized board listed companies for the study and finds that the situation of goodwill impairment recognition and disclosure of these companies is similar to that of A + H stock companies, and all of them have the problem of opaque accounting information quality.\textsuperscript{4} From Figure 2, it can be seen that firms with goodwill impairment experienced a sharp decline in MTB before confirming the impairment, which implies that the market has already realised the possible goodwill impairment before its disclosure (K. K. Li & Sloan, 2017).

For high-quality enterprises, in terms of disclosing defects, investor reaction and the sharp decline in MTB before confirming impairment, there is no difference between large-scale firms in A + H-share markets or small-scale firms in SZSE. However, on the basis of the cost-benefit principle, it is hard to conclude that small-scale firms conscientiously test goodwill impairment annually, and managers delay confirming goodwill impairment for defensive motivations. Nonetheless, if managers opportunistically use their discretion regarding the timing and/or amount of reported goodwill impairment, the resulting disclosure is unlikely to be informative, as they rely on inappropriate impairment inputs (Amiraslani et al., 2013). From the comments in the IASB (2020), even if impairment loss often lags market assessments of an acquisition’s performance, recognising the impairment loss confirms investors’ earlier assessments that those losses have occurred. Thus, goodwill impairment confirmation is hardly an effective tool for earnings management. Further, when a cash-generating unit faces a significant loss in value or an accumulation of impairments that are finally recognised by the accounting, it might lead to a marked decline of profitability, and high-quality enterprises might deteriorate substantially. In our sample, we note that in the third year after confirming huge goodwill impairment, Zhejiang Juli Culture Development (‘Juli Culture’) got rid of special treatment (ST) in the capital market, and achieved good performance in terms of profitability and stock price. Thus, case information is contrary to the theoretical analysis. This gives rise to the following questions: Is discretion regarding confirming goodwill impairment necessarily a tool for earnings management? Or are there deep-rooted reasons or an internal logic beyond this? This study attempts to delve into and verify the reasoning and internal logic via a specific case analysis.

4. Case analysis: goodwill, goodwill impairment and economic effects

4.1. Introduction of case enterprise

4.1.1. Acquirer – Juli culture

Juli Culture was established in 2000 formerly known as Zhejiang Dilong New materials Co.,LTD. Prior to 2016, its main business involved the research and development, production, processing and sale of building and decorative materials. The business supplied multi-coloured, multi-material products, with printing–dipping–pressing as its industrial chain. Its main products included decorative paper, high-performance decorations and polyvinyl chloride, mainly used in the decoration of floors, furniture,\textsuperscript{4}For brevity, we do not list the details.
cabinets and doors. It emerged as a leading enterprise in China’s decorative paper industry because of its competitiveness in branding, technology and management. In 2016, after acquiring Suzhou Meishengyuan Information Technology (‘Meishengyuan’), the enterprise was renamed to Juli Culture and shifted to pan-entertainment cultural businesses, including the development and operation of mobile standalone games and mobile online games and the promotion of mobile advertising.

Figure 3 shows the return on assets (ROE) of Juli Culture compared with the industry average. Juli Culture maintained an above-average ROE of more than 7% prior to the M&A, implying that Juli Culture has the capability of earning excess profits. This capability means that Juli Culture owned self-initiated (internally generated) goodwill assets before the M&A was completed and the purchased (external) goodwill emerged, and the recognition and measurement of this internal goodwill was beyond the balance sheet. In addition, its

![Figure 3. The profitability of Juli Culture before the M&A.](image)

information disclosure quality was always ranked B prior to the merger. In short, Juli Culture was a high-quality listed enterprise prior to acquiring Suzhou Meishengyuan.

4.1.2. Acquiree – Suzhou Meishengyuan Information Technology
Meishengyuan was founded in 2013 with registered capital of 2 million yuan. Its main business was the development and operation of mobile standalone games, technology development, consultation and services in the computer field, business management consulting, corporate image planning and sales of computer software and auxiliary equipment, cultural and sporting goods, household appliances and communication equipment. In the beginning, it mainly specialised in the distribution of mobile standalone games, becoming a mobile game developer and distributor after 2015. By the end of the year, Meishengyuan mainly focused on mobile standalone games, supplemented with mobile online games and mobile advertising. Its main revenue derived from three businesses: first, royalties from game copyrights (as the publisher) and game revenues from its operations; second, revenue from self-developed games and shares with other agents; and third, agreed mobile advertising revenue from advertising based on the needs and
Table 3. Meishengyuan balance sheet, 2013–2015.

|                      | 31/12/2013 | 31/12/2014 | 30/09/2015 |
|----------------------|------------|------------|------------|
| Current assets       | 44.14      | 86.76      | 245.87     |
| (million yuan)       |            |            |            |
| Fixed assets         | 0.03       | 0.58       | 0.53       |
| (million yuan)       |            |            |            |
| Intangible assets    | -          | 0.66       | 10.08      |
| (million yuan)       |            |            |            |
| Deferred tax assets  | 0.20       | 1.10       | 0.54       |
| (million yuan)       |            |            |            |
| Non-current assets   | 0.23       | 2.35       | 11.15      |
| (million yuan)       |            |            |            |
| Total assets         | 44.37      | 89.10      | 257.02     |
| (million yuan)       |            |            |            |
| Current liabilities  | 9.48       | 42.08      | 84.40      |
| (million yuan)       |            |            |            |
| Non-current liabilities | -     | -          | -          |
| (million yuan)       |            |            |            |
| Total liabilities    | 9.48       | 42.08      | 84.40      |
| (million yuan)       |            |            |            |
| Owner’s equity       | 34.90      | 47.02      | 172.61     |
| (million yuan)       |            |            |            |

Table 4. Meishengyuan income statements, 2013–2015.

|                      | 2013   | 2014   | 2015 (three-quarters) |
|----------------------|--------|--------|------------------------|
| Total operating income (million yuan) | 36.71  | 63.32  | 281.58                 |
| Total operating costs (million yuan)   | 23.91  | 47.09  | 398.38                 |
| Operating income (million yuan)        | 12.78  | 16.24  | -116.80                |
| Total income before tax (million yuan) | 12.80  | 16.54  | -116.08                |
| Net income (million yuan)              | 9.55   | 12.13  | -119.79                |

desires of mobile game clients and purchasing mobile advertising traffic from various online distribution channels. The liabilities and profits of Meishengyuan (2013–2015) are shown in Tables 3 and 4.

From the balance sheet, it can be seen that the acquiree was an asset-light firm. Because Meishengyuan was in the information technology industry, the valuation of the firm was influenced by the macroeconomic, market and industry environment. The information industry technology is at a high level of valuation, and this carried through to Meishengyuan.

4.2. M&A plan

4.2.1. Time process

Table 5 shows the timeline for the acquisition of Meishengyuan. It can be seen that the whole process of the M&A deal finished within half a year. As shown in Table 6, prior to the M&A transaction, the controlling shareholder of Juli Culture was Dilong Holdings, which

Table 5. Merger and acquisition of Meishengyuan by Juli Culture.

| Date     | M&A process                                                                 |
|----------|----------------------------------------------------------------------------|
| 18/11/2015 | Juli Culture acquires 6% of Meishengyuan’s equity held by Huofengtianxiang |
| 19/11/2015 | Juli Culture acquires 15% of Meishengyuan’s equity held by Tianjin Lecheng Juli Culture acquires 8.21% of Meishengyuan’s equity held by Julihuying |
| 20/11/2015 | Meishengyuan agrees to transfer 100% of its equity to Juli Culture Juli Culture acquires 8.6% of Meishengyuan’s equity held by Hangzhou Zhexin |
| 25/11/2015 | Juli Culture acquires 1.07% of Meishengyuan’s equity held by Horgos Shuize |
| 17/12/2015 | Juli Culture acquires 1.79% of Meishengyuan’s equity held by Jie Yutao Juli Culture acquires 1.07% of Meishengyuan’s equity held by Qianhaishengshi |
| 18/12/2015 | Juli Culture passes a proposal to issue shares and pay cash to purchase assets and raise matching funds |
| 5/2016    | Juli Culture completes the M&A of Meishengyuan |
held 18.51% of the shares. After the M&A was completed, the former executive director of Meishengyuan, Yu Haifeng, held 15.32% of the shares, becoming the largest shareholder of Juli Culture and serving as its director.

4.2.2. Price determination and performance commitment

Table 7 shows the price determination and performance commitments made during the acquisition, while Table 8 lists the number of cash payments and stocks issued during the transaction. The information industry technology is at a high level of valuation, and this carried through to Meishengyuan.

When shareholders, such as Yu Haifeng, signed a performance commitment with Juli Culture, they also formulated compensation clauses related to performance commitment, agreeing that the related party would compensate for profits in cash and shares in accordance with the cash and stock repurchase agreement if the audited cumulative net profit made by Meishengyuan was less than the net profit committed. The specifics are shown in Table 9.

### Table 6. Top 10 shareholders of Juli Culture after M&A.

| Name of shareholder | Nature of shareholder       | Shareholding ratio (%) |
|---------------------|-----------------------------|-------------------------|
| Yu Haifeng          | Natural person              | 15.32                   |
| Zhejiang Dilong     | Non-state-owned corporation| 11.50                   |
| Zhao Shan           | Natural person              | 7.05                    |
| Jiang Feixiong      | Natural person              | 4.34                    |
| Tianjin Zitian      | Non-state-owned corporation| 4.26                    |
| Hangzhou Zhixin     | Non-state-owned corporation| 3.47                    |
| Jiang Zugong        | Natural person              | 3.45                    |
| Julihuying          | Non-state-owned corporation| 3.31                    |
| Jiang Xiaowen       | Natural person              | 3.05                    |
| Jiang Chaoyang      | Natural person              | 3.05                    |

### Table 7. Price determination basis and performance commitment.

| M&A                | 100% equity of Suzhou Meishengyuan Information Technology |
|--------------------|----------------------------------------------------------|
| Counterparty       | Yu Haifeng, Zhao Shan, Zhou Tuanzhang, Tianjin Lecheng, Julihuying, Hangzhou Zhixin and others |
| Evaluation agency  | Beijing Zhongqihua Asset Evaluation Co. Ltd.            |
| Benchmark date of  | 30 September 2015                                        |
| evaluation         |                                                          |
| Merger and acquisition price | Evaluation value is 3,471.61 million yuan; trading price is 3.4 billion yuan |
| Merger and acquisition method | Stock and cash payments |
| Performance commitment | Yu Haifeng, Julihuying, Tianjin Lecheng and Huofengtianxiang |
| Performance promises | Net income attributable to shareholders of the parent enterprise in 2015–2017 shall not be less than RMB 180 million, RMB 320 million and RMB 468 million |
In December 2015, Juli Culture, as the acquirer, held its 26th Meeting of the Third Board of Directors, which approved its proposal to purchase assets via stock and cash payments and to acquire Meishengyuan by raising funds. During the acquisition, a valuation was made by taking the income approach to 100% equity of Meishengyuan, after which the total amount of shareholders’ equity was nearly 3,472 million yuan and that of value-added was 3,300 million yuan, with an appreciation rate of 1,924.01%. Purchasing assets in cash and share payments, Juli Culture confirmed in its 2016 semi-annual report that the goodwill value accrued to Meishengyuan had reached 3,042 million yuan (see Table 10). The goodwill accrued in the M&A deal for Juli Culture derived from at least two components: an asset-attribute component and an expense-attribute component. The former derives from Juli Culture’s capability to reorganise the resources of Meishengyuan and make an excess profit, while the latter arises from an unreasonable premium in the payment in the M&A deal. As the goodwill is recognised and calculated as the difference between the payment and the total value of all identifiable assets and liabilities of the

### Table 8. Equity transfer and distribution.

| Counterparty       | Proportion of shares sold (%) | Transaction price (million yuan) | Cash (million yuan) | No. shares issued (million shares) |
|--------------------|-------------------------------|----------------------------------|---------------------|-----------------------------------|
| Yu Haifeng         | 37.98                         | 1,291.32                         | 130.44              |                                   |
| Zhao Shan          | 17.49                         | 594.66                           | 60.07               |                                   |
| Tianjin Lecheng   | 15.00                         | 510.00                           | 510.00              |                                   |
| Hangzhou Zhixin   | 8.60                          | 292.40                           | 29.54               |                                   |
| Julihuying         | 8.21                          | 279.14                           | 28.20               |                                   |
| Huofengtianxiang  | 6.00                          | 204.00                           | 20.61               |                                   |
| Zhou Tuanzhang    | 1.79                          | 60.86                            | 6.15                |                                   |
| Jie Yutao          | 1.79                          | 60.86                            | 6.15                |                                   |
| Qianhaishengshi   | 1.07                          | 36.38                            | 3.68                |                                   |
| Horgos Shuize      | 1.07                          | 36.38                            | 3.68                |                                   |
| Yuan Jun           | 1.00                          | 34.00                            | 3.44                |                                   |

### Table 9. Performance commitment compensation clause.

| Net profit commitment | Original shareholding ratio (%) | Compensation ratio (%) |
|-----------------------|---------------------------------|------------------------|
| Yu Haifeng            | 37.89                           | 56.53                  |
| Julihuying            | 8.21                            | 12.22                  |
| Tianjin Lecheng      | 15.00                           | 22.32                  |
| Huofengtianxiang     | 6.00                            | 8.93                   |
| Total                | 67.10                           | 100.00                 |

### Table 10. Recognition of M&A goodwill.

| Merger and acquisition costs (million yuan) | Meishengyuan |
|--------------------------------------------|--------------|
| Cash                                       | 510.00       |
| Fair value of issued equity securities     | 2,890.00     |
| Total merger and acquisition cost          | 3,400.00     |
| Fair value of identifiable net assets      | 357.47       |
| Goodwill                                   | 3,042.53     |

4.3. **Merger and acquisition results**

**4.3.1. Confirmation of goodwill value**

In December 2015, Juli Culture, as the acquirer, held its 26th Meeting of the Third Board of Directors, which approved its proposal to purchase assets via stock and cash payments and to acquire Meishengyuan by raising funds. During the acquisition, a valuation was made by taking the income approach to 100% equity of Meishengyuan, after which the total amount of shareholders’ equity was nearly 3,472 million yuan and that of value-added was 3,300 million yuan, with an appreciation rate of 1,924.01%. Purchasing assets in cash and share payments, Juli Culture confirmed in its 2016 semi-annual report that the goodwill value accrued to Meishengyuan had reached 3,042 million yuan (see Table 10). The goodwill accrued in the M&A deal for Juli Culture derived from at least two components: an asset-attribute component and an expense-attribute component. The former derives from Juli Culture’s capability to reorganise the resources of Meishengyuan and make an excess profit, while the latter arises from an unreasonable premium in the payment in the M&A deal. As the goodwill is recognised and calculated as the difference between the payment and the total value of all identifiable assets and liabilities of the
acquiree, the price of the acquiree determines the initial recognition and subsequent measurement of goodwill assets. However, while the price of the underlying assets of the acquiree is determined by the fundamental value, it is also influenced by economic and market conditions. In addition, the acquirer, Dilong New Material, was a high-quality enterprise, owning internally generated goodwill assets beyond the balance sheet prior to the M&A. In the M&A deal, on basis of IPO shell resources, the internally generated goodwill was also included in goodwill assets. In light of the internally generated goodwill from the acquirer and the high valuation of the whole information technology industry, Juli Culture overpaid for Meishengyuan, and then recognised high and unreasonable goodwill in the balance sheet.

### 4.3.2. Enormous amount of goodwill impairment accrued in 2018

Juli Culture failed to make any provisions for goodwill impairment accrued to the asset groups of Meishengyuan in 2016 and 2017, but the provisions in 2018 amounted to 2.97 billion yuan (see Table 11). The reasons why Juli Culture did not accrue goodwill impairment in 2016 and 2017 are complicated; this study attempts to combine the characteristics of the acquisition, the governance structure, and industry and market conditions in discussing this untimely disclosure of goodwill impairment.

First, as is typical for M&As with acquiree in the information technology industry, in this M&A deal, the bidding price was very high with a huge premium, and because of the use of the income valuation method, such premium was recognised as a huge amount of goodwill (as high as nearly 30.43 billion yuan) in the balance sheet of the listed enterprise. In addition, the acquisition contract included the terms of the performance commitment and related terms, which required the acquiree to achieve a certain performance target and to compensate the acquirer if it failed to beat the target. The stipulated period for this performance commitment was 2015, 2016 and 2017. Once the firm failed to beat the target performance in 2016 and 2017, the listed enterprise had to recognise and accrue goodwill impairment and consequently, the owner of the acquiree had to compensate the listed enterprise. Therefore, the owner of the acquiree tended not to recognise a performance decline and as a result, the listed enterprise did not accrue goodwill

| Table 11. Goodwill impairment of Juli Culture, 2016–2018. |
|----------------------------------------------------------|
| **2016** | **2017** | **2018** |
| Book value at the beginning of the year (million yuan) | 0 | 3,042.53 | 3,042.53 |
| Impairment testing at end of year | Yes | Yes | Yes |
| Yearly increase (million yuan) | 3,042.53 | 0.00 | 197.97 |
| Yearly decrease (million yuan) | 0.00 | 0.00 | 2,965.00 |
| Book value at the end of the year (million yuan) | 3,042.53 | 3,042.53 | 275.50 |
| Notes | Wholly-owned acquisition of Meishengyuan | Increase resulted from the goodwill generated by the acquisition of Shenzhen Miquan, and decrease resulted from goodwill impairment of the assets of Meishengyuan |
impairment. However, in 2018, the period of performance commitment ended and the acquiree started to recognise the earnings decrease, which led to the goodwill impairment recognition in the financial reporting of the listed enterprise.

Second, the corporate governance of the listed enterprise experienced a transformation after the completion of the acquisition. With the stock payment and the high bidding price, the acquirer provided a large number of stocks to the owners of the acquiree. Hence, one of the owners of the acquiree, Yu Haifeng, became the largest shareholder and chairman of the board of directors, and began to exert a strong influence on information disclosure, especially regarding goodwill impairment. However, as an owner of the acquiree, Yu Haifeng also had an obligation concerning the performance commitment, and thus, had incentives to conceal the goodwill impairment and the performance decline of the acquiree to avoid compensation for the lack of performance. Moreover, according to the comment letter from the SZSE, the listed enterprise had serious internal control deficiencies, mainly in the recognition of revenue, especially the revenue of the acquiree and the occupation of non-operational funds by Yu Haifeng. Above all, an agency conflict between large and minority shareholders emerged after the completion of the acquisition and there existed serious weaknesses in internal control, which gave the largest shareholder (Yu Haifeng) incentives to conceal goodwill impairment.

Third, from the perspective of market and industry conditions, the acquisition happened in the merger wave starting in 2013, and the listed enterprise likely undertook the acquisition to cater to the market and investors and to seek transition of its core business. Therefore, the diversification merger brought a large amount of uncertainty to the listed enterprise. As the most complex accounting standard (e.g. goodwill is a permanent asset than a consumption asset, goodwill is an asset bringing excess profit under the direct measurement method, the allocation of goodwill to cash generating units (CGUs) and relevant information for the determination of the recoverable amount are uncertain), goodwill impairment testing offered flexibility in determining the presence and amount of goodwill impairment. Thus, the listed enterprise was unwilling to confirm the failure of the acquisition and the provision of the goodwill impairment in a timely manner after the deal was completed.

Figure 4. MTB trend for Juli Culture.
4.4. Economic consequences of untimely goodwill impairment

From Figure 4, it can be seen that the MTB ratio of Juli Culture was above two and on an increasing trend before acquiring Meishengyuan. The MTB ratio of Juli Culture reached a peak in 2015, when the M&A deal was in process. However, after the deal was completed and before the goodwill impairment was recognised in the 2018 annual report, the MTB ratio was on a decreasing trend, and even dropped below two in 2017, which further validated the negative attitude of the stock market to the development prospects and goodwill assets of Juli Culture.

In previous sections, we showed that Juli Culture’s large-scale goodwill impairment sent negative and worrying signals to shareholders and caused stock prices to fall sharply, consequently harming the benefits of shareholders. Generally speaking, delays in goodwill impairment heighten the financial distress of an enterprise; opportunistic goodwill impairment confirmation can never aid earnings management. Although goodwill impairment charges negatively affect net income, they do not have any cash flow implications, and the profitability of the listed enterprise might steadily worsen. Further, untimely recognition of goodwill impairment worsens the systematic risk of the stock market. With consecutive losses within two years, Juli Culture was subject to ST by the exchange, which implies a huge risk of being delisted. As M&As tend to occur in waves, there may be a large number of enterprises recognising overwhelmingly high goodwill in their balance sheet, and delays in goodwill impairment after M&A deals may cause a large number of delisted firms or firms at risk of being delisted.

Fortunately, on 23 October 2019, the board of supervisors of Juli Culture held a meeting, and unanimously approved a motion to remove chairperson Yu Haifeng. On 6 December, the 2nd Interim Shareholders Meeting was held, and a new board of directors was elected. On 10 December, the 31st Meeting of the Fifth Board of directors was held. Chen Zhijian was elected as the new chairperson of Juli Culture, and the original manufacturing management team of Dilong New Material returned to the board of directors and management. After two consecutive years of ST, Juli Culture was removed from the list of potentially delisted firms in 2021 for divestiture of the acquired assets of Meishengyuan. This case highlights that good corporate governance is effective in handling the principal–agent problem as regards abuse of goodwill impairment testing. Spinning off some businesses with high goodwill, it is the most fundamental measure to curb the negative effect of goodwill impairment.

5. Suggestions

In March 2020, the IASB issued a discussion paper Business Combinations – Disclosures, Goodwill and Impairment. IFRS 3 Business Combinations specifies how companies must account for these transactions. The IASB is carrying out a research project on goodwill and impairment, considering the issues identified in the Post-implementation Review of IFRS 3, which aimed to identify whether a standard was working as the IASB intended. The project considers the following topics identified in the Post-implementation Review: (1) disclosing information about acquisitions, (2) testing goodwill for impairment – effectiveness and cost, (3) whether to reintroduce amortisation of goodwill and (4) recognising intangible assets separately from goodwill. Based on the realities in China, this study argues that although
the impairment test method in the subsequent measurement of goodwill has some shortcomings, reintroducing amortisation of goodwill could not effectively solve the problems caused by goodwill. Amortisation would lead to a sharp decline in net profit of enterprises with high goodwill, aggravate the financial constraints of enterprises, inhibit the market mechanisms behind M&As and negatively affect sustained, healthy and stable development of the capital market. Based on the current economic climate, analysis of the capital market and cases in China, this paper proposes suggestions as outlined in the sections below.

5.1. Improve the effectiveness of the impairment testing method

5.1.1. Strengthening goodwill impairment test in enterprises with high goodwill
In an M&A deal, assuming the goodwill includes only the expense-attribute component, the business combination cost of the acquirer should fluctuate around the fair value of the identifiable net assets of the acquiree. In practice, a large amount of goodwill is recognised in a business combination. However, goodwill contains both asset-attribute and expense-attribute components, and those enterprises confirming significant goodwill impairment in the future is not always the case. In any case, for enterprises with high goodwill, it is necessary to strengthen goodwill impairment testing to distinguish and confirm the expense-attribute component. First, an estimate of headroom is required. For a company with high goodwill, there is reason to believe that items in headroom (e.g. internally generated goodwill) are already present in the business of the acquirer prior to the merge or the acquired business being combined with the acquirer’s business. The purpose is to reduce the shielding effect, target the acquired goodwill more effectively and require companies to recognise impairment losses on acquired goodwill on a more timely basis. Second, a distinction must be made between regulatory policies and accounting standards. In 2008, the CSRC issued Measures for the Administration of Material Asset Reorganisation of Listed Companies, which requires the counterparties to evaluate future profits based on the income method and to sign up to a performance commitment. However, performance commitments sometimes turn into cover-ups, where managers abuse goodwill impairment testing to discern between truthful and opportunistic impairment disclosure (e.g. not recognising a performance decline in the stipulated period of the committed performance; fulfilling performance commitment, of course goodwill is an asset bringing excess profits under the direct measurement method). Third, value in use should be permitted, including future restructuring or enhancement. In the era of the digital economy, by merging big data enterprises, manufacturing upgrades traditional industry. Correspondingly, the premium for light-asset enterprises is high may be due to the reason that the acquired business will be closely combined with the acquirer’s business after an M&A. When testing goodwill impairment, it is unreasonable to require the enterprise to exclude cash flows expected to arise from a future restructuring or enhancement. To reduce cost and complexity, revising value in use should make the impairment test less prone to error, easier to understand, and enhance ease of performing an or audit.
5.1.2. Interactions between accounting, auditing and evaluating in the test

Han and Tang (2019) found that goodwill impairment is negatively related to an enterprise’s stock return; managers abuse goodwill impairment testing to smooth income. Generally, goodwill impairment testing involves managers, auditors and appraisers. Managers must comply with accounting standards and are responsible for measuring and disclosing goodwill; auditors must comply with auditing standards and are responsible for goodwill inspection and verification; and appraisers must comply with appraisal standards and assist management in accounting for goodwill. When evaluating impairment testing, it is necessary to define and clarify the roles, relationships and responsibilities of managers, auditors and appraisers. Specifically, there are three types of goodwill impairment testing depending on individual roles and responsibilities and whether an external evaluation agency is involved. The first type involves managers conducting the testing independently; that is, they carry out a proper evaluation by analysing the reference materials and data and then disclose the results based on the evaluation method, model and parameters chosen. The second type is dominated by managers and assisted by appraisers. In this scenario, appraisers are experts helping managers in testing and consulting, while managers make use of appraisal work and assume responsibility for disclosing the results of the impairment test. The third type occurs when appraisers conduct the entire testing and obtain the test results, while managers adopt and disclose the results. Regardless of how managers conduct testing, auditors are involved throughout the entire process. The role of auditors is to verify the goodwill impairment test, which includes checking the reasonableness of major assumptions and key parameters, value types and evaluation method, cash-generating unit or group of assets.

5.1.3. Simplify the process of goodwill impairment testing

According to China’s accounting standards, enterprises are required to conduct goodwill impairment testing each year after M&As, whether there are signs of impairment or not. However, given the complex method and high cost of annual testing, it is necessary to remove the requirement for an enterprise to perform an annual quantitative impairment test for cash-generating units containing goodwill. An enterprise should not be required to perform a quantitative test unless there is an indication that there is an impairment. For those with no obvious signs of goodwill impairment, systematic amortisation may be integrated with impairment testing (e.g. disclosing amortisation figures without updating the book value of goodwill annually). Moreover, according to systematic amortisation, the enterprise should conduct an impairment test every time 20% of the original book value has been amortised to promptly update the value of goodwill compared to the original goodwill which is allocated to CGUs.

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5The Accounting Standards for Business Enterprises No. 8: Assets Impairment stipulates that the company should reflect any signs of goodwill impairment on the balance sheet; if there are no signs, it should conduct an impairment test yearly when goodwill and assets of uncertain active life are confirmed during the amalgamation of businesses.
5.2. Merger and acquisition

5.2.1. Regulate the market and prevent irrationally high premiums

High premiums in M&As are the fundamental causes of high goodwill, and lead directly to high risks (Dionne et al., 2015). In waves of M&As, some third-party agencies (e.g. appraisers, lawyers, auditors, financial consultans and securities under-writers) are involved in and promote the transactions of the acquirer and the acquiree. Based on the relevant ratio of M&A prices, these third-party agencies are rewarded immediately after the transaction is completed. This might lead to high premiums and high goodwill as well as confirming huge impairments in the future (e.g. appraisers evaluating an acquiree by adopting the income approach, ideal assumptions and subjective predictions about discount rates and future profitability). Therefore, it is necessary to regulate the market and eliminate the risks associated with high goodwill by reducing high premiums. Joint liability should be definite that third-party agencies are responsible for M&A prices, which would help to curb high valuations of acquirees, promoting stability in the transaction market and reducing the risk of goodwill impairment in M&As.

5.2.2. Strengthen the recognition and determination of intangible assets in M&A

IFRS No. 3 Business Combinations gives some examples of identifiable intangible assets (see Table 12). Unaccounted intangible assets include internal brands, customer lists and internal unpatented technology.

Chinese accounting standards do not provide such examples, either in No. 20 Business Combinations or No. 6 Intangible Assets. There was some principle guidance in Interpretation No. 5 in 2012, which stated that an intangible asset is identifiable if it meets either the separability criterion or the contractual-legal criterion. However, this remains a blurry area in practice. Where intangibles are not recognised as intangible assets, they are subsumed into goodwill. Some enterprises might be motivated to report fewer intangible assets, and higher goodwill, because most intangible assets must be amortised whereas goodwill is subsequently measured under an impairment-only approach. The Accounting Supervision on Listed Enterprises Report 2016 issued by the CSRC showed that some listed enterprises have recognised large amounts of goodwill in business combinations, and goodwill accounts for 90% of the merger consideration. One possible reason for this is that listed enterprises fail to fully identify the intangible assets owned by the acquiree. Similarly, Accounting Supervision on Listed Enterprises Report 2018 issued by the CSRC states that in M&As and restructuring transactions, recognition of the identifiable net assets of the acquiree is generally insufficient and fair value

| Category                          | Example                                                                 |
|-----------------------------------|-------------------------------------------------------------------------|
| Market-related intangible assets  | Trademarks, trade names, brands                                         |
| Customer-related intangible assets| Customer lists                                                          |
| Artistic-related intangible assets| Books, musical works, pictures, video                                   |
| Contract-related intangible assets | Advertising contract, construction contract, lease agreements, franchise agreement |
| Technology-based intangible assets| Patented technology, software, database, unpatented technology           |
underestimated. This phenomenon is particularly prominent in emerging industries (such as medical biology, media, computers). The targets of M&As in these industries are mostly asset-light enterprises, and their commercial value is likely to come from unidentified intangible assets (such as customer relations, contract rights and interests).

The IASB revised the definition of an asset in the Financial Reports Conceptual Framework issued in 2018, which clarifies that an asset is a current economic resource controlled because of past issues, where economic resources refer to a right that has the potential to produce economic benefits. This definition abolishes the standard uncertainty and no longer requests anticipated inflow of economic benefits. After revising the definition of an asset, many new types of intangible assets have been included in the balance sheet. According to the newly revised definition of an asset, accounting standards in China should deal with the issue of the intangible assets definition being narrowed to include essential productive factors such as digital assets in the scope of intangible assets, in light of the Corporate Reporting of Intangible Assets: A Progress Report (April 2012) issued by the Organization for Economic Co-operation and Development (OECD). At the same time, the organisation setting new accounting standards for business enterprises should perfect the accounting rule criterion and application guide including enterprises merging and consolidated financial statement, and offer operational guidelines such as the IFRS3 details that identify and confirm identifiable intangible assets of the acquired in M&As. This could help enterprises to cope with complicated or special circumstances when it comes to the identification of intangible assets. Through identifying and confirming intangible assets in M&A as much as possible, the risk of high premiums, high goodwill and large impairments in the subsequent measurement of goodwill can be reduced.

5.2.3. Implement step-by-step mergers and acquisitions
Goodwill is essentially the payment premium associated with an M&A; high values of goodwill generated from M&As is the fundamental reason for the risk of big-sum impairments (Wei & Zhu, 2019). Xu et al. (2020) found that the peer effects in recognition of goodwill are positively related to the probability and amount of goodwill impairment in the future. When overestimated goodwill is initially controlled, the risk of goodwill impairment will reduce in the future. Being the most complex accounting standard, goodwill cannot be measured directly, and is measured as a residual. Now, most M&As are paid in full in one step, leading to goodwill with a high value. However, if the acquirer adopts a step-by-step M&A (e.g. initially acquiring only some of the shares to control the acquiree and then purchasing minority stockholders’ interests), the difference between the price the acquirer agrees to pay and the net value of the individually recognised assets and liabilities of the acquired business would not be defined as goodwill, which may offset capital reserves. This would not only reduce goodwill with high value and high risk, but also curb high premiums and improve valuations of M&A based on information symmetry.
5.3. **Standardising the off-balance sheet information disclosure of goodwill and strengthening corporate governance**

5.3.1. **Standardising the off-balance sheet information disclosure of goodwill**  
First, goodwill disclosure should be distinguished from acquisition disclosure. Although the current acquisition accounting requirements generate an abundance of useful information (e.g. financial metrics: deal metrics (transaction level) and projected financial information (forecast outputs) and key performance indicators (forecast inputs), tested unit structure (whether the acquisition will be combined with an existing tested unit or be standalone), it is a different situation with goodwill disclosure in M&As. Goodwill includes reputation, future intangible value, workforce, synergies and assemblage value. These categories of goodwill may provide a framework for the disclosure of meaningful information to investors on how an enterprise plans to create and maintain its value creation advantages beyond the life of the identified tangible and intangible assets. Such information is helpful to assess the value relevance of goodwill to investors and other stakeholders.

Second, as M&As with performance commitments become popular in transaction markets, enterprises should continuously disclose the follow-up performance of the acquired business in the periods following the acquisition. If the acquiree is still an independent accounting entity, following Standard No. 35 of segment reporting, the subsidiary should disclose its financial position, earning performance and cash flow annually. Moreover, the actual performance of the acquiree should be compared with the projected financial information at the time of the acquisition to assess if expectations have been met. In particular, synergies are typically assumed to phase-in over a certain period; after an M&A, the synergies are capitalised in the perpetuity calculation through either a higher margin (cost synergies) or absolute higher revenue and income (revenue synergies). By strengthening segment reporting, the synergies could be directly measured and compared with the performance commitment made at the time of the acquisition.

5.3.2. **Strengthen corporate governance to prevent the Type II agency problem**  
The owner of the acquiree is required to make a performance commitment when using the stock payment method in the M&A combined with the income valuation method. However, when the listed enterprise pays a large premium with stock payment, the owner of the acquiree is likely to obtain a large number of stocks, which enables the owner to interfere with the corporate operation and information disclosure, and the Type II agency problem is likely to become dominant in the listed enterprise. In the extreme case, such as the case firm in this paper, the owner of the acquiree becomes the largest shareholder, and exerts a significant impact on firm operation and financial reporting. Moreover, the owner of the acquiree also has an obligation to meet the performance commitment, and consequently, the owner has the incentive to conceal any performance decline and goodwill impairment recognition. Therefore, it is necessary for the listed enterprise to strengthen corporate governance to prevent the Type II agency problem and limit the potentially negative influence of the acquiree’s owner on firm information disclosure. First, the listed enterprise should strengthen internal control, especially that regarding the supervision of large shareholders when the owner of the acquiree enters the board of the directors. Second, the function of the supervisory committee should be strengthened, especially for enterprises without enough board members from minority shareholders on
the board of directors. Third, the regulator should require external monitors, such as auditors and independent directors, to disclose independent comment on the performance and performance commitment of the acquiree. In addition, investors and the regulator should pay close attention to the performance commitment and the subsequent goodwill impairment after the commitment period.

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