Variable Considerations in ASC 606, Earnings Management and Business Continuity during Crisis

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Abstract: The Financial Accounting Standards Board (FASB) released Accounting Standards Codification (ASC) 606, “Revenue from Contracts with Customers”, with the aim of enhancing transparency to provide fairer representation and inhibit the misuse of revenues to manipulate earnings. During COVID-19, variable considerations in ASC 606 were used to manage earnings as a tool to help firms survive. The study aimed to test the mediating role of earnings management in influencing the effect of variable considerations in ASC 606 on the continuity of the firm. An online questionnaire was sent to financial reporting preparers in US public shareholding firms; 403 valid questionnaires were received. The results of PLS-SEM revealed that crises such as COVID-19 have highlighted the way in which variable considerations in ASC 606 were exploited to manage firms’ earnings to ensure their survival. Companies resort to showing their best financial performance, beautifying its financial reports by manipulating profits, using flexibility in accounting policies, but this may negatively affect the country’s entire economy by collapsing companies and creating more financial crises that cannot be easily addressed.

Keywords: variable considerations; “Revenue from Contracts with Customers”; earnings management; ASC 606; going concern; COVID-19

1. Introduction

Earnings management (EM) has been covered intensively in the literature. EM is the intervention of management in the presentation of financial statements and related disclosures to achieve certain benefits for themselves or for the firm (Healy and Wahlen 1999). One of the reasons for practicing EM is to improve the firm’s image (Teixeira and Rodrigues 2022). The decision to implement corporate earnings management depends mainly on costs and benefits. When the benefits outweigh the costs, companies are motivated to employ earnings management. A major benefit of earnings management is business continuity (Zhan and Jing 2022).

The firms that early adopted the IAS/IFRS reporting regime may have arguably high extant incentives to enhance their reporting and that were already reporting under (old) IAS/IFRS standards. While the late adopters and mandatory adopters exhibit an increase in earnings management practices after transitioning to the 2005 version of IFRS as documented by (Capkun et al. 2016). This provides strong evidence that the 2005 changes to IAS/IFRS give the firms a wide range of flexibility in accounting choices and this, couple with the lack of implementation guidance, has contributed to increase the earnings management practices. This interpretation supports our assumption that the firms
may benefit from the flexibility that exists in accounting choices, particularly in difficult circumstances, such as the COVID-19 pandemic, to manage their earnings and show their ability to survive.

A stream of literature focused on the perspective of EM as a consequence of using accounting standards (Capkun et al. 2016; Kim and Lee 2016; Tutino et al. 2019; Comporek 2020; Lee and Lee 2020; Kim 2022). After the Sarbanes–Oxley (SOX) Act was passed in 2002, the Financial Accounting Standards Board (FASB) started to develop more consistent standards based on principles or goals. Compared to rule-based standards, principle-based standards leave more room for different interpretations and are characterized by clearly defined goals, fewer scope exceptions, and fewer implementation instructions (Bjornsen 2019).

Another stream of the literature focused on the use of EM as a determinant of business continuity (Francis and Krishnan 1999; Butler et al. 2004; Sengupta and Shen 2007; Herbohn and Ragunathan 2008; Arnedo et al. 2008; Yassin and Shaban 2022). Sengupta and Shen (2007) suggested that the higher the quality of accruals, the lower the likelihood of receiving an audit result that threatens the continuity of the business. Chi and Shen (2022) revealed that the going-concern assumption reflects the current capacity and status of the firm in the near future. In addition, Francis and Krishnan (1999) assert that the auditors of firms with high-quality accruals are less likely to provide a qualified opinion about the uncertain asset realization and the business continuity compared to the auditors of firms with low-quality accruals.

COVID-19, like any other crisis, affects the continuity of firms and increases the probability of the bankruptcy threat. In turn, this threat affects the other related parties. Capital providers and managers are interested in the costs of these failures, as well as employees, who may face the risk of redundancy (Charitou et al. 2007). As a result, the quality of financial information provided has captured the attention of both analysts and users, particularly when dealing with reports of financially distressed firms who have the incentives and potential to manage earnings (Tsipouridou and Spathis 2014; Yassin et al. 2015).

FASB issued a converged standard for the “Revenue from Contracts with Customers”; it was formed by the Accounting Standards Codification 606 (ASC 606), in collaboration with the International Accounting Standards Board (IASB), with the aim of enhancing transparency for the investors, thus, in turn, affecting the continuity of the business.

The purpose of implementing ASC 606 is to provide fairer representation and to prevent revenue steering. It is believed that adopting ASC 606 increases management discretion in revenue recognition. In addition, the new standard leads to a reduction in the informative value of revenue deferrals (Kim 2022).

During the COVID-19 crisis, many businesses attempted to manage their earnings in order to continue operating. One of the tools that was used by many companies to achieve that aim was the variable considerations in ASC 606. Variable consideration refers to a contract whereby the promised amount varies depending on the potential outcomes (Condren 2021).

Although few in number, there are significant motivations for this research. First, in 2020, larger firms were entering bankruptcy at higher rates. According to data from the American Bankruptcy Institute, the total number of Chapter 11 filings increased by 35% during the first six months of 2020 as compared to the same period in 2019. In addition, there was a 194% rise in bankruptcies of firms with more than USD 50 million in assets (Greenwood et al. 2020; Ventura 2020; Wang et al. 2020). Moreover, the US Census Pulse survey declared that 74 percent of small businesses reported lost revenues in one week in the middle of the second quarter of 2020 (U.S. Census Bureau 2020; Wang et al. 2020). Secondly, although ASC 606 is one of the outcomes of a long series of projects between IASB and FASB, it has different characteristics with stricter requirements than IFRS 15. On the one hand, the IFRS standards offer greater accounting flexibility due to vague criteria, open and hidden options, and subjective estimates (Capkun et al. 2016). On the other hand, GAAP is described as being principle-based; in addition, the US market is characterized as
more prudent, with a stricter attitude against accounting policies and practices, because of significant fraud cases. Thus, GAAP limits the options of income recognition practices and requires more disclosures (Zhou 2021).

Against this background, this research aims at answering the following research question: “Are the variable considerations in ASC 606 used as a tool to manage earnings in order for a business entity to continue operating during COVID-19?”. More specifically, this research aims to achieve the following objectives:

− To explore the use of the variable considerations in ASC 606 as a tool to manage earnings during COVID-19;
− To examine the way in which earnings management is used to keep firms operating during COVID-19;
− To assess the effect of using the variable considerations in ASC 606 on the continuity of firms during COVID-19;
− To investigate the mediating role of managing earnings on the relationship between using the variable considerations in ASC 606 and the business continuity for business entities during COVID-19.

This paper contributes to the scholarship by exploring the practices of financial statement preparers during the COVID-19 pandemic regarding the revenue recognition application under ASC 606 to manage earnings, enabling businesses to survive. This provides evidence on the contingency theory, which is in line with Donaldson (2001) and Damayanti et al. (2022), who argued that businesses form strategies and actions that help them to survive depending on the external environment. In addition, this study provides indicators of the importance of using the variable considerations in ASC 606 as a determinant of going concern during the pandemic. Furthermore, this research is expected to assist regulators and policy makers in finding the gaps resulting from the flexibility provided by FASB to financial statement preparers. Also, preparers will gain benefits concerning the use of variable considerations in ASC 606 as a tool to help their businesses in facing crises.

The study is structured as follows. The literature review of the effect of variable considerations in ASC 606 and earnings management, the way in which earnings management affects business continuity, and the effect of variable considerations in the ASC 606 business continuity are summarized in Section 2. In addition, the development of the hypotheses is provided in this section. Subsequently, Section 3 provides an explanation of the research methodology. In addition to highlighting the data analysis process, a discussion of the results is presented in Section 4. Finally, the research concludes with practical and theoretical implications, as well as suggestions for further research.

2. Literature Review

2.1. Theoretical Foundation

Companies tend to report an inflated financial performance for several reasons, including to conceal poor financial conditions (Rosner 2003), to meet earnings target, or to meet forecasting benchmark (Haw et al. 2005). For example, earnings management is used to avoid violations of debt covenant in times of financial distress, thus allowing for a greater access to leverage (Charitou et al. 2007). The management that uses the earnings management shows its orientation and focuses on short-term accomplishments to obtain positive managerial reviews, or to gain the investors’ confidence, rather than long-term goals which may accomplish a sustainable stream of liability or equity investment and, thus, reduce firms’ going-concern ability. In addition, the concealment of a poor financial or operational performance through earnings management practices hinders early diagnosis to address the problem, leaving several lurking problems and, thus, making the company unable to withstand a competitive environment. These interconnected results make companies exploit the accounting flexibility found in accounting standards, especially in times of crises that companies seek to demonstrate high financial performance through the use of the magic tool represented by earnings management.
The contingency theory is a kind of behavioral theory that claims there is no optimal method to organize a company, to lead the organization, or to make decisions; instead, the optimal course of action is highly dependent upon the external and internal situations (Abba et al. 2018). Contingency theory supports the idea that the business strategy used and actions taken when dealing with uncertain events or situations are driven by the business environment (Chenhall and Morris 1986; Donaldson 2001).

Following Pennings (1975), who examined the interaction between organizational structure, environmental uncertainty, and various aspects of performance, this study is based on contingency theory. COVID-19 is a contingent uncertain external situation that forced firms to make changes in their decisions to cope with this contingency, considering the variable considerations found in ASC 606. These actions were necessary for managers to keep their businesses going.

2.2. Background of Variable Considerations in ASC 606

The result of the long-term collaborative project between FASB and IASB, ASC 606, was issued in May 2014 and came into effect in 2017 (Ferreira 2021). It provides a consistent revenue recognition framework for firms and improves comparability through a 5-step model. These steps break the contract process as follows (Financial Force 2022):

− Identification of the contract with a customer, outlining the criteria that should be met when contracting a customer;
− Identification of the performance obligations, separating the distinct performance obligations from others in the contract;
− Determination of the transaction price, which determines the payment that is expected to be received for the transfer of products or services to a customer;
− Allocation of the transaction price, which indicates how to allocate the price of the transaction across the distinct performance obligations;
− Revenue recognition, which specifies how revenues have to be recognized as meeting the distinct performance obligations.

The variable considerations in ASC 606 require that the price be estimated for purchase agreements and proration be made of that estimate in order to recognize revenue, taking into consideration the unlikeliness of price reversal in the future. For example, the old standard (ASC 605) required that revenue from sales to wholesalers be recognized only after the wholesalers transfer the goods to end users, allowing time for resolving any doubt about the concessions and returns of goods. However, ASC 606 requires that companies recognize revenue only when delivering goods to merchants, and this revenue should be based on the estimated price (BDO 2018).

Waqar and Tseng (2022) argued that, under the current standard, the seller price must be fixed or determinable to the buyer. As previously mentioned, the sale price is generally not fixed or determinable for the buyer until the cancellation rights expire. The new standard introduces variable consideration for the transaction price. This scenario increases an entity’s estimate of variable consideration. This estimation should use either the most likely amount method or the expected value method. It is important to note that the amount of variable consideration that can be recognized is limited to the probability that a material reversal of the cumulative income recognized will not occur. The addition of variable considerations in ASC 606, as well as IFRS 15, requires more discretion on the part of the entity, since the entity is no longer limited to a fixed price or concerns about collectability but now has the ability to estimate considerations, which could be variable, based on the goods or services it provides (Benavides 2015).

The five-step model requires that variable considerations be estimated at the inception of the revenue contract and recognized as satisfying a performance obligation (Hepp 2018).

In order to ensure the accuracy of reported information, managers, as well as auditors, should adapt their own policies and internal controls to adequately recognize variable considerations. On the other hand, users have to familiarize themselves with the new detection rules in preparation of processing this new information. A greater degree of
analysis and scrutiny of the disclosures is needed in order to understand how an entity should report variable considerations, but the result has to be a better assessment of the way in which the entity generates its value (Du and Winhittington 2017).

2.3. Variable Considerations and Earnings Management

ASC 606 conceptualized that variable consideration takes various different forms, such as refunds, rebates, price concessions, volume-based or usage-based charges, and additional service costs (BDO 2018; PwC 2017).

Furthermore, ASC 606 introduced a radical change in recognizing the estimated variable considerations as a treatment that had been previously unallowed under ASC 605 (PwC 2017; FASB 2014). Previously, variable consideration revenue could not be recognized until uncertainty was resolved, while ASC 606 allows us to recognize the most likely amount of revenue, despite it being not fully certain (Waqar and Tseng 2022).

Kim and Lee (2016) suggested that, in the absence of opportunistic management incentives, current expenses are accelerated, or current income is deferred. Furthermore, this should be the case when aggressive accounting features are present, current expenses are recorded late, or future income is accelerated in the existing year (Bhattacharaya et al. 2003; Basu 1997). This finding reveals a possible option for managing earnings in the sense of the matching principle with opportunistic management incentives.

In addition, Tutino et al. (2019) proposed an analysis to compare the number of discretionary provisions in telecoms and utilities industries, which reflect different sensitivities for applying IFRS 15. The analysis aimed at understanding the actual effect of applying IFRS and whether this application could limit the principles of earnings management and improve the reporting quality. In this context, the agency theoretical approach should be considered (Jensen and Meckling 1976), in line with the requirements of shareholders to delegate management, taking into account the skills and knowledge that should be present and showing that multiple predictions about managers’ behavior should be made by agency theory (Iatridis 2010).

Specifically, for IFRS 15, Comporek (2020) argued that listed companies that had been penalized by the Polish Financial Supervisory Authority (UKNF) for irregularities related to IAS/IFRS compliance had practiced violations of IFRS 15 during the analysis of their financial statements in order to manage results to practice. In addition, in its report reviewing the initial application of IFRS 15, the Financial Reporting Council (2019) expressed disappointment with the level of disclosure of variable consideration (e.g., bonuses, entitlements, and penalties). Furthermore, Hagos and Svensson (2021) demonstrated that respondents agreed that there is more flexibility and judgment in applying IFRS 15.

The COVID-19 crisis may impact managers’ assumptions when measuring revenue for transactions already delivered, particularly for variable consideration and for the expected outcome of contracts that span multiple reporting periods.

For instance, reduced demand could result in an increase in returns, additional discounts, late delivery penalties, reduced volume discounts, or a reduction in the given prices (Gould and Arnold 2020). The widespread impact of COVID-19 could challenge the ability of both the firm and the client to meet the terms of the contract. The timing and magnitude of revenue recognition can therefore be heavily influenced, such that revenue should not be recognized at all (O’Donovan and Zentner 2020).

Lee and Lee (2020) examined the way in which the adoption of ASC 606 affects earnings quality. They found that the transition involved in adopting the new standard—from rules-based to principles-based—reduces earnings predictability, as reflected in an increase in the analyst forecast spread and errors; it also increases discretionary power in generating earnings numbers, as reflected in increased discretionary provisions.

2.4. Earnings Management and Going Concerns

Financial report users’ attention has recently been focused upon the quality of information provided in financial statements, particularly those of financially troubled companies,
which might have a greater incentive to practice earnings management. For example, Sengupta and Shen (2007) noted that the probability of obtaining a going concern report is reduced when the provisions for a company are of a high quality.

Herbohn and Ragunathan (2008) examined whether there is a negative relationship between actual exceptional provisions and the likelihood of Australian firms receiving a qualified audit opinion. Their study involved a sample of Australian listed firms during the period from 1999 to 2003. A negative relationship was observed between provisions and the likelihood of receiving a qualified audit opinion about a going concern for companies in audit disputes and those at greater risk of financial distress. These findings are in alignment with Butler et al. (2004), who indicated that the qualification of an audit opinion is not a result of earnings management.

Furthermore, the same relationship was tested on a sample of pre-insolvency private firms in Spain. Arnedo et al. (2008) divided the qualified reports into two types; reports that were qualified due to going concern reasons, and those that were qualified due to other reasons. Again, the findings are in line with those of Butler et al. (2004). However, it seems that there is a positive correlation in cases where there are reasons for qualifying other than going concern. In contrast to Butler et al.’s (2004) study, they contend that the auditors’ report is a normal result for managing earnings and that the negative response in the going concern cases is driven by auditors’ conservatism, rather than the firm’s plight and its deployment of liquidity tactics for survival.

2.5. Variable Considerations and Going Concerns

Arora (2019) argued that, historically, revenue recognition has been one of the main pillars of a company’s financial reporting. Generating revenue by meeting customer needs is the primary source of revenue for most organizations and a fundamental requirement for maintaining business continuity as part of the accounting going-concern concept. Revenue is also an integral part of the stakeholder analysis of a company’s financial health. Consequently, the revenue recognition standards set by the relevant regulatory authorities must be carefully reviewed and prepared to ensure a consistent approach to recognizing revenue.

Glaze et al. (2020) predicted that simultaneous reports would help investors in trading by tackling their uncertainties regarding the way in which earnings reports should be interpreted. They used ASC 606 as an additional variable that increases investors’ uncertainty regarding the way it is used as a response to earnings news. In particular, they noted that the high uncertainty in Q1 of implementation of ASC 606 is reflected in increased trading around the specific releases of earnings. In addition, they argued that this specific relationship is stressed when investors are considerably uncertain about the numbers of earnings and when firms add further disclosures about revenue recognition in the related footnotes.

Uncertainties related to COVID-19 and other conditions may prompt firms to modify the current revenue contracts with customers or reassess the likelihood of collecting the contractual considerations. Pursuant to ASC 606, an entity is required to revise the revenue estimates and related disclosures throughout the life of the contract that contains variable consideration (e.g., performance bonuses, price concessions, penalties, refunds, and discounts) for any condition that may exist at each balance sheet date to reflect changes in the firm’s expectations. In preparing their report, firms may need to review their disclosures regarding the assumptions, inputs, and methods used (Levy 2020).

For contracts that contain provisions such as a completion time-based bonus, the probability of meeting the bonus criteria could be changed due to the effect of the health protection measures imposed by governments (e.g., travel restrictions and quarantines) and other changes in customer behavior, operations, and business practices may impact the revenue recognition evaluation.

Because ASC 606 fundamentally changes the process of revenue recognition, there may be concern that the results found in previous studies are attributable to a mechanical effect of the standard itself versus manipulating amounts by corporate managers intentionally. This is particularly concerning if there is a perceived use of ASC 606 opportunistically to
accelerate revenues to meet analyst forecast targets that may ultimately negatively affect the continuity of companies and expose them to bankruptcy and collapse.

2.6. Variable Considerations, Earnings Management, and Going Concerns

COVID-19 has directly impacted business continuity. Distress and liquidity have increased, and the bankruptcy risk has become more likely. These threats, in turn, affect the parties associated with the company. The cost of these mistakes is significant for investors and managers, as well as employees, who may face the risk of losing their jobs (Charitou et al. 2007). “In such an environment, there are growing concerns about the quality of information provided by managers in financial statements, particularly financially troubled companies, as their incentives to manage profits may be strengthened” (Tsipouridou and Spathis 2014, p. 38).

Franceschetti (2020) suggested that firm directors possess the authority to employ their personal judgment in setting up financial reports and specifying earnings, known as earnings management. In addition, Al-Sraheen (2019) argued that earnings management has become an important topic for different economies around the world. In some cases, earnings management is viewed as an ethical action which covers suspicious ones (Saleh et al. 2020). Also, Yassin et al. (2015) suggested that practicing earnings management may be seen as a result of deficient performance.

According to Yassin and Al-Khatib (2019), one of the primary goals of regulators is to provide financial statement users with complete, secure, and transparent financial reports. Recently, the COVID-19 crisis has affected companies’ performance. This has drawn the attention of standard-setters, who have become worried about financial accuracy being affected by the crisis.

A company’s actual performance might be concealed by earnings management practices, and the shareholders may lose their ability to make properly informed decisions (Toumeh and Yahya 2019). Therefore, it is likely that allowing managers leeway to use their personal judgment will be reflected in the practice of earnings management, particularly in the recent COVID-19 crisis (Yassin et al. 2022).

3. Methodology

The purpose of this section is to outline the sample characteristics and data collection procedures, in addition to the measurement of variables.

3.1. Research Model and Hypotheses Development

The foundation of this research is the extant literature on the relationships among variable considerations in ASC 606 issued by FASB, earnings management practices, and business continuity (e.g., Francis and Krishnan 1999; Butler et al. 2004; Sengupta and Shen 2007; Herbohn and Raganathan 2008; Arnedo et al. 2008; Tsipouridou and Spathis 2014; Capkun et al. 2016; Kim and Lee 2016; Tutino et al. 2019; Comporek 2020; Lee and Lee 2020; Kim 2022; Zhan and Jing 2022). There are three core relationship bonds in this segment of the literature in addition to a proposed mediating effect. The general model of their possible interrelationships is illustrated in Figure 1. This model is explained later in the Sections 2.4–2.6. The research explores these relationships during the COVID-19 era. Figure 1 shows the research model that presents the nature of the relationships between the research variables.

Based on the presented theoretical framework that is summarized in Figure 1, the following hypotheses were formulated and tested in this study.
Based on various previous studies (i.e., Lee and Lee 2020; Hagos and Svensson 2021) that indicated, directly or indirectly, that due to the COVID-19 crisis, stock markets are likely to face a greater amount of asymmetric information, and company management could be encouraged to engage in earnings management, given the impact of COVID-19 on global businesses. Thus, according to the previous discussions related to variable considerations and earnings management, there is evidence to support our first research hypothesis:

**H1.** *Variable considerations in ASC 606 increased the use of earnings management practices in firms during COVID-19.*

As for the relationship between earnings management and going concerns, the prior studies (Herbohn and Ragunathan 2008; Sengupta and Shen 2007) documented that companies receiving uncertainty modifications—other than going concern—have much more earnings persistence (accruals) relative to other companies. This result is consistent with the assumption that corporate managers have chosen specific policies in reporting current earnings that may not be consistent with their auditors. Therefore, through these results and interpretations, the second hypothesis of this study can be proposed as follows:

**H2.** *Earnings management practices positively affect business continuity for firms during COVID-19.*

Companies must consider disclosing how uncertainties that related to the crisis could affect the conditions of the prospective contracts with customers, including pricing, and collectability (Levy 2020). Because the uncertainties of a related crisis such as COVID-19 and other conditions may prompt companies to reassess the likelihood of collecting the contractual considerations or to modify current revenue contracts with customers. Thus, based on the abovementioned discussions and the results of the previous research related to variable considerations and going concerns, there is evidence to support the current research hypothesis:

**H3.** *Variable considerations in ASC 606 positively affect going concern assumptions for firms during COVID-19.*

Various threats, in turn, affect the parties associated with the firm, and its cost is significant for managers and investors, as well as employees, who may face the risk of losing their jobs (Charitou et al. 2007). Thus, the actual performance of firms might be concealed by employing earnings management, and, thus, the corporate shareholders may
be losing their ability to make proper decisions (Toumeh and Yahya 2019). Therefore, the relationship between variable considerations, earnings management, and going concerns is proposed as follows:

**H4.** Earnings management mediates the positive effect of variable considerations in ASC 606 on going concern assumption for firms during COVID-19.

### 3.2. Sampling and Data Collection

The target respondents of this study consisted of financial reporting preparers in US public shareholding firms. The reason for targeting this population is the assumption that public shareholding firms provide more reliable and accessible information compared to other types of firms (Yap et al. 2011). Each respondent represents the unit of analysis.

Data were collected using an online questionnaire that was sent to financial reporting preparers in US public shareholding firms. It was pretested with an appropriate sample of thirty respondents from the target population. This pilot sample was added later to the sample. In April 2021, the survey was sent 450 questionnaires to target participants in the US by using the SurveyMonkey tool with a four-week deadline for responses. As a follow-up, and to increase response rate, the deadline was later extended two weeks, till June 2021. The total number of responses received was 422, which represents 94% of the total distributed questionnaires. The valid questionnaires received and evaluated were 403 (being usable), which represents 95% of the total responses received. The resulting sample can be deemed acceptable.

As summarized in Table 1, the respondents’ profile shows that 52% of respondents were male and 50% of them fell in the middle-range age group (30–60 years old). In total, 54% of respondents held a bachelor’s degree. In addition, respondents were closely distributed among job levels, with the majority being at the intermediate, middle management, and owner/executive levels (28%, 23%, and 26%, respectively).

#### Table 1. Respondents’ profile.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>n</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Male</td>
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<td>52</td>
</tr>
<tr>
<td>Female</td>
<td>194</td>
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<tr>
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<tr>
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<td></td>
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<tr>
<td>&lt;30</td>
<td>117</td>
<td>29</td>
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<tr>
<td>30–60</td>
<td>202</td>
<td>50</td>
</tr>
<tr>
<td>&gt;60</td>
<td>84</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
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<td>100</td>
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<tr>
<td><strong>Education</strong></td>
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<td></td>
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<tr>
<td>Diploma degree</td>
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<tr>
<td>Bachelor’s degree</td>
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<tr>
<td>Post-graduate degree</td>
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<td>Total</td>
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<tr>
<td><strong>Job Level</strong></td>
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<td>Owner/executive</td>
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<td>Intermediate</td>
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<tr>
<td>Entry level</td>
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<tr>
<td>Total</td>
<td>403</td>
<td>100</td>
</tr>
</tbody>
</table>

### 3.3. Questionnaire

Questionnaire-based studies have suffered from several negative criticisms, of which researchers should be fully aware when considering them (Young 2016). However, this is exploratory research, and for the purpose of this study, a questionnaire was employed.
A five-point Likert scale was used for the measures and labeled from 5 = strongly agree to 1 = strongly disagree.

Table 2 shows the constructs used in this study and their sources. Napier and Stadler (2020) revealed that, in terms of the revenue standards, most of the differences between IFRS and GAAP were eliminated. For this reason, the paper used both the GAAP and IFRS literature to build the measures used to operationalize the variables included in the research model.

Table 2. Sources of constructs’ measures.

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of Items</th>
<th>Sources</th>
</tr>
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<tbody>
<tr>
<td>Variable considerations</td>
<td>8</td>
<td>FASB (2020); PwC (2017); IFRS (2018)</td>
</tr>
<tr>
<td>Earnings management</td>
<td>6</td>
<td>Cohen et al. (2008); Barth et al. (2012)</td>
</tr>
<tr>
<td>Going concern</td>
<td>8</td>
<td>Moss Adams (2022)</td>
</tr>
</tbody>
</table>

The 22 items that were used to collect the data about the constructs are illustrated in Table 3.

Table 3. Questionnaire.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Code</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable considerations</td>
<td></td>
<td>Considering ASC 606 “Revenue from Contracts with Customers standard”, during the COVID-19 crisis:</td>
</tr>
<tr>
<td></td>
<td>ASC1</td>
<td>Re-estimation of revenues has been used</td>
</tr>
<tr>
<td></td>
<td>ASC2</td>
<td>Re-estimation of variable considerations has been used</td>
</tr>
<tr>
<td></td>
<td>ASC3</td>
<td>Re-estimation of discounts has been used</td>
</tr>
<tr>
<td></td>
<td>ASC4</td>
<td>Re-estimation of refunds has been used</td>
</tr>
<tr>
<td></td>
<td>ASC5</td>
<td>Re-estimation of price concessions has been used</td>
</tr>
<tr>
<td></td>
<td>ASC6</td>
<td>Re-estimation of bonuses or penalties on performance has been used</td>
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<tr>
<td></td>
<td>ASC7</td>
<td>A revision of variable considerations will be assessed</td>
</tr>
<tr>
<td></td>
<td>ASC8</td>
<td>Revenues estimation will be conservative</td>
</tr>
<tr>
<td>Earnings management</td>
<td>EM1</td>
<td>When the firm is in financial distress, earnings management is used</td>
</tr>
<tr>
<td></td>
<td>EM2</td>
<td>Discounts, lenient, and flexible credit terms are used to accelerate the timing of sales</td>
</tr>
<tr>
<td></td>
<td>EM3</td>
<td>Mends policies judgments are used to meet financial position expectations</td>
</tr>
<tr>
<td></td>
<td>EM4</td>
<td>An accounting treatment is selected to meet the expected earnings number</td>
</tr>
<tr>
<td></td>
<td>EM5</td>
<td>An increase in revenue is claimed without a corresponding increase in cash flows</td>
</tr>
<tr>
<td></td>
<td>EM6</td>
<td>An increase in earnings is reported only in the last quarter of the year</td>
</tr>
<tr>
<td>Going concern</td>
<td>GC1</td>
<td>Have you documented all events that are related to the firm’s ability to continue operating as a going concern?</td>
</tr>
<tr>
<td></td>
<td>GC2</td>
<td>If the firm’s ability to continue is substantially doubtful, have you documented your opinion about any plans to mitigate the relevant events and conditions?</td>
</tr>
<tr>
<td></td>
<td>GC3</td>
<td>Have you evaluated whether events substantially affect the firm’s ability to continue as a going concern?</td>
</tr>
<tr>
<td></td>
<td>GC4</td>
<td>Have you evaluated the management’s plans about mitigating the relevant events that raised substantial doubt about the entity’s going concern?</td>
</tr>
<tr>
<td></td>
<td>GC5</td>
<td>Have you documented the conditional and unconditional commitments due or anticipated within the coming year?</td>
</tr>
<tr>
<td></td>
<td>GC6</td>
<td>Have you documented your consideration of management’s plans to overcome the problem of substantial doubt about the going concern, if any?</td>
</tr>
<tr>
<td></td>
<td>GC7</td>
<td>Have you provided the required disclosures when substantial doubt was determined, and this doubt was existed in a prior period but no longer existed in the current?</td>
</tr>
<tr>
<td></td>
<td>GC8</td>
<td>Have you provided the required disclosures regarding the continuity in case of changing the conditions or events have between reporting periods?</td>
</tr>
</tbody>
</table>
3.4. Measurement
3.4.1. Variable Considerations

No explicit disclosures were made regarding the change in variable consideration. Despite the expanded quantitative and qualitative disclosures required by ASC 606, which include variable consideration, Hinson et al. (2022) used a control dummy variable for entities with disclosures of variable consideration and other revenue-related disclosures. In general, the application of revenue standards will impact the reported revenue of all users. To understand the impact of this new standard on all industries, this study used the industry-specific guidelines found on the Big Four websites (Tutino et al. 2019). As shown in Table 3, this variable was developed from eight items (items ASC1 to ASC8). The respondents were asked to give their own responses to the recognition and measurement of the terms in the revenue contracts. The items include variable considerations, rebates, refunds, collectability from customers, performance penalties, and bonuses.

3.4.2. Earnings Management

The measure used to operationalize earnings management was adapted from Cohen et al. (2008) and Barth et al. (2012). This measure was tapped by six items (items from EM1 to EM6), as shown in Table 3.

3.4.3. Going Concerns

The study adapted the measure for operationalizing going concerns from Moss Adams (2022). The respondents were asked to indicate their responses, documenting and evaluating the going concern assumption. Eight questions were used for measuring this variable (questions from GC1 to GC8), as shown in Table 3.

4. Results
4.1. Validity and Reliability

The nature of this study is exploratory research; that is, partial least square (PLS) regression is preferable in this kind of research, which does not require normally distributed multivariate data (Hair et al. 2019). Smart-PLS 4.0 was used to conduct the structural equation model (SEM) analysis with multiple constructs.

All measures of the latent variables achieved convergent validity for loading (loading > 0.70, significant at \( p < 0.05 \)), which means that the analysis did not exclude any measure from its latent variable (Chua 2023).

Following Hair et al. (2018), for a further validity and reliability analysis for the variables, Table 4 illustrates that Cronbach’s \( \alpha \), the rho A, and the composite reliability (CR) for all variables were greater than 0.70. Furthermore, the average variance extracted (AVE) values were greater than 0.50, suggesting convergent validity.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach's Alpha</th>
<th>Rho A</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable considerations in ASC 606 (ASC)</td>
<td>0.946</td>
<td>0.949</td>
<td>0.945</td>
<td>0.684</td>
</tr>
<tr>
<td>Earnings management (EM)</td>
<td>0.890</td>
<td>0.891</td>
<td>0.890</td>
<td>0.575</td>
</tr>
<tr>
<td>Going concern (GC)</td>
<td>0.915</td>
<td>0.915</td>
<td>0.915</td>
<td>0.573</td>
</tr>
</tbody>
</table>

In addition, the cross-loadings among variables were examined to test the discriminant validity (Fornell and Larcker 1981). Table 5 shows that the correlations between each variable, and the other variables were less than the square root of the AVE, thus indicating suitable discriminant validity.
Table 5. Discriminant validity.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ASC</th>
<th>EM</th>
<th>GC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable considerations in ASC 606 (ASC)</td>
<td>0.827</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earnings management (EM)</td>
<td>0.586</td>
<td>0.758</td>
<td></td>
</tr>
<tr>
<td>Going concern (GC)</td>
<td>0.667</td>
<td>0.737</td>
<td>0.757</td>
</tr>
</tbody>
</table>

4.2. Hypotheses Testing

Figure 2 illustrates the results of the SEM analysis. It shows the estimates of the causal relationships among variable considerations in ASC 606, earnings management, and going concern. As suggested by Hair et al. (2018), a path coefficient ($\beta$) of 0.1 or higher, with a t-value of 1.96 or higher, is significant at ($p \leq 0.05$).

![Path Analysis Diagram](image)

Figure 2. Path analysis.

In addition to the path analysis shown in Figure 2, Table 6 shows the results of direct and mediating (indirect) relationship hypotheses testing in panel A and panel B, respectively. Panel A indicates that the using variable considerations in ASC 606 increased the use of earnings management practices (H1). In addition, earnings management practices positively affect the going concern (H2). Furthermore, the use of variable considerations in ASC 606 significantly positively affects going concern (H3). All three hypotheses are significant at ($p \leq 0.01$).

Sobel’s test was used to detect the mediation role of earnings management practices in the causal effect of using variable considerations in ASC 606 on the going concern of business firms (H4). These results are found in panel B of Table 6. It is revealed that the hypothesized mediating effect is significant at ($p \leq 0.01$).
Table 6. Hypotheses testing results.

<table>
<thead>
<tr>
<th>Panel A: Hypotheses testing</th>
<th>Path</th>
<th>Beta</th>
<th>t-statistic</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ASC-EM</td>
<td>0.586</td>
<td>10.221</td>
<td>0.000</td>
</tr>
<tr>
<td>2</td>
<td>EM-GC</td>
<td>0.140</td>
<td>2.916</td>
<td>0.004</td>
</tr>
<tr>
<td>3</td>
<td>ASC-GC</td>
<td>0.899</td>
<td>21.033</td>
<td>0.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B: Mediating effect</th>
<th>Path</th>
<th>z-statistic</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>ASC-EM-GC</td>
<td>9.735</td>
<td>0.000</td>
</tr>
</tbody>
</table>

5. Conclusions

The crisis of COVID-19 had a direct impact on business continuity. During such a crisis, the quality of reported financial information becomes questionable, especially when dealing with the reports of financially distressed firms. Such firms have considerable incentives to practice EM (Tsipouridou and Spathis 2014), which could be a consequence of the latent and flexible standards issued by regulators. These provide users with more room to interpret and implement practices based on their specific situations (Bjornsen 2019).

FASB issued ASC 606 with the objective to enhance transparency, to provide fairer representation, and to prevent revenue steering (Kim 2022). During COVID-19, variable considerations in ASC 606 were used to manage earnings in order to keep businesses operating. This study builds on prior research by exploring the mediating effect of EM on the relationship between using the variable consideration in ASC 606 and going concerns.

To achieve the objectives of this study, PLS-SEM was used. The results revealed that variable considerations in ASC 606 increased the use of earnings management practices. This finding contradicts prior research (Tutino et al. 2019; Comporek 2020; Lee and Lee 2020). The finding is consistent with the hypothesis that firms tended to use variable considerations in ASC 606 as a tool for managing their earnings during COVID-19.

The results showed that earnings management practices positively affect the going concern. This result is aligned with the previous research results (Butler et al. 2004; Sengupta and Shen 2007; Arnedo et al. 2008; Herbohn and Ragunathan 2008) and confirmed that firms may opt to practice earnings management to continue operating, especially during crises.

Another finding showed that the use of variable considerations in ASC 606 positively affects going concerns. The previous literature (Glaze et al. 2020; Levy 2020) also emphasized this finding, which confirms that companies may use various kinds of variable considerations in ASC 606 to keep their businesses operating during challenging times.

The results emphasized the mediation role of earnings management practices in the causal effect of using variable considerations in ASC 606 on the going concern of businesses. This result is a new finding that has not been previously researched in the literature and likely constitutes the most important contribution of this research. COVID-19 has forced firms to look for solutions to keep them operating. The crisis has shown the positive side of earnings management practice, whereby the variable considerations in ASC 606 were exploited to manage firms’ earnings, enabling them to survive.

Furthermore, different practical implications have been provided to regulators, policy makers, and preparers. The study made it easier for regulators and policy makers to find weaknesses arising from the flexibility granted by FASB to financial-statement preparers through the variable considerations in ASC606. In addition, preparers can benefit from the use of variable considerations in ASC 606 as a tool to help their businesses in facing crises. Through the results shown in this study and what was found in previous studies, companies, especially in times of crises, exploit the gaps and flexibility found in accounting policies and practices to show their best financial performance. Therefore, from an economic perspective, we can generalize the results obtained in this study, especially since our
sample was from developed countries with strong economies that are supposed to practice accounting standards correctly.

However, this study has several limitations that can open the door for further research. The study was performed on public shareholding companies in the US market. Additionally, the sample size was limited due to the prohibitive cost of the data collection method used. Therefore, it is difficult to generalize the results of this study to other types of firms, although public shareholding companies have characteristics that allow the results to be generalized to other types of companies. The problem of generalizing the results may also be affected by the country in which the study was applied. Hence, future research should assess the variables on larger samples, in other countries, and in diverse types of businesses. To make the results more robust, we prepared a preliminary experiment by sending the questionnaire to thirty respondents from the target sample to conduct an initial survey (pilot test), where the initial results we found were consistent with the results obtained after sending all questionnaires to the respondents. This confirms that the mechanism used to extract the results is logical and consistent with the research methodology.


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