



## Research Article

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# SME'S Accounting Information in the Eyes of Bank Credit Analyst: Exploration with ZMET Method

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## Abstract

*This study aims to explore and gain an in-depth understanding of the views of bank credit analysts on SME's accounting information in credit decision making. This study used the ZMET (Zaltman Metaphor Elicitation Technique) method to dig information from nine credit analysts as research participants with a qualitative approach. With ZMET's projective techniques through image metaphors, the study has identified 16 important constructs that describe bank credit analysts' mental models when facing the vagueness of SME's accounting information in their credit decision-making process. The connection between constructs is described in the consensus map, which explains the four main themes of the study's findings; SME accounting information blur, the use of alternative information, the dual role of credit analysts, and information needs in credit decision-making.*

**Keywords:** SME accounting information blur; credit analyst; SME credit decision process; ZMET

## 1. Introduction

Most Small Medium Enterprises (SMEs) do not have accounting records or make good accounting records (Emsfors and Holmberg, 2015; Sian and Roberts, 2009; Bruns et al., 2008; Pinasti, 2000; 2007; Collis and Jarvis, 2002; Laitinen, 2001). This makes it difficult to obtain accurate information on the financial condition of SMEs, especially for external parties. A bank credit analyst is one of the SME accounting information users in the decision making of credit for SMEs applying for a loan to a bank. Loans from banks are a major source of external funding for SMEs (Howorth and Moro, 2012; Palazuelos et al., 2017). The absence of SME accounting records results in a lack of information on the financial condition of SMEs for bank credit analysts, thus failing to address the information asymmetry between SMEs as potential debtors and banks as lenders (Hyytinen and Pajarinen, 2008; Berger and Frame, 2007; Berger et al., 2001).

In addition to accounting information, credit analysts use various sources of information to address information asymmetry in credit decision making for SMEs. SME credit scoring provided by third parties can be a source of quantitative information for credit analysts. This credit scoring agency collects data on credit payment history, business demography, list of bankrupt businesses, and other information to assess whether the prospective debtor can fulfil their debt obligations; thereby providing information to banks in evaluating credit applications and monitoring debtors (Cassar et al., 2015; Petersen and Rajan, 2002; Berger and Frame, 2007). Not just 'hard

information', credit analysts even use more 'soft information' in credit decision making for SMEs. 'Soft information' is obtained through a relationship built by the bank with the debtor. Some previous research suggests that this relationship-based information is a better source of information than accounting information in assessing the creditworthiness of SMEs (Chang et al., 2014; Howorth and Moro, 2012; Puri et al., 2011; Agarwal et al., 2009; Petersen and Rajan, 1994). This seems to 'put aside' the role of accounting information.

Recent research on the role of accounting information in credit decisions for SMEs has sought to compare the effects of 'hard information' and 'soft information' in credit decision making for SMEs. Palazuelos et al. (2017) examine the effect of accounting and trust information quality on SME lending. They found that for SMEs with unaudited financial statements, the quality of accounting information does not affect SME lending decisions. The quality of accounting information only affects SMEs whose financial statements are audited. Cassar et al. (2015) examine the interaction of accounting accruals and other sources of information on the reduction of information asymmetry in SME lending. They found that information-based credit scoring and 'soft information' better reduce information asymmetry than accrual accounting information. Chang et al. (2014) examine the effect of information gained from relationship lending and hard information on bad loans in China. They found that information from relationship lending (or 'soft information') could better predict bad credit than 'hard information'. The previous researches were conducted using quantitative methods of hypothesis testing, with secondary data and questionnaire-based surveys.

How does SME accounting information in the eyes of bank credit analysts? How blur is SME's accounting information for them? How do they make credit decisions for SMEs in the context of blurred SME's accounting information? Do other information substitute or complement SME accounting information in credit decision making? These questions are related to making decisions, so they cannot be answered by quantitative research. Exploration of this area is important. The SME credit decision-making process is complex (Howorth and Moro, 2012) and involves more judgments and perceptions of credit analysts (De la Torre et al., 2010).

This research aims to explore and gain a deep understanding of the views of bank credit analysts on SME accounting information in credit decision making. Although banks have established standardized formal procedures, there is a complexity and judgmental involvement in the SME credit decision process and SME accounting information blur. Therefore, this research applies a qualitative interpretive approach using the ZMET method (Zaltman Metaphor Elicitation Technique) in digging information. The research questions addressed in this research are: how to illustrate the mental models of bank credit analysts when dealing with SME accounting information blur in their credit decision-making process.

ZMET is one variation in an interview as a data collection method, precisely by using projective techniques. The projective technique is used to solve data collection by survey or traditional interviews that rely on direct questions. Participants often find it difficult to respond to such questions to give their views on something (Coulter et al., 2001; Khoo-Lattimore et al., 2009)). ZMET was developed by Gerald Zaltman. Zaltman (1995) argues that many things happen in the mind, but often one does not realize it. Most things that affect the words and deeds take place at the unconscious level. It takes a technique to get that hidden knowledge in order to get things that people do not know that they know or they want. Therefore, he created ZMET. In this method, images play an important role as a medium for generating metaphors. Images are stimuli during in-depth interviews to explore and explore participants' thoughts and feelings. This image is based on the findings of cognitive psychology that most of the information reaches the human brain through the visual system, which has many nonverbal communications. Human thinks in terms of images, not words (Coulter et al., 2001; Zaltman, 1996). By applying the ZMET method, this research yields a picture of the mental models of bank credit analysts when facing the blurring of SME accounting information in their credit decision-making process.

The results of this research provide several contributions; theoretical contributions, practical contributions, and methodological contributions. First, concerning theoretical contributions, the results of this research explain credit decision making in the context of SME accounting information vagueness. Such explanations cannot be found in earlier research, most of which use quantitative approaches to test hypotheses. This research provides an in-depth understanding of the credit analyst's perspective as a user of SME accounting information.

Second, concerning practical contributions, the results of this research encourage improvement efforts in the provision of SME accounting information. Based on an understanding from the perspective of information users (i.e. banks), improvement steps can be taken to provide SME accounting information to address information asymmetry and reduce information vagueness. These improvements can be made by SMEs as well as by the regulators governing SME financial reporting. In addition, for the bank, the results of this study also show the crucial points in the process of credit decision-making SME accounting information. These crucial points need

further attention to reduce the risk of bad loans.

Third, concerning methodological contributions, research that applies the ZMET method in accounting is still very limited (if any). Throughout the researcher's knowledge, no prior research has employed the ZMET method to explore the use of accounting information in SME credit decision making. This research can serve as a reference for further research on ZMET method applications in accounting.

The next section of this paper is organized as follows. The second part describes the literature review relating to accounting information in SME credit decision making. The third section describes the applied research methods. The fourth section describes the results of research and discussion. The fifth section contains conclusions, implications, limitations and opportunities for future research.

## **2. Literature Review**

### **2.1. Information Asymmetry in Credit Decision Making for SMEs**

In making credit approval, the creditor assesses the debtor's potential to repay the loan. However, this assessment is not easy because of the information asymmetry between creditors and prospective debtors. Compared to creditors, potential debtors have better information about their financial performance in the past and their future financial prospects, affecting the risk of bad credit (Bharath et al., 2008).

Information asymmetry in credit decision making becomes more severe if prospective debtors are SMEs (Berger et al., 2001). This is because SMEs generally do not have accounting records and are not required to disclose their specific business information to the public (Bruns et al., 2008; Butler et al., 2007). As a result, information about the financial condition of SMEs becomes vaguer compared to information about the financial condition of large companies. This increases the risk of information and potentially influences credit decision making. Palazuelos et al. (2017) and Berger et al. (2001) state that this information's vagueness could harm a bank as a creditor. SME's accounting information obscurity makes it difficult for the bank to distinguish between high-risk prospective debtors at high-risk and low-risk debtors.

Berger and Udell (2006) argued that to address information asymmetry in credit decisions for SMEs, banks use one or more of the following four methods: (1) accounting-based lending; (2) credit scoring; (3) collateral-based lending; and (4) relationship lending. The first three methods are based on hard information. The fourth method is based on soft information.

### **2.2. Accounting Information as of the Base for SME Credit Decision Making**

The SME's accounting information is the main source of information used by creditors to evaluate the financial condition and the risk level of prospective debtors (Palazuelos et al., 2017). Gomez-Guillamon and Vidal (2008) stated that the most important information that financial institutions have in making credit decisions is the financial statements of prospective debtors.

However, accounting information may lose its usefulness if it does not meet some qualitative characteristics that can help users make informed decisions. Schipper and Vincent (2003) stated that accounting information must be timely, accurate, complete, relevant and reliable to be the basis of business and financial decision making. Even the research results from Palazuelos et al. (2017) indicated that companies with audited financial statements have greater access to credit and lower interest rates. The audit process improves the quality of accounting information, thus affecting credit decision-making. The absence of SME accounting records results in a lack of information on the financial condition of SMEs for bank credit analysts, thus failing to address the information asymmetry between SMEs as potential debtors and banks as lenders (Hyytinen and Pajarinen, 2008; Berger and Frame, 2007; Berger et al., 2001).

Accounting reports are not the only source of information that creditors can use to evaluate prospective debtors' financial condition and risk level. Credit scores provided by various credit rating agencies can be the basis of credit decision making for SMEs. Credit scoring is based on SME track records, business demographics, and other public information about financial history of the business. Credit scoring is included in the hard information group in credit decision making. Credit scores information can be cost-efficient for creditors in evaluating loan applications and monitoring debtors (Cassar et al., 2015; Berger and Frame, 2007).

### 2.3. Soft Information as Source of Alternative Information in SME Credit Decision Making

Relationship lending is based on soft information in credit decision making. Relationship lending is particularly relevant for SMEs (Petersen and Rajan, 1994; Howorth and Moro, 2012) because of the characteristics of the vagueness of SME's accounting information (Berger et al., 2001). Soft information is obtained through the relationship between the bank and the debtor. Soft information includes knowledge of credit analysts about the ability, character and reliability (trustworthiness) of prospective debtors. This information is 'soft' in the sense that it is difficult to quantify and communicate to other parties, not even easy to verify by others (Cassar et al., 2015).

Petersen and Rajan (1994) argued that relationship lending could reduce information asymmetry because the relationship between creditors and prospective debtors can improve the accuracy of information about the feasibility of prospective debtors. However, previous research was not conclusive about the positive effect of this relationship lending (Cassar et al., 2015).

## 3. Research Method

### 3.1. ZMET Techniques in Data Collection and Analysis

This research uses the ZMET method (Zaltman Metaphor Elicitation Technique) to collect data and information with a qualitative approach. ZMET is a qualitative research technique that utilizes insights from mind science to open up unwitting knowledge to understand the beliefs, behaviours, and decisions that a person makes by utilizing the image media (imagery). The main objective of ZMET is to gain an in-depth understanding of the participants' views on something (Coulter et al., 2001; Khoo-Lattimore et al., 2009). This research aims to explore and gain a deep understanding of the views of bank credit analysts on SME accounting information in credit decision making. Therefore, ZMET as a projective technique is highly applicable in collecting and analyzing data in this study.

In the preparation phase, before the ZMET interview was conducted, participants were asked to look for ten images that express their thoughts and feelings about SME accounting information in credit decision making. Participants in this study were credit analysts. Participants can select images from multiple sources. In this study, all participants used the internet to search for images. Participants were given seven days to do an image search before the ZMET interview was conducted.

At the individual interview stage, the data retrieval procedure conducted in this study refers to the ZMET procedure as stated in Coulter (2006); Zaltman (1997); Zaltman (1996) as follows:

- Storytelling  
Participants are asked to describe the contents of each picture (one by one) based on their thoughts and feelings. Researchers do the digging (probing) at the time participants tell.
- Missed images  
Participants were asked if there was any important idea they wanted to express, but he could not find relevant images.
- Sorting task  
Participants are asked to sort images into meaningful sequences.
- Construct elicitation  
While listening to the participants' stories about the pictures, the researchers recorded important words that describe the participants' experiences. Those important words are the constructs that come up.
- The most representative picture  
Participants are asked to indicate which image best represents their views and explains why.
- Opposite images  
Participants were asked to indicate which image was the opposite of the most representative image (stage 5). The opposite picture can be sourced from existing images or images that can not exist.
- Sensory images  
Participants were asked to describe flavours, odours, textures, sounds, and colours associated with SME accounting information in credit decision making.
- Mental map  
Participants were asked to create a map or a causal model based on the constructs that appeared in the previous stages.

- Summary image  
Participants are asked to create a collage of images that express their views on SME accounting information in credit decision making.

The final step is to build a consensus map of all study participants. The researcher creates a map or causal model that shows the most important constructs of all participants. The constructs that emerged from all participants were then reduced (grouped/categorized) by determining the main themes based on the individual ZMET interview results that have been conducted. The consensus map in the form of this diagrammatic scheme is the main outcome, which illustrates the views of bank credit analysts on SME accounting information in credit decision making.

### **3.2. Research Participants**

Participants in this study are credit analysts from a bank in Indonesia who mostly distribute credit to SMEs. The background of participants' work environment as credit analysts in a bank that is familiar with SME credit is very appropriate with the focus of this research. Participants involved in this study were nine credit analysts, all of whom were men, aged between 27 and 46, with a working period of between 8 and 15 years. An adequate number of participants is based on Zaltman's (1997) assertion that ZMET interviews of 4 to 5 people provide approximately 90% of the main information extracted from all interviews. Previous research also shows that the number of constructs identified with ZMET will not increase if the number of participants is increased (Danilet and Bobalca, 2017).






## **4. Results and Discussion**

### **4.1. Identify Emerged Constructs**

The ZMET interview results for each participant produced data and information that underlie important construct identification. The data obtained in the form of selected images from participants, exposure description of the choice of images in the story telling stage, identification of missed images, picture sequence, most representative picture, opposite images, sensory images, mental map of each participant, and collage images of each participant. Based on the information gained from this entire material, the researcher identified the constructs that participants present.

Participants' pictures choices in the storytelling stage showed the metaphor chosen to illustrate their view of SME accounting information in credit decision making. The metaphors in the picture contain the important constructs that participants present. Table 1 shows some sample images selected as metaphors by participants, along with important constructs contained therein.

**Table 1.** Examples of Picture and Constructive Metaphors Involved by Participants

Images	Emergед Constructs	Storytelling of Images
	There is no supporting evidence.	Information on the financial condition of SMEs at a glance can look 'beautiful', as the scenery view in the picture. This 'beauty is, for example, information that the selling rate is high. However, when further explored, it is not as beautiful as it seems because there is no supporting evidence.
	Information on the financial condition of SMEs cannot be trusted (unreliable)	Colourful ballpoint images depict SMEs that are not consistent in explaining the conditions of their business. This lowers the credit analyst's confidence because it looks 'nonsense'.
	Assessment of SME'S financial condition	The scales show the assessment of the financial condition of SMEs. Credit analysts use the data they obtained to assess the financial condition of SMEs.
	Assessment of business prospects	Personal communication with the prospective debtor provides information about the prospective debtor's perspective on his business prospects. The open door illustrates that the prospective debtor has an open view of his business prospects.
	Presentation of SME's accounting information	Analysts feel like a 'chef' in the kitchen. Retrieve 'raw data' financial condition of SMEs, then process and present accounting information for their credit decision-making basis.



The description through the sensory image also confirmed some important constructs that participants presented. The 'no supporting evidence' constructs appeared consistently in 2 participants when describing touch sensory. Two participants of this study associated SME accounting information with textures 'like feeling the water'. The meaning explained by both participants was that SME accounting information is difficult to hold because there is no supporting evidence.

The collage of drawings prepared by each participant in the final stage of individual ZMET interviews explained the links between constructs that are raised. Figure 1 shows a collage of pictures from participant number 3.



**Figure 1.** The summary image created by participant no. 3

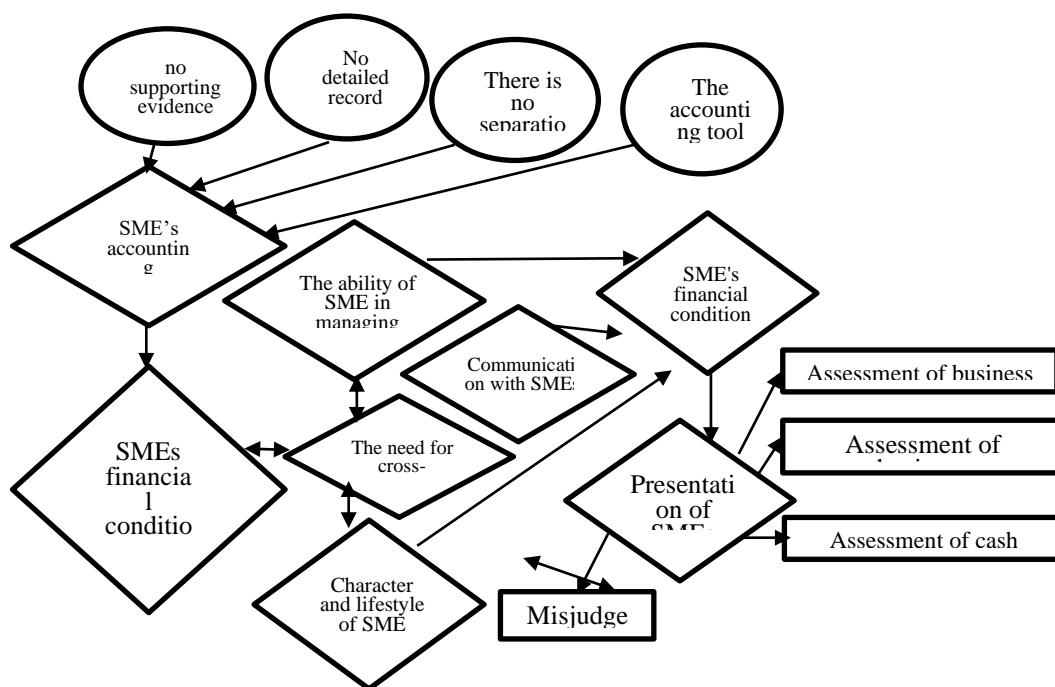
In the picture collage, as shown in figure 1, participant number 3 considers that SME accounting information should be like a clear sea that can indicate the overall condition of the SME business. This expectation is placed as the basis of the collage of the picture. However, he viewed that SME accounting information cannot be held (such as clouds) and unreliable (like water on taro leaves). Therefore communication is required with SMEs, using the right 'connector' (style of communication) and no bullshit. Credit analysts can process and present accounting information (such as a chef who process and serve food). The information processed and presented by credit analysts has a risk of appraising, so it can turn to attack (become boomerang) credit analyst. The accounting information presented by credit analysts is used to view (like the eyes) the prospects of SME business of prospective debtors.

Based on the overall material of individual ZMET interviews on each credit analyst participant, the researcher successfully identified 42 constructs that describe the credit analyst's view of SME accounting information in credit decision making. The categorization reduction of these 42 constructs yielded 16 important constructs. Sixteen important constructs that emerged were: (1) no supporting evidence; (2) no detailed records;

(3) there is no separation of business and personal assets; (4) accounting tools not used; (5) SME accounting information is not accurate; (6) information on the financial condition of SMEs can not be trusted; (7) need to cross-check; (8) communication with SMEs; (9) the character and lifestyle of SMEs; (10) the ability of SMEs to manage the business; (11) the assessment of the financial condition of SMEs; (12) presentation of SME accounting information; (13) the risk of a misstatement; (14) assessment of business prospects; (15) cash flow projection assessment; (16) business continuity assessment. These 16 constructs from the consensus map.

## 4.2. Consensus Map

Important constructs that appeared in the ZMET process, associated with the credit analyst's view of SME accounting information, are presented in the consensus map in Figure 2. In the ZMET method, the consensus map is one of the most important outcomes. Zaltman and Coulter (1995) suggested that direct and indirect connections between constructs represent a chain of reasoning or thought processes that show how an idea raises other ideas. The consensus map of this study used different symbols for different types of constructs. Referring to Danilet and Bobalca (2017) research, circle symbols indicate the originator constructs, rectangular symbols indicate destination constructs, and the parallelogram symbol indicates connector constructs. The relationship between constructs is shown by the unidirectional or bi-directional arrows.



**Figure 2.** Consensus map on the view of bank credit analysts on SME accounting information in credit decision making

Originator constructs identified in this study are: (1) no supporting evidence; (2) no detailed records; (3) there is no separation of business and personal assets; and (4) accounting tool is not being used. Participants see these four constructs as the cause of the emergence of other constructs. The absence of supporting evidence, the absence of detailed records, the exclusion of business and personal assets, and the unused accounting tools make SME accounting information inaccurate and vague (blur).

Connector constructs identified from the ZMET process include: (1) inaccurate SME accounting information; (2) information on the financial condition of SMEs cannot be trusted; (3) the need of cross-checking; (4) communication with SMEs; (5) the character and lifestyle of SMEs; (6) the ability of SMEs to manage the business; (7) assessment of the financial condition of SMEs; (8) presentation of SME accounting information. The



inaccuracy of SME accounting information causes information on the financial condition of SMEs to be unreliable. Therefore, a cross-check is required. Cross-checking is conducted through communication with SMEs, taking into account the managerial skills of SMEs and the character and lifestyle of SMEs. Communication, assessment of managerial ability, and character assessment of SMEs become the basis for credit analysts to assess the financial condition of SMEs. The results of these assessments are then presented in SME accounting figures.

Destination constructs of the ZMET results of this study include (1) the risk of a misstatement; (2) assessment of business prospects; (3) cash flow projection assessment; (4) business continuity assessment. The risk of misjudgment arises because the presentation of SME accounting information by credit analysts is based on judgment and complex considerations from various sources of information. An assessment of the financial condition of SMEs expressed in accounting figures aims to assess the business prospects, business sustainability, and projected cash flows of prospective SMEs debtor. Destination constructs in this study show the information needs in SME credit decision making.

The sixteen constructs identified from the ZMET process of this study can be categorized into four main themes, namely: (1) SME accounting information vagueness; (2) the use of alternative information; (3) the dual role of credit analysts; (4) information needs in credit decision making. The grouping of the sixteen consensus map constructs into four major themes is shown in Table 2. Each theme is discussed further in the discussion section.

**Table 2.** Categorization of consensus map constructs into main themes

Consensus Map Constructs	Main Theme
There is no supporting evidence	The vagueness of SME's accounting information
There are no detailed records	
There is no separation of personal and business affairs.	
The accounting tool is not used.	
SMEs accounting information is not accurate.	
Unreliable SMEs financial condition	
The need for cross-checking	The use of alternative information
Communication with SMEs	
Character and Lifestyle of SMEs	
The ability of SMEs to manage their business	
Assessment of SMEs financial condition	Dual roles of credit analyst
Presentation of SMEs accounting information	
Risk of misjudgement	
Assessment of business prospectus	The use of information in credit decision making
Assessment of projected cash flows	
Assessment of business sustainability	

### 4.3. Discussion

This study identified four main themes that describe the views of credit analysts on SME accounting information in credit decision making:

- The blurred of accounting information for credit analysts

This study confirms the findings of previous research on SME accounting information vagueness for credit analysts. Hyytinen and Pajarinen (2008), Berger and Frame (2007), and Berger et al. (2001) have stated that SME accounting information vagueness is not able to overcome information asymmetry between SMEs as potential borrowers with banks as lenders. For credit analysts in this study, the vagueness of information is expressed in the constructs of 'inaccurate SMB accounting information' and 'information on the financial condition of SMEs is not reliable.

Specifically, the results of this study identify the causes of SME accounting information vagueness. There are four causes: the absence of supporting evidence (source document), the absence of detailed records, the exclusion of business entities and private assets, and the unavailability of accounting tools (even simple ones). The absence of supporting evidence received attention from some credit analyst participants. They describe it as 'like feeling water'. Participants also illustrated with a picture of 'cloud' and picture 'water on taro leaves'. This means that the information they get can not be 'held'. Therefore it is unreliable.

The identification of vagueness causes becomes an important finding. To improve the provision of SME accounting information to users, especially creditors, the factors causing this vagueness must be addressed. The findings of this research have implications for improving the SME accounting records process. SMEs should keep evidence of transactions as supporting documents of their accounting records. SMEs should perform detailed records using a simple accounting tool. In performing such a simple listing, SMEs should separate the entity's assets from the owner's assets.

- Use of alternative information

The results of this study explain how credit analysts make credit decisions when they face the vagueness of an SME's accounting information. Credit analysts do cross-checking and use alternative sources of information. Alternative sources of information used by credit analysts in this study are expressed in the constructs of 'communication with SMEs', 'the character and lifestyle of SMEs', and 'the ability of SMEs to manage businesses'. Participants of this study stated that the communication made in the form of oral communication tailored to the background of SMEs. Characters that highlight the participants of credit analysts in this study include trustworthy characters, openness, obedience, consistency, and a simple lifestyle. The managerial capabilities of SMEs to be considered by credit analysts in this study include managing costs efficiently, developing the business, the uniqueness of the business, and the mastery of technology.

Previous research stated this alternative source of information as "soft information". Chang et al. (2014), Howorth and Moro (2012), Castle et al. (2011), Agarwal et al. (2009), and Petersen and Rajan (1994) stated that this relationship-based information is a better source of information than accounting information in assessing the creditworthiness of SMEs. Cassar et al. (2015) and Chang et al. (2014) stated that 'soft information' based on relationships with prospective debtors is better able to reduce information asymmetry and more able to predict bad loans.

The result of this study indicates that bank credit analysts use 'soft information' based on relationships and communication with SMEs in their credit decision-making process. This information is 'soft' because it is difficult to quantify and communicate to other parties, not even easy to verify by others. This implies the need to consider the scoring of SMEs' character elements and managerial skills so that it can be more verifiable by third parties and increase the reliability of 'soft information' used as the basis for decision making.

- The dual roles of credit analysts

This study shows interesting results by identifying multiple roles of credit analysts. Concerning SME prospective debtors' accounting information, credit analysts not only serve as 'users' of information but also 'server' and 'verifier' of that information. This is stated in the constructs 'assessment of SMEs' financial condition and 'presentation of SME accounting information' by credit analysts. Even credit analysts also face the risk of misjudgment due to the use of 'soft information'.

Participants of this study describe their role as a presenter of SME accounting information with the analogy of a 'chef'. Using raw data obtained through relationships and communication with prospective debtors, credit analysts gather and present the SME accounting figures in the credit analysis process. One participant associates this with white, meaning that he presents 'colourful' information on SME accounting. One of the participants also associates this with the aroma of 'garlic', which means that it still feels 'uncomfortable when not processed, but when it has been processed, it feels good. The overall sensory image confirms the dual role of credit analysts, as users and as a renderer of information.

This finding is very interesting, as previous research has not explored and explained the dual role of credit analysts when dealing with SME accounting information blur. The results of this study also indicate the awareness of credit analysts will be the risk of wrong assessment due to the use of 'soft information'. One participant described the risk of this misjudgment with a 'boomerang' image, meaning that the analyst's mistake in assessing SME accounting figures can turn against itself when approved credits are unperformed. These findings have implications for the need for proper judgment training for

credit analysts in facing SMEs' complexity of credit decisions.

- Information needs in credit decision making.

The fourth theme identified from the ZMET process of this study shows the information needed by analysts in credit decision making. There are three objectives in SME credit decision making: business prospect assessment, cash flow projection assessment, and business sustainability assessment. These three objectives lead to the assessment of the ability of prospective debtors to repay loans. This is in line with Berger and Udell (2006) assertion that in decision making of credit approval, the creditor assesses the probability of the debtor's potential to repay the loan.

The findings of this study are three things that become the objectives of the assessment; namely, business prospects, cash flow projections, and business continuity can be the basis for the development of credit scoring equations. Credit scoring is a cost-efficient method for creditors in evaluating loan applications and monitoring debtors. The three objectives of the assessment can be formulated as predicted variables in the calculation of credit scoring.

## **5. Conclusion, Implication, Limitation and Recommendation of Further Research**

The results of this study explain in-depth the views of bank credit analysts on SME's accounting information in credit decision making. Using the ZMET method, this study explores and identifies 16 important constructs that explain the four main themes of SME's accounting information vagueness, the use of alternative information, the dual roles of credit analysts, and information needs in credit decision making. For credit analysts in this study, SME's accounting information is deemed inaccurate and untrustworthy. This is due to the absence of supporting evidence and the absence of accounting records for SME entities. To overcome this vagueness of SME accounting information, credit analysts dig 'soft information' about the character and capability of SMEs. 'Soft information' is obtained from relations and communication with SMEs. The study found that credit analysts have multiple roles in the process of making credit decisions for SMEs. A credit analyst acts as a user of accounting information and acts as a presenter/server of an SME's accounting information. Based on the data and 'soft information' obtained, credit analysts assess the financial condition of SMEs and present the SME's accounting figures. Credit analysts are aware of the risk of misjudging the financial condition of SMEs. The ultimate goals of the process of collecting and presenting this information are the assessment of business prospects, cash flow projection assessment, and business continuity assessment, all of which leads to an assessment of the ability of prospective borrowers to repay loans.

The findings of this study bring several implications, particularly about improvement efforts in the provision of SME accounting information. SMEs, as prospective debtors, need to store transaction evidence as supporting documents and perform detailed records for their business entities. This is to overcome the vagueness of SME accounting information on which credit decision is based. The findings of this study also have implications for improving the SME's credit decision-making process. The presence of 'soft information' and the multiple roles of credit analysts involving judgment, as well as a complex assessment process, implies the need for ongoing training for credit analysts. The training includes the ability to process information (including 'soft information') and minimize the risk of assessing the complexity of credit decisions for SMEs.

The limitation of this research lies in the low generalizability of the research results. This is due to the limited context and research participants. However, exploration by the ZMET method does involve a limited context but with deep exploration. Therefore, further research can explore the role of accounting information in credit decision making in different contexts, i.e. corporate loans or large corporations. Further research is also likely to explore ZMET from the perspective of SMEs as potential debtor and provider of accounting information.

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## References

- Agarwal, Sumit, Souphala Chomsisengphet, Chunlin Liu, and Nicholas S Souleles. 2009. "Benefits of relationship banking: evidence from consumer credit markets." *Working Paper, Federal Reserve Bank of Chicago, No. 2010-05*. Chicago: Federal Reserve Bank of Chicago.
- Berger, A N, and G F Udell. 2006. "A more complete conceptual framework for SMEs finance." *Journal of Banking and Finance* 30: 2945-2966.
- Berger, A N, and W S Frame. 2007. "Small business credit scoring and credit availability." *Journal of Small Business Management* 45 (1): 5-22.
- Berger, A N, L F Klapper, and G F Udell. 2001. "The ability of banks to lend to informationally opaque small business." *Journal of Banking & Finance* 25 (12): 2127-2167.
- Bharath, S T, J Sunder, and S V Sunder. 2008. "Accounting quality and debt contracting." *The Accounting Review* 83: 1-28.
- Bruns, V, D V Holland, D A Shepherd, and J Wiklund. 2008. "The role of human capital in loan officers' decision policies." *Entrepreneurship Theory and Practice* 32 (3): 485-506.
- Butler, M, A Kraft, and I S Weiss. 2007. "The effect of reporting frequency on the timeliness of earnings: The cases of voluntary and mandatory interim reports." *Journal of Accounting and Economics* 43: 181-217.
- Cassar, Gavin, Christopher D Ittner, and K S Cavalluzzo. 2015. "Alternative information sources and information asymmetry reduction: evidence from small business debt." *Journal of Accounting and Economics* 59 (2): 242-263.
- Chang, Chun, Guanmin Liao, Xiaoyun Yu, and Zheng Ni. 2014. "Information from relationship lending: evidence from loan defaults in China." *Journal of Money, Credit and Banking* 46 (6): 1225-1257.
- Collis, J, and R Jarvis. 2002. "Financial information and the management of small private companies." *Journal of Small Business and Enterprise Development* 9 (2): 100-110.
- Coulter, R A, G Zaltman, and K S Coulter. 2001. "Interpreting consumer perceptions of advertising: An application of the Zaltman Metaphor Elicitation Technique." *Journal of Advertising* 30 (4): 1-21.
- Danilet, Magdalena, and Claudia Stoian Bobalca. 2017. "Using ZMET for investigating the role of social media in the employment process." *Review of Economic & Business Studies* 10 (1): 9-32.
- De la Torre, A, M S Martinez-Peria, and S L Schmuckler. 2010. "Bank involvement with SMEs: beyond relationship lending." *Journal of Banking & Finance* 34 (9): 2280-2293.
- Emsfors, E, and L Holmberg. 2015. "Uncertainty, information practices and accounting in small firms." *Small Business Institute Journal* 11 (1): 49-64.
- Gomez-Guillamon, A D, and J S Vidal. 2008. "The relevance of the audit report for obtaining bank credit." *Spanish Journal of Finance and Accounting* 37 (138): 255-278.
- Howorth, Carole, and Andrea Moro. 2012. "Trustworthiness and interest rates: an empirical study of Italian SMEs." *Small Business Economics* 39: 161-177.
- Hyytinen, A, and M Pajarinen. 2008. "Opacity of young businesses: evidence from rating disagreements." *Journal of Banking & Finance* 32 (7): 1234-1241.

- Khoo-Lattimore, C, M Thyne, and K Robertson. 2009. "The ZMET method: Using projective technique to understand consumer home choice." *The Marketing Review* 9 (2): 139-154.
- Laitinen, E K. 2001. "Management accounting change in small technology companies: towards a mathematical model of the technology firm." *Management Accounting Research* 12 (4): 507-541.
- Palazuelos, Estefania, Angel Herrero Crespo, and Javier Montoya del Corte. 2017. "Accounting information quality and trust as determinants of credit granting to SMEs: the role of external audit." *Small Business Economics* 1-17.
- Petersen, M A, and R G Rajan. 2002. "Does distance still matter? The information revolution in small business lending." *Journal of Finance* 57: 2533-2570.
- Petersen, Mitchell A, and Raghuram G Rajan. 1994. "The benefits of lending relationship: evidence from small business data." *Journal of Finance* 49: 3-37.
- Pinasti, Margani. 2007. "Pengaruh penyelenggaraan dan penggunaan informasi akuntansi terhadap persepsi pengusaha kecil atas informasi akuntansi: suatu riset eksperimen." *The Indonesian Journal of Accounting Research* 10 (3): 20-32.
- Pinasti, Margani. 2000. "Penggunaan informasi akuntansi dalam pengelolaan usaha para pedagang kecil di pasar tradisional di kabupaten banyumas." *Jurnal Ekonomi, Bisnis dan Akuntansi* 1 (1): 1-10.
- Puri, Manju, Jorg Rocholl, and Sascha Steffen. 2011. "On the importance of prior relationships in bank loans to retail customers." *ECB Working Paper, No. 1395*. Frankfurt: European Central Bank (ECB).
- Schipper, K, and L Vincent. 2003. "Earnings quality." *Accounting Horizons* 17 (Supplement): 97-110.
- Sian, S, and C Roberts. 2009. "UK small owner-managed businesses: accounting and financial reporting needs." *Journal of Small Business and Enterprise Development* 16 (2): 289-305.
- Zaltman, G. 1996. "Metaphorically speaking: New technique uses multidisciplinary ideas to improve qualitative research." *Marketing Research* 8 (2): 13-20.
- Zaltman, G. 1997. "Rethinking market research: Putting people back in." *Journal of Marketing Research* 34 (4): 424-437.
- Zaltman, G, and R H Coulter. 1995. "Seeing the voice of the customer: Metaphor-based advertising research." *Journal of Advertising Research* 35 (4): 35-51.