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*From risk management to resilience management.
Strategies and instruments of Upper German merchant bankers
in the 'long' sixteenth century to avoid insolvency and bankruptcy*

1. Introduction

Risks of all kinds could (and can) have such different effects on merchant-bankers and their companies that – in extreme cases – some benefited from them, while others became insolvent or even bankrupt. Why this was (and is) so, can be answered in an innovative way from the perspective of the research paradigm of resilience, which describes the ability to master risks and cope with crises. All entrepreneurial activities to strengthen, preserve and utilise the resilience potential of a particular business can be described as resilience management.

By concentrating on case studies of merchant-bankers or trading companies organised in the form of family businesses from the Upper German region during the sixteenth century, the study examines which strategies and instruments merchant-bankers used to minimise the risks to their trading ventures, i.e. to make them as resilient as possible. Situated geographically in the centre of Europe, these Upper German family businesses were particularly exposed to the economic upheaval of the sixteenth century, the commercialisation process that intensified in the wake of European expansion,¹ but also to numerous other political and economic risks. My research is focussed on the following case studies from Upper Germany, which turned out to be particularly suitable for this purpose due to the available sources:

- the trading and banking house and mining company of the Fuggers from Augsburg (Denzel 2023a: 163-231; Isenmann 2019; Denzel and Isenmann 2026);
- the various commercial and banking companies of the Welser family of Augsburg (Denzel 2023a, 233-56);
- the Paumgartner trading company from Augsburg (Lehm 2024);
- the trading company of Ambrosius I Höchstetter from Augsburg (Denzel 2023a, 258-67);
- the trading company of Melchior Manlich from Augsburg (Denzel 2023a, 274-81);
- the Hirschvogel trading company from Nuremberg (Denzel 2023a, 267-73);
- the trading company of Bartholomäus Viatis and Martin Peller from Nuremberg (Denzel 2023a, 287-300); and

¹ The innovative developments of the commercialisation process, which from a business history perspective can be compared in some respects to the industrialisation process of the eighteenth and nineteenth centuries or to the digitalisation of the present day, represented an enormous logistical, financial and legal challenge for commercial entrepreneurs (Denzel 2023, 32-44).

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- the sole traders David Gauger from Augsburg and David Wagner from Bolzano (Baumgartl 2023).

The aim of this article is to work out which strategies and instruments they used to succeed or fail in their risk and resilience management. Therefore, the following questions will be answered:

- What distinguishes risk management from resilience management? How can resilience management be characterised?

- How did Upper German merchant-bankers in the long sixteenth century deal with risks in their everyday business, especially with the challenges of the commercialisation process in this time?

- What strategies and tools did they use for their risk and resilience management?

- Was the resilience management of the Upper German merchant-bankers successful and, if so, why? In those cases where it was not successful, what were the reasons for the entrepreneurial failure?

The aim is to show how the interplay of various resilience strategies and resilience instruments or tools, i.e. conscious and sophisticated resilience management, ensured that commercial enterprises were able to operate successfully over generations and also cope with extremely risky business situations. But it can be seen as well, that inadequate resilience management or resiliencing resulted in the sometimes abrupt and sometimes long-delayed failure of a company, ending in insolvency or bankruptcy.

2. From risk management to resilience management

First of all, it should be noted that both risk and resilience management are concepts of contemporary business administration that may seem anachronistic in the context of a study of pre-modernity. However, previous application to questions of business history (e.g. Denzel 2023a) has shown that they can certainly contribute to a better and deeper understanding of entrepreneurial decisions or systemic developments of (commercial) enterprises.

The term ‘risk’ was very familiar to long-distance merchants in the high and late Middle Ages: Adopted from the Arabic *rizq*, *risicum maris* from around 1180 onwards, it expressed the uncertainty of the future and a possible loss event in Mediterranean overseas trade (Scheller 2017, 309-10; cf. Kedar 1969; Bencheikh 2002). From this, the understanding of a calculable *risk* developed – very roughly speaking – in distinction to an incalculable *danger*, which together are referred to as *hazard* (Voss 2008, 50). According to Niklas Luhmann, the fundamental difference between the two terms lies in the fact that ‘danger’ is used when a damaging event is perceived as externally induced and is therefore attributable to the environment, while ‘risk’ is understood as a damaging event that is attributable to a decision (Luhmann 1991, 30-31; Luhmann 2009, 140-41). Understood in this way, risk *management* comprises risk assessment (identification, analysis and evaluation), the management in its classical meaning and risk communication (Schmitt and Pfeifer 2015, 363; cf. Albrecht and Maurer. 2016) and, in the sense of decision-oriented risk management, can also

include the consideration of risks in management decisions (Gleißner 2019). However, a company's risk management can only begin when a risk is perceived as such, although different risk carriers may perceive the same risk differently or not at all (Raupp 2012, 27).

In sharp contrast to traditional, short-term corporate risk management, resilience management allows a company to develop a rapid and flexible, yet long-term and sustainable defensive and offensive strategy against new, unexpected dangers and risks that arise as by-products (in the broadest sense: a 'collateral damage') of interdependent business operations (Starr et al. 2003, 6-7). In addition to danger and risk, resilience management also includes crises and disaster as well as systemic vulnerabilities of enterprises and individual vulnerabilities of entrepreneurs and their families, i.e. all possible uncertainties, in its holistic view. Danger, risk, crisis, and disaster are viewed as disruptions with increasing impact, all of which can increase the operational, strategic and financial vulnerability of a system (Denzel 2023a, 29-30). The key focus here is on the link between the resilience that develops day by day to safeguard corporate functions and the ability to successfully and consistently defend against exceptional situations that jeopardize these functions. Resilience management understood in this way results from a planned series of safeguards against discontinuities: the selection of organizational components, the self-assessment of vulnerability, the identification and prioritization of fundamental vulnerabilities and the enhancement of adaptive capacity (McManus et al. 2008, 88). As a result, a resilient company is «sensing, agile, networked, and prepared» (Starr et al. 2003, 6-7).

Resilience or resilience management of an enterprise respectively can essentially be analysed from three perspectives:

1. (Corporate) resilience is understood dynamically as crisis robustness (proactive robustness), i.e. as a «microeconomic version of the analysis of economic selection processes». Proactive, dynamic risk management, the proactive formation of resilience resources (capacities), and adaptive crisis management are the decisive, mutually reinforcing components (Köhler and Schulze 2016, 460-63).

2. From the perspective of management and organisational research, the crisis response (reactive agility) of companies and the use of resilience resources (capabilities) in situations of transformation are emphasised situationally: The analysis of coping mechanisms and strategies under the influence of great uncertainty shows how a company or an institution could successfully negotiate challenges through resilience management. It is necessary to adopt the specific perspective of the entrepreneurial actors and to emphasise the importance of the intrinsic connection between organisational, individual and familial resilience, which goes beyond economic crisis prevention (Urban 2018, 189-93) and focuses on the social and political capacity or agency of the entrepreneurial actors. A purely systemic, holistic view of the organisational resilience of a chosen company is also possible, although this can vary greatly from company to company (Mohr 2016, 419). This ranges from inelastic or «rigid», which means a very low or non-existent degree of resilience, to extensively resilient. When it comes to the value or degree of resilience to be determined, organisations or companies are also differentiated according to particular types of resilience: they can be more inward-looking («fixed mindset») and thus possess anchored resilience, or they can be oriented towards development and growth («growth mindset») and

are characterised by adaptive resilience (Ishak and Williams 2017, 186-87). Both organisations and companies are therefore resilient, but not in the same way. An organisation with adaptive resilience is inherently more focused on resilience as a primary identity anchor than one with stabilised resilience. For organisations with stabilised resilience, it is sufficient to restore the normal state as quickly as possible in the event of disruptive situations. In contrast, enterprises with adaptive resilience see resiliencing as a normal standard process of integrating disruptions into their everyday (business) life, to such an extent that they no longer see disruptions as a break in their usual routine. The latter therefore perceive disruptions as such to a lesser extent and therefore also have less need for discussions about the reshaping of their organisation after a disruption than the former. Although companies with anchored resilience are prepared to work with alternative concepts in exceptional situations – i.e. during and immediately after disruptions – because they seem absolutely necessary in this particular case, they are otherwise taboo. In contrast, companies with adaptive resilience are much stronger and more willing to plan with alternative concepts in advance of a potential disruption and to tolerate and even (pro)actively use them during a disruption. From this perspective, there are essentially two different types of resilient enterprises: Companies with adaptive resilience consider changes in perspective to be normal and always act with foresight regarding the available options for adaptation. If, on the other hand, an enterprise is ‘only’ anchored resilient, its goal is to bounce back from a disruption to the respective ‘normal’ situation; it is initially surprised by a disruption, but is at least prepared, and it aims to preserve its identity and return to normality as quickly as possible (Ishak and Williams 2017, 190-92). This model is important because it can provide an explanation why some companies failed even though they practised resiliencing, or at least why they were not as successful with their resiliencing as others. It is precisely these kinds of empirical findings that can be recovered in historical case studies.

3. The third approach focuses more on disruption management through resiliencing, i.e. how crises evoked by vulnerabilities, risks and dangers, including shocks of all kinds within a company, can be anticipated, cushioned, minimised and overcome, and even turned into an opportunity for the company in such a way that it emerges from this situation strengthened (‘competitive’) in the long term as the result of a transformation process (Denzel 2018; Denzel 2020a). In this context, the management of key vulnerabilities, the ability to adapt, a transformation potential capable of development, and a pronounced resilience ethos («resilience affinity») appear to be fundamental components (Denzel 2018, 534-37).

Research into corporate developments in the face of disruption requires a specific analytical framework, as, despite existing approaches (Starr et al. 2003; Günther et al. 2007), there is currently no applicable and commonly accepted model for investigating resilience management, especially not from a historical perspective. However, an analytical grid can be derived from previous theoretical considerations, which refer to the complex interactions of four research-guiding parameters, as shown in some previous studies (Denzel 2018, 534-35; Denzel 2020, 166-67):

1. the active entrepreneurial affinity for resilience in the form of the entrepreneur’s or company’s creative willingness to resilience, which, based on the diagnosis of changing conditions and the resulting external and internal risk factors, implies the

will to change, but also the ability to implement changes, i.e. the ‘power’ of the entrepreneur (cf. Plumpe 2007);

2. the application of specific resilience strategies, which currently and historically have included the use of capital, the intensification of networking with shareholders and interest groups that pursue joint management goals, and the strengthening of (internal) knowledge management (Weick 2010; Perkams and Sørensen 2015). The most important manifestations of these resilience strategies in practical business activities are diversification and networking, the professionalisation of those responsible, the institutionalisation and legalisation of business activities, capitalisation or – in the case of failure – liquidation (Lukesch 2016, 299–300) and, if necessary, the transformation of the company. These strategies are just as constitutive for resilience management as

3. capital, networks, knowledge, information, and values as well as skills and attitudes at the management and employee level as the underlying material and immaterial resources of resilience, whose availability and differentiated combination options and deployment techniques can develop different mechanisms of action;

4. the implementation of resilience instruments or tools (e.g. accounting, association contracts, information management, environment monitoring) as well as resilience media for external communication and internal knowledge management by means of price currents or merchants’ manuals, for example.

It should be emphasised that the parameters of resilience management, understood in this way, cannot be precisely separated from each other, but often occur side by side or in close interdependence (Denzel 2018, 535), as it will be seen in the following section.

3. Strategies and tools of resilience management

When examining strategies and tools of resilience management, a distinction must be made between strategies for adapting to changing conditions and overcoming short-term crises within the commercial core business and long-term organizational resilience strategies. The latter can be seen as crucial for changing the form of the company and for avoiding insolvency or bankruptcy, while the former primarily, although not exclusively, served to minimize entrepreneurial risks. Outlining the resilience strategies of the core commercial business is as simple as it is complex: almost all business strategies can also be resilience strategies, but they do not necessarily have to be. Whether a strategic decision made by an entrepreneur has *also* contributed to the resilience of their company can usually only be determined indirectly in hindsight. A clever, innovative business strategy can strengthen the resilience of a company, while a reckless, risky one can weaken it. However, the correlation is not regular and certainly not always to be expected. Rather, the impact of a decision or a bundle of decisions on company’s resilience to crises or its adaptation to changing business conditions. Conscious business decisions to strengthen the resilience of a company are rather rare and, if at all, are usually identified in the event of an acute crisis. In contrast to the long-term strategies that occasionally appear in articles of association, wills or cross-generational planning, this type of *resiliencing*, which is geared towards

short-term crisis management, usually focuses on the injection of ‘fresh’ capital in order to maintain the company’s liquidity.

In the family businesses analysed so far – i.e. commercial and industrial companies (e.g. Urban 2023), in the pre-modern era and today (cf. Seibold, Lantelme and Kormann 2019) – internal challenges played a central role; in many disruptive situations these internal factors weighed even more heavily than external risks or crises. On the one hand, they regularly concerned issues of succession, the discipline of family members, shareholders and employees, as well as the efficiency of business activities, because family interests often did not coincide with business interests, as internal conflicts and their solutions in various Upper German trading companies of the sixteenth century clearly illustrate (Isenmann 2020). On the other hand, the way in which decisions were made in the pre-modern era was much more crucial than in the highly developed communication infrastructure of the present day or even since the end of the nineteenth century. Whenever possible, strategic decisions are supposed to be made in the head office and should not give business partners, employees (‘trading servants’) and agents too much freedom. In practice, however, they were often inhibited by lengthy and uncertain communication flows. Finally – and perhaps most importantly – the ratio of equity to borrowed capital was an enormous challenge, as too much indebtedness or outsized borrowing, as well as exaggerated speculation, could lead to a loss of capital. Excessive borrowing and hazardous speculation – often linked to each other – reduced the resilience of a family business both by limiting the possibilities for obtaining credit in the future and by the growing influence of outside lenders on the family business. To put it the other way round: «The ability to draw capital from an extended family and to move it among its various branches becomes a central aspect of premodern resilience» (Safley 2020, 218; cf. *ibid.*, 203, 206).

It can be assumed that all the trading companies examined here were making conscious efforts to adapt to changing conditions, to withstand and overcome crises and, if necessary, to transform internal company structures and thus achieve organisational resilience, even if this cannot be explicitly proven in the sources. However, the entrepreneurs’ willingness to engage in such resiliencing, the so-called resilience affinity or entrepreneurial resilience, varied greatly among the responsible managers of the individual companies, and the available sources allow few definitive statements. Jakob or Anton Fugger, Bartholomäus Welser or Bartholomäus Viatis, so-called *Regierer* in the language of their time, apparently harboured a much stronger sense of responsibility for the long-term stabilisation of their trading company than, for example, Ambrosius Höchstetter or the last Welser shareholders, who tended to prolong the life of their companies with risky transactions and sometimes questionable business practices. The sole traders Gauger and Wagner demonstrably endeavoured to make or maintain their comparatively small companies resilient (Baumgartl 2023). For a more precise and improved assessment of entrepreneurial resilience, however, further studies have to be carried out, especially from a more psychological perspective, on the individual and familial resilience of the entrepreneurial personalities (Urban 2023). But this presupposes that the available sources allow this at all.

The case studies referenced here are of varying significance due to the nature of the sources and the respective state of research. In the case of the Fugger trading

company, resilience management can be demonstrated both from a long-term perspective in close combination with the strategic reorganisation of business activities and in the course of short-term crisis management. The process of winding up the Fuggers' Hungarian trade dragged on for more than two decades and was delayed by numerous setbacks, but as an overall idea was pursued almost constantly. The withdrawal from the politically and economically risky Hungarian mining and metallurgy industry and the increasingly intensive focus on the Iberian Peninsula during this period offer a prime example of large-scale disruption management, an adaptation to changing international economic conditions during the upheaval of the sixteenth century. This involved organisational transformations within the company and an enormous concentration of business activities. In other words, the broad-based, 'medieval' commercial super-company of the Fuggers was transformed in the course of this process into a much leaner, more efficient financial services company that was able to cope with large financial losses due to the radical reduction in overall transaction costs. This is particularly evident in the abandonment of factor locations. Short-term crisis and resilience management in the case of the Fuggers became tangible during the disruption of the Schmalkaldic War (1546–1547), the most significant case of warfare in Upper Germany and especially in the area around Augsburg in the sixteenth century. Anton Fugger knew how to turn this disruptive situation, which for many reasons was potentially highly dangerous for the Fugger business, to his advantage through his personal diplomatic skills and high capital investment. As a result, his company ultimately emerged from this crisis even stronger and his politically and economically crucial connection to the Habsburg dynasty could be intensified in the long term. The close interdependence between crisis and resilience management becomes clear, as the need to prevent the military conflict from becoming an existential crisis for his company led to the development, revitalisation and intensification of strategies that strengthened the resilience of the Fugger company in the medium and long term. For although the amount of capital invested in loans to the Emperor and the Roman King may have been extraordinarily high, Anton Fugger was able to secure his loans in the best possible way (Denzel 2023a; Isenmann 2019, Denzel and Isenmann 2026).

The classic model of the adaptive transformation cycle, which is frequently used in resilience research (Pendall et al. 2010, 76; Lukesch 2016, 299–300), can be applied and tested using the case study of the various Welser companies of the sixteenth century. So far, this model appears to be less suitable for numerous corporate developments, as these usually tend to follow a linear course and cyclical processes can only be proven to a limited extent. Yet the successive Welser companies in the sixteenth century, which were relaunched in each generation, can be viewed and interpreted in such a cyclical sense, even if their development – almost naturally – does not fully correspond to the model. It is noteworthy that from the end of the second company, that of Bartholomäus V Welser, in the 1550s the capital stock was reduced at the end of each cycle, i.e. when the respective head manager retired and someone from the next generation took over responsibility. These capital reductions served to finance the retirement of the previous 'ruler' on the one hand and to satisfy the inheritance claims of family members on the other. As a result, the company shrank financially in the second half of the sixteenth century and had to reduce its business

activities or, as happened in the fourth and last generation, try to compensate for the financial bloodletting with risky transactions. Although the company's creditworthiness, i.e. its good faith, and thus its resilience remained largely intact for decades – not least due to its owners' high social prestige – this was gradually 'used up' in the last company from the 1580s and was no longer sufficient to provide the company with sufficient resilience against the threat of bankruptcy in the final crisis of the 1610s. Nevertheless, the successive Welser companies of the long sixteenth century can be seen as a prime example of a possible application of the adaptive transformation cycle. Interpreting their history in this way can contribute to a better understanding of the gradual decline of the trading house from the later sixteenth century onwards, which was barely recognised in the business world for decades (Denzel 2023a).

Despite their radically different history, these two major Upper German trading companies of the sixteenth century are almost paradigmatic of long-term corporate development in the pre-modern era. One company – that of the Fuggers – was sustainably successful for generations due to ongoing adaptations to changing conditions, structural changes, the abandonment of traditional business areas and investments in continuously profitable sectors despite all the crises and internal and external disruptions that occurred; it remained resilient and still exists today, albeit in a significantly different form. The fact that «through cautious and diversified investment decisions [...] the Fuggers [succeeded] in preserving a large part of the wealth generated in the sixteenth century to the present day» is part of the marketing concept of the *Fürst Fugger Privatbank* to the present day. In contrast, the Welser enterprise, which was on a par with the Fuggers in terms of wealth, reputation and political influence until the later sixteenth century, lost capital over the course of several generations and failed in 1614 after one of its shareholders, Matthäus Welser the Younger, had occupied the high-ranking, but also labour-intensive, time-consuming and costly office of the Imperial Penny Master (*Reichspfennigmeister*, 1603–1608). The family survived in the following centuries as a comparatively insignificant landed gentry, not exactly characterised by great wealth.

The contrasting nature of these two case studies raises important questions about resilience strategies and their chances of success in the trading companies examined. First of all, the possibilities of adapting to the changing framework conditions – whether more gradual developments as part of the commercialisation process or surprising, shock-like disruptions – probably play the most important role. The liquidity or capital issue, i.e. a company's capability to overcome a crisis situation by injecting capital and thus maintaining liquidity and creditworthiness, is of paramount importance. In the case of the Augsburg trading companies, most capital investments generally came from within the family network. The most important exceptions were the Höchstetters and the Fuggers. Although the two companies differed significantly in terms of the amount of deposit capital raised, which made up the majority of the Höchstetters' capital at the time of their bankruptcy (approx. 84%), the Fuggers only had a comparatively small percentage in the same years, albeit it was increasing over the years (1527: 12.7%; 1533: 24.7%). In the case of the Höchstetters, less than half of the invested capital came from the family circle, while the major part was supplied by merchants and bankers, patrician rentiers, wealthy widows, foundations, state and

church institutions (Safley 2020, 117, 183). It is evident that the undercapitalisation of a company like that of the H \ddot{o} chstetters made it particularly vulnerable and therefore more susceptible to crises – up to and including bankruptcy. It has been observed that «in the course of the sixteenth century, the use of borrowed capital [...] increasingly developed into a structural feature of the Augsburg trading houses, which were thus able to beat their competitors from Nuremberg and other Upper German cities out of the field – but also became susceptible to economic and financial crises» (H \ddot{a} berlein 1998b, 23). In this sense Safley (2000, 60) stated that «[f]oreign investment was a benchmark of Upper German, especially Augsburger, finance, [...] – as well as its underlying weakness – the tendency of one bankruptcy to trigger others». So, the often emphasised propensity of Augsburg merchants to take risks (cf. Safley 2000, 61) thus came at a high price, namely the increased vulnerability and reduced resilience of numerous trading companies, as the H \ddot{o} chstetters prove. In contrast, a high level of equity financing strengthened the resilience of a commercial house, not least by promoting its creditworthiness. Even more than the Fuggers, the Nuremberg-based Viatis & Peller are a significant case in point.

Other, more generally recognisable resilience strategies for adapting to changing conditions were the diversification or concentration of business activities. In addition, most trading companies provided banking services, while some also acted as marine insurers and were involved in mining or manufacturing. Particularly when companies were active in the latter two sectors, this involvement was often coupled with endeavours to achieve a quasi-monopoly, i.e. the greatest possible influence on the relevant European markets – at least where this was possible or appeared to make economic sense. The first two sectors were mainly regarded as services for other companies, which they were pleased to utilise themselves in return if their business relationships allowed them to do so. For example, the offer to insure transport by sea was not yet widespread within the Upper German cities in the sixteenth century – Ambrosius H \ddot{o} chstetter is said to have undertaken such transactions (H \ddot{a} berlein 2018), making it necessary to resort to business partners in Mediterranean ports or in the Netherlands. In contrast, exchange transactions were already commonplace in the commercial portfolio in Upper German merchant houses, but the various companies had different networks of exchange partners in various European cities. So, it was necessary to fall back on the network of a ‘friendly’ trading house.

Crown financing, which entailed loans to European rulers, German princes (e.g. Fouquet 2022), high-ranking clerics, landlords or nobles, generally paid high interest rates, but were also associated with significant risks due to their unreliable repayments; yet such loans were particularly important for the risk-taking Augsburgers. While the combination of different lines of business could contribute significantly to the resilience of a company, as a crisis in one line of business could be offset or at least mitigated by good results in another, involvement in crown financing generally increased the vulnerability of a trading company. The extent of this vulnerability depended on the volume of the loans granted and, above all, on the collateral provided. The Fuggers, for example, managed to maintain a high degree of resilience despite their extraordinarily high level of lending to the Spanish crown, which in the second half of the sixteenth century even became their company’s most important line of business, as their loans were physically secured by the best possible security of their

time: the opportunity to exploit mines (initially silver and copper in Tyrol and Hungary, later mercury in Almadén) and the transfer of landed estates. Yet other companies, which had not been able to safeguard their investments in this way, were hit much harder than the Fuggers with their considerable losses stemming from various suspensions of payments by the Spanish crown from the later 1550s onwards. However, the Fuggers' overall business and their creditworthiness were never seriously jeopardised. In contrast, the sustained withdrawal of the Welser family from this line of business from the 1550s onwards contributed to the resilience of their company in the following decades, as the accompanying risk was deliberately avoided. The same applies to the Viatis & Peller company from Nuremberg, which was involved in limited lending to princes and clerics – mostly to secure their trading interests in Saxony by courting princely favour. In this case, the granting of loans to the Saxon elector can be seen as an explicit resilience strategy (Denzel 2023a, *passim*).

Strategies employed by some trading houses to invest their accumulated assets on a long-term basis with good returns but low risk, thus preserving them for future generations, played a special role but were also company-specific. These included investments in real estate and manorial rights, which the Fugger and Paumgartner families undertook and secured at considerable legal expense in some cases. At least in the case of the Fuggers, this long-term strategy was extremely successful. The fact, that Raymund Fugger, the brother of the *Regierer* Anton, took care of the landed estates as a 'full-time job', shows the overall strategic importance of this branch of business within the company even at a comparatively early stage, when the expansion of the commercial and financial business was by no means complete. Nonetheless, this resilience strategy must be seen as exceptional, as the vast majority of Upper German family businesses tended to carry out landed property transactions – and sales in particular – only on the periphery of their business activities and primarily used them to reinvest capital which could be liquidated at short notice in the event of disruptions. Another unique feature is the Welser's long-standing involvement in Venezuela – Anton Fugger shied away from similar activities in Chile (Großhaupt 1990, 15-17) – which is very difficult to categorise from the perspective of resiliencing. But despite its ultimate failure, the Venezuela deal did not have a lasting impact on the company's resilience. This assessment is based on the finding that this 'adventure' did not develop into a financial disaster, even if the exaggerated profit expectations of the Welser headquarters in Augsburg could not be fulfilled. Anton Fugger's brother-in-law, Hans II Paumgartner (c. 1487/91–1549), pursued a similar strategy of acquiring real estate and feudal rights, which were to be secured across generations through a family charter and a legal code, although this strategy failed due to disruptions within the family (Lehm 2024).

These and other minor resilience strategies, which cannot be described here, were supported by a wide range of resilience tools or instruments, several of which can be identified on a fairly regular basis in the trading companies analysed. These include the use of bills of exchange for payment transactions and marine insurance for sea transport, as these promoted endeavours to reduce risks in an inherently risky business field. These two instruments were initially geared towards the short term, i.e. to individual transactions, although their overall effect was also understood in terms of longer-term, forward-looking protection against potential dangers and risks. Legal

instruments, by contrast, were generally designed for the long term from the outset, be it the organisational structure of a trading company, fixed in a partnership agreement (*Gesellschaftsvertrag*; Lutz 1976; Isenmann 2020, 341-54), or the transfer of the company to the next generation of entrepreneurs in a will or family statute (Simmacher 1994; Lehm 2024).

Among the major instruments of resilience management, accounting played a key role that can hardly be overestimated. More than any other economic, social or legal safeguards, it constitutes the decisive anchor of business activity and the central hinge between upstream information and knowledge management (Denzel 2020b) on the one hand and the strategic planning of future business activities on the other. It is not without reason that Werner Plumpe (2018, 8) emphasises this aspect as constitutive for entrepreneurial activity in general. It is precisely from this perspective that the Upper German trading companies of the long sixteenth century – as well as those of the fourteenth and fifteenth centuries – represented companies in the full sense of the word (Plumpe 2018, 1, 4), as they were regularly at the forefront of the arithmetic and accounting techniques of their time. The sixteenth century in particular was characterised by the spread of dual and double-entry bookkeeping techniques, which had been transferred from Italy to Upper Germany and adapted to the requirements of individual companies (Denzel 2023b; Isenmann 2019). This comprehensive adaptation process was perhaps the most important contribution to resilience in one of the most economically advanced regions of Europe during this period. The resilience of a trading company tended to increase with the elaboration of its bookkeeping which could largely avert the danger of a sudden and unexpected collapse. The recourse to exact accounting results, the valuation of assets by the respective head manager (*Regierer*), the increasing consolidation of individual financial statements in a balance sheet, which was also checked mathematically and for conclusiveness in a test (*Proba*; Isenmann 2019), enabled a company's management to arrive at strategic considerations – from small corrections to current business practices to a comprehensive reorientation of the entire company. In particular, the extensive accounting records of the Fugger family allow such conclusions, which can be exemplified by their management of the Hungarian trade and the shift in the company's activities towards Spanish crown finances under Anton Fugger (Denzel 2023a, 163-231). It also becomes clear that the idea of the long-term protection and stabilisation of the trading company played a decisive role for the head manager. In other words: the entrepreneur's affinity for resilience can be seen as a decisive factor in such a process.

Compared to the central factor of accounting, which can be interpreted as both a medium and an instrument of resilience management (the latter interpretation has been favoured here), the other factors are not subordinate, but sometimes tend to take a back seat, especially as their contribution to resiliencing is often not directly apparent. On the one hand, this concerns the information media and knowledge management, whose use in companies is regularly documented. A common medium of information management are business letters containing current prices and handwritten newspapers (*Zeytungen*), but it often remains unclear how and to what extent these were used in decision-making processes (Denzel 2020b). The information that they conveyed contributed to strategic decisions and thus played a role in resilience

management; however, the process behind them is virtually incomprehensible for present-day researchers. This applies to an even greater extent to the verbal communication of information, which can be recovered only rarely – for example in the case of court records or protocols of shareholders' meetings. In the process of resilience management, the use of these media must therefore always be taken into account, but its direct influence on business decisions within companies in particular can hardly be weighted. As a result, the media used in resilience management do not play a prominent role in the case studies discussed here, but should always be considered as a source of information.

Social capital, which is attributed to an entrepreneur or a company by the outside world, is particularly difficult to grasp and must therefore be assessed indirectly. This makes its weighting as a factor in resilience management much more difficult than for the other instruments. What significance does prestige or the name have for a particular trading company? It is true that social networks between merchant families, but also between merchants and political rulers, could be decisive for the success or failure of a company, especially in existential crisis situations. Moreover, the influence of social networks could extend beyond regular business partnerships or even business friendships. However, the competitive relationship between numerous Upper German trading companies, which were often based on pursuing similar business interests, muted the importance of forming and maintaining networks. Despite five marriages between the Augsburg Welser and Imhoff families in the sixteenth century, for example, the two families maintained competing trading companies throughout the sixteenth century (Häberlein 2002, 404). Thomas M. Safley (2020, 192-93) thus emphasises that – especially from the perspective of the research paradigm of resilience – the pursuit of creditworthiness through social networks was of «relative importance» and that previous research should be at least partially modified for the Upper German family companies of the sixteenth century: «The relative importance of social networks in shaping credit-debt relations appears to have been overdrawn in relationship both to financial markets and to family firms. Networks play a substantial role to be sure, but that role has less predictive and less explanatory value than has been recently argued, especially over distance or across society, where personal connections might be attenuated». This becomes particularly clear in the case of the Welser company, which was already in decline and whose glorious past seems to have helped secure its creditworthiness until the final years of its existence. However, the social capital that had been used up in the meantime did not save it from final bankruptcy. This finding can be seen *cum grano salis* in the numerous other cases of bankruptcy in Augsburg in the second half of the sixteenth and early seventeenth centuries (cf. Häberlein 2008). As a whole, the functional significance of social networks and, ultimately, social capital for resiliencing – in terms of creditworthiness alone – can be regarded as rather limited.

Last, but not least a secular phenomenon has to be mentioned, which can be interpreted as a resilience strategy *sui generis* concerning the structural development of trading companies in the sixteenth century's commercialisation process as a whole. As Michael North points out, «in the course of the sixteenth century, a process of concentration set in, in the course of which the circle of shareholders was reduced and increasingly limited to the nuclear family». In the long term, «the trend was

towards sole proprietorships, which had always dominated in the north, but also in Nuremberg [actually in the whole of Upper Germany; M.D.] in the early seventeenth century – possibly under the influence of immigrating foreign merchants» (North 2014, 25). From the perspective of economic vulnerability and resilience research, this empirical finding, which has not yet been scrutinised conceptually, can be linked to the so-called ‘Singapore paradox’, which emphasises the higher resilience of smaller entities compared to larger ones. In other words, it explains how smaller states – the city-state of Singapore is a prime example – can be more resilient than larger ones despite their inherent higher vulnerability (Briguglio et. al. 2006, 266-69). This could also be the case for companies, as «small size was compensated for by risk-reducing understandings» (de Vries 2011, 17). Consequently, the structural change of companies engaged in intra-European trade can be interpreted as a consequence of entrepreneurial efforts to achieve resilience in the course of the commercialisation process of the sixteenth century, which provides a conclusive explanation for this phenomenon that has been observed, but not sufficiently penetrated to date.

Although such evolutionary tendencies can be observed in numerous Upper German trading companies of the sixteenth century – North sees the Fuggers as a prime example of this (North 2014, 25) – the enterprise of the Viatis & Peller of Nuremberg, which only emerged in the final decades of the sixteenth century, appears to have anticipated and realised these structural transformations in an almost ‘ideal-typical’ manner. For although Viatis & Peller can still be regarded as a trading company in legal terms, they differed significantly in organisational terms from their predecessors, let alone the late medieval super-companies (Hunt 1994). Learning from his negative experiences in earlier trading companies, Bartholomäus Viatis initially chose to run his enterprise all by himself, later on with his son-in-law Martin Peller. Together, these two sole entrepreneurs built up what was perhaps the most important and financially strongest trading house in the Holy Roman Empire and made it so resilient that it not only emerged from the ‘Thirty Years’ War economically successful, but was able to survive for several decades during the post-war period with comparatively weak management personalities. The most remarkable feature of this company was its lean, highly efficient organisational form, which avoided personnel and transaction costs wherever possible and was able to invest all available capital in trading, putting-out and, if necessary, financial transactions. In this way, a much faster turnover of capital was achieved than in traditional trading companies, so that higher profits could be realised in a shorter period of time. Of course, Viatis & Peller were not the only entrepreneurs who successfully carried out such an organisational transformation of their corporate structure. In fact, the downsizing or streamlining of organisational structures had been widespread in Upper Germany since the last decades of the sixteenth century; such developments can also be observed among the Fuggers and the Welsers, to name just two further examples.

In addition to reducing costs, possible reasons for structural changes within the companies were the avoidance of internal conflicts and the concentration on a few selected business areas that were deemed particularly profitable. However, it also makes sense to consider the aspect of resilience, especially if we look again at the Viatis & Peller: Smaller organisational entities are simply easier to make or keep resilient – «[they] offered the most reliable form of risk management» (Safley 2000, 73)

– and this was probably in the interest of commercial entrepreneurs, especially in the decades of crisis since the late 1550s and during the disruption of the ‘Thirty Years’ War. Of course, this does not mean that sole traders – including their presumptive successors – were immune from failure; the Augsburg bankruptcies of this period also include numerous cases of small and medium-sized companies or sole traders (Häberlein 2013, 22; Häberlein 2008, 21, 30). Nonetheless, the likelihood of overcoming a disruption or crisis appears to have been greater if business was conducted within the framework of a lean, efficient organization, usually within the nuclear family, than if this was done within the framework of a traditional trading company with a large workforce. This makes the structural development of trading companies in the sixteenth century – from large trading companies towards individual owners, possibly with (only) one additional manager from the nuclear family (Hildebrandt 2002, 272) – understandable from the perspective of the resilience paradigm.²

4. Insolvency and bankruptcy in spite of resilience management

Various scenarios of failure show why merchant-banking companies went bankrupt despite their presumed resilience management, even if it can hardly be proven from the sources, as exemplified by the Höchstetter and Manlich companies from Augsburg³ and the Hirschvogel from Nuremberg. In the case of all three companies, a certain degree of resilience management must have been achieved before the decisive corporate crisis. This is clear from the fact that they all operated successfully for years or even decades and enjoyed a high level of prestige and creditworthiness in the business world. Ambrosius Höchstetter’s company was among the most respected and financially strongest of its time. Yet at some point, all three reached the tipping point, which caused negative reversal of their fortunes and ultimately ended in bankruptcy. The main reasons for this – in line with previous research (Häberlein 2008, 17-20; Safley 2000, 61-62) – were a reduction of the capital stock and therefore a decline of liquidity; speculative and hence highly risky exchange transactions; losses due to privateers, rumours and bad news about payment difficulties (however unjustified they may have been); bankruptcies of close business partners; and embezzlement by employees or commission agents. At least in the case of Höchstetter and Hirschvogel, however, there is additional evidence of inaccurate, improper bookkeeping, faulty accounts and balance sheets, and therefore an insufficient basis for strategic business and resilience planning. Even if resilience efforts may have existed in the past, it can be assumed that they had been neglected or even abandoned at a certain point in time; at the very least, these companies lacked an accurate accounting basis. It is precisely in cases of business failure that the outstanding

² That this transformation towards a more resilient corporate structure may also have been one of the foundations of Augsburg’s rapid recovery after the disruption of the ‘Thirty Years’ War, with its enormous losses of population and capital (Safley 2000, 74-75), seems plausible; however, this conclusion cannot be drawn in the same way for Nuremberg, where commercial companies also underwent structural change; Viatis & Peller are only the most prominent example.

³ For bankruptcies in Augsburg as a whole in the late sixteenth and early seventeenth centuries see Häberlein (2008, 31-32), who used Reinhard (1996) as main source.

importance of elaborate bookkeeping – ideally with some kind of regular accounting or balance sheet – becomes apparent as a prerequisite and instrument for strategic resilience and general business planning. The fact that accounting records were inaccurate or even completely missing was regarded by knowledgeable contemporaries as a major reason for business failure or bankruptcy. Ambrosius Höchstetter, despite all his shrewdness in his earlier business dealings, did not pursue any hedging or transformation strategies for his company in his last years as head manager and eventually tried to save it with manipulated accounting documents (Safley 2020, 114-17). The Hirschvogel lost sight of which assets they actually owned or might have been entitled to due to negligent bookkeeping by their representative in India, Jörg Pock (Kömmerling-Fitzler 1967/68). And for the Zangmeister company – to cite another example – it was only during the bankruptcy proceedings that a reasonably complete list of receivables and liabilities was compiled (Westermann 1908). The important, indeed central, role of bookkeeping and accounting as the basis for sustainable resilience management thus becomes clear *ex negativo*.

Of course, there were various other internal and external factors that contributed to business failure and might even have caused the collapse; however, inadequate bookkeeping and accounting must be given particular weight in a company's path to bankruptcy. Furthermore, at least in the case of the Manlich and Hirschvogel companies, it is reasonable to assume that their earlier resilience mainly served to stabilise them rather than adapt them to new challenges, which they were then unable to cope with. The type of resilience pursued within the broad field of organisational resilience is therefore of no small importance. Overall, however, this also means that failure can ultimately be attributed to a lack of resilience management or insufficient focus on adaptive resilience, as the company in question was no longer able to hold its own in an impending crisis situation – whether it was caused internally or externally.

What conclusions can be drawn from the three case studies listed above, which are well documented by extensive research? What were the main causes of the business failure of formerly highly respected, successful trading companies? Were they difficulties in adapting to the changing conditions during the secular commercialization process? Was it bad speculation, bad decisions by managers, internal organizational problems, family conflicts or all of the above?

On the one hand, the fallout in Upper Germany, as well as in Italy, Spain and France, are regularly cited as causing the economic slowdown in the second half of the sixteenth century and the high-risk transactions with crowns and governments, not least due to the long-term capital commitment, as well as the years following the first two Spanish (so-called) 'state bankruptcies' and suspension of payments in 1560 and 1575, as government bonds often had to be sold by the borrowing merchants due to their rapid loss in value in order to become liquid again. On the other hand, it is pointed out that the insufficient equity capital not only exacerbated this liquidity problem, but must also be regarded as a general weakness of commercial enterprises in the sixteenth century (cf. Seibold 1995, 131, 146).

This fundamental problem of almost all trading houses in the sixteenth century, the interplay of a too thin equity base and a too long-term capital commitment, was also one of the decisive factors for the decline of the respective companies, if not for their bankruptcies, in all three case studies. Raising outside capital in the form of

deposits, as Höchstetter in particular, but also Manlich, did on a large scale, did not generally provide any relief, as on the one hand high annual interest payments were required, which placed an additional burden on the budget; on the other hand such deposits were generally only short-term and could therefore be terminated comparatively quickly. Even if this ‘quickly’ normally meant a six-month or annual period, a wave of terminations could have a devastating effect if the capital was lent to a ruler for a longer period, tied up in a mine that was becoming unprofitable or in an overseas trading voyage lasting several years. It was precisely the withdrawal of capital by depositors - in modern terms: a run - that could be the final decisive factor in the insolvency of a company. The risk of such a run was probably all the greater the less the company in question was networked with other local merchant families, as can be seen in the Höchstetter bankruptcy. Conversely, a high degree of integration with other families from the local economic, political and social elites created confidence in one’s own trading activities and made it possible to generate new capital from this broad network. If there was no such intensive networking, the creditors’ lack of patience could be exacerbated at the first signs of payment difficulties (or corresponding rumors) if either – as in Höchstetter’s case – individual creditors were given preferential treatment or the confidence of the (local) creditors was permanently shaken by a succession of collapses and they therefore reacted ever more sensitively to the slightest signs of payment weakness. This seems to have been the case in Augsburg in 1574 when, following the bankruptcies of Manlich and Schorer in the summer, the Haug, Langnauer and Linck company was also forced to go bankrupt in October (Seibold 1995, 132; von Ciriacy-Wantrup 2007, 290-300). Rumors and bad news about payment difficulties or even the collapse of a close business partner or a relative bearing the same name – as in the case of the bankruptcy of Franz Tucher from Nuremberg in 1561 (Bauernfeind 2011, 26) – could be responsible for the onset of payment difficulties. The Augsburg Herwarth company, for example, is said to have become insolvent in 1576 because it had deposited 120,000 francs in the Manlich company shortly before its collapse and thus at least largely lost money (Seibold 1995, 151). If speculative exchange transactions or losses from privateers were added to this, the capital base could be so quickly eroded that bankruptcy became inevitable. According to Mark Häberlein (2008, 17-20), these were the main reasons for bankruptcies in the sixteenth century.

While the amount and type of capitalisation of a company may ultimately have been a decisive factor in its collapse, other causes should also be highlighted. Firstly, there was the underestimation or misjudgement of the risks of individual lines of business, which was generally based on a lack of information – whether on the part of the respective company management or on the part of the creditors. Such a lack of information played just as fatal a role in Höchstetter’s mercury business as it did in Hirschvogel’s India trade and mining business or in Manlich’s Levant trade. ‘Lack of information’ can mean both a lack of relevant knowledge about the specifics of a particular branch of trade – about production, quality of the goods, trade and payment opportunities, etc. – as well as insufficient information about developments on the individual markets, about the risks of transportation or something else, or a lack of experience with the relevant trading practices. It seems that it was not primarily ‘book knowledge’ about production methods that was decisive here, but rather up-

to-date market information about prices, supply, demand and transportation options, which Ambrosius Höchstetter lacked in the mercury business, for example, as well as the empirical knowledge about established branches of trade that ‘newcomers’ such as the Höchstetter, Hirschvogel or Manlich lacked in the India or Levant trade, so that they took very high, perhaps avoidable risks relatively naively. The lack of information also meant that the essential basis for appropriate stabilization or adaptation management to changing circumstances and, in the worst case, for crisis management, i.e. ultimately for the necessary resiliencing, was missing.

The lack of information had a particularly negative effect when it came to bookkeeping and accounting. The increasingly efficient organization of all bookkeeping processes since the early fourteenth century in Italy and – perhaps about a century later – also in Upper Germany had led to an enormous increase in information about the state of a commercial enterprise at a particular point in time. The lack of this internal company information could lead to a complete misjudgment of the financial situation of a trading company. In fact, inadequate or incorrect bookkeeping, whether in one or more factories or in the head office, played a decisive role in two of the bankruptcies examined here (and in very many others in the late Middle Ages and early modern period): in the case of the Hirschvogel, it was specifically a lack of accounts from India and from their Lisbon branch (*Faktorei*), while in the case of Ambrosius Höchstetter it was probably inadequate (or even missing?) annual accounts and embellished information on receivables and liabilities in favor of his company, which did not cause the decline, but accelerated it. During the bankruptcy of Hans the Younger and David Weyer from Augsburg in 1557, caused by their inability to pay after a run by their creditors on their cash register in Lyons, it was established during the audit by Matthäus Manlich and Joachim Jenisch that nothing had been «inscribed» in the books – especially in the Lyons journal – which was already regarded by contemporaries not only as considerable negligence, but also as a lack of information, even as an attempt at fraud (Häberlein 1998a, 255-56). The bookkeeping did not have to be poorly kept or fraudulently falsified – as with the question of solvency, a rumor alone could be enough to drive a trading company into bankruptcy. In the case of the suspension of payments by the Zangmeister from Memmingen in 1560, false rumors and missing main accounts also accelerated the bankruptcy (Westermann 1908, 477, 481).

A final important factor in a company collapse, which can be observed in all the case studies examined here (and beyond), was the internal constitution of the trading company, i.e. its internal organization: the branches (*Faktoreien*), which were common in the sixteenth century, not only caused high costs, but could also cause risks by filling management positions with unsuitable trading servants (*Handelsdiener*) – whether from their own family or through employees. A lack of communication and problems with the flow of information, embezzlement or transactions by the factors on their own account, or a lack of loyalty of the trading servants to the corporate policy of the head office were just some of the sources of risks that could drastically increase the vulnerability of the company in a short space of time. Such internal organizational weaknesses could be considerably exacerbated by misconduct on the part of fellow shareholders or family members, as had been the case in the last years of the Höchstetter company, when the younger generation of shareholders attracted

more public attention through a lifestyle not befitting the code of behaviour of the merchant class, in particular through extravagance and immoral life, than through incompetence and missing drive in the trade itself, thus permanently damaging the previously good reputation of the trading house. However, the internal organizational weaknesses of a trading company could also include a lack of leadership and assertiveness or will to assert oneself on the part of the managers or the director towards fellow shareholders or employees – even if this represents a contradiction – as was probably the case with the old Höchstetter as well as with Endres I Hirschvogel, who was in poor health. A far-reaching abandonment of the claim to leadership by the ‘manager(s)’ within a trading company may have contributed significantly to its increasing vulnerability.

These parameters, which played a significant role in the various decline and collapse scenarios over and above the individual company factors, can be summarized as the result of a lack of or inadequate resilience: The information deficits meant that in many cases the crucial foundation on which successful resilience management could have been built was missing. And even if this was the case, the way in which resilience management was structured by those responsible in a company still played a key role – in the direction of more stabilized or more adaptive resilience. In the former case, the company organization was largely stable and crisis-resistant, but it lacked the necessary adaptations to the changing framework conditions, such as to the commercialization process. This is shown particularly clearly by the example of the bankruptcy of Manlich, which was also a consequence of a lack of experience with the specific conditions of the Levant trade. Although this trading company may have been largely stable or even resistant to crises, i.e. it had a relatively high level of stabilized resilience, it lacked the ability to adapt to the high risks of trade with the eastern Mediterranean. Similarly, the Hirschvogel were probably not up to the challenges of the Indian business, despite their stability over several generations. Ultimately, the specific type of resilience was also decisive for the success of the resiliencing in question – although not solely so.

Furthermore, none of the three trading companies examined provided sufficient evidence of comprehensive resilience management for the purpose of long-term stabilization and consolidation in the months or years of decline. Even if the more or less targeted focus on new business areas can be understood as an adaptation to changing business conditions, this was more of a short to medium-term adjustment of business strategies than the implementation of long-term resilience strategies, especially as the risk and vulnerability to which the individual company was exposed was increased rather than reduced. There is also little evidence of stabilization management in the phase of the emerging or incipient crisis; Ambrosius I Höchstetter’s attempt to win Anton Fugger’s support for his company shortly before bankruptcy could be interpreted in this sense, but due to his specific approach – the transmission of easily transparent, embellished information – it could be classified as somewhere between amateurish and naive and tricky (Safley 2020); his approach may be seen more as an attempt of a short-term crisis management. After a few initial successes, Lienhard III Hirschvogel’s diversion into the real estate business quickly led to increased and no longer manageable risks (Schaper 1973), so that successful stabilization cannot be assumed here either. *Ex negativo*, it can therefore be stated that timely

resiliencing, consistently enforced with the authority and will of the director, for the long-term stabilization or adaptation of the company in the approaching crisis situation was largely omitted or at best remained stuck in half-hearted approaches (and was also not part of any kind of corporate philosophy). As a result, the crisis was not permanently pushed back or even overcome, but from this perspective it is not possible to determine with certainty whether and to what extent this lack of resilience, inadequate resilience or misdirected resilience promoted or exacerbated the respective corporate crisis.

5. Conclusion

The above case studies on Upper German merchant houses of the long sixteenth century clearly reveal various resilience strategies that helped them to avoid insolvency or bankruptcy over long periods of time. The most important factor was their ability to adapt to changing conditions – whether gradual developments as part of the commercialization process or shock-like. Also of paramount importance was their liquidity, i.e. whether a company was able to master a crisis situation by injecting capital and thus maintaining creditworthiness. The diversification or concentration of business activities or investments was also a generally observed business and resilience strategy. In contrast, involvement in the banking or insurance business, mining, manufacturing or putting-out systems, crown financing, bond transactions or the purchase or sale of real estate or estates were more company-specific strategies that were applied as required in certain situations as part of their resilience management. However, with the exception of bank services, these specific strategies were hardly suitable for overcoming short-term crises as their use generally had to be of a long-term nature and only brought corresponding success in the *longue durée*, although the rapid sale of real estate or estates may be regarded as an exception to this.

The most important tools for implementing these strategies as part of corporate resilience management appear to be accounting, followed by information and the acquisition and management of knowledge, although there is regular evidence of their use in the companies, but not *how* and to what extent they were used in decision-making.⁴ The short-term economic instruments of resilience (bill of exchange, marine insurance) were regularly used, although their overall effect was also understood in terms of longer-term, forward-looking protection against potential dangers and risks. Legal instruments (wills, association contracts), on the other hand, were generally designed for the long term from the outset. The unmeasurable social capital that was attributed to an entrepreneur or a company by the outside world is difficult to grasp and therefore also difficult to weigh and must in turn be derived rather indirectly. Overall, the functional significance of social networks and, ultimately, social

⁴ This applies to an even greater extent to the oral communication of information, which is also included and can only be followed to a certain extent in rare cases – for example in the case of available minutes of court proceedings or shareholders' meetings. In the process of resilience management, the use of the media discussed must therefore always be taken into account, but its direct influence on events in companies in particular can hardly be weighted.

capital for resiliencing – in terms of creditworthiness alone – appears to be rather limited.

Tab. 1. **Resilience Strategies used by Upper-German Companies, 16th to early 17th Centuries**

Strategies	Adaptation to changing framework conditions	Overcoming short-term crises
General strategies:		
Diversification or concentration of business activities or investments	✓	✓
Injection of capital	✓	✓
Specific strategies in selection:		
Purchase or sale of real estate, estates, manorial rights	✓	✓
Banking services	✓	✓
(Marine) insurance business	✓	---
Mining, manufacturing, putting-out-systems	✓	---
Crown financing, bond transactions	✓	---

The above (and numerous other) case studies also make it clear that the application of resilience strategies and tools could not always prevent a company from becoming insolvent or going bankrupt. The background may have been specific and individual in each case, but even many years of resilience management did not guarantee that every crisis could be overcome. The tipping point could come when the previous resilience management was no longer sufficient to overcome the crisis, resulting in insolvency or even bankruptcy.⁵ This was particularly the case if a company relied on anchored rather than adaptive resilience in its organizational resilience. This is because if a company is ‘only’ anchored resilient, its (primary) goal is to bounce back from a disruption to the respective everyday or initial situation, but not to adapt to changing conditions or decision variables (Ishak and Williams 2018, 190). And such anchored resilience may not be sufficient to cope with a massive disruptive situation. This would explain the above-mentioned examples of insolvencies and bankruptcies despite prior efforts at resilience management.

Finally, it may be asked what fundamentally new insights this research paradigm of resilience can provide. If a company was able to overcome the numerous challenges and disruptions described above – from shipwrecks and the bankrupt of business partners to financial crises, wars and natural disasters – i.e. if it appears to be resilient, then such a company had also been successful in business, often for generations. Resilient business is always based on sustainability and forward-looking management, not necessarily focused on quick profits, but striving at secure earnings over

⁵ This can be well demonstrated by a case study from the Hanseatic region, the Loitz company group in Stettin, Danzig, and Lüneburg in the late 1560s and early 1570s (Denzel 2024).

long periods of time. In this sense, resilience management means the entrepreneurial orientation towards a long-term economic approach and sustainable business practice, the skillful combination of appropriate strategies and instruments by the company's management, including necessary short-term crisis management and forward-looking planning for the distant future. The sheer size of a company, the number of employees, the level of turnover or other indicators are not decisive; from the perspective of resilience, smaller units are often, if not usually, more crisis-resistant and durable than (too) large ones.

The case studies presented above suggest that, over the course of the sixteenth century, many large Upper German trading companies were transformed into smaller units that were managed by members of a nuclear family, who were ideally able to contain internal conflicts; new companies like the Viatis & Peller were regularly founded in the decades around 1600 in the form of individual companies. The medieval super-companies with their Europe-wide networks of employees were a thing of the past now; they were simply no longer resilient enough to cope with the challenges of the fundamental commercialization process of the early modern period and its inherent disruptions. This is a remarkable finding that can plausibly explain the structural changes in the business world of the long sixteenth century.

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