Accounting for Industry Change

A Case Study on the Use and Development of Vernacular Accounting Systems in the Branches of a Swedish Bank

Abstract

This thesis explores the use and development of locally produced, self-generated accounting information systems, also known as vernacular accounting systems (VAS), by branch managers in a Swedish bank. The phenomenon is analysed through earlier literature's theoretical identification of different manifestations, and we find that many of these are used in practice. The dynamics of the systems are analysed through the lens of industry-wide developments, primarily increased regulatory burdens and digitalisation and digitisation of bank services. We find that the branches, along with the industry at large, are under heavy regulatory burdens directly impacting the use of VAS. However, since the motives for such systems remain, they continue to exist, albeit in more subtle and supportive forms. Digitalisation and digitisation have had an indirect impact on the use of VAS, primarily through the connection to increased centralisation of the bank through the closure and consolidation of bank branches.

Key words: Vernacular accounting systems, managers' information use, bank branch developments, compliance

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1. Introduction

1.1 Background

Managers will use many sources of information to understand their surroundings and operate in their oftentimes diverse and complicated environments (de Alwis et al., 2006). One technique to collect, analyse and act upon information is through accounting and control systems (McKinnon & Bruns, 1992). The managers' role includes creating new knowledge for the organisation and improving the functions they are responsible for (de Alwis et al., 2006). How they use and interact with accounting information affects what type and form of information currently is, or could be, considered helpful by managers (Hall, 2010).

In many organisations, there are global accounting and control systems, which are standardised systems used by all managers to create uniformity (Hanseth et al., 2001; Ives & Jarvenpaa, 1991) and shared understanding (Chapman, 2005; Davenport, 1998; Dechow & Mouritsen, 2005; Scapens & Jazayeri, 2003). However, managers in branches, divisions and subdivisions face a multitude of challenges based on their geographical and functional settings (McKinnon & Bruns, 1992; Goretzki et al., 2018). Using accounting information and control systems, said managers can better understand their unique setting and act according to this aggregated information (Cacciatori, 2012). However, due to their unique business landscape requirements, in the absence of such global systems or in defiance of these, they may develop and maintain their own *local* accounting and control systems to fit their needs. These local accounting and control systems are sometimes referred to as *Vernacular Accounting Systems* (VAS) (Kilfoyle et al., 2013).

Cambridge Dictionary (2022) defines ''Vernacular'' as:

> *"The form of a language that a particular group of speakers use naturally, especially in informal situations"*

Two keywords in this definition are; *naturally* and *informal*, as vernacular accounting is created for the local landscape and thus fits *naturally* into the processes of the manager. Second, the *informality* of said systems is also an important aspect, seeing how managers

create these systems in discord with global systems or as an "unofficial" tool not used in the rest of the organisation (Kilfoyle et al., 2013).

1.2 Problem

Understanding and exploring the information used by managers is essential since they hold such a central part in firms (de Alwis et al., 2006). They are exposed to and take part in top-down and bottom-up information flows and thus constitute a centrepiece for research on information in organisations (de Alwis et al., 2006).

In a previous study by Kilfoyle et al. (2013), vernacular accountings were analysed by the dissection of the phenomenon into its motives and epistemological aspects, as well as defining and positioning VAS in relation to other types of information systems. Hall (2010) proposed different ways managers use information and stressed the importance of exploring accounting information on a smaller scale, focusing on micro-practises to gain further insights. Hall (2010) argued that previous studies focused on typical well-defined decision-making contexts when there could be more critical ways in which accounting information is used. Moreover, Kilfoyle et al. (2013) stated that identifying and analysing the many possible types of empirical manifestations of VAS is needed in future research. In a case study by Goretzki et al. (2018), the focal point was the development of global accounting systems and the role of VAS in these processes. The authors analysed the development and use of VAS as part of an intra-organisational change, where homogenisation and efficiency were the primary drivers of the change. Goretzki et al. (2018) and Kilfoyle et al. (2013) shared the focus of primarily studying VAS as inscriptions, and the former identified and used Excel files as the primary manifestation of VAS. De Alwis et al. (2005) pointed out that understanding managers' information preferences and uses when the sources and channels of such information are under rapid transformation is of great importance. Therefore, it is valuable to study VAS as a broader phenomenon, including more manifestations (as advised by Kilfoyle et al., 2013), under the influence of changes in the overall industry and society, e.g., regulatory changes and technological progress (as opposed to the intra-organisational changes analysed by Goretzki et al. (2018)). Cobb et al. (1995) performed a similar study, but the publication date implies that some external environmental changes may be outdated and need revisiting. Moreover, the study only focused on the global system in development.

The Swedish banking industry is such an industry where VAS may exist, and industry developments are likely to affect VAS. In particular, the bank branches of Swedish banks, where each branch manager faces different demands and may create the tools necessary to meet said demands. The local setting opens up three possibilities for accounting diversity and informality. First, different areas have different customers and business landscapes. For example, a bank branch in a small town in the north of Sweden may have a wholly different customer base and thus demands than a bank branch in a metropolitan area (Sin Tian Ho & Berggren, 2020). Second, the distance between headquarters and a local bank branch may entail a lack of understanding of these local requirements by the main office (Alessandrini et al., 2009). Third, branch managers may have different decision criteria and transactional evaluation processes than their head office counterparts (Canales & Nanda, 2012).

There is also significant industrial development of increased centralisation of physical banks through the rapid closure of bank branches in Sweden due to the increased possibility of digitisation and digitalisation of bank services combined with decreased profitability of physical banks (Sin Tian Ho & Berggren, 2020). Sweden's "Big Four" banks have led this development, with Swedbank closing more than 60% of bank branches between 2008 and 2020 (Swedish Bankers' Association, 2009, 2021). Handelsbanken, SEB and Nordea have made similar cutbacks, closing many bank branches and focusing on online banking (Tranfaglia, 2018).[1] Other reasons for this trend, stated in earlier literature on the topic, are the developments in banking regulation (Sangupta & Dice, 2019; Feldman et al., 2013; DiSalvo & Johnston, 2016). As the banking industry becomes more centralised and regulated, the vernacular accounting systems of bank branches might change in appearance and prevalence or go extinct as a whole.

1.3 Aim and Research Question

1.3.1 Aim

We aim to explore and understand the gaps in prior research by viewing VAS as a dynamic and highly contextual phenomenon. As VAS is always part of the context within which it was created, and the need for it arose, the in-depth analysis and subsequent understanding of it is

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[1] However, there are also exciting outliers, Länsförsäkringar Bank. Länsförsäkringar Bank has increased its local offices between 2008 and 2020 by 15% (Swedish bankers 2008, 2021).

enriched by analysing the surrounding circumstances. Therefore, our aim is to analyse the phenomenon as a 'chain', wherein identifying VAS on a smaller scale is naturally linked to the industry in which it exists and the developments of said industry.

1.3.2 Research Question

The purpose of this thesis is to understand and explore VAS in the Swedish banking industry. Thus, our research question can be formulated as follows:

> *How are vernacular accounting systems developed and used in the Swedish*
> *banking industry?*

1.3.3 Contribution

The contribution of this study is threefold by (i) adding to the scholarly knowledge on the practices and activities that make up vernacular accountings, (ii) understanding vernacular accountings through a dynamic perspective and (iii) by gaining insights relevant to the banking sector itself.

First, we have added to existing knowledge about the use of vernacular accountings by analysing the phenomenon in an industry and country previously unexplored in relation to VAS. In doing so, we have found other empirical manifestations of VAS than the inscriptions analysed by Kilfoyle et al. (2013) and Goretzki et al. (2018), such as narratives, artefacts, mental models and a possible manifestation outside the categorisation by Kilfoyle et al. (2013) entirely. Second, our analysis of VAS as a dynamic phenomenon subject to influences from industry-wide developments (as opposed to the previously researched intra-organisational developments) has found that VAS can continue to exist even if industry-wide changes, such as regulatory developments, make certain manifestations less actionable or even illegal. In such cases, the users (managers) develop more subtle and more supportive vernacular accountings. On the other hand, in less regulated tasks, managers are more prone to develop VAS that have substitutional elements (in regards to the global systems in place). The digitisation and digitalisation of bank services impact managers' VAS use indirectly by enabling the centralisation of banks. These findings also contribute to the wider field of understanding managers' information use in times of great change, as emphasised by de Alwis et al. (2006). Analysing VAS in the banking industry has thus shown

that local systems can exist in industries with unique requirements such as high regulatory burdens. This leads to the third and final contribution of this study; by analysing VAS in relation to developments in the banking industry, such as increased centralisation and regulation, we have shed light on local resources within the organisational grid that should be included in the list of trade-offs between staying local and centralising

1.3.4 Limitations and Delimitations

Like every study, our research has its limitations and delimitations (Ross & Zaidi Bibler, 2019). In particular, four main limitations were apparent when conducting the study. The first revolves around the subject itself. Identifying VAS may involve asking uncomfortable questions about the processes of managers. For instance, their use of VAS may be frowned upon in the organisation or even in violation of company policy, which may result in interviewees withholding information in interviews. Second, earlier research on VAS and similar subjects has often shadowed managers in their everyday work to further understand and map their behaviour. Given the timeframe and the fact that most interviewees were situated far from each other and from Stockholm, we could not replicate this. Third, this is a case study, and we cannot make definite conclusions about the findings and the correlations included in these findings and their connection to a wider phenomenon. Single case studies analyse a particular topic through the lens of one entity (person, group, organisation) which means that there may be other explanations for the findings that did not appear in the studied organisation. We can not and will not make definite causal inferences from the material at hand but only provide suggestive findings and conclusions that hopefully inspire further research (Ross & Zaidi Bibler, 2019). Fourth, an important delimitation was to focus on managers primarily. This meant that information from and about clerks and other employees in the branches was provided by a secondary source, i.e. the managers. This could mean that there are more manifestations of VAS present than the managers are aware of and therefore missed in this study.

2. Previous Literature and Theory

2.1 Earlier Research

2.1.1 Identifying Vernacular Accounting Systems
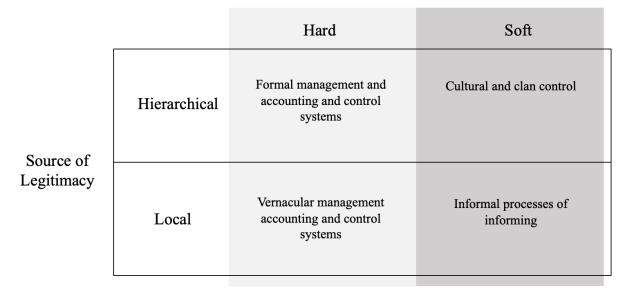
Kilfoyle et al., (2013) define VAS as:

> *"...accounting and information systems that are self-generated by managers and/or employees and not officially sanctioned within the organisational hierarchy."* (Kilfoyle et al., 2013, p. 382).

Moreover, Kilfoyle et al. (2013) identified three types of VAS, with the main difference being the motives of the user. First, VAS is used as an "inventory of knowledge" (derived from Hall, 2010, p.303), which are collections of information created and used by managers in their day-to-day operations. A similar view on vernacular systems is provided by Fisher (1994), who states that they may run parallel to the global systems, and exist to provide managers with the information deemed necessary for their tasks but not provided by the global system (Kilfoyle et al. 2013). Second, VAS may be a resource with defensive purposes related to local inertia in regards to the formal and official (hierarchical) information and control systems. Kilfoyle et al. also find that the empirical data of Neergaard (1998) illustrate the existence of other defensive motives in the use of VAS. Users may find that the key performance indicators of formal systems are not valid or that the formal systems fail to capture the user's lived experiences.[2] The third ideal type of VAS has both a pragmatic and epistemic function, in that VAS are usable to take action to meet situational demands (pragmatic), but also facilitate the conceptualisation and understanding needed for said action. According to Kilfoyle et al. (2013), this implies that there are pools of knowledge outside the sight and reach of the central senior management. On a similar note, Hedberg and Jönsson (1978) find that (global) accounting and information systems act as organisational stabilisers, which inhibit the organisation's possibility to change and be proactive.

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[2] This is exemplified by Kilfoyle et al. (2013) by junior auditors who keep two parallel accounts of their time spent on projects. One formal for billing purposes and another vernacular accounting system with all hours spent on the project used internally for planning future projects.

Kilfoyle et al. (2013) make a further distinction by using two dimensions to analyse the subject. Firstly the modality of accounting, i.e. whether the accounting information is "hard" or "soft" (lent from Ijiri, 1975). Hardness in their paper refers to, in simple terms, how actionable the information is perceived to be and not necessarily hard/soft as a distinction between quantitative and qualitative form or medium of transmission. The authors add to these discerning features by stating that the epistemological aspects of the accounting information are key in understanding its softness or hardness, i.e. the information is constructed in a social context that influences its modality. This realisation entails another dimension, the source of legitimacy of the accounting information, i.e., what counts as hard and soft data in the organisation. The mentioned dimensions allow for an interesting perspective on accounting systems since it highlights local and hierarchical (the two being opposites) accounting systems, thus implying heterogeneity due to the:

"...epistemological commitments and values of the participants in specific task environments and the social processes by which epistemological consensus may emerge within task groups" (Kilfoyle et al., 2013, p.385).

Modality of Accountings

		Hard	Soft
Source of Legitimacy	Hierarchical	Formal management and accounting and control systems	Cultural and clan control
	Local	Vernacular management accounting and control systems	Informal processes of informing

Figure 1. Framework recreated from Kilfoyle et al. (2013) p. 386.

The authors thus define vernacular accountings as locally legitimised accounting systems in which hard and actionable information is used. Moreover, some possible empirical

manifestations are listed, such as mental models, narratives, artefacts[3] and inscriptions. The article analyses inscriptions primarily but states that other manifestations require analysis. These aspects of accounting and VAS can be further understood by viewing accounting as a social and institutional practice; wherein accounting creates a collective understanding of the business landscape upon which decisions are made. (Hopwood & Miller, 1994).

Another study conducted on the phenomenon by Goretzki et al. (2018) analysed VAS in relation to their global counterparts and how the process of enabling the latter could be influenced by the former in an international manufacturing company. The case study mainly identified Excel files created by managers as manifestations of VAS ("inscriptions" in the terminology used by Kilfoyle et al. (2013)) that rely on codified knowledge to build more knowledge that can support local actors in their tasks. The authors found that the Excel files were examples of vernacular accounting that could impact the global systems that were set to replace the locally produced accounting and control systems (main motives for the development being homogenisation and efficiency). According to the authors, local systems can have an impact on knowledge integration in the development of global systems. In particular, they can act as benchmarking material when evaluating the new global system, as "knowledge transformation devices", wherein the knowledge stored in vernacular accounting systems is implemented in the new global systems, and finally as "negotiation devices", where local actors can signal their continued use of VAS if the global system was perceived as unsatisfactory, thereby influencing the development process through 'negotiation'. The use of VAS as negotiation devices is argued to be most prominent in the development processes of global systems facilitating bottom-up decision making and less so in the development of top-down global systems. Goretzki et al. (2018) also mention the process of "glocalisation", in which local actors produce varieties of the global systems to meet their situational demands (Cruz et al., 2011).

2.1.2 The Litterature Mosaic

We are aware that not all research conducted on this topic uses the same terminology. Consequently, only limiting ourselves to studies that explicitly mention VAS may potentially lead to a narrow basis for our analysis. Hall (2010) mentions that the accounting information used by managers in day to day operations is more often than not verbal and not written down

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[3] Kilfoyle et al. use the kanban system in lean production environments as an example of an "artefact" that has an accounting function.

in informal reports. Van der Veeken and Wouters (2002) found that managers used a few key non-financial metrics to analyse different projects (Ijiri, 1975 would probably regard this as "soft" accounting information). Preston (1986) concludes that:

> "*[...] the models of organisations and behaviour, which typical information (and accounting) systems are designed upon, are inadequate as representations of the actual-operating-order that may be seen to exist in organisations.*" (p. 539)

In Mckinnon and Bruns' *The Information Mosaic* (1992), the authors explore the categories of information used by managers, finding that formal accounting information only constitutes a small part of this "mosaic". For example, financial information in a quantitative form was not used as daily production indicators. The findings by Mckinnon and Bruns (1992) cover different managerial positions and their identified information preferences and where they collect such information, i.e. the information flows managers are part of. One insight is that the oral and informal information flows often are the primary means of collecting information early in activities, with reports and other written accounts being developed later. The authors also review the use of digital information systems in branches, finding that the organisational culture can influence the degree of utilisation of such systems in firms. McKinnon and Bruns (1992) define accounting information as:

> "*...quantitative, relat[ing] to an entity, is based on observation, and is prepared according to rules.*" (Mckinnon & Bruns, 1992, p.4).

This raises the question of whether VAS is a subset of accounting information or a term including categories of information outside Mckinnon and Bruns' definition? We must therefore return to the definition of VAS by Kilfoyle et al. (2013), quoted at the beginning of this section;

> "*...accounting **and information systems** that are self-generated by managers and/or employees and not officially sanctioned within the organisational hierarchy*". (Kilfoyle et al., 2013, p. 382)

Thus, we conclude that vernacular accounting as a phenomenon in the literature includes information systems which are separate from strictly accounting systems. Therefore, VAS in this study is a term that includes information categories outside the strict definition of accounting information used by Mckinnon and Bruns.

In a study on the development of a (global) management accounting system in a multinational bank, Cobb et al. (1995) found that during the period of analysis (during the implementation and shortly afterwards), all interviewed parties found that informal discussions as a means of sharing business information had increased rapidly. However, the focal point of the study was the global system and its motivators, catalysts and facilities, and not the use and development of its self-generated counterparts.

2.1.3 Development of Bank Branches

A clear trend in the banking industry for the past 20 years has been the closure and consolidation of bank branches (Morrison & O'Brien, 2001; Cole et al., 2004; Nguyen, 2019). There are numerous reasons behind this, with Argent and Rolley (2000) and Dick (2006) highlighting high operating costs, regulations, the rollout of new financial technology, and the possibility of digitising banking services as deciding factors. The digitisation and digitalisation of the consumer banking industry has also decreased the operational distance[4] between banks and borrowers. This has increased competition in local credit markets and led to a shift in the prevailing business strategies of consumer banks in most industrialised countries (Alessandrini et al., 2009). Sweden is no exception to this trend and has seen a clear move towards increased spatial concentration of power with strategic and decision making powerless dispersed across regional branches (Sin Tian Ho & Berggren, 2020). Alessandrini et al. (2009) frame the development as an increase of operational distance between bank and borrower coupled together with a decrease in functional distance[5] between the control centre of lending decisions and regional branches. The latter is much more related to topics such as organisational structure and, in some regard, division of labour (Alessandrini et al., 2009). Naturally, this study will mostly cover aspects of functional distance.

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[4] By operational distance; the authors refer to the geographical distance between borrowers and lenders. (Alessandrini et al., 2009).
[5] Functional distance means the gap between the activities and processes of local branches and the head office (Alessandrini et al., 2009).

Berger and Udell (2002), Stein (2002) and Novaes and Zingales (2004) found that a significant part of the functional distance is "soft" information on local borrowers being difficult to transfer between local bank branches and the headquarters. Moreover, Alessandrini et al. (2009) state that functional distance between headquarters and bank branches stems from uneven distribution of information and the costs associated with redistributing these, as well as the social, economic and cultural differences between the areas in which the bank branches are situated. This again highlights the notion that there are much more subtle elements of the research topic at hand, as Hopwood and Miller (1994) described. Finally, Canales and Nanda (2012) analysed decentralised vs centralised organisational structures of banks, the distinction between them being the level of authority over lending decisions by branch managers, and found that decentralised banks gave larger loans to smaller businesses based on more "soft" information. The definition of "soft" information was derived from a study by Stein (2002). It represents information that is difficult to transmit throughout the organisation due to difficulties in verifying its accuracy by other actors than its creator.

Following the financial crisis of 2008, regulation in the banking industry has increased rapidly with the rollout of regulations such as Basel III and its reporting requirements (Alessandrini et al., 2016). Laws and regulations affect the work processes of managers in banks and how they can create, store and use information which is likely to impact the leeway of managers to employ vernacular accountings. Furthermore, the existence of local branches may be directly or indirectly affected by regulatory developments, the latter through, for example, driving up operational costs. Sengupta and Dice (2019) list the increased regulation after the financial crisis of 2008 as having indeed negatively impacted the use of branches in banks, referencing the work by Feldman et al. (2013) and DiSalvo and Johnston (2016). Moreover, a recent development affecting all industries in the European Economic Area is the General Data Protection Regulation (GDPR) rollout in 2018. The law has restricted European organisations' possibility of storing personal information about customers (European Union, 2022).
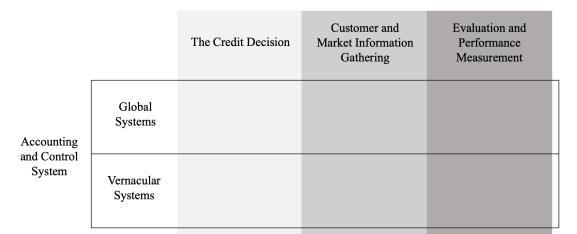
Finally, of the industry-wide developments analysed in Cobb et al. (1995), no regulatory developments were mentioned. Instead, the focus was on the novel technologies facilitating a new global system and the increased globalisation of banks. The difference in industry-wide developments analysed in the study by Cobb et al. (1995) and the developments impacting

banks found in more recent sources is not surprising and signals the need to revisit the subject, even if done in another (although related) area of study.

2.2 Theoretical Framework

Understanding vernacular accountings in the context of bank branches and the work processes of the local managers require an analytical tool that can be applied to the empirical data to identify, categorise and analyse the possible manifestations of VAS in the material at hand. The empirical manifestations of VAS during our data collection and early analysis phase followed a pattern which was very well translated into the model developed by Andersson et al. (2020) to understand financial analysts' activities throughout the phases of a corporate acquisition. This study will use a version of that model with some key modifications. Where Andersson et al. (2020) used three consecutive (linked) phases in corporate acquisitions, this study will use three distinct activities that are central to a bank branch manager in their role. Moreover, in this study's theoretical framework, a categorisation of the accounting systems used by branch managers in these activities has been applied.

There are several ways to categorise accounting and information systems, as shown by previous studies (Adler & Borys, 1996; Ahrens & Chapman, 2004; Clancy & Collins, 1979; Cobb et al., 1995; Roberts & Scapens, 1985), but for the purpose of this study we have made a deliberate choice to reduce the complexity of the categories to incorporate the activity dimension better and by doing so facilitate analysing accounting and information systems in relation to these activities as well as any important industry developments.

	Branch Manager Activities		
	The Credit Decision	Customer and Market Information Gathering	Evaluation and Performance Measurement
Accounting and Control System — Global Systems			
Accounting and Control System — Vernacular Systems			

Figure 2: Theoretical Framework

2.2.1 Differentiating Between Global and Vernacular Systems

Clancy and Collins (1979) adapted a typology of information systems from the findings by Galbraith (1973). The main parameter was the differentiation between local and global information systems in organisations. "Local" was defined as information gathering and use at dispersed points in the organisation. "Global" was referred to as centralised and formalised information collection and consequent organisation-wide use. Goretzki et al. (2018) follow the same parameter of locality, that is, whether the accounting system was local (created by managers in a local division outside of the head office and used in said division) or global (a system that was harmonised across the organisation). As previously mentioned, Kilfoyle et al. (2013), on the other hand, derived their own epistemologically focused matrix for categorising accounting and control systems (distinguishing systems of hard and soft information based on how actionable the information was perceived to be in the social context). Examples of VAS were mental models, narratives, artefacts and inscriptions and the hardness of these manifestations laid in (in very simple terms) the perception of its usefulness by the group. This definition is shared by Rowe et al. (2012) in their analysis of the process of hardening accounting information in organisations.

We use the division by Goretzki et al. (2018) as it fits the aim and topic of the study well. Furthermore, understanding the local systems and their relationship to their global counterparts in relation to industry developments is more in line with the work by Goretzki et al. (2018) than the epistemologically focused study by Kilfoyle et al. (2013). Therefore, the accounting and control systems studied are analysed as either global systems or vernacular systems.

2.2.2 The Activities of a Branch Manager

In his doctoral thesis, Henry Mintzberg (1968) performed a categorisation of the activities of managers. A noteworthy difference between this study's categorisation and his, is his focus on the time devoted by managers to each activity. For example, Mintzberg provides minute by minute descriptions of each analysed manager's workday actions, such as telephone calls, scheduled meetings, unscheduled meetings and desk work. The theoretical framework used in this study is in more general terms to ease the analytical process at hand. As evident from figure 2 above, we use three distinct activities that are central to a bank branch manager.

In line with our empirical data, earlier research addressing the activities of bank branch managers has found that these managers are decision-making units in credit decisions (Canales & Nanda, 2012; Rajan, 1992). Moreover, Moliner-Tena et al. (2019), on the topic of branch manager activities, state that they perform many customer-oriented and non-transactional tasks, which serve as an integral part of their roles. These tasks are gathered into one activity defined as Customer and Market Information Gathering in the framework. Finally, our empirical data showed that a third central task for the branch manager was evaluating the branch employees, and the study by Blackwell (1994) supports this claim. This activity, here given the name Evaluation and Performance Measurement, also encompasses the managerial processes in the evaluation of the bank branch as a whole. However, the responsibilities of the managers in the studied bank revolved more around the evaluation of individual employees, making this the primary point of analysis in the activity for this study.

It should be noted that the Customer and Market Information Gathering and The Credit Decision naturally overlap in some situations, since knowing the market is key in performing a correct credit decision. However, the activities have been chosen with a foundation in empirics and earlier literature, and the main difference between the two is that the customer insights used in the credit decision are focused on a single business transaction with a specific customer, whereas the Customer and Market Information Gathering activity is performed to understand the local market as a whole, which naturally includes the analysis of individual customers or customer segments, be it consumer or business clients.

3. Methodology

3.1 Research design

We have conducted a qualitative cross-sectional single case study in a large Swedish bank to answer the chosen research question. Due to the sometimes 'concealed' nature of VAS (Kilfoyle et al., 2013), and in line with earlier studies of the phenomenon, a qualitative approach was chosen in which interviews with branch managers served as the primary data source. In addition, one interview with a regional head was also conducted to get more insight into how the local and global systems could or could not coexist and interact and the reasoning behind such decisions.

3.2 Research Setting and Case Selection

The chosen Swedish Bank has primarily relied on using branches as its main point of customer interaction but has, in line with the rest of the bigger players in the industry (Swedish Bankers' Association, 2009, 2021), begun closing and merging bank branches in recent years. As an early hypothesis was that a more decentralised organisation would offer a greater possibility of hosting identifiable vernacular accountings, the bank was chosen since managers have enjoyed some operational autonomy and have had relatively limited interference in day-to-day decisions from upper management (such as the headquarters or regional heads).[6]

A single case study has its limitations in terms of transferability and generalisability (Ryan et al., 2002), and researchers should thus treat these activities carefully. However, applying Bent Flyvbjerg's idea of a critical case which enables generalisation (Flybjerg, 2006; Ruddin, 2006), one could argue that the case used in this study shares characteristics with Flyvbjerg's concept. Looking at the banking industry and its branches, which are undergoing significant changes in terms of, for example, digitalisation and subsequently centralisation, this single case study can act as an informative case on how these developments are likely to affect other banks that historically have focused on utilising local offices. Furthermore, the regulatory developments, most notably Basel III and GDPR, affect not only Swedish banks, but the

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[6] This information was gathered through desktop research of different banks' organisational structures and corporate history. These references have not been disclosed as it would make it impossible to keep the chosen bank anonymous for readers of the study.

European (GDPR) and international banking industry (Basel III). Consequently, the analysis performed in this study can possibly be generalised to other countries. Moreover, data protection laws are affecting many other industries (European Union, 2022), and the conclusions reached here can provide some guidance as to how they affect VAS as a whole in other industries in which organisations historically have had a geographically and functionally dispersed divisionalised structure (where VAS can exist). This type of analytical generalisation, as described by Kvale and Brinkmann (2014), can thus help in understanding similar developments in related fields.

3.3 Data collection and analysis

3.3.1 Data collection

A source of inspiration for our interview-based data collection was Goretzki et al. (2018), which analysed VAS and their relation to the global system in a large organisation. The inspiration we drew from this study was twofold. First, the study had a good solution to the question of *where* to collect the data. By interviewing employees in multiple divisions, the authors were able to identify and compare local skills and information systems. Second, by concretising the relatively vague concept into questions about how employees used, for example, Microsoft Excel, the authors could pinpoint real examples of VAS, which helped us understand *how* to collect data.

We conducted 12 interviews with 13 employees, where ten currently held the position of branch manager, and two others (one regional head and a deputy manager) had held the position earlier in their careers. In one interview, both the manager and her deputy manager (who had not held the manager position) attended. Eight of the interviewees were women, and five were men. Furthermore, the interviewees covered a wide span of years employed by the bank, ranging from a relatively newly employed manager of two years (who had previously worked in a competing bank) to a manager with 33 years in the bank. This allowed us to ask questions about the industry and bank developments and get nuanced answers to aid us in the analysis (please find the compiled interview topics and interviewee overview in Appendix A and B, respectively).

Interviews were three-quarters of an hour to an hour long, semi-structured and in Swedish. Loose pre-written questions were used as a basis and tool for structuring the interview and

entry points into the different subfields of our research question. For example, asking an interviewee how they collected, stored and used customer information oftentimes lead to discussions on how the increased scrutiny of governmental institutions affected their role as customer-focused. Moreover, conducting the interviews in Swedish allowed for a more relaxed and, in our belief, truthful information collection, where interviewees could express themselves fully and without restraint. A difficulty related to semi-structured interview sessions is quickly, or at the very least, following the pace of the discussion, and coming up with related follow-up questions while still holding the theoretical framework in mind (Marginson, 2004). This issue was mainly solved by us both being present in all interview sessions (except one), as we could take turns being active and reflective. This allowed us to discuss the material shortly after each interview and thereby reduced the possibility of subjective interpretations of the material. This also enabled effective note-taking in interviews where the interviewee had not given explicit approval to being recorded. However, we were able to record almost all of the interviews. The interviews were also split into two rounds, with one week in between, to allow us to review the first round's data and pinpoint which areas required more data for the subsequent analysis. Two thirds of the interviews were held in the first round, and the rest in the subsequent round.

Naturally, a consequence of our decision to identify VAS in regional bank branches through interviews was that the interviews would need to be held in branches all over Sweden. Interviewing managers in the northernmost, southernmost and westernmost parts of Sweden in person would entail some logistical issues given the timeframe of this study. Therefore we choose to have as many interviews as possible over Microsoft Teams. In all interviews except one (where we faced some technical issues), all parties used video as we found it the most practical while similar enough to close to face to face dialogue to promote truthful answers.

We did run into some challenges during the interviews, one being in relation to the semi-structured format. Our interviewees spoke in different paces and emphasised certain areas more than others, which made the more ad-hoc solution of a semi-structured format both advantageous and disadvantageous. The former due to the fact that we could quickly adjust our focus areas if one interviewee seemed to hold a lot of expertise or experience of a certain topic, for instance. The latter due to the inability to use a highly structured script to "force" the interviewee to provide insights on all topics, which may have resulted in some areas being overlooked in interviews. We tried to mitigate this by adapting quickly to ask

"bridging" follow-up questions that would lead the interviewee back into the structure. Another challenge was a consequence of the research topic itself. As VAS may, in some instances, lie in the grey area of what is officially allowed by the organisation, it sometimes took multiple attempts (where we changed the formulation of the question each time) to draw out some of the VAS activities or VAS-like manifestations from the interview subject. This is an example of when the semi-structured format was once again advantageous.

3.3.2 Data analysis

The information collected in interviews was transcribed and sorted in two turns. First, all recorded dialogue was written down and subsequently, only relevant parts of the transcriptions were collected in a separate document for each interview.[7] As the interviews were held in Swedish, the transcription process involved translating the chosen data into English; this was done as soon as possible after the interviews had been held to remember and accurately translate the correct purport of the interviewees. The different accounting systems were sorted into each activity and system type following the theoretical framework, which made the empirical findings easily comparable among interviewees and provided a thematic overview for the analysis. Finally the theoretical framework (which now included the empirical data) was subject to analysis of industry developments and how these had influenced each manifestation and activity. At this step, the empirical data on industry developments were used to understand the phenomenon further.

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[7] It should be noted that we never discarded any data considered "irrelevant" as the original transcriptions were also kept but in separate files.

4. Empirical Findings

The empirical findings are structured along with the activities of a bank branch manager as defined in the theoretical framework. Each subsection describes the formal work processes and systems used, followed by important differences in how the interviewed managers performed these activities. Last, a section is devoted to the findings regarding how industry developments have affected these activities and the accounting and information systems used therein.

4.1 The Credit Decision

Every bank branch provided credit to their allotted geographical area (the local market). The branches and their managers used an organisation-wide Credit Management Software for both consumer banking and business clients, albeit with a more detailed and less standardised approach for handling the larger business clients. Managers mentioned having to write a memorandum combining quantitative and qualitative information in their assessment of the creditworthiness of such larger clients, which was sent to their regional heads and assessed by a credit committee. In consumer banking, a credit information search was performed. All the necessary and mandated information was uploaded through the Credit Management Software and divided into files for each case. An important aspect of such files was that the information stored within needed to motivate the credit decision on a standalone basis in an understandable way to a third party, such as the bank's regional credit committee. However, laws regulating confidentiality in banking limited who could access said files.

Each manager had an allotted amount of credit that they could provide to customers, and each manager could set such amounts for their employees. Many managers mentioned that this amount was based on the historical performance of each employee and their regard for the credit policy that was set by the bank in this activity.

The managers had different understandings of the legitimacy of certain types of information and how they could be used on different levels and in different configurations depending on the situational need. When asked about the need for certain types of information to make credit decisions, the managers distinguished between the financial and quantitative data and the more qualitative and subjective information available. There was also some reference to

an even more subjective "gut feeling" from several managers as a source of information. The managers explained the financial data as the foundation that, when sufficient, could be complemented by a qualitative layer of information "on top". If the quantitative data was insufficient or proved the customer did not meet the requirements for creditworthiness, said customer would be denied credit. There were large discrepancies in how much the managers valued this qualitative layer, i.e. how usable the information was regarded as and how necessary the information was to gather in the first place. For some managers it was a "nice to have" and not a "need to have", but to others, it was crucial (though always in combination with the quantitative data) for the credit decision. However, the need for qualitative data was generally higher when dealing with larger business clients. One manager, who had worked in the bank for 27 years reported:

"The more you work, the more gut feeling you have that you can trust. Gut feeling is a pretty large part of the credit decision [...] it is a bit of a transition, the more experience you get, the larger the role of the gut feeling in the decision" (Interviewee C)

Another manager saw it differently:

"It has definitely changed, 95% is quantified data in credit decisions [...] you have to have good numbers as you cannot motivate a decision using qualitative information" (Interviewee E)

Many managers regarded the qualitative layer as particularly useful in borderline cases or when it cast doubt about the relevance or reliability of the financial data. Several managers said it was easier to use qualitative information to motivate not giving credit than to use it to motivate overlooking weaknesses in the financial information. We saw some indication that managers in the larger branches regarded retail banking clients as a more or less automated process needing less qualitative data. In comparison, managers in the smaller branches were more involved and took qualitative and more subjective information into consideration. The managers' opinions about the business clients were more cohesive since they shared the view that understanding local businesses took more effort and that the complexity in the prognosis made less case-specific financial data, non-financial data and subjective information more valid and actionable. One manager reported having a computer file in which complementary

business data was stored and frequently updated, such as transactions on currency exchanges, financing solutions and the placement of surpluses. This data served as a basis for credit decisions and a source of knowledge for this particular manager in his work processes. Another manager mentioned their own self-generated structuring of information related to the credit decision into a system of specific folders, describing it as branch-specific and as increasing their competitiveness in relation to other offices. The difference between these types of systems and the computer files mentioned above is that these did not encompass complementary information but instead differed from the Credit Management Software in how the data was compiled and structured.

4.2 Customer and Market Information Gathering

A vast majority of the bank branch managers spoke highly of their work in understanding the local market conditions. Such activities were performed by the branch managers and their employees continuously as a natural part of understanding the needs of their customer base. The bank had an organisation-wide database in place that was used by the branch manager to easily access statistics provided by the headquarters about their local market and overall macroeconomic developments (referred to as "The Market Statistics Tool"). Furthermore, it was required by the head office to set up a local committee of influential and important stakeholders in the local area to ensure a way of understanding local demands and strong networking possibilities. At least one manager did not like the idea of it and had so far (~2 years) avoided setting it up, focusing instead on other information collecting activities. Less structured means of knowing one's local market was speaking with the employees at the branch and people living in the area as well as following the local news sources. The local market knowledge gathered by the branch (from the Market Statistics Tool and through other means) was not recorded in any formal capacity, instead, it was up to every manager and employee to implement a system to keep up to date and remember the information.

Some managers complemented the Market Statistics Tool through the use of Excel. Some managers would extract and process the data. Others would add to the information by combining it with independently generated data to get a better overview of the local market. Another non-mandated means of collecting and making use of local market information was mentioned by one manager who, in collaboration with other branch managers (whom we did not interview), had set up an informal network of branch managers in the same part of

Sweden. This group would meet every month to discuss regional developments and share insights and solutions that they had found. Another way was mentioned by a manager who kept note of almost everything that happened, be it general local market developments or customer/case-specific information, in a personal digital file on her computer. In general, managers saw an understanding of one's surroundings as a competitive edge in the form of risk management. For example, the active cases of one branch would be sent to the largest regional offices during weekends. However, the manager in the smaller office felt that this was to her organisation's disadvantage as her local market had large discrepancies in the creditworthiness of customers based on which area they lived in. This was, in her opinion, overlooked in the larger office. Consequently, loans were given to consumers who did not meet her standards.

> *"When bigger offices handle the mortgages over the weekends, our bank branch is more restrictive. We know how segregated these parts are. We would not lend as freely to clients in areas with high crime rates, but the people at larger, regional offices would; they only see the name of our area and nothing more. "* (Interviewee C)

Although the Market Statistics tool and the complementary systems were readily available, there was also a need to store information on customer relationships. The specific information needed for every credit decision was recorded in the Credit Management Software. However, the bank lacked a means of easily storing and accessing information on important customer relationships, as they did not have a fully developed CRM (Customer Relationship Management) system in place. A few interviewees mentioned that such a system had been in development for some time, and others reported having tested early versions of the software.

> *"It is really important that you pass on the tacit* [customer] *information, which is not performed in any structured manner today. It is surprising since we focus so much on knowing our customers, and have been for so long. What is missing is a full-fledged CRM system! Today it is a very fine balance in storage* [of customer information] *thanks to GDPR."* (Interviewee B)

Another manager described a substitute for the CRM system in development. However, he did not view the system's current state as satisfactory as it was poorly developed. Instead, he had a more analogue approach. He kept information about customers in a notebook in his office, which he updated and used to get a quick overview of his cases.

> *"There is no structure or database, I have my own little book where I take notes and update continuously, but it is very personal. When colleagues hand over cases to new employees, this is a limitation and challenge."*
> (Interviewee I)

Other solutions in the absence of a CRM system have also been developed. A majority of managers relied almost entirely on memory and word of mouth alone, even though it was deemed very important to have such information readily available as a branch manager. Storing information in memory was also a shared process as some managers reported the use of "collective memory" in the branch, where important information would be shared orally and thus memorised together. Managers who employed such systems would motivate their existence with the rollout of GDPR, fearing that having locally created databases on customer information would violate this law. Interestingly, many managers who spoke of such systems explained that these were part of their branch's unique skill set and their competitive edge.

4.3 Evaluation and Performance Measurement

The third and final central activity was the internal evaluation of employees and the branch itself. The headquarters dictated the overall structure and framework for evaluation that was mandatory for all branches to implement while still allowing for some adjustments to meet the branches' and employees' specific needs. Some leeway for management style was therefore allowed. Evaluating employees was done by most managers on a monthly basis and would follow a plan set up by the employee and manager in unison. This plan would include the (mostly qualitative) employee targets, which in turn were connected to the targets set for the whole bank branch (and in turn, the whole bank). Other means of evaluating employee performance that all managers used were informal check-ups reminiscent of what Mckinnon and Bruns (1992) refer to as 'management by walking around. This included listening in to how the employees were doing in the break room or in other "unstructured" contexts.

A striking difference between managers' evaluations was their belief in qualitative and subjective values versus quantitative and objective metrics. Although the former was mandated through company policy and all interviewees partook in qualitative evaluations, some managers voiced their concern over the lack of comparability and validity of an employee's performance. Thus, in employee evaluations, some favoured the highly qualitative evaluation system used in the bank; some used it but saw limitations, while others used it because they were asked to, disliked it, and utilised their own control systems. One manager, in particular, had a very thought out control system that differed a lot from the mandated, qualitative one. Using an excel sheet, she would analyse the activity of all her employees and keep tabs on their performance in a quantitative manner.

When explaining how she performed the analysis of employees, she had this to say:

> *"I use excel, it is sort of a homemade solution, but we are not alone in doing this. I have heard of other offices having similar solutions*."

Continuing by stating that;

> *"I have wanted to implement such a system for some time, to be able to measure* [employee performance] *in another way, and I finally got acceptance to measure activity, the number of appointments, for example. We must have something that measures that employees are doing what they are hired to do."* (Interviewee L)

On a similar note, multiple managers mentioned their employees building their own Excel sheets to track their performance. Their use was motivated by both intrinsic incentives, i.e. in order for the employees to understand their performance better and extrinsic ones, as the employees felt that the monthly meetings lacked substance without quantitative data. Both of these motives were underpinned by the lack of quantitative data in the evaluation process. However, the outcome of the individual evaluations, both mandated and complementary, stayed in the local bank branches. According to the managers, only extreme (theoretical) scenarios where an employee acted in serious disagreement with the bank's policies would be reported higher up in the hierarchy.

In an evaluation of the branch itself, a lot of the information was collected automatically in an organisation-wide database. It was thus transparent, and every branch could access up to date information about how each branch performed. Some managers did their own analysis of the transparent data. The transparent information was discussed in monthly meetings between the manager and their regional head.

One interesting view that a branch manager voiced was that there sometimes appeared different views on what data was deemed important in branch level evaluations. According to this interviewee, her regional head would repeatedly ask for quantitative data that was not collected in the transparent global system, implying that this regional head had his own system of evaluation outside of the mandated processes. Unfortunately, we did not have the chance to interview said regional head. The process of collecting such data on branch performance was not appreciated by the manager who appreciated the global transparent system and favoured it.

4.4 Impacting Industry Developments

When asked about their work processes and activities, multiple managers intertwined comments about recent industry developments with their answers. Though not a seperate part of our analytical framework, it is here treated as such to support the analysis of the dynamic nature of the research question.

Recurring themes were how different developments in the regulatory landscape and digitalisation of financial services had changed the activities during their time at the bank. The managers who had been employed in the bank for a longer time saw the developments as more impactful and drastic, while the newer managers put less emphasis on the effects of the recent changes. First off, the connection between digitalisation and centralisation was agreed upon by many. The idea that digitalisation and digitisation of bank services resulted in less need for local physical bank branches was mentioned by multiple managers, with one stating that;

> *"With the digitalisation, some form of centralisation is inevitable. It affects extremely much"* (Interviewee J)

Second, multiple managers brought up increased compliance as forcing a change on the whole industry as its incumbents had to adapt to meet these new requirements.

> *The digitalisation, regionalisation and nationalisation of the bank and other banks create a distance to the customer. Can an advisor in Stockholm serve customers in Gothenburg? Maybe this development is enforced by the increasing compliance."* (Interviewee E)

Third, the effect these changes had on their work processes and activities were also discussed. A majority of the interviewees expressed that digitalisation and increased compliance has brought more information, more easily understood information and less focus on the personal relationship to the client and qualitative information in the credit decision;

> *"95%* [of credit decisions] *are no longer based on professional judgement, the Swedish Financial Supervisory Authority is always there in the background, and the banking industry must meet its standards."* (Interviewee E)

The launch of GDPR was also mentioned as having a significant impact on their possibility of collecting, storing and using information about customers in their tasks.

> *"It is easier to say no* [to a client] *because of numbers than gut feeling, with GDPR decreasing the possibility further* [...] *I have to talk to colleagues daily and get briefed through word of mouth when before we could document the data locally"* (Interviewee C)

As noted in section 4.3, some managers still collected and stored information in personal notebooks, analogue and digital. However, sharing this information without a CRM system was seen as problematic for management. Thus, many saw word of mouth as a possible, albeit less effective, medium of transmission.

5. Analysis

Using the theoretical framework defined in section 2.2, an analysis of the different accounting and control systems in place at the bank is performed. First, the identification and categorisation of each empirical manifestation are listed, followed by an analysis of the identified systems and their evolution in relation to the developments in the banking industry.

5.1 Identified Global Systems

The credit decision preparation process and documentation in the Credit Management Software was imposed by the head office and used by all bank branches and managers, and therefore easily identified as a global system. Some variations in the day to day use of the software existed, such as which supporting tools and functions were utilised. However, data protection regulations and bank regulations gave the interviewees little room to deviate from the global system and the credit decision process was harmonised to a high degree across the company branches. However, some examples of self-generated local systems were in place, explained below.

A second identifiable global system in the empirical data was the Market Statistics Tool. It was used by all participants in the interview and was officially mandated by the head office. Therefore, it served as a centrepiece in the branches' local Customer and Market Information Gathering activities. The CRM system in development will be a global system if finalised and readily available to all potential users in the organisation. For now, it serves as a partial global system for a small selection of branches.

A third global system identified is the control system in which users could access fully transparent data on all branches' performance, including their own. It was the primary system used in both vertical (between regional heads and managers) performance evaluation and horizontal (benchmarking between branches). It was an integral part of what the managers described as the official evaluation process. The individual employee plans acted as a global control system applied in the local context, as it was an officially mandated and required system in the organisation but allowed for some modifications to meet the local needs. Finally, a fourth global system was employed in the evaluation of bank employees, which

was the employee plans relying on mostly qualitative data, which would be assessed on a monthly basis in meetings between the manager and the employee.

5.2 Identified Vernacular Systems

5.2.1 VAS in the Credit Decision

Multiple vernacular accounting systems in the credit decision were identified. One manifestation was the systematic collection of business-related data (such as historical transactions on currency exchanges, financing solutions and placement of surpluses) in digital files, serving as a complementary information source in credit decisions. Another self-generated system employed in the credit decision was the jointly developed (between manager and their employees) internal system for structuring and categorising data related to the credit decisions through a joint system of folders. Using the terminology of Kilfoyle et al. (2013), one can conclude that the former is a quite clear case of an inscription. The latter may be harder to identify in practice and categorise in theory. However, seeing how it was self-generated and used for accounting purposes, as described by the manager, it can be defined as a VAS. Kilfoyle et al. (2013) mention a kanban system as an example of a vernacular accounting system. The cards or bins used in such a system act as artefacts in VAS and the system identified in the bank branch shares many of these characteristics. The folders can be viewed as artefacts that the branch manager used to sort, structure and later process important data. Thus, we conclude that the folder system was a VAS relying on artefacts. Both of these systems parallel the global system in place (Fisher, 1994, as cited in Kilfoyle et al., 2013) in the credit decision. However, the managers still rely heavily on the Credit Management Software in the activity.

However, as mentioned in section 5.1, the processes and systems used in the credit decision were to a large extent harmonised, and only one case of vernacular accountings with clear substitutional elements, in regards to the global system, was identified. As described in the findings, one manager reported not lending as freely to customers living in areas with high crime rates, mentioning the high segregation in the area as a contributing factor. Thus, the possible socioeconomic background of potential customers was used in the credit decision and was deduced from which part of the local area said customer lived. This resulted in potential borrowers being denied credit, even though the global Credit management system

would have allowed the transaction. The managers' colleagues in the main office, who handled the branch's cases over the weekends, were far less restrictive in their lending as they, in the manager's opinion, didn't have the same insight into the local market. Thus, by using a mental model (Kilfoyle et al., 2013), this manager employed vernacular accountings in her credit decisions, which heavily influenced her credit decisions. Although not systematised to the same degree, is the (by some managers) shared notion that qualitative and softer information was best used to deny credit to potential clients that looked good on paper but when something felt "off".

Overall, the high degree of harmonisation implies that the idea promoted by Berger and Udell (2002), Stein (2002), and Novaes and Zingales (2004), i.e. that local branch managers provide credit based on more "soft" information, is not necessarily the case in the studied bank. On the contrary, the global system largely used what the aforementioned authors would refer to as "hard" information, and the supportive VAS also heavily relied on quantitative elements, only one deviation appeared. Thus, the functional distance in the bank and its credit decisions, viewed through the lens of vernacular accountings, seems to be relatively low.

5.2.2 VAS in the Customer and Market Information Gathering Activity

Multiple types of vernacular accounting systems were identified in the local market knowledge activities. One manager spoke of his use of a private digital storage of both customer information and local market developments generated wholly outside of the global Market Statistics Tool. This system was updated frequently and continuously. Much like this digital approach, one manager reported having a similar solution but in a handwritten notebook updated with customer information. A second vernacular accounting system that manifested was the use of Excel to extract and process data from the global Market Statistics Tool, as well as adding other independently collected data, which in one instance was purchased from a third party. This combination of internally and externally sourced data served as a basis for the analysis performed. Both of these types are inscription manifestations of VAS, since they are self-generated information systems that rely on written accounts. The use of the global Market Statistics Tool in combination with externally sourced data in Excel sheets are manifestations of the process of "glocalisation" (Cruz et al., 2011) as they are local adaptations of the global systems, motivated by the local needs of the manager.

However, the most widespread possible case of VAS in the local market knowledge activities of the branches was the informal information flows, i.e. the widespread use of word-of-mouth in the branches as well as a "collective memory" where the employees of the branch shared and memorised important local market information among themselves. Another example of this is the informal regional network of managers who would exchange information. This is not a clear cut case of VAS. Still, as inscriptions are far from the only possible manifestation of the phenomenon, these self-generated information systems without any formal prescription could be classified as narratives or a new type entirely. Many managers explicitly stated their unique use of said systems as one of few ways to increase their competitive edge against other branches, which underscores that they weren't a formal and global system but a local occurrence. Furthermore, it resonates well with the findings by Hall (2010) and Mckinnon and Bruns (1992) in that accounting information often takes a verbal form in managerial duties and that a type of VAS acts as an "inventory of knowledge" (Kilfoyle et al., 2013). Moreover, Cobb et al. (1995) found that during and shortly afterwards the development of a global system in a multinational bank, informal discussions increased, mainly driven by the managers' need for better information and later help with interpretations of the new global system's data. A similarity can be found with the development of a CRM system in the analysed bank, as managers are increasingly reliant on other means of sharing important business information.

5.2.3 VAS in the Evaluation and Performance Measurement Activity

Two types of vernacular accountings were identified in the evaluation processes of employees. First and foremost, as reported in the empirical findings, one manager used a home-built Excel-based system for tracking, by using quantitative metrics, the activity of employees. It should be noted that this was one of, if not the most informal and discernible manifestation of vernacular accountings and inscriptions in the empirical data. It was fully self-generated and stood in stark contrast to the officially mandated qualitative focus by the head office. The manager motivated its use by stating that the qualitative focus of the global system did not meet her needs, as she preferred evaluations based on quantitative data. This correlates well with the interpretation of the empirical data of Neergaard (1998) by Kilfoyle et al. (2013), in that the formal KPIs are questioned, and thus vernacular accountings are created and used as a defensive resource. The manager who used it reported not being the only one who had developed such a solution as she had multiple colleagues who used it as

well. Regarding the results reported by Goretzki et al. (2018), a noteworthy finding in this study is the use of the aforementioned evaluation Excel files as a negotiation device. This manager had signalled the need for more quantitative data in evaluations to her superiors and continued doing so until "finally" receiving approval for use in her branch. It is worth emphasising that it was the same manager who was part of an informal regional network of branches, where they shared solutions and tactics, including this VAS. Her continuous use and effort to spread the use of VAS in the bank (only achieving horizontal spread so far), as well as her debate with superiors over whether qualitative or quantitative data was optimal in evaluations, support the finding that VAS can act as a tool to create changes in an existing global control system, not only in processes of developing new global systems. Interestingly, two other managers (located far from the interviewed user) corroborated this by stating that they knew of other managers using similar Excel-based control systems (even if they did not do so themselves).

The second local system was used by the employees in some branches as a complement to the qualitative evaluation system. Much like the manager with the Excel-based evaluation tool, the employees in these branches expressed that the qualitative focus was not satisfactory in terms of their ability to track their own personal development. Therefore, they had created Excel sheets that were updated frequently with personal metrics tracking their achievements. As mentioned in section 2.1.1, earlier literature (Neergaard, 1998, as cited in Kilfoyle et al., 2013) have reported similar findings, and Kilfoyle et al. categorised these as vernacular accountings with defensive motives, i.e. the second ideal type. Interestingly, the employee-generated vernacular accountings found in this study are very similar to both of the examples given, in that they are used to improve one's work processes (which the formal system fails to do) and that they are used when the validity of formal KPIs are questioned.

Last, the manager who reported having to collect and share data (which was not automatically tracked in the transparent global control system) about her branch's performance with her regional head, indicates the existence of a vernacular accounting system. This regional head's evaluation process encompasses other metrics than the mandated ones, therefore strongly implying the use of vernacular accountings. However, a more detailed description of this manifestation is left out since it would be too speculative.

5.3 Vernacular Accounting Developments

The connection between digitisation, digitalisation, increased regulation and centralisation (as reported by Sin Tian Ho and Berggren (2020), Argent and Rolley (2000) and Dick (2006)) is affirmed by our empirical findings. The local actors all asserted digitalisation and digitisation of bank services as well as increased demands on compliance as important explanatory factors behind the bank's consolidation and closure of branches. These industry developments also clearly shaped the managers' activities and use of VAS.

The global systems in place (and in development) partly reflect the need for standardisation of work processes throughout the bank. Hanseth et al. (2001) and Ives and Jarvenpaa (1991) found the development of global systems as a means to increase uniformity in organisations and the global systems in the analysed bank exist in part to standardise work processes and activities in a time of increasing regulatory scrutiny. The Credit Management Software streamlined the credit decision to a degree, especially towards retail clients, and managers motivated the bank's use of such a system by the need to be in line with the standards enforced by the Swedish Financial Supervisory Authority. Moreover, the development of a formal CRM system was described as a means to collect and store customer information in the bank under GDPR. These regulatory changes and consequently the development of the aforementioned global systems have impacted the use of VAS in bank branches and shifted the weight from local to global systems in many ways. Still, interestingly, many identified manifestations of VAS remain.

The identified VAS in the Credit Decision activity were in large supportive tools and all managers relied on the Credit Management Software to perform their tasks. The only vernacular accounting system with substitutional elements was for a specific customer segment and by being a mental model, it was very subtle, i.e. it could easily "fly under the radar" in the manager's activities. Identified VAS in the Customer and Market Information Gathering activity followed a similar pattern as GDPR has limited the possibility of storing customer information in written accounts to an extent (although a few managers still did this privately). Customer information outside of the scant information stored in the Credit Management Software (related to each individual case) was instead shared orally and memorised together in many branches.

Moreover, in the same activity, most of the identified inscriptions were used to understand the local market at large, without a focus on single customers, and no managers reported this use as a violation of GDPR. Thus, the increased regulatory burden in both the credit decision and customer and market information gathering has decreased the use of VAS as a tool with substitutional elements, and in particular, the use of inscriptions that could act as substitutes to global systems. On the other hand, inscriptions, being the most discernible manifestation of the phenomenon, were used to a much higher degree when managers did not perceive use as infringing on any regulatory standards in these activities. A noteworthy deviation in the empirical data is the manager who had tested the CRM system but still preferred the informal notebook. This shows a clear defensive position regarding the new global system and unwillingness to adapt to the regulatory requirements. In the third and last activity, the evaluation of employees and the branch itself, no regulation was ever mentioned as interfering with the leeway of managers to develop VAS. The industry digitisation and digitalisation were also not reported as having had a significant impact on the activity. Interestingly, it is also in the evaluation of employees that the most apparent and informal use of VAS was identified. Inscriptions, driven by defensive purposes, were used by multiple managers and their employees.

The digitalisation of bank services and the consequent consolidation and closure of bank branches (Argent & Rolley, 2000; Dick, 2006) also impact the use of VAS in bank branches, albeit in a less direct manner. First and foremost, the possibility of digitisation and digitalisation of bank services acted as an enabling factor in the development of global systems in the bank, as many of the global systems, such as the CRM system and automatic collection of branch data is impossible without digital resources. On the other hand, many of the identified inscriptions used throughout the bank branches were in a digital format, making digitalisation and digitisation less decisive factors in the development of VAS than the regulatory developments described above. However, indirectly, these industry developments may impact the use of vernacular accountings. The consequential closure and consolidation of bank branches limit the usage of VAS by local actors since there is no more "local". This can be illustrated by the manager who used a mental model of the socioeconomic backgrounds of customers in her credit decisions. This manager described the colleagues in the head office only using the Credit Management Software. Moreover, the use of externally sourced data to complement the Market Statistics Tool was in large part driven by the local managers' in-depth understanding of their surroundings. Many managers saw the

centralisation in the bank as detrimental and that the local focus and these unique "inventor[ies] of knowledge" (Hall, 2010, p.303; Kilfoyle et al., 2013) would be lost.

6. Conclusion

6.1 Answering the Research Question

Regarding our research question; *How are vernacular accounting systems developed and used in the Swedish banking industry?* We can conclude that vernacular accounting systems exist and are utilised in multiple ways in the Swedish banking industry. Inscriptions, mental models, narratives and artefacts are used by managers and their employees in the branches of the analysed bank. Even a self-generated information system that may not fall into the typology of Kilfoyle et al. (2013) was identified.

The use of these identified systems has been affected by industry-wide developments, mainly the increased regulatory burdens stemming from the post-financial crisis of 2008 framework Basel III and the European Union's GDPR. Consequently, these regulations have played a role in the increased expansion and use of harmonising global systems in the bank. A CRM system is under development, motivated partly by the inability to collect and store customer information. The Credit Management Software is engineered to follow the demands of the Swedish Financial Supervisory Authority. These developments have impacted managers' use of vernacular accountings, and the empirical data shows a connection between the level of regulatory burden and the different uses of VAS. What should be emphasised is that VAS has not disappeared under these new regulations, but has taken on new forms, supported other activities, and become more subtle. Notably, an increased regulatory burden has decreased the use of VAS with substitutional or defensive purposes, especially the most easily detectable manifestations, i.e. inscriptions. Instead, the use has shifted towards parallel and supportive vernacular accountings, i.e. resources employed when the global system is considered valid. Still, local circumstances create the need for further understanding and conceptualising of one's task. These take the form of "glocalisations" and fully self-generated systems that guide the managers in their activities. Another consequence of the regulatory developments has been the increased subtleness of VAS employed in the affected activities. The use of word-of-mouth as a customer knowledge tool and the continued existence of informal mental models in the credit decision, when their inscribed counterparts have been to a large extent eradicated, illustrate this conclusion.

The activity targeted by the least regulations, the evaluation of branch employees, had the most easily identifiable, substitutional, fully self-generated, informal VAS with defensive purposes. Very much in line with the connection described above, as the absence of such laws has left room for vernacular accountings to develop freely and be used to a higher degree.

Digitalisation and digitisation have had less of a direct impact on the use of VAS in the analysed bank branches. Although many global systems rely on digital technologies, many vernacular accountings do as well. However, both earlier literature and the interviewees agree upon the relationship between increased digitalisation and digitisation of bank services and the decrease in bank branches. Therefore, we conclude, through analysis of the many motives for using VAS, that some use cases for vernacular accountings are set to be thwarted if increased centralisation proceeds. Thus, the connection between these industry developments and the use and development of VAS seems to be indirect and primarily related to the increased centralisation and consolidation of bank branches occurring as of performing this study.

6.2 Validity and Reliability

As discussed in the limitations and delimitations of the study, there are drawbacks to choosing a single case study. Attaining a high level of validity with limited sample size is difficult, thereby limiting the possibility of drawing definite conclusions and making causal inferences in broader applications. However, it does come with benefits, such as studying a phenomenon in great detail by focusing on a single group's relationship to the said phenomenon. The insights and contextual findings may also be generalised to a degree, as mentioned in section 3.2.

Regarding the reliability of the research, it is worth emphasising that the data collection was based on interviews. This entails a degree of subjectivity because our framing and question as well as the subsequent answers, may be interpreted in a certain way. However, as discussed in section 3.2, multiple methodological tactics were applied in the interview sessions. For example, both authors were present in the interviews and discussed the data shortly after the interview to limit subjectivity. All interviewees were also notified that they could refrain from answering any question they were uncomfortable with and that their answers were

anonymous. This built trust and mutual understanding, limiting other potentially harmful effects, e.g. interviewees not answering truthfully.

6.3 Future Research

VAS is a topic with limited prior research. Widening the research by analysing other industries would be beneficial. Other possible future research topics could include the comparative analysis of VAS at different levels of the organisational hierarchy. This study focused on branch managers, but other positions could be further explored and analysed in relation to each other. This could hopefully enhance the scholarly understanding of the relationship between the micro-practices of different users of VAS and their employment of such systems. We also believe that the focus on exo-organisational developments in industries and their impact on VAS could be further explored. Are there other developments affecting the use? VAS could also be evaluated to create prescriptive conclusions, e.g. exploring the connection between the use of VAS and company/branch/individual performance. Last, VAS could have widespread implications on organisational functions, making it a possible management and strategy research subject.

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8. Appendix

8.1 Appendix A

Interview structure

Topic	Description
Background information	Background information about interviewee(s), such as n years employed at the bank, size of current bank branch and experience of working in different branches
Decision making	Information collection, storage, aggregation, use and preference in recurring decisions taken at a branch level, the main example being a credit decision.
Customer knowledge	Information collection, storage, aggregation, use and preference in regards to understanding the local market and its customers.
Performance Evaluation	Methods of evaluating performance on a branch and employee level and on which metrics the evaluation was performed.
Misc	Other questions not fitting into other topics, such as the use of different computer applications in forecasting and/or organising purposes. How Industry developments affected their work.

8.2 Appendix B

Interview overview

Interviewee	Position	Date of Interview
A	Branch Manager	2022-03-08
B	Branch Manager	2022-03-21
C	Branch Manager	2022-03-21
D	Regional Head	2022-03-23
E	Branch Manager	2022-03-24
F	Branch Manager	2022-03-24
G	Deputy Manager	2022-03-24
H	Branch Manager	2022-03-25
I	Branch Manager	2022-03-25
J	Branch Manager	2022-04-04
K	Branch Manager	2022-04-05
L	Branch Manager	2022-04-05
M	Deputy Manager	2022-04-05

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