PEER-TO-PEER INVOICE FINANCING

Can it be an attainable financing option for start-up companies to address their financing needs?

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ABSTRACT

In recent years, the financial landscape for (start-up) companies has undergone a significant transformation. Driven by technological innovation, countless new financial opportunities have become available. One of those opportunities lies in the form of peer-to-peer (P2P) invoice financing via a platform approach, invoice financing in general is used by companies to accelerate cash flow, improve working capital rates and therefore support liquidity. This has been identified as the foremost reason for start-up companies to seek financing, also being the companies that face the largest constraint in attaining (invoice) financing traditionally. Traditional invoice financing- and P2P platforms in general are well-researched subjects. However, in existing academic literature the subject of P2P invoice financing is researched limited or indirectly focused on. Therefore this exploratory researched paper is dedicated to investigating P2P invoice financing as an attainable financing option for start-up companies to address their financing needs. Based on the synthesizing of limited- and indirect academic literature existent, assumptions were created regarding core aspects of P2P invoice financing in regard to start-up companies financing needs, forming the theoretical framework for this research paper. Coherently, the conceptual framework constructs hypotheses regarding the attainability of P2P invoice financing and its perceived ability to address financing needs of start-up companies. A research design has been used to empirically explore these different aspects by employing a content analysis of P2P invoice financing platforms to identify key features that embody the characteristics of P2P invoice financing. Following this, a survey was conducted among entrepreneurs to gather insights on their perceptions regarding different features of P2P invoice financing platforms and their financing needs, creating a perception towards the characteristics of P2P invoice financing.

The empirical findings of this research paper indicate that P2P invoice financing platforms in the sample researched mostly possess features that enhance the attainability of financing for start-up companies by minimizing the requirement of financial records, credit history and collateral for financing. These traditional eligibility criteria are substituted by an emphasis on alternative criteria like a minimum required operating history and credit-worthiness checks on customers. Additionally, entrepreneurs in the sample researched showed a positive perception towards the attainability features presented with, further supporting the attainable characteristic of P2P invoice financing. Empirical findings also indicate positive perceptions towards features enhancing the flexibility and short process duration of P2P invoice financing. Another feature identified to be generally present in P2P invoice financing platforms, which was not identified by the review of literature is accounts receivable management. Findings return mixed perceptions towards this feature, along with it not being substantiated, creates a suggestion for future research opportunities.

In conclusion, P2P invoice financing is affirmed as an attainable financing option for start-up companies to address their financing needs by supporting their need for managing cash flows, increasing working capital and improving liquidity while being a financing option that is attainable, flexible and fast, aligning with the dynamic natures- and operating environments of start-up companies. Affirmation of the central research question is supported by the acceptance of hypotheses constructed. This research paper contributes to the academic foundation of P2P invoice financing research, posing as a starting point for future academic- and practical exploration of this niche subject. The insights resulting from this research paper should be generalized with large precaution because of the exploratory nature of this research, the limited availability of academic literature and imperfect samples when conducting the content analysis and survey. However, it can give indications regarding the characteristics of P2P invoice financing, posing as a starting point for more in-depth research.

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KEYWORDS

P2P invoice financing, P2P lending, P2P platform, Invoice financing, Start-up companies, Financing needs, Alternative financing

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1. INTRODUCTION

In recent years the traditional financial landscape for businesses has undergone a significant transformation. Driven by technological innovation and its widespread adaptation it resulted in numerous new financial opportunities. One of those opportunities lies in the form of new financing options (Mollick, 2014), available to companies, specifically start-up companies. One of the more recent iterations of these new financing options being peer-to-peer financing via peer-to-peer platforms. Peer-to-peer is explained as the direct connection of entities without an intermediary (Pourebrahimi et al., 2005). This can potentially be an opportunity for companies to attain financing. Attaining financing poses as a challenge for start-up companies due to their limited financial record, credit history & collateral, generally required for attaining financing in a traditional manner (C. G. Brush et al., 2001). To address this gap in attainability of financing, peer-to-peer (further referred to as P2P) financing options have gained distinction due to their avoidance of traditional intermediaries (Bakker et al., 2004; Klafft, 2008; Lin et al., 2013; Mollick, 2014).

As stated, one of the more recent- as well as less researched financing options comes in the form of P2P invoice financing. Traditionally, invoice financing is used by companies to manage cash flows improve working capital rates by obtaining financing matched to outstanding invoices (Bakker et al., 2004), bridging the time-gap to the receive date, therefore improving liquidity. Start-up companies could benefit greatly from improved liquidity levels, being the companies that struggle the most with managing it (Moro-Visconti, 2020; Stice et al., 2017), making the acceleration of cash flows, increasing working capital rates and therefore liquidity, their most common reason to require financing. However, the traditional invoice financing process often involves financial intermediaries, for example banks or financial institutions, who set eligibility criteria in place, making invoice financing less- or hardly accessible by start-up companies. In contrast, P2P invoice financing options offer financing without the use of a financial intermediary by directly connecting borrowers and lenders (Bakker et al., 2004; Klafft, 2008; Lin et al., 2013; Mollick, 2014). This new opportunity has led to the emergence of P2P invoice financing which combines the benefits of invoice financing with the attainability of P2P financing through online P2P platforms, which enables companies to connect directly with financers for their outstanding invoices. P2P invoice financing offers a direct approach to attain financing, enabling start-up companies to accelerate their cash flows, improving working capital rates and manage liquidity levels.

1.1 Problem statement

Start-up companies can face a significant challenge in accessing traditional financing options. As a result, many Start-up companies struggle to attain the needed financing to support their operational activities. As indicated by (Moro-Visconti, 2020; Stice et al., 2017), the most common reason for start-up companies to require financing is the acceleration of cash flows, increasing working capital rates and managing liquidity levels. Invoice financing is a proven traditional financing option to address this financing need, but is mostly applicable to more mature companies only, due to financial intermediaries and their eligibility requirements present (Bakker et al., 2004; C. G. Brush et al., 2001). P2P invoice financing seems like a response to the limited attainability of traditional invoice financing for start-up companies, positioning as an attainable financing option. The problem present is the fact that in existing academic literature, the attainability as well as the potential to address financing needs that P2P invoice financing can offer for Start-up companies is something not actively researched. Existent academic literature regarding P2P invoice financing is limited to non-available. Academic literature mentioning P2P invoice financing exists, the main focus however lies on either P2P financing or P2P platforms in general or traditional invoice financing.

1.2 Research goal

Academic literature focusing directly on P2P invoice financing is very limited and indirect, therefore a research gap can be identified in the research domains of invoice financing and P2P financing- and platform literature, regarding P2P invoice financing. Without adequate research focusing on P2P invoice financing specifically, there is no foundation to conduct further research regarding this subject. Exploring this identified research gap is essential to gain insights into the implications of P2P invoice financing. Because the academic foundation regarding this P2P invoice financing is slim and indirect, this research paper will employ an exploratory approach to address the identified research gap.

The goal of this research paper is to explore P2P invoice financing as a concept and investigate if assumptions derived from indirect academic literature available can be verified, creating a foundation for future research in this niche research domain. The research paper aims to explain if P2P invoice financing can serve as an attainable option to address start-up companies' most common reason to need financing; improving cash flow, working capital and liquidity levels, while fitting with their financing preferences or requirements. For P2P invoice financing, attainability- as well as the ability to address financing needs of start-up companies are equally important. Without being attainable, addressing financing needs of start-up companies is not possible. Meanwhile, if P2P invoice financing cannot address financing needs, the attainability of this financing option loses its value. Therefore, the central research question of this research paper states:

Can Peer-To-Peer invoice financing be an attainable financing option for start-up companies to address their financing needs?

From an academic standpoint, this research paper contributes to the research domain of P2P financing/platforms, both a constantly evolving phenomenon. Also, it will add to the research domain of Invoice financing. Next to that, for the niche research field of P2P invoice financing, this research paper aims to act as a foundation for future research, by enhancing the understanding of P2P invoice financing and its implications for start-up companies. It will provide insights into the fundamental characteristics of this financing method, contributing to larger academic presence. A larger academic presence also brings practical implications. Start-up companies and P2P (invoice) financing platforms can gain valuable insights to get a deeper understanding of this relatively unexplored subject, fostering adaptation. Also for start-up companies specifically, the potential advantages of P2P invoice financing can be better understood, this can enhance the ability to assess whether P2P invoice financing can serve as a suitable financing option.

1.3 Outline of research paper

This exploratory research paper will investigate P2P invoice financing as a financing option for start-up companies. Existing academic literature regarding P2P invoice financing is limited because this financing option is not widely actively researched, therefore the literature review is based on limited- and indirect academic literature which is compared to create a theoretical framework; explaining core aspects of P2P invoice. Additionally, this creates the basis for the conceptual framework focusing on the attainability of P2P invoice financing as well as its perceived ability to address financing needs. Together this forms the analytical framework of this research paper.

Based on the analytical framework, the research design composed for this research paper aims to substantiate the assumptions derived from limited- and indirect academic literature about P2P invoice financing and comprehensively investigate- and address both hypotheses constructed to answer the central research question. The research design consists of a content analysis on P2P invoice financing platforms to identify features present which embody the identified characteristics of P2P invoice financing, after which a survey is conducted among entrepreneurs to gather insights into the perceived ability of P2P invoice financing to address their financing needs.

The results from this empirical research will be extensively evaluated and explained, analyzing the data obtained to come substantiated findings. These findings and the fit existing academic literature and the research paper and overall will be reflected upon with an overview of findings and a conclusion. Here the hypotheses will be accepted or rejected based on qualitative insights and substantiated by statistical tests, to answer the central research question. After all, there will be a reflection upon the findings and their implications for future research and practical use. This exploratory approach to researching P2P invoice financing aims to contribute meaningfully by creating a foundation for use in both academic- and practical context.

2. LITERATURE REVIEW

2.1 Core concepts

2.1.1 Invoice Financing

Invoice financing, also named ‘accounts receivable financing’ or ‘debtor financing’ is a financing method utilized by companies to manage their cash flows by improving increasing working capital, therefore improving liquidity (Bakker et al., 2004; C. G. Brush et al., 2001). When participating in invoice financing a company finances their outstanding invoices for the amount invoiced, or even sell their invoices, to achieve the amount to be received at an earlier time (Bakker et al., 2004). In this practice, the one financing is traditionally a financial institution. This practice allows a company to bridge the timeframe between issuance of an invoice and actually receiving the payment. By managing accelerating cash flows and increasing working capital rates, liquidity levels are managed and supported, which can support start-up companies’ operation. Invoice financing has been practiced for several decades, dating back to the 1960s and gaining popularity and more widespread attention in the 1980s. With an increase in companies’ operating pace (Beqiri, 2018), the popularity of invoice financing has significantly increased over the last years.

For invoice financing in general, financial intermediaries traditionally play a significant role in the financing process. They evaluate the creditworthiness- and risk associated with the invoice based on set criteria, giving financing according to this evaluation (Lin et al., 2013). In the invoice financing process, traditional intermediaries possess high levels of control and power as a result of their ability to provide the needed financing, assess creditworthiness and use of their expertise and size to offer additional risk-bearing services. Therefore, they are able to influence fees, contractual terms and most importantly; decide whether companies can receive financing or not. This decision is made by evaluation of requirements under set eligibility criteria. Generally, set criteria are strict because traditional financial intermediaries are more risk-averse compared to newer, alternative financing methods.

2.1.2 Peer-to-peer platforms

P2P platforms have emerged as a disruptive and innovative approach to financing in the financial landscape, originating in the early 2010s **(**Klafft, 2008; Mollick, 2014**)**. A P2P platform in the context of financing is a digital platform that utilizes peer-to-peer principles; the connection of individuals or businesses seeking financing directly with potential lenders or investors **(**Lin et al., 2013**)**, bypassing traditional financial intermediaries. P2P platforms leverage technology to enable companies to access financing for specific opportunities or situations outside of the traditional spectrum **(**Lin et al., 2013**)**. In the context of financing, the use of P2P principles started with P2P lending, which originated in the early 2000s along with technological advancements enhancing easy communication **(**Mollick, 2014**),** which in its turn enhanced the ability of entities worldwide to connect with each other. Recently, this has evolved into a platform based approach; P2P platforms. The rise of P2P platforms coincided with advancements in financial technology, including improvements in payment systems and data analytics. For invoice financing, P2P platforms have emerged as an alternative route to the traditional approach of financing; creating P2P invoice financing platforms.

2.1.3 Peer-to-peer invoice financing

P2P invoice financing is an innovative type of financing, combining the principles of invoice financing and P2P platforms as explained in section 2.1.1 and 2.1.2 respectively. P2P invoice financing offers the same type of financing advantages as traditional invoice financing, inherently using the same financing principles. The connection between the entity financing and the company seeking for financing is however made with the use of online P2P platforms, bypassing traditional financial intermediaries. In the process of P2P invoice financing, a company first issues an invoice to a customer for provided goods or services. This invoice is then submitted to a P2P platform in seek for financing against the outstanding invoice. The submitted invoice is subject to a verification process on the invoice submitted, the company and the customer to which the invoice is issued. Upon successful verification, the invoice is either financed directly by the P2P platform, or is listed for potential investors to finance. Once the capital is received from the customer, on the due date of the invoice, or earlier, the company repays the financed amount of capital to the platform, minus a fee charged for the financing service, thereby completing the financing process. See figure 1 for an overview of the P2P invoice financing process. This process, while leveraging the foundational principles of traditional invoice financing, introduces a level of attainability and efficiency that can align with the financing needs of start-up companies, enabling them to manage their cash flows, improve working capital rates, and enhance liquidity levels.

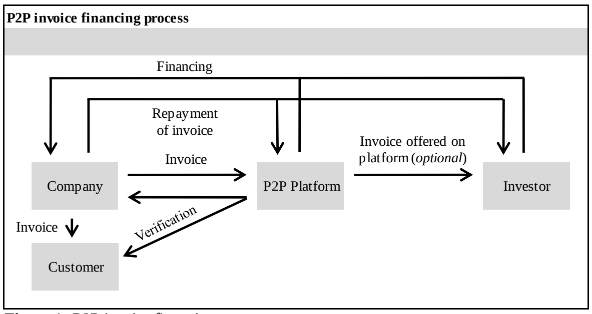


Figure 1: *P2P invoice financing process*

2.2 Start-up companies

A start-up company is defined as an entrepreneurial venture in the early stages of its operations, most often, but not necessary characterized by innovation, growth potential and uncertainty (Blank, 2013). Such companies are driven to develop scalable business models to pursue growth, offering new products or services to fulfill a need in a market, typically operating in a dynamic- and rapidly changing environment, adding to uncertainty (Ries, 2011). In the context of this research paper, we align with the definitions put forth by (Blank, 2013) and (Ries, 2011), emphasizing start-up companies’ operational duration, their orientation towards growth and their dynamic operating environment. Based on these characteristics, financing needs can be identified.

2.2.1 Start-up companies’ characteristics

Start-up companies possess distinct characteristics that differentiate them from mature, more established companies. Academic literature, while limited and indirect, provides valuable insights into these characteristics, especially the paper by (Gilbert et al., 2006), shedding light on the unique characteristics of start-up companies. The first characteristic present is the limited operating history of start-up companies, this implies that start-up companies are recently founds businesses, often within the first few years of inception. In the context of this research paper, it is considered that start-up companies are in their first five years of operation, a common timeframe used in entrepreneurship literature and practice, as defined by (Reid & Smith, 2000; Stam & Garnsey, 2007). Being in the first five years of operation, therefore boasting a limited operating history is a characteristic of start-up companies which plays a role in all other characteristics identified.

Start-up companies being in the first years of operation creates an orientation towards growth, with the aim of evolving into an established company. Unlike established companies that may prioritize sustainability or incremental growth, Start-up companies often pursue more resolute growth oriented strategies; in which growth is prioritized over other factors such as profit or favorable financial records. Whether through gradual, steady development or rapid, exponential scaling, growth remains the guiding beacon for these companies' strategic maneuvers (Gilbert et al., 2006). Due to operational costs exceeding revenue generated it is common for start-up companies to be seeking for financing. Trying to attain financing via traditional financing routes is often challenging for start-up companies. Their limited operating history results in limited financial records, credit history and collateral available. The reason to require financing is often the need for cash-flow management (Moro-Visconti, 2020; Stice et al., 2017); with the goal of increasing cash-flow, working capital, and liquidity levels. Effective cash flow management involves strategic planning to ensure that the company can cover its operational costs and survive until it can generate a steady revenue stream. This financial balancing act is crucial for achieving sustainability and attracting further investment (Gilbert et al., 2006). Furthermore, the dynamic and rapidly evolving environment of start-up companies is widely recognized. Start-up companies often are driven by innovation, therefore operating in competitive and fast-paced markets (Ries, 2011), requiring them to be agile and adaptable. Academic literature highlights the importance of flexibility and responsiveness to market changes for start-up companies' success. This dynamic nature necessitates the use of financing options that can accommodate the evolving needs and circumstances of start-up companies' and support their ability to pivot quickly in response to market feedback, competitive pressures, or changes in the economic landscape.

The characteristics mentioned contribute to a concluding aspect of start-up companies; their high levels of uncertainty. Companies in this position of operation are willing to take calculated risks to pursue their ambitious goals (Bird, 1988; Shane & Venkataraman, 2000). In risk analysis, a potential higher reward goes paired with higher risk; so start-up companies are inherently associated with having a high-risk profile (Stam & Garnsey, 2007). Factors that contribute to this high-risk profile are; their limited operating duration, their orientation towards growth and their dynamic operating environment. Also, a study by (Kickul & Gundry, 2008) found that entrepreneurs have a higher tolerance for risk compared to individuals in established businesses, fostering higher risk approaches to gain substantial rewards. This risk appetite is another reason for the financing needs present in start-up companies, to fuel their innovative ideas and enable rapid growth.

2.2.2 Start-up companies' financing needs

In alignment with the identified characteristics of start-up companies in the preceding section, the financial needs of start-up companies can be tied to their characteristics of companies' operational duration, their orientation towards growth and their dynamic operating environment. These characteristics create a unique set of financial requirements crucial for their survival and growth.

First and foremost, start-up companies need financing most frequently to accelerate cash flows, improve working capital rates, and enhance liquidity levels. Effective cash flow management is critical for Start-up companies due to their cost of operation frequently exceeding revenue and their fluctuating demand for cash as dictated by their dynamic operating environment. Start-up companies must navigate the precarious balance between ambitious growth plans and the reality of fluctuating revenue streams. The need for managing working capital efficiently is paramount, as it directly impacts liquidity levels (Brown & Lee, 2014; Moro-Visconti, 2020; Stice et al., 2017). This involves strategic planning to ensure the company can cover its operational costs and survive until it can generate a steady revenue stream. The focus on managing working capital effectively helps in achieving sustainability and attracting further investment. This purpose is positioned as the inherent function that P2P invoice financing should fulfill. Additionally, financing should align with other financing needs- or preferences of start-up companies next to its inherent function.

For start-up companies, securing capital that is attainable for their company is critical. Traditional financing methods often require extensive financial records, credit history, and collateral, which Start-up companies typically lack due to their limited operating history (Berger & Udell, 2006; Cassar, 2004), along with the aversion towards uncertainty possessed by traditional financial intermediaries. Therefore, financing solutions need to avoid these stringent eligibility criteria focused on avoiding uncertainty in a traditional strict manner, to be an attainable financing option. P2P invoice financing is an example of a more attainable financing option as it connects Start-up companies directly with investors through online platforms, bypassing traditional financial intermediaries (Klafft, 2008; Lin et al., 2013).

In addition to being attainable, financing is required to align with the dynamic and fluctuating operating environment that start-up companies function in and their imperfections in revenues as a result of their strong orientation towards growth, which underlines the overarching need for flexible- and scalable financing options. Start-up companies are on a constant quest for financing that can support them through various growth phases, whether it be scaling operations, penetrating new markets, or diversifying product lines (Davila et al., 2003; Gilbert et al., 2006). Financing solutions need to adapt to changes in revenue, operation, stage of operation, and environment. P2P invoice financing aligns repayment directly with the start-up's revenue inflow through invoice payments, providing a manageable repayment structure that supports the dynamic needs of Start-up companies (Pierrakis, 2019). Also, while Start-up companies grow, their financial needs evolve, requiring larger amounts of capital to support expansion efforts. Scalable financing solutions can grow with the company, providing the necessary funds to fuel long-term growth without imposing restrictive long-term commitments. P2P invoice financing supports scalability by allowing Start-up companies to finance against future receivables, enabling continuous access to funds as the company's invoice volume grows (Mollick, 2014). Also, start-up companies need financing that can be accessed on short notice, again to align with their dynamic operating environment. The nature of Start-up companies means they often require quick responses to financial needs to capitalize on opportunities or address urgent challenges. Traditional financing options, with their lengthy approval processes, often do not meet this requirement (Robb & Robinson, 2014). In contrast, P2P invoice financing offers quicker access to capital, typically within a few days to a week, enabling Start-up companies to manage their cash flows more effectively and sustain growth (Klafft, 2008).

Understanding the specific financing needs of start-up companies is crucial to investigate P2P invoice financing as a viable financing option for start-up companies. P2P invoice financing should fulfill the inherent function of invoice financing; accelerate cash-flows, increase working capital rates and liquidity rates Furthermore, it needs to be attainable in the initial stages of operation, be flexible to operational- and environmental changes, and avoid long-term commitments. By recognizing these needs, limited- and indirect academic literature existent can be investigated and compared to create assumptions on P2P invoice financing in addressing financing needs of start-up companies.

2.3 Financing options

2.3.1 Start-up companies' traditional financing options

While alternative financing options including P2P invoice financing have gained popularity in recent years, traditional financing options still play a significant role in meeting the financing needs of start-up companies. This section explores the most common traditional financing options used by start-up companies: bank loans and lines of credit, venture capital funding, bootstrapping and personal savings, along with their advantages and limitations.

2.3.1.1 Advantages of traditional financing options

Traditional financing options for start-up companies include bank loans and lines of credit. Banks have long been a primary source of financing for companies including start-up companies, while posing as financial intermediary. Loans and credit lines are offered to support start-up companies' operations and foster growth (Berger & Udell, 2006; Cassar, 2004). Bank loans can provide Start-up companies with the necessary financing to invest in equipment, inventory, and other start-up expenses, usually providing a larger amount of financing at once. Lines of credit are agreements between a lender and a financer to issue funds to the borrower as needed, without exceeding a predetermined amount (Berger & Udell, 2006; Colombo & Grilli, 2007). This form of credit is typically secured by specific assets of a company, enabling the lender to offer a relatively low interest rate (Cassar, 2004; Colombo & Grilli, 2007). This type of financing offers flexible access to funds, allowing Start-up companies to manage cash flows and meet short-term financing needs (Padachi, 2014). The provision of a larger amount of capital through bank loans offers Start-up companies the necessary financial backbone, crucial especially in their nascent stages where cash inflow is often limited. Lines of credit provide a flexible way of financing, allowing start-up companies to draw capital in response to the often-unpredictable nature of start-up companies (Berger & Udell, 2006), without the long-term commitment of a standard loan. Additionally credit lines are usually secured with a collateral, securing the financing against company assets, which results in the ability to lower interest rates due to the lower risk profile this creates.

Traditional invoice financing shares similarities with lines of credit, both offering flexible financing. While lines of credit are agreements between a company and a bank or other financing entity to issue capital as needed without exceeding a predetermined amount, invoice financing allows businesses to advance funds based on outstanding invoices. This similarity lies in their capacity to provide start-up companies with immediate financing to accelerate cash flows, increase working capital, and improve liquidity. However, the repayment structure of these two methods differs. In invoice financing, repayment occurs as customers pay their invoices, aligning repayment with the company's sales cycle. On the other hand, lines of credit have a more traditional structure, often requiring regular payments over time. The choice between these two may depend on the specific financial nature of the company's operations.

Venture capital investing, including angel investing, is another traditional financing option that has seen rapid expansion. Venture capital firms provide financing in the early operating stage for high-growth potential start-up companies (Lerner & Gompers, 2001). They typically invest larger amounts of capital and take an active role in guiding the strategic direction of the start-up, offering valuable assistance beyond monetary investment, including industry information and mentorship (Hellmann & Puri, 2002). Angel investors, on the other hand, are individuals who provide financing to start-up companies with high growth potential (Mason et al., 2016). These investors often have a background in entrepreneurship, taking an active supporting role while willing to take on higher risks in return for potential high returns on their investments. While angel investors usually come in earlier, before the operational stage for Start-up companies, venture capital investments stand as beacons of rapid growth and noticeable scale-up. They bring substantial amounts of capital along with valuable expertise, industry insights, networks, and mentorships, equipping Start-up companies with the tools necessary for sustainable growth and market penetration (Gompers & Lerner, 2004). Additionally, affiliation with established venture capital firms, often comprised of high-wealth and influential individuals, can significantly support a start-up's credibility, opening doors to new business opportunities, partnerships, and networks, further fueling the growth trajectory (Hellmann & Puri, 2002).

Bootstrapping and personal savings represent a more self-reliant financing option for start-up companies. Bootstrapping involves using personal funds, savings, or reinvesting profits generated by operation to finance its growth (Brush et al., 2006). This approach allows entrepreneurs to retain control and ownership over their companies by minimizing reliance, aligning with characteristics of independence and self-reliance that is often displayed by entrepreneurs (Rutherford et al., 2017). This independence allows for a high degree of operational flexibility, enabling start-up companies to pivot and adapt quickly to changes in the environment. Moreover, reinvesting profits fosters a sustainable cycle of organic growth, fueling start-up companies' development from within (Brush et al., 2006). Government grants and subsidies are also widely available for start-up companies to access financing. Governments at various levels offer grants and subsidies to support innovation, research and development and the growth of Start-up companies (Dushnitsky & Shapira, 2010). Start-up companies may receive grants to finance research projects, prototype development, or market entry initiatives. Government grants and subsidies can provide a valuable source of non-dilutive funding for Start-up companies, as they do not require equity ownership or repayment. This non-dilutive nature of government funding allows start-up companies to develop their ideas and scale up without the pressure of repaying loans or giving up equity stakes (Dushnitsky & Shapira, 2010). Additionally, receiving grants or subsidies from the government can serve as validation for the start-up's vision and potential, often providing access to a network of support, resources, and specialized programs that nurture their growth (Howell, 2017).

2.3.1.2 Limitations of traditional financing options

While traditional financing options offer advantages, they also come with significant limitations for start-up companies. These limitations often stem from misalignment with characteristics of start-up companies.

Bank loans and lines of credit, despite being able to provide suitable financing for start-up companies in different stages of operation, also exhibit significant limitations for start-up companies. Banks as an intermediary have the power to set strict eligibility criteria for issuing loans and credit lines, therefore he biggest limitation for Start-up companies is the attainability of this capital. Start-up companies, typically in their first five years of operation, miss financial records, credit history, and collateral, in combination with their growth orientation and dynamic operating environment fosters uncertainty (Berger & Udell, 2006; Cassar, 2004). Lines of credit are more attainable, compared to loans due to smaller amounts of capital and lower risk as an effect of being tied to company collateral, which can pose a challenge for start-up companies. Besides, the lengthy and bureaucratic application process associated with traditional banking often conflicts with the dynamic nature of Start-up companies, potentially delaying critical operations and growth opportunities (Robb & Robinson, 2014). Additionally, rigid repayment terms may not align with the fluctuating revenue streams of Start-up companies, leading to financial strain and negative impacts on liquidity rates.

Venture capital funding, while supporting growth in both monetary and non-monetary ways, is not universally attainable. This type of financing is highly competitive, reserved for companies with exceptional growth potential, scalable business models, compelling business ideas and strong management teams (Hellmann & Puri, 2002). Many start-up companies do not meet these criteria or aim for exponential, radical growth, leaving them without this funding option to consider (Kaplan & Strömberg, 2004). Even for those eligible, only a small percentage secure financing due to the highly competitive environment. Also, venture capital financing dilutes ownership and control, often resulting in loss of control for entrepreneurs over strategic decisions (Hellmann & Puri, 2002), while the focus on quick and significant returns can pressure Start-up companies to prioritize financial gains over other business goals, potentially leading to misaligned objectives (Lerner & Gompers, 2001).

Bootstrapping, although enabling full control and minimizing debt, has limitations primarily related to scale and growth potential. Reliance on personal funds or internally generated revenue often means limited capital compared to external funding sources. This limitation restricts investment in significant growth opportunities and can cause liquidity constraints, delaying expansion and scaling efforts (Rutherford et al., 2017). Bootstrapping places considerable financial risk on the entrepreneur, with personal savings and assets at stake, making the potential failure of the start-up company financially damaging (Ebben & Johnson, 2006; Rutherford et al., 2017). Government grants and subsidies, while offering non-dilutive funding, are not without limitations. The application process is complex, involving strict eligibility criteria, lengthy procedures, and competition from other Start-up companies (Dushnitsky & Shapira, 2010). Start-up companies must align with funding agencies' objectives to secure these funds, which can be challenging without prior grant-writing experience. Government funding is often reserved for specific types of projects or sectors, limiting applicability to a broad range of start-up companies (Howell, 2017). Additionally, reliance on government funding can be risky due to potential changes in policy or funding priorities, leading to uncertainties in long-term financial planning (Dushnitsky & Shapira, 2010).

2.3.2 Start-up companies’ alternative financing options

Available financing options for start-up companies have significantly increased with the surge of P2P platforms. Beyond P2P invoice financing, numerous other financing options are available through these platforms, offering unique benefits to start-up companies. The most established platform based alternative financing options are P2P business loans and crowdfunding (Zimnicka, 2014), which this section explores.

2.3.2.1 Benefits of alternative financing options

P2P platforms offering business loans using P2P principles have established themself as a widely used alternative to traditional bank loans. These platforms connect (start-up) companies directly with financing entities, lowering requirements of financing that many start-up companies face when financing is sought by banks, specifically requirements related to stringent eligibility criteria to attain financing (Pierrakis, 2019). P2P business loans are characterized by their flexibility in loan amounts and repayment arrangements, aligning well with the dynamic financial requirements of start-up companies as depicted by their operating environment and orientation (Nurdana & Suryawati, 2021). The lower requirements- and tailored nature of business loans via P2P platforms creates a particularly appealing financing option for start-up companies in different stages of operation. Moreover, the speed at which funding can be secured through these platforms addresses the short-term need for financing, once again aligning with their dynamic nature (Pierrakis, 2019).

Simultaneously, crowdfunding has risen as an increasingly common financing option for different kind of start-up companies, aiming for capital, market validation, and customer engagement. This method of financing involves raising small amounts of money from a large number of people, typically via a (P2P) platform on the internet. Unlike traditional financing methods that rely on a few investors or institutions, crowdfunding draws upon a larger audience, allowing start-up companies to present their ideas and products directly to potential customers and investors (Mollick, 2014). Start-up companies typically set up campaigns on platforms where they outline their business idea, goals, and financing needs. They may offer rewards, free products, future product discounts, or a voice in company decisions in exchange for funding. This financing option is particularly effective for Start-up companies with innovative products or services that speaks to a large audience, allowing them to test market appeal and receive feedback (Lipusch et al., 2020). Successful crowdfunding campaigns can significantly boost a start-up's visibility and brand recognition. By engaging a large audience and involving them in the funding process, Start-up companies can build a community of supporters and early adopters, crucial for long-term customer relationship building (Gerber & Hui, 2013; Lipusch et al., 2020), along with providing financing needed to pursue presented goals and operation.

2.3.2.2 Limitations of alternative financing options

While P2P business loans offer enhanced attainability of financing when compared to traditional methods, they come with limitations. High-interest rates due to a higher uncertainty toleration are a primary concern, as they can significantly increase the cost of financing, particularly for uncertain companies without strong credit scores, or financial records, like start-up companies (Pierrakis, 2019). The vigorous nature of the P2P loans market adds another layer of complexity, the availability and terms of loans depend on the prevailing market sentiment among financing entities, leading to potential inconsistencies in funding availability or alignment with current financing needs (Mollick, 2014). Although the repayment obligation is often more flexible compared to traditional bank loans, the amount of capital to repay remains substantial. For start-up companies, characterized by their fluctuating revenue streams, this can cause financial strain on future operation or opportunities, because of the requirement of repayment and higher financing fees if repayment takes longer than scheduled.

Crowdfunding, despite its appeal, also poses challenges. The success of a crowdfunding campaign heavily relies on a companies’ ability to craft a compelling campaign that speaks to- and attracts a wide audience. This requirement demands substantial investment in marketing and promotional activities, which can be resource-intensive (Gerber & Hui, 2013). The need to capture public interest adds an element of unpredictability; not all projects are perceived as interesting, leading to unsuccessful campaigns and unmet financing goals. Also, the expectations of backers, in the form of financing creates operational constraints. Start-up companies must manage the expectations of a diverse group of contributors, delivering on promises and maintaining transparent communication (Mollick, 2014). Failure to meet these expectations can lead to reputational damage and a loss of trust. Furthermore, the public exposure of a start-up's ideas and plans through crowdfunding platforms can pose risks such as idea theft or early entry of competitors, potentially threatening the potential of the opportunity, contributing to the risk posed by this method of attracting financing, (Belleflamme et al., 2012).

2.4 P2P invoice financing as a financing option

This section compares P2P invoice financing, the main subject of this research paper, against traditional- and alternative financing options most commonly used by start-up companies to highlight how P2P invoice financing can meet the needs of start-up companies, in ways the explored options fail to provide. These ‘gaps’ in meeting financing needs of start-up companies which are addressed by P2P invoice financing, will be grouped into overarching topics with the goal of substantiating the limited information which could be extracted from academic literature regarding P2P invoice financing specifically, therefore strengthening the conducted review of literature for this research paper.

2.4.1 P2P invoice financing compared

2.4.1.1 P2P invoice financing versus traditional financing options

Bank loans can offer start-up companies larger amount of capital at once, while lines of credit can offer capital in smaller amounts delivered on-demand. Both financing options can serve to better capital management (Berger & Udell, 2006). However for both financing options the major factor misaligning with start-up companies’ characteristics- and needs is the attainability of financing. These options often require financial records, credit history and collateral (Berger & Udell, 2006; Cassar, 2004), which is the case for all financing options using a traditional bank or financial institution as the intermediary or financing entity, including traditional invoice financing. In contrast, P2P invoice financing offers accessibility to Start-up companies with limited creditworthiness or assets as collateral. By connecting start-up companies directly with the investor investors through online platforms, P2P invoice financing provides an alternative route to secure capital, bypassing the eligibility criteria set by traditional financial intermediaries. Additionally, P2P invoice financing outperforms in terms of the financing process duration by streamlining the financing process (Klafft, 2008), compared to traditional bank loans- and lines of credit, by exploiting technology and boasting lower levels of bureaucracy, as compared to traditional bank loans- and lines of credit, which are only generally approved after extensive checks and layered approval processes, which makes for a lengthy financing process (Robb & Robinson, 2014), normally taking two weeks to two months for approval. This misaligns with start-up companies' dynamic nature, while P2P invoice financing in contrast, optimizes these steps using technology, trough automated credit assessments and invoice validations, drastically shortening the approval timeline into a few days to a week. Furthermore, P2P invoice financing platforms offer flexibility in financing terms. Unlike traditional financing options that have fixed repayment structures, P2P platforms allow for alternative repayment agreements, more tailored towards the needs of start-up companies.

Venture capital financing can offer start-up companies substantial amounts of capital, as well as a lot of non-monetary support. However, the problem with this financing option for a large majority of start-up companies, is again attainability of financing. Only a very select pool of start-up companies with extreme growth potentials can acquire venture capital financing. P2P invoice financing on the other hand can be an option, also for more modest start-up companies, as explained earlier. Compared to venture capital financing, P2P invoice financing avoids the need for equity dilution. Angel investors and venture capitalists typically require Start-up companies to give up ownership or a share of future profits in exchange for capital (Lerner & Gompers, 2001). In contrast, P2P invoice financing allows Start-up companies to retain full ownership and control, aligning with start-up companies who do not seek to have long term commitments or accountabilities. However, the needs that P2P invoice financing fulfills in comparison to venture capital financing do not strongly substantiate the findings from literature regarding P2P invoice financing, since both financing options are used by start-up companies with different intents.

Bootstrapping, which involves using personal savings to varying financing needs of start-up companies allows entrepreneurs to maintain control over their start-up companies and avoid external financing (C. Brush et al., 2006; Ebben & Johnson, 2006). However, bootstrapping is only possible if personal savings are available, thus, acquiring financing through bootstrapping is not an attainable for many start-up companies. P2P invoice financing on the other hand is not linked to the personal ability of entrepreneurs to finance their companies. Also, since P2P invoice financing funds capital for outstanding invoices, there are no long term commitments or accountabilities, which can be present personally when using bootstrapping as a financing option, since the entrepreneur can lose capital personally.

Government grants and subsidies are attractive funding sources due to them being free- or low in charge financing methods as well as having a non-dilutive nature (Dushnitsky & Shapira, 2010). Government grants and subsidies are issued to help companies in various operating stages with widely varying challenges, including managing cashflow levels, increasing working capital and liquidity levels to support their orientation. However, attainability of government financing poses a challenge because the financing is typically reserved for start-up companies with a specific focus, adhering to specific requirements (Howell, 2017). In comparison, P2P invoice financing is not reserved for specific type of start-up companies, thus being a financing option for a substantially greater amount of start-up companies. Also, P2P invoice financing offers a shorter duration of the financing process, as the process for acquiring government financing is very specific and extensive.

2.4.1.2 P2P invoice financing versus alternative financing options

P2P invoice financing has emerged as an alternative financing option alongside other financing options offered via P2P platforms, being distinct in its approach and benefits when compared against business loans and crowdfunding. Unlike P2P business loans, which also provide increasingly accessible financing for start-up companies, P2P invoice financing is particularly advantageous for companies with reliable sales, not necessarily needing larger loan amounts or longer-term financial commitments. This specificity makes it a more suitable option for start-up companies at various stages, generally those with longer operating durations, already having a stream of revenue, but requiring immediate liquidity to exploit opportunities in line with their growth orientation. The flexibility of P2P invoice financing is a key difference, aligning the repayment directly with the a companies' revenue inflow through invoice payments. This alignment with revenue cycles offers a manageable repayment structure for start-up companies with fluctuating revenues (Pierrakis, 2019).

When compared to crowdfunding, P2P invoice financing once again serves different financing needs. Crowdfunding is ideal for start-up companies that can engage a broad audience, focusing on market validation and community building (Mollick, 2014). Therefore, companies using crowdfunding need to invest significantly in marketing and promotional activities to attract backers, requiring high efforts and investments for the financing process. On the other hand, P2P invoice financing is more suitable for start-up companies with established business operations seeking the immediate attainment of financing, rather than long-term market validation. Crowdfunding often involves rewards or product pre-sales to attract funding, while P2P invoice financing utilizes existing invoices, making it a more predictable and immediate source of funding, without long-term commitments or accountabilities towards investors, as a result of the open presentation and finance seeking (Belleflamme et al., 2012).

2.4.2 Assumed characteristics of P2P invoice financing

When compared, P2P invoice financing is assumed to offer advantages over traditional- and alternative financing options for start-up companies. By leveraging online platforms, P2P invoice financing is characterized by attainability, flexibility, and a short financing process duration. While traditional financing options have their distinctions, P2P invoice financing presents a compelling alternative that addresses the specific financing needs of start-up companies and aligns with their preferences as a result of their limited operating duration, their orientation towards growth and their dynamic operating environment. Also in comparison to other commonly used P2P financing options, P2P invoice financing stands out as a viable and attractive option for start-up companies, offering benefits which are not uniformly available through other P2P financing options like business loans and crowdfunding. When looking at the comparison made from investigating financing options in limited- and indirect literature, assumptions are created that P2P invoice financing serves financing needs of start-up companies in four general aspects:

P2P invoice financing is assumed to be more easily attainable for start-up companies when compared to all traditional financing options listed. The inherent nature of P2P financing not requiring high levels of certainty from the start-up company, because the financing is backed by invoices, is the reason for this. When compared, P2P invoice financing does not require financial records, credit history and collateral, like bank loans and lines of credit, exponential growth forecasts like venture capital financing, personal savings like bootstrapping and alignment with certain objectives for government financing.

P2P invoice financing is assumed to be more flexible in financing capital for start-up companies when compared to traditional- or P2P business loans. P2P invoice financing aligns repayment of financing with incoming revenues, compared to extensive commitments to repay, being untied to cash-

flows. When compared, P2P invoice financing using a platform approach offers flexibility in terms of repayment nature. Also, contributing to the flexibility characteristic of P2P invoice financing are the short-term commitments associated with this financing option.
P2P invoice financing presents a shorter-term financial commitment for start-up companies when compared to venture capital financing, traditional or P2P loans and crowdfunding. P2P invoice financing offers short-term access to capital financing based on short-term future income of revenue, after the payment is made, there is no commitment left for start-up companies. This contrasts with having an extra entity of control in your company, as present with venture capital investing, payments for loans and interest on loans, or commitment to many random investors who have been given promises, as present in crowdfunding.

P2P invoice financing is assumed to have a shorter process duration to receive capital when compared to traditional bank loans, government financing and crowdfunding. P2P invoice financings offers quicker access to capital, addressing the fluctuations in financing needs for start-up companies, instead of going through the bureaucratic process for traditional bank loans, lines of credit or government financing, or going through the creation of a crowdfunding campaign and be subject to the actions of random individuals.

The assumed advantages of P2P invoice financing for start-up companies, as identified in this section, align with the advantages stated and/or assumed earlier in the introductory sections. Therefore, this comparison substantiates the assumptions and findings retrieved from the very limited- and indirect academic literature available regarding the subject. These potential benefits offered by P2P financing aligns with the research findings that start-up companies require attainable financial solutions, aligning with their financing needs and requirements to support their growth-oriented and dynamic nature. This substantiates P2P invoice financing's potential as an effective financing option for start-up companies, bridging the gap in their underaddressed financing needs and offering a promising avenue for future research and practical application. These exploratory findings from assessing limited- and indirect academic literature will pose as the foundation for the theoretical framework in the next section.

3. ANALYTICAL FRAMEWORK

Start-up companies possess inherent characteristics; a limited operating history, a growth orientation, and a dynamic environment, all of which foster uncertainty. These characteristics create specific financing needs: managing cash flows, working capital, and liquidity; being attainable in the early stages of operation and being flexible to dynamic nature of start-up companies. The primary challenge in meeting these needs is the attainability of financing, as traditional intermediaries require strict eligibility criteria, including financial records, credit history, and collateral.

The theoretical framework of this research paper addresses how P2P invoice financing aligns with these financing needs. Based on limited and indirect academic literature, P2P invoice financing is theorized to be characterized by attainability, flexibility, and a short financing process duration, each addressing different aspects of the financing service. The biggest challenge, attainability, is considered first, followed by other characteristics like flexibility and the ability to accelerate cash flows and increase working capital and liquidity levels. This dual approach targets the main characteristics of P2P invoice financing, addressing both attainability and dynamic financing needs.

Building on this theoretical framework, the conceptual framework narrows the focus to a practical model for guiding empirical research. This section translates the discussed aspects of attainability and support of financing needs into measurable concepts for exploratory empirical research. It serves as a blueprint for linking constructed theories to tangible data and observable phenomena in the context of start-up companies using P2P invoice financing. For the empirical research, developing hypotheses is crucial to concentrate theoretical information into clear, investigable propositions grounded in the reviewed literature and comparisons. Each hypothesis aims to capture a different aspect of P2P invoice financing, addressing the identified research gap and seek measurable indicators to support the constructed theories, which will be verified through statistical tests and qualitative explanations.

3.1 H1: Attainability of P2P invoice financing

Findings from limited- and indirect academic literature regarding P2P invoice financing substantiated by the comparison to other financing options most commonly used by start-up companies has resulted in the following theory; P2P invoice financing is assumed to be an attainable financing option for start-up companies to support financing needs. The attainability of financing is identified to be a clear and prominent obstacle faced when financing is sought for by start-up companies. P2P invoice financing is theorized to address this prominent financing need. Therefore, while this research paper employs an exploratory approach to identifying characteristics of P2P invoice financing, the aspect of attainability is addressed separately as a main characteristic. P2P invoice financing is theorized to be an attainability financing option due to operation via a platform-based approach, therefore avoiding obstacles present in traditional financing options. Most notably, due to the absence of traditional financial intermediaries, P2P invoice accepts more uncertainty in financing arrangements, boasting less strict eligibility criteria.

The first hypothesis focusses on the ability of P2P invoice financing to address start-up companies' biggest financing obstacle; the ability to attain suitable financing, it is constructed to validate the theoretical proposition; P2P invoice financing is an attainable financing option for start-up companies. The development of this hypothesis is reinforced by the assumption that P2P platforms offering P2P invoice financing should possess features which, in theory, should reveal an alignment with start-up companies' needs to access financing without complying to strict eligibility criteria, which would indicate greater attainability of P2P invoice financing for start-up companies. Therefore, the hypothesis is stated as follows:

H1: *P2P invoice financing platforms demonstrate start-up friendly features to support the attainability of financing*

3.2 H2: P2P invoice financing to address financing needs

Findings from limited- and indirect academic literature regarding P2P invoice financing substantiated by the comparison to other financing options most commonly used by start-up companies has resulted in another theory; P2P invoice financing can address start-up companies financing needs- and preferences, addressing the management of cash-flows, working capital- and liquidity levels and aligning with their orientation towards growth in a dynamic operating environment. This stems from the recognition that acquiring financing, while vital, must somehow translate into alignment of characteristics with financing needs to be truly beneficials. Meanwhile, P2P invoice financing is characterized by flexibility and short financing process durations, aligning with start-up companies' orientation towards growth in a dynamic operating environment.

The second hypothesis is constructed to validate the stated theoretical proposition. Since start-up companies who have actually used P2P invoice financing is a very niche group, this hypothesis is geared towards exploring whether there is a positive perception among entrepreneurs that these characteristics, embodied by the features of P2P invoice financing platforms indeed align with their financing needs and dynamic, growth-oriented nature. The hypothesis is stated as follows:

H2: *P2P invoice financing is perceived as a financing option able to address start-up companies' financing needs*

4. RESEARCH METHODOLOGY

This section of the research paper focuses on the research- methodology and strategy employed in detail. The chosen method of research is a combined approach; enabling the simultaneous investigation of attainability- as well as the ability to support financing needs that P2P invoice financing can offer for start-up companies to the best extend possible, given the information- and timeframe available. First, a content analysis is conducted among P2P platforms offering invoice financing. This is used to empirically investigate P2P invoice financing and its attainability- as well as several other characteristics that could support the financing needs of start-up companies. This addresses hypothesis 1 directly, but also lays the foundation for addressing hypothesis 2 by identifying features embodying these characteristics, therefore substantiating the findings from the conducted literature review and comparison. The potential support for start-up companies' financing needs is investigated by conducting a survey among entrepreneurs, which is structured around identified characteristics from the content analysis and literature review.

By utilizing both content from available P2P platforms and the perception of entrepreneurs, the research aims to capture data to answer the research question and address both the hypotheses to the best extend. Furthermore, the approach is explained by its alignment with the primary goal of this research paper; testing hypothesis and stating conclusions based on empirical data, something which is currently limited or not directly approached in academic literature as explained. The combination of content analysis and surveys allows for a multi-dimensional exploration of the subject matter. Content analysis provides a systematic and objective way to analyze the features present on P2P platforms, turning qualitative data into quantifiable metrics. Surveys, on the other hand, offer direct insights from professionals who are actively engaged in the start-up domain, providing real-world perspectives on the perceived effectiveness and practicality of P2P invoice financing. Together, these methods form a comprehensive, exploratory approach to understanding of the foundational aspects of P2P invoice financing.

4.1 Research Design

A research design is crafted to comprehensively assess the attainability and perceived support of P2P invoice financing for start-up companies. The study is characterized as both empirical and exploratory, reflecting its dual objectives: to explore a relatively under-researched area and to describe different identified characteristics, with the goal of substantiating assumptions towards P2P invoice financing in the context of start-up financing. It involves an in-depth examination of operational characteristics of P2P platforms and their alignment with start-up companies' financing needs as identified by empirical research. This contributes significantly to the existing assumptions gathered from limited- and indirect academic literature. Simultaneously, the exploratory characteristic of this research is pivotal due to the scarcity of in-depth academic literature on P2P invoice financing specifically targeted at start-up companies. This gap in the literature signifies a need for a preliminary investigation that can generate new insights and understandings. The exploratory nature allows the study to investigate uncharted territories, paving the way for future research and theory development. The use of a combined approach creates a robust framework for understanding different characteristics of P2P invoice financing for start-up companies. This methodological approach not only aligns with the research objectives but also ensures that the study's findings are grounded in the current realities of the start-up financing landscape.

4.2 Sample Selection

4.2.1 Sample of P2P invoice financing platforms

Investigating the attainability, along with other characteristics of P2P invoice financing as a financing option for start-up companies is pursued by conducting a content analysis on P2P platforms offering invoice financing, available to start-up companies in the Netherlands. The procedure of the content analysis will be explained in section 4.3.1. P2P platforms are selected based on specific criteria; offerings, along with markers of credibility; indicated by either transaction volume or number of active users, along with operational duration, to ensure legitimacy, ensuring strong empirical relevance to the goal of this research paper. Starting with the most basic inclusion criteria, in line with the representation of P2P invoice financing in the EU and the perspective of this research paper; the P2P platforms should be based in the EU and be available for start-up companies based in the Netherlands. Onto the most important inclusion criteria; the offerings of the platform. Since P2P financing is rapidly growing and being adopted as explained, traditional financial intermediaries have started offering the facilitation of similar P2P financing services, still controlling eligibility criteria as per usual. Only platforms that focus on P2P invoice financing as one of their main operations are selected. Next to that, platforms selected are required to possess markers of credibility. Numerous new-found platforms are available that offer promising financing options, while not being able to back claims, these platforms are filtered out to ensure research is based on legitimate and credible platforms. Starting with transaction volume; selecting P2P platforms with at least $5 million in transactions, or they should have at least 10.000 active users. Next to that, operating history; platforms with a minimum of two years in operation are chosen to ensure they have a stable market presence and a track record**.** This characteristic is vital for the exploratory nature of the study, focusing on platforms with enough history to provide reliable data for a meaningful content analysis. A sample of at least 20 platforms is targeted, this offers a comprehensive dataset for in-depth analysis as researched by (Bryman, 2012), maintaining that this size is manageable for a detailed investigation, while allowing for diversity inside the context and requirements of the quantitative analysis procedure. By examining a representative sample of platforms, the study aims to offer a comprehensive view of P2P invoice financing, contributing to the field's academic literature and providing practical insights for start-up companies.

4.2.2 Sample of entrepreneurs

In line with the research's exploratory objective to evaluate the perceived benefits of P2P invoice financing in addressing financing needs of start-up companies, this survey centers on entrepreneurs. The procedure of the survey will be explained in section 4.3.2. Insights from entrepreneurs are crucial for understanding the perception towards implications of P2P invoice financing as a financing option for start-up companies, from a source actively involved. The sample will consist of participants who are entrepreneurs; either actively managing- or having managed start-up companies. Also, the participating entrepreneurs should be based in the Netherlands, aligning with the platforms investigated and the perspective of this research paper. These are considered the inclusion criteria. Entrepreneurs provide a critical perspective on P2P invoice financing, their direct involvement and experiences with start-up financing render their insights invaluable in determining the practical utility and benefits of P2P invoice financing within the start-up community. By incorporating their firsthand experiences, the study offers a nuanced understanding of P2P financing's characteristics that enables the ability to address start-up companies' financing needs, thereby enriching both academic and practical knowledge in the field of start-up financing. Inside this available sample, a sampling strategy is strived for with the goal of attaining diversity. First of all, diversity in operating duration, seeking entrepreneurs with start-up companies with different operating durations, to ensure that perceptions about the effect of P2P invoice financing are not tied to one operational phase specifically. Also, diversity is strived for regarding the entrepreneur itself, specifically the demographic factor age, to see if this plays a difference in perception. Diversity regarding these two characteristics ensures that the basis for research captures a representation of the perceived effects of P2P invoice financing across different start-up- and demographic circumstances. This also allows for potential distinct similarities or differences to be identified. In the realm of an exploratory, qualitative research survey, a sample of at least 50-75 entrepreneurs should be targeted. This offers a comprehensive dataset for in-depth analysis (Hair et al., 2019; Sekaran & Bougie, 2016). This size is manageable for a detailed investigation, while allowing for diversity, therefore allowing for more distributed data inside the context and the requirements of the analysis procedure.

4.3 Data collection

4.3.1 Content Analysis on P2P Platforms

Content analysis is a research method used for making valid inferences from texts and communication, particularly relevant in financial and business research. This method enables systematic and objective analysis of communication content, which is essential for understanding complex interactions and data within these fields. It is emphasized by (Neuendorf, 2016) in its comprehensive guide on content analysis methodology, its utility in providing a structured approach to examining message content. In this research paper, a content analysis is used for its precision in interpreting the features of P2P platforms, this method allows for adaptability and efficacy to precisely extract information in various different contexts of communication (Krippendorff, 2018). The research goal and question revolve around the hypothesis that P2P invoice financing platforms possess characteristics and policies enhancing the attainability of financing for start-up companies. A content analysis is employed to explore this hypothesis, consistent with the principles of systematic evaluation of identifiable features to make empirical inferences, as discussed by (Herring, 2010), who emphasizes its application in analyzing digital content, particularly on webpages and online platforms.

In conducting this analysis, P2P platforms meeting the sample criteria are examined for their features and content relevant to start-up financing attainability. The aim of the content analysis is to perform a full screening of the information available on P2P platforms to identify features that indicate attainability for start-up companies, alongside other features embodying characteristics of P2P invoice financing which align with start-up companies' financing needs. Each feature identified on the P2P platforms is documented, after which a coding process is used for categorization of identified features. The presence and frequency of each feature are analyzed. This follows the structured approach derived from combined insights on work by (Herring, 2010; Krippendorff, 2018; Neuendorf, 2016), reflecting the methodological framework provided by these authors.

4.3.2 Survey for entrepreneurs

In this research paper, the survey design is a crucial tool to gather insights from entrepreneurs about the perceived support of P2P invoice financing for start-up companies' financing needs. This survey is particularly significant as it captures the real-world perspectives and experiences of those directly engaged in the realms of P2P invoice financing and development of start-up companies. The survey is constructed from the research paper by (Morrel-Samuels, 2002), which has created comprehensive guidelines for survey format, language and measurement approach, mainly used to create a neutral language and unbiased format. While staying neutral in language, the format used for the way of writing questions is based on research conducted in similar subjects, which also used a survey to understand thoughts or opinions of persons on a certain subject (Block et al., 2018; Bruton et al., 2014; Freel & Robson, 2004). This implies that questions are designed to speak directly to the respondent and their feelings, thoughts and opinions. Meanwhile inquiring about a specific characteristics of P2P invoice financing. This adds to the earlier conducted literature review and content analysis. A survey is considered as a suiting data collection method to gather data from specific target groups, while also playing a big role in general social research (Fowler, 2014). Simultaneously, the multi-faceted nature of P2P invoice financing was recognized, for which survey questions were crafted to cover a broad spectrum of considerations. This diversity ensures a comprehensive understanding of the subject, based on the findings from (Fowler, 2014; Morrel-Samuels, 2002), regarding the importance of it in exploratory research and how survey design is able to address this.

For the main questions of the survey (questions from section 2-5, each section focusing on a characteristic of P2P invoice financing), a 4-point Likert-scale format is employed. The Likert-scale is a widely recognized and effective tool in research for measuring attitudes and opinions. This format presents statements related to P2P invoice financing, asking respondents to express their level of agreement on a scale from 1 (strongly disagree) to 4 (strongly agree), including an insufficient insight / no answer option, which cannot be seen as a neutral option, hence why it does not contribute to scale count. The use of a Likert scale is particularly beneficial in this context for several reasons. Likert scales allow to capture the intensity of responses in research, which is vital for areas where opinions are unknown or vastly different (DeVellis, 2016) fitting with the exploratory nature of this research paper. Making sure that the survey item design aligns with the research objectives and type is of the greatest importance and is crucial in ensuring that the survey data directly contributes to the understanding of P2P invoice financing's role in supporting start-up companies' financing needs. This survey design is tailored to extract in-depth, quantifiable insights from industry professionals; being entrepreneurs. It is designed to yield data that is not only qualitative but also structured enough to address the hypothesis, aligning with the research approach of this research paper. For the full survey, consult appendix 2.

4.4 Data Analysis

In the analysis addressing hypothesis 1, the primary objective is to assess the prevalence of features on P2P platforms offering invoice financing aligning with the attainability of financing needed by start-up companies. In the analysis addressing hypothesis 2, the primary objective is to assess the perceptions of entrepreneurs regarding the support that P2P invoice financing could offer in supporting start-up growth. This process involves a systematic approach to quantify the findings from both data collection methods, which is performed in the form of a frequency analysis, which enables the translation of qualitative insights into measurable data, allowing for objective comparisons and informed conclusions about the effectiveness of P2P invoice financing for start-up companies, substantiated by statical tests; a one sample proportion z-test on prevalence of features on platforms and a one sample t-test on perceptions of entrepreneurs on characteristics identified. For a full overview the statistical tests performed consult figure 7 and 14, for the proportion-test and t-test respectively.

4.4.1 Analysis of content analysis data

Policies and features of P2P platforms in the EU offering invoice financing are sought to be identified. In line with the sampling strategy, data collection is pursued using a content analysis. This data creates the basis for conducting the frequency analysis. A frequency analysis is a statistical method used to describe the number of times (or frequency) that an event or a range of outcomes occurs within a given dataset (Johnson & Wichern, 2007). It essentially counts how often each different value in a set of data occurs. This method is fundamental in descriptive statistics and serves as a basic tool for data analysis. It is a highly valuable tool in data analysis due to its simplicity, ability to identify key patterns, and effectiveness in summarizing, visualizing and analyzing data systematically (Bryman, 2012) making it a foundational technique for further exploration, aligning with the foundational aim and exploratory nature of this research paper.

In its context of this research paper, frequency analysis is employed to quantify the occurrence of each start-up-friendly feature across the platforms. This analysis highlights not only the most common features but also those that are rare or unique, providing a holistic view of the platforms' features and policies aimed towards attainability- and attractiveness of this financing for start-up companies. The systematic approach to coding and categorizing features is aligned with the methodology described by (Krippendorff, 2018), emphasizing the importance of reliability and replicability in content analysis. A feature or policy present on a P2P platform is coded into a subcode, which are grouped into more general codes posing as categories of present features. The final step involves interpreting the frequencies to draw conclusions about P2P platforms' fit with start-up companies' financing needs. Higher frequencies of attainability supporting policies or features in P2P platforms indicate a better likelihood of start-up companies to access financing. Also, features or policies addressing other financing needs of start-up companies are identified; substantiating the basis for the later survey to address hypothesis 2.

Addressing Hypothesis 1, a content analysis, analyzed using a frequency analysis provides a quantitative backbone to the qualitative nature of assessing platform features. This methodological choice is justified on the grounds of its ability to offer a standardized, objective, and replicable approach to evaluate the attainability for start-up companies of P2P platforms. The application of frequency analysis allows for the aggregation of content into data that can serve as an indicator for platform suitability to start-up companies' needs. Moreover, the selection of P2P platforms based on predetermined criteria ensures that the sample is representative and that the findings are generalizable across the industry. This aligns with the research goal of providing an in-depth understanding of the attainability of P2P invoice financing for start-up companies, a limited- to unexplored area in current academic literature.

To quantitively substantiate the qualitative explanations regarding the content analysis, a one sample proportion z-test is employed on the findings derived from these findings. This test addresses hypothesis 1, by statistically substantiating statements made regarding start-up friendly features of platforms analyzed. Furthermore, it assesses whether the proportion of platforms exhibiting each identified attainability supporting feature ($\hat{p}$), is significantly greater than a calculated mean proportion of feature-exhibiting platforms across all features (p_0), calculated by taking an average prevalence of features across all platforms and features. The test statistic (z) is computed, while accounting for standard error (SE), to get a p-value, which is analyzed on a significance level (α) 0.05, to either accept- or reject h_0 (The proportion of platforms exhibiting the feature is equal to the mean proportion) and conversely accept- or reject h_1 (The proportion of platforms exhibiting the feature is greater than the mean proportion).

4.4.2 Analysis of survey data

In this research paper, a frequency analysis is once again used to analyze data gathered from the conducted survey, this provides a coherent statistical method to interpret insights from entrepreneurs about P2P invoice financing. This analysis aligns with the foundational aim and exploratory nature of the research, as previously outlined in section 4.4.1. Frequency analysis in this context is used as a tool to analyze and interpret the diverse responses captured through the Likert-scale format of the survey. This aligns with the emphasis of (DeVellis, 2016) on the importance of scale development and application in research. A frequency analysis with a set scale as recommended, can convert qualitative opinions and attitudes into quantifiable data, offering a clear overview of entrepreneurs' perspectives on P2P invoice financing. The use of the Likert scale, a widely recognized tool in research for measuring opinions, in this case from entrepreneurs, fits with frequency analysis by standardizing responses (Fowler, 2014), the structured nature of Likert-scale responses being beneficial in enabling an efficient frequency analysis. This method allows for a straightforward categorization of data, simplifying the understanding of results, thus enabling a nuanced understanding of respondent attitudes.

The approach to frequency analysis in this study is based on the exploratory research principles created by (Stebbins, 2001). A frequency analysis is fitting with the insights regarding exploratory abilities of surveys, highlighting the competency surveys to explore the multi-faceted nature of a largely unexplored subject like P2P invoice financing. Additionally, the guidelines from (Morrel-Samuels, 2002)support the design of survey questions that are focused, clear, and effective for capturing the intended data, a frequency analysis aligns with this type of data gathered from responses. The frequency analysis of survey data complements the insights from the frequency analysis conducted on data gathered from the content analysis, building upon the initial findings to provide a more detailed understanding of the subject matter. aligning survey practices with research objectives is of high importance, which is mirrored in the frequency analysis being used for analyzing data gathered from both research approaches of this study.

To quantitively substantiate the qualitative explanations based on the perceptions derived from entrepreneurs participating in the survey, a one sample t-test is employed on the findings presented in responses with a Likert-scale format. This test addresses hypothesis 2, by statistically substantiating statements made regarding the perception of entrepreneurs towards different features and characteristics of P2P invoice financing and their ability to address and align with financing needs, based on the sample of responses.

The statistical test employed follows suggestions from (Frost, 2023; Harpe, 2015; Vieira, 2016) to compute a suitable approach, the test assesses whether the mean ($\bar{x}$) perception of entrepreneurs towards each different characteristic, is significantly higher, indicating a more positive perception, than the neutral mid-point of the Likert scale (2.5), being deemed as appropriate under the suggestions followed. The test statistic (t) is computed, while accounting for standard error (SE) and standard deviation (s), to get a p-value, which is analyzed on a significant level (α) 0.05, to either accept- or reject h_0 (The mean score of perception towards 'feature' is equal to the neutral mid-point) and conversely either accept- or reject h_1 (The mean score of perception towards 'feature/general' is greater than the neutral mid-point).

4.4.3 Data Management Plan

For this research paper and its data collection- and analysis, strict confidentiality protocols will be adhered to, ensuring that individual responses and platform data cannot be traced back to specific participants or entities. Data will be anonymized before analysis. This involves removing or altering any identifying information, such as names, contact details, or specific platform identifiers. Participants in the survey will be provided with detailed information about the study's purpose, the nature of their involvement, and the use of the data collected. Consent will be obtained explicitly, ensuring participants are fully aware of their participation terms. The research will adhere to the ethical guidelines established by the (University of Twente, 2024), for a full overview of these guidelines consult the source from the bibliography (8.2). Data collection and analysis activities will comply with applicable privacy laws and regulations. Participants' rights to privacy and data protection will be a top priority throughout the research.

5. CONTENT ANALYSIS FINDINGS

To evaluate the landscape of P2P invoice financing platforms, a comprehensive content analysis was conducted online, with the intent to analyze 20 platforms. However, taking into account the criteria of the platforms to be eligible for the sample; offering invoice financing as a main service, operating from an EU country, offer their service to companies operating in the Netherlands and minimum thresholds for transaction volume, active users and operating time, the final analysis was performed on 15 platforms. This sample size was determined to be the maximum feasible under the circumstances and is still considered sufficient for a content analysis. The content present in the P2P invoice financing platforms was analyzed using a coding process, developing codes based on the information as encountered in the platforms, fitting with the approach of this research paper. Once all the platforms were analyzed, a re-examination of the platform information was conducted to ensure that any later-emerging codes were not overlooked in the previously analyzed platforms. Once the initial coding process was completed and all the created codes **(**40**)** were present, the data **(**169 references among 40 codes**)** was organized into code groups **(**5 groups in total, 4 with 2 pro- and against categories**)**. For a full overview of the code groups, codes and references consult appendix 1. These groupings were reflective of the characteristics identified in the literature review, although not identical. During the research performed on P2P invoice financing platforms it became evident that the concepts of flexibility and short-term commitments as described in the literature review were closely related and mentioned on the platforms as flexibility features. As a results, these two characteristics were combined into a single code group labeled 'Flexibility'. This decision was made to better reflect the practical applications and features observed across the researched P2P invoice financing platform, allowing for a more accurate analysis of P2P invoice financing platform features. Sections 5.1.1.1 – 5.1.1.4 of this results section focus on these code groups respectively, followed by a comparison to the results of the literature review; together posing as a foundation for the survey conducted.

5.1 Identified characteristics from content analysis

5.1.1 Attainability features

The first characteristic of P2P invoice financing, also posing as code group 1 is the attainability of financing. The content analysis performed identified an emphasis on the eligibility criteria to access financing. This code group with its codes being the most frequent among the platforms, being referenced a total of 85 times, 48 of which were features making financing more attainable, while 37 were features present posing as alternative requirements for financing, as illustrated in figure 2. Also, an important factor for attainability of financing are financing fees, which is why the code group 'invoice financing fee' is incorporated into this section; explaining the construction of financing fees. In the context of eligibility criteria to access financing, we can find certain characteristics of P2P invoice financing being present in a majority of the platforms researched. On a majority of the platforms, identified traditional eligibility criteria like minimum amount of turnover **(**11**)**, providing year numbers **(**8**)** and prognosis' **(**8**)**, and providing a collateral **(**11**)** are not required, while finding statistical support for the absence of collateral and minimum turnover requirements.

Group 1: Attainability					
Sub-group: Positive			**Sub-group: Negative**		
Code	Frequency	% of sample	Code	Frequency	% of sample
Ability to finance invoices on second lien	6	40,00%	Credit check conducted on customer(s)	8	53,33%
Not required; Collatoral	11	73,33%	No second-lien financing	2	13,33%
Not required; Minimum amount of € per invoice	4	26,67%	Only B2B invoices financed	8	53,33%
Not required; Minimum turnover	11	73,33%	Required, recent bank transactions	4	26,67%
Not required; Prognosis	8	53,33%	Required; Minimum amount of € per invoice	1	6,67%
Not required; Year numbers	8	53,33%	Required; Minimum amount of customers	1	6,67%
			Required; Minimum operating duration	8	53,33%
			Required; Minimum turnover	4	26,67%
			Required; Transport document	1	6,67%
	Total			Total	
Combined total freq. 85	48			37	

Figure 2: *P2P platform features - code frequencies - Attainability*

Minimal requirements for annual turnover and the provided year numbers and prognosis criteria illustrate the platforms' commitment to aligning with start-up companies' characteristics. Demanding to yearly numbers and prognosis' is identified to form a barrier for start-up companies to access financing, therefore by not boasting these eligibility criteria caters to the fluctuating uncertain nature of start-up companies, ensuring that companies in earlier stages can also make use of financing. Furthermore, the absence of collateral requirements emphasizes a move towards not valuing a company's worth- or potential on its **(**physical**)** assets. Not requiring collateral makes P2P invoice financing a more attainable financing option for start-up companies lacking substantial assets. This aligns with the needs of start-up companies, which are in general innovative and asset-light. However, the not providing collateral can bring costs. Additionally, some platforms also did not require a minimum amount of invoice value to finance, however this was only seen on 4 platforms. On the other hand, on a majority of the platforms, alternative eligibility criteria are present in the form of a minimum operating history **(**8**)** and a credit-worthiness check on customers **(**8**)**. Additionally, on 8 out of the 15 platforms researched, financing was only available to business-to-business **(**B2B**)** companies, something which was not identified during the literature review. Instead of the requirements as stated earlier, operating history requirements are set as a measurement to indicate the needed stability of start-up companies, which allows the showcasing of stability without the need of an extensive financial history. However, a particularly innovative finding is the focus on creditworthiness of a start-up companies' customers to, in conjunction, to measure operational stability. By focusing on the creditworthiness of customers, which is inherently the party who forms the risk of not paying the invoice, rather than the start-up company itself, the platforms gives the companies seeking financing the ability to indicate stability by leveraging their customers stability to attain it. Some platforms did require a minimum amount of turnover which is verifiable by providing recent bank transactions, but this was only seen in 4 instances. not being able to finance invoices on a second lien was seen twice, while requiring a minimum amount of € per invoice or customer amount, as well as the requirement of a transport document were present in one instance.

In the context of financing fees associated with P2P invoice financing, there are certain features present in a majority of the platforms researched. On all the platforms on which a fee was specifically stated **(**11**)**, thus being present on a majority of platforms, a financing fee below 5% was indicated. This financing fee is seen to fluctuate based mainly on one of two factors, or both; the payment term of the invoice financed **(**6**)** and the credit-worthiness of the customer for the invoice **(**7**)** as illustrated in figure 3.

Group 1.2: Invoice financing fee

Code	Frequency	% of sample
Low financing fee (<5%)	11	73,33%
Financing fee based on credit worthiness customer(s)	7	46,67%
Financing fee based on invoice amount of €	1	6,67%
Financing fee based on invoice payment term	6	40,00%
Financing fee based on turnover	2	13,33%
Financing fee based on volume of invoices	3	20,00%
	Total	
Combined total 30	30	

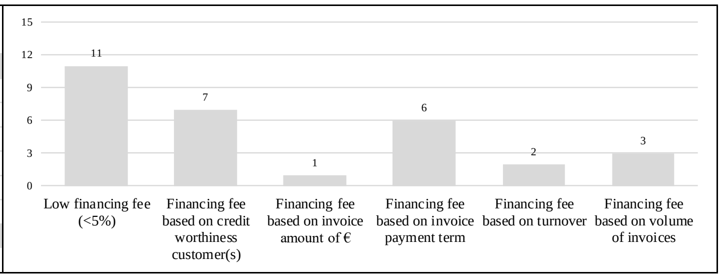


Figure 3: *P2P platform features - code frequencies – Financing fee*

The cost of financing is a crucial consideration for start-up companies, these findings indicate that platforms are trying to focus on affordability, in this case, a financing fee of less than 5%, ranging as low as 2%. If this low financing fee is not realistic, start-up companies are not excluded from getting financing, however it can be the case that financing can become more expensive. Meanwhile, letting the price rise- or fluctuate based on factors such as the credit-worthiness of customers or the payment term indicates an effort to retain attainability of financing even for companies with higher levels of uncertainty, with this being an inherent characteristic of start-up companies, this fosters attainability. Meanwhile, companies perceived as lower risk can profit from the lower financing fees resulting from this fluctuation. Additionally, the invoice financing fee on some platforms fluctuate based on volume of invoices financed, amount of turnover and amount of € financed, however this was only seen twice and one time respectively.

5.1.2 Flexibility features

The second characteristic of P2P invoice financing, also posing as the next code group **(**Code group 2**)** is the flexibility of financing. The content analysis performed identified an emphasis on the flexibility of terms when financing invoices via P2P platforms. This code group with its codes being the second most frequent among the platforms, being referenced a total of 40 times, 34 of which were features making financing terms more flexible, while features haltering flexibility of the financing process were only present 6 times, as illustrated in figure 4. Included in this code group are also codes which could pose as the characteristic 'short-term commitments' as identified in the literature review, the reasoning will be explained in section 5.1.2. In the context of the financing process' flexibility, we can find certain characteristics of P2P invoice financing being present in all, or a majority of the platforms researched. On a majority of the platforms, two major characteristics are identified which support the flexibility of the financing process; the ability to decide which invoices to finance **(**15**)** and the absence having to enter into a contract for a set time **(**9**)**.

Group 2: Flexibility

Sub-group: Positive

Code	Frequency	% of sample
Ability do decide on which financer for invoices	5	33,33%
Ability to decide which invoices to finance	15	100,00%
Contract can be terminated any time	9	60,00%
Possibility to finance an invoice partly	2	13,33%
Possibility to pay back financed invoice early	3	20,00%
	Total	
Combined total freq. 40	34	

Sub-group: Negative

Code	Frequency	% of sample
Additional financing costs if customer exceeds payment term	3	20,00%
Subsequent verification if not financing regurlarly/on contract	3	20,00%
	Total	
	6	

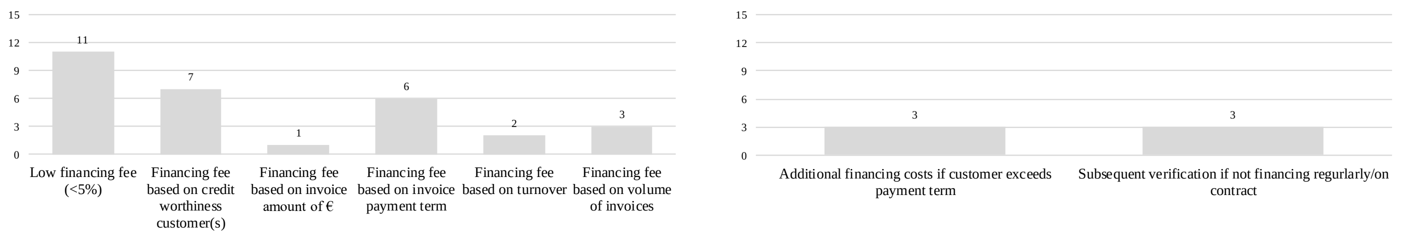


Figure 4: *P2P platform features - code frequencies – Flexibility*

The ability for **(**start-up**)** companies to selectively finance which invoices they require, instead of having to finance all their invoices, or none, is a characteristic of P2P invoice financing platforms that is impactful. It allows start-up companies to strategically manage their cash flows only if necessary. This selectivity ensures that Start-up companies can prioritize their financing needs according to their immediate financial goals and operational strategies, offering a nuanced approach to managing cash-flows, supporting working capital- and liquidity levels. Also, the contractual flexibility, where the contract can be terminated at any time, or even is not required, reflects the platforms' recognition of the dynamic nature of start-up environments. This flexibility reflects the sector's recognition of start-up companies' need for strategic financial management; offering start-up companies the agility to pivot financial strategies in alignment with their evolving, growth-oriented business models, without being committed to long-term financial obligations. Additionally, some platforms offered the ability to finance invoices partly **(**2**)** or repay financing early (3). On the other hand, on a minority of platforms, characteristics are present that halter the flexibility of the financing process in the form of additional financing costs if the payment term is exceeded **(**3**)** and the requirement for subsequent verification for each financing procedure **(**3**)**. These characteristics are both counteracts to characteristics mentioned above in favor of flexibility. But, additional financing costs are only present in the case when they can also be lowered when paying back the financed invoice early. Also, subsequent verification is needed to provide the ability to finance selective invoices without a long-term contract.

5.1.3 Process Duration features

The next characteristic of P2P invoice financing, also posing as a code group **(**Code group 3**)** is the duration of the financing process. The content analysis performed identified an emphasis on short financing process duration, making use of a platform approach. This code group is being referenced a total of 23 times, 22 of which were features making the duration of the financing process shorter, while a code referencing a feature indicating a longer financing process duration was only encountered once, as illustrated in figure 5. In the context of process duration, we can find certain characteristics of P2P invoice financing being present in a majority of the platforms researched. On a majority of the platforms the time to receive financing is claimed to be below 48 hours **(**3**)**, while most of this majority claims financing time to be below 24 hours **(**11**)**. Also, on 8 platforms a quick scan can be performed to get immediate insight into financing options and possibilities.

Group 3: Process duration

Sub-group: Positive

Code	Frequency	% of sample
Financing time < 24 hours	11	73,33%
Financing time < 48 hours	3	20,00%
Quick scan, insight into financing options	8	53,33%
	Total	
Combined total freq. 23	22	

Sub-group: Negative

Code	Frequency	% of sample
Financing time 1 week - 3 months	1	6,67%
	Total	
	1	

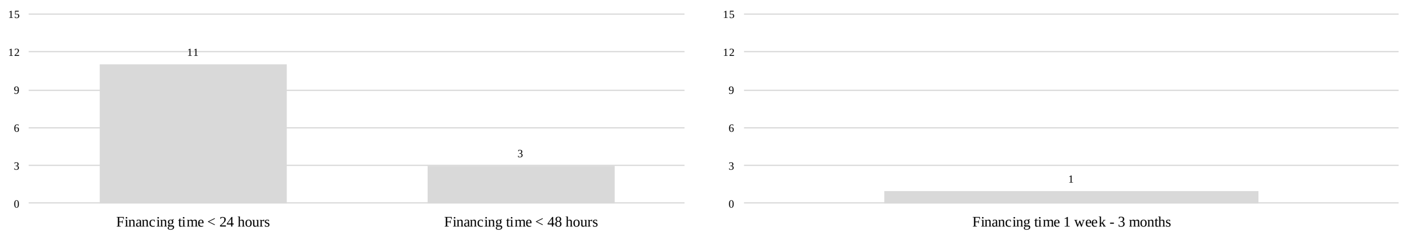


Figure 5: *P2P platform features - code frequencies – Process duration*

The duration of the P2P invoice financing process is a crucial element for start-up companies requiring immediate financing. An effort can be seen to streamline this process making use of technology to compress the process durations notably. This rapid processing capability is critical for start-up companies poised to capitalize on immediate business opportunities, aligning with their dynamic operating environment. Further enhancing the process of P2P invoice financing is the introduction of a quick scan. This allows start-up companies to gain instant insights into their financing possibilities. Such immediate feedback is valuable, enabling Start-up companies to assess a financing solution for their current needs promptly, thus facilitating faster decision-making. However, it has to be kept in mind that this 'quick scan' does not give any guarantees. On the other hand, there was only one platform present which boasted a claimed financing time higher than 48 hours, in this sole instance the financing time was stated as ranging from one week to a month.

5.1.4 Accounts receivable management features

The last characteristic of P2P invoice financing, also posing as the last code group **(**Code group 4**)** is the offering of accounts receivable management for financed invoices. The content analysis performed identified an emphasis on the total management of financed invoices which are financed via P2P platforms. This code group is being referenced a total of 41 times, 35 of which were features present when accounts receivable management was offered, while 6 features were present if this service is not offered. In the context of accounts receivable management, we can find certain characteristics of P2P invoice financing being present in a majority of the platforms researched, as illustrated in figure 6. On a majority of the platforms accounts receivable management is offered for financed invoices **(**12**)**, inherently for those platforms **(**12**)** the customer has to pay the invoice to the bank account of the P2P platforms. Also, out of those platforms, insurance is offered against the negligence of the customer on 9 occasions.

Group 4: Account receivable management

Sub-group: Present

Code	Frequency	% of sample
Account receivable management for invoices financed	12	80,00%
Insurance against negligence of customer	9	60,00%
Agreement has to be signed by customer	1	6,67%
Contact with cusomter by platform if payment term is not met	1	6,67%
Payment of customer to platform bank account	12	80,00%
	Total	
Combined total freq. 41	35	

Sub-group: Not present

Code	Frequency	% of sample
Payment of customer to own bank account	3	20,00%
Contact and collection of invoice with customer in hand	3	20,00%
	Total	
	6	

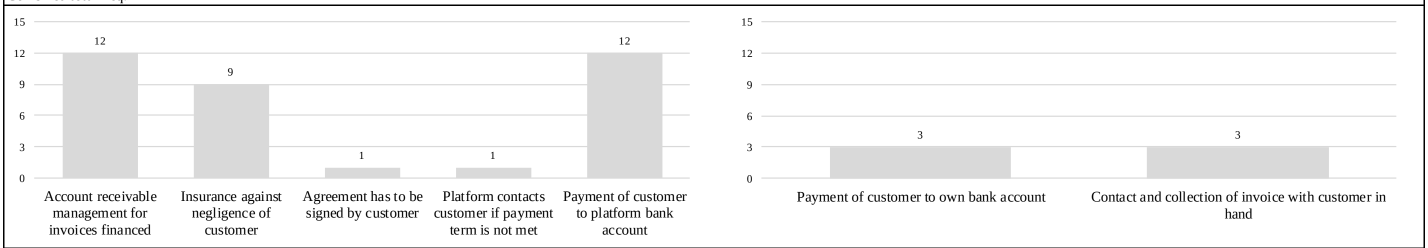


Figure 6: *P2P platform features - code frequencies – Accounts receivable management*

Offering accounts receivable management as a standard service for P2P invoice financing signals a shift towards comprehensive financial solutions. It is revealed that accounts receivable management is not an add-on service, but in most cases present as a fundamental component of P2P invoice financing. This widespread inclusion underscores the recognition by P2P platforms towards the critical role that efficient management of receivables can portray in addressing start-up companies' financing needs. By helping with financial management, P2P invoice financing platforms potentially boost financial stability, addressing a core challenge many start-up companies face. Also, the insurance offered by P2P platforms further contributes to minimizing financial risk for start-up companies, ensuring that their cash-flows remain unaffected by unforeseen customer defaults.

Such protective measures are indicative of the platforms' proactive approach to safeguarding the interests of start-up companies. However, the analysis also brings to light certain considerations associated with the offering of accounts receivable management. The most important; payments are required to be made to the platform's bank account, which could introduce operational complexities. On the other hand, platforms not offering accounts receivable management in conjunction with P2P invoice financing were identified three times. For all those three platforms, the payment of the customer, along with the contact and collection process is retained.

5.1.5 Statistical testing of content analysis data

The one-sample proportion z-test conducted for each identified attainability supporting feature (6 features, total frequency 48, across 15 platforms) to determine statistical prevalence. This yields insights into the statistical significance of the frequency of platforms exhibiting a feature, which is only the case for the features 'Not required: collateral' and 'Not required: minimum turnover', both yielding the same p-value to reject the null-hypothesis (p^=0.733, z=1.752, p=0.040, 0.040<0.05, reject h0). For the other features, p values were >0,05 (0.0854, 0.990, 0.500 and 0.500 respectively), so these do not find statistical support. For the full results of the statistical test, see figure 7. This statistical test finds support for hypothesis 1 of this research paper in two features identified from the content analysis, which substantiates the qualitative explanations.

Overview Proportion-test on presence of attainability features from content analysis				
Overview	**Observed Proportion ($\hat{p}$)**	**Mean Proportion (p0)**	**Test Statistic (z)**	**P-value**
Formula	$\left(\frac{x}{n}\right)$	$\left(\frac{\sum x}{N}\right)$	$\left(\frac{\hat{p}-p_0}{\sqrt{\frac{p_0\times(1-p_0)}{n}}}\right)$	
Features				
Ability to finance invoices on second lien	0.40	0.5333	-1.054	**0.0854**
Not required: collateral	0.7333	0.5333	1.752	**0.040**
Not required: minimum amount of € per invoice	0.2667	0.5333	-2.335	**0.990**
Not required: minimum turnover	0.7333	0.5333	1.752	**0.040**
Not required: prognosis	0.5333	0.5333	0.000	**0.500**
Not required: year numbers	0.5333	0.5333	0.000	**0.500**
Number of observations for features	6, 11, 4, 11, 8, 8 (Total = 48)			
Sample size (n)	15			

Figure 7: *Statistical test – Proportion-test on presence of attainability features from content analysis*

5.2 Foundation for survey

5.2.1 Content analysis and literature review compared

In this research paper, both existing academic studies on P2P invoice financing and new empirical findings from a content analysis of P2P platforms are examined. This involves comparing established academic insights with observations from current P2P practices to identify areas of alignment or difference and to uncover new insights. The comparative analysis serves as a foundation for designing the survey, ensuring it is informed by both indirect, limited academic literature and current realities of P2P platforms. This dual approach helps ensure the survey questions contribute to existing knowledge or generate new insights, grounding them in both literature and practice. This method ensures the survey meaningfully advances the current understanding of P2P invoice financing and related research domains.

The findings from both the literature review and content analysis suggest that P2P invoice financing aligns well with start-up companies' characteristics and financing needs, particularly in terms of attainability. Literature by (Bakker et al., 2004; Klafft, 2008; Lin et al., 2013; Mollick, 2014) indicates that P2P financing is more accessible because it bypasses traditional financial intermediaries and their stringent requirements such as financial records, credit history, and collateral. The content analysis confirms that P2P platforms offering invoice financing do not require these traditional criteria. However, the analysis reveals alternative measures taken by P2P platforms, such as requiring recent bank transactions, minimum operating history, or turnover, and performing credit checks on the customers of the start-up company. This focus on the customers' creditworthiness rather than the start-up itself is a notable finding.

Both the literature review and content analysis indicate that P2P invoice financing offers flexibility. The literature emphasizes flexible repayment schedules and variable interest rates based on factors such as the amount financed and the duration. Content analysis reveals that many platforms offer accounts receivable management, eliminating the need for flexible repayment schedules, but allowing for early repayment to reduce interest costs. However, late invoice payments can increase costs. The empirical observations confirm the presence of flexible interest rates, aligning with the literature's findings.

Additionally, the literature review briefly mentions the appeal of short-term commitments in P2P invoice financing. The content analysis highlights this flexibility more prominently, showing that platforms often allow start-ups to finance selected invoices without long-term contracts. Some platforms require no contractual agreement, while others offer agreements that can be terminated at any time, providing start-ups with significant operational freedom and adaptability.

Both sources agree on the quicker process duration of P2P invoice financing compared to traditional methods. Literature indicates traditional financing can take weeks, while content analysis shows P2P platforms typically offer financing within 24 to 48 hours. This speed is crucial for start-ups needing rapid financial responses to opportunities and challenges. The ability to secure funds quickly can be a decisive factor in a start-up's ability to seize timely business opportunities and navigate unexpected financial hurdles.

5.2.2 Development of survey

The survey development draws from both the literature review and content analysis on P2P invoice financing. It aims to explore key characteristics: attainability, flexibility, process duration, and account receivable management, which were prominent in both sources. By focusing on these core aspects, the survey seeks to gather comprehensive insights into the practical application and effectiveness of P2P invoice financing for start-up companies.

The first part of the survey, with three questions, focuses on attainability. It examines eligibility criteria, such as the shift from traditional requirements to those more suitable for start-ups, like minimum operating history or credit checks on customers. This aligns with findings that P2P platforms remove traditional barriers by offering alternative criteria. The survey will seek opinions on whether these alternative requirements are indeed perceived as more accessible and suitable for start-up environments.

The second part, with two questions, addresses flexibility. It evaluates the perceived benefits of short-term commitments, dynamic financing decisions, and the potential drawbacks of repeated verifications. This section aligns with the findings that flexibility is crucial for start-ups' dynamic environments. The survey will probe how industry professionals view the balance between flexibility and the need for frequent assessments, and whether the benefits outweigh any potential inconveniences

The third part examines process duration with questions on the importance of rapid financing availability. Both literature and content analysis highlight the advantage of P2P platforms offering quick financing solutions, typically within 24 to 48 hours. The survey aims to understand the criticality of quick access to funds and how it impacts start-up operations and decision-making processes.

The fourth part focuses on account receivable management, exploring its value as an extension of P2P invoice financing services. This characteristic is prominent in the content analysis but less so in the literature, providing new insights into its significance for start-ups. By including this characteristic, the survey aims to capture opinions on the comprehensive support offered by P2P platforms and its perceived impact on financial stability and growth.

The survey is structured to capture demographic information and the core characteristics of P2P invoice financing relevant to start-ups. This ensures that the questions are both academically grounded and practically relevant, contributing valuable insights to the field. By carefully selecting and crafting the survey questions, the research aims to provide a well-rounded understanding of how P2P invoice financing can support start-up companies in various aspects of their financial needs and operational challenges.

6. SURVEY FINDINGS

For this research paper a survey was conducted among entrepreneurs, posing as industry professionals, with the goal of evaluating first hand insights from entrepreneurs about the perceived ability of P2P invoice financing to address- and align with start-up companies' financing needs. By presenting features present in online platforms offering P2P invoice financing, as identified by the earlier content analysis, features grounded in empirical research of the platforms and embody the general characteristics P2P invoice financing, creating its value; attainability, flexibility, process duration and accounts receivable management. This corresponds with sections 2, 3, 4 and 5 of the survey respectively. While targeting entrepreneurs within the sample requirements as described in section 4.2.2, the survey was filled in a total of 94 times. After data cleaning procedures, 3 responses were excluded because they did not consent to their data being used for analyzation purposes, 5 responses were excluded because the respondent was not an entrepreneur and 11 responses were excluded because they were not familiar with the concept of P2P invoice financing, even if the response stated that they could still contribute to the research. Excluding these respondents created a sample size of 75 entrepreneurs fitting within the requirements for sample sizes. Another characteristic of the data cleaning process included the open questions 6.1, 7.3 and 7.4, for which Dutch responses were translated into English and formulated in standard-level English.

To analyze the data gathered from the survey, perceptions of entrepreneurs towards the different features of P2P invoice financing platforms, responses given along the Likert-scale **(**Strongly agree, Agree, Disagree, Strongly Disagree, Don't know/Insufficient insight**)** were categorized into Positive; Strongly agree and Agree and Negative; Strongly Disagree and Disagree. For each question the frequencies of answers were categorized and percentages were calculated to give the best overview of perception. Also, for each section of the survey embodying one of the four main characteristics of P2P invoice financing, combined averages were calculated, to create a general perception towards the characteristic present, instead of the individual features. Additionally, patterns were sought between demographic characteristics of entrepreneurs and their perception towards the different features/characteristics presented. Patterns could be found between 2 of the 5 demographic factors; age- and years in business of the entrepreneur, these two demographic characteristics are analyzed further for the different sections. It can be noted however that the demographic distribution of both factors is skewed towards respondents with an age under 25 and 25-34, as well as towards respondents with an operating duration of 1-3 and 4-6 years, as illustrated in figure 8, which indicates a concentration of insights from younger entrepreneurs, operating newer start-up companies. Therefore, demographic findings should be considered with caution due to their skewed distribution in combination with the limited, but adequate sample size in general. Also, while a start-up company can be defined by an operating duration below five years (Reid & Smith, 2000; Stam & Garnsey, 2007), being entrepreneurs, even with a higher operating duration, they have worked in such environments associated with the short operating duration of a company. This results section first focuses on the 4 main characteristics of P2P invoice financing in-depth in section 5.2.1.1 – 5.2.1.4, focusing on section 2, 3, 4 and 5 of the survey respectively as described above. This is then followed by a general perception analyses based on section 6 of the survey, as well as the statistical test conducted on the data gathered. For a full overview of responses to the survey conducted; consult appendix 3, for a full overview of demographics; consult appendix 4.

Demographic distribution					
Age			**Operating duration**		
Under 25	31	41,33%	Less than 1 year	7	9,33%
25-34	17	22,67%	1-3 years	26	34,67%
35-44	9	12,00%	4-6 years	23	30,67%
45-54	5	6,67%	7-10 years	5	6,67%
55-64	1	1,33%	More than 10 years	4	5,33%
65 or above	2	2,67%			
I prefer not to answer	10	13,33%	I prefer not to answer	10	13,33%

Figure 8: *Perception P2P invoice financing – Demographic distribution*

6.1 Perception of entrepreneurs

6.1.1 Perception on attainability

Section 2 of the survey focusses on the first characteristic of P2P invoice financing, the attainability of financing. Following a structure coherent to the importance of characteristics identified by the content analysis, focus lies on financing criteria & costs to embody attainability. The three questions in this section inquire about the opinion of entrepreneurs on alternative eligibility criteria, the absence of collateral and the financing fee construction and their associated consequences, respectively. See figure 9 for an overview of perception frequencies for the questions in section 2.

Question 2.1	Alternative eligibility criteria				
Strongly agree	24	32,00%	Positive	65	86,67%
Agree	41	54,67%			
Disagree	4	5,33%	Negative	6	8,00%
Strongly disagree	2	2,67%			
Insufficient insight	4	5,33%	Mode	Agree	

Question 2.2	Absence of collateral requirement				
Strongly agree	23	30,67%	Positive	60	80,00%
Agree	37	49,33%			
Disagree	10	13,33%	Negative	13	17,33%
Strongly disagree	3	4,00%			
Insufficient insight	2	2,67%	Mode	Agree	

Question 2.3	Financing fees				
Strongly agree	10	13,33%	Positive	46	61,33%
Agree	36	48,00%			
Disagree	6	8,00%	Negative	12	16,00%
Strongly disagree	6	8,00%			
Insufficient insight	17	22,67%	Mode	Agree	

Section 2 (combined average)		
Positive	57	76,00%
Negative	10	13,78%
Insuf. Insight	8	10,22%

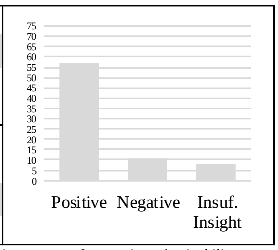


Figure 9: *Perception P2P invoice financing - answer frequencies – Attainability*

Starting with eligibility criteria of P2P invoice financing, the most important contributor to financing option being attainable by start-up companies. The insights from question 2.1 indicate a strong positive perception towards the avoidance of traditional eligibility criteria, even though new, alternative criteria are present. 65 out of 75 respondents **(**86,67%**)** stated a positive expression towards the statement. Thus, a significant majority of entrepreneurs in this sample is positive towards new requirements set for financing. This aligns with the broader industry trend towards innovation and accessibility, which is fitting with the nature and orientation of start-up companies as discussed. This trend, along with the perception gathered from the survey suggests that entrepreneurs are not just looking for financing options but are keen on those that understand and cater to the dynamics of their business operations. The relatively low number of disagreements indicates minor reservations about moving away from traditional requirements set. On top of that, the insights from question 2.2 are consistent with the insights from question 2.1, indicating a strong positive perception towards the absence of a required collateral, even though this has consequences in the form of increasing financing fees followed by higher levels of uncertainty. 60 out of 75 respondents **(**80,00%**)** stated a positive expression, once again being a significant majority with a positive perception towards new requirements set for financing. 10 respondents **(**13,33%**)** however, disagree with the statement, thus the perception towards this characteristic of requirements is less positive than the other. This willingness among entrepreneurs to accept extra financing fees over the requirement of a collateral highlights a trade-off by entrepreneurs, valuing attainability to financing, while maintaining operational flexibility more than the potential extra costs it can carry. The importance in a collateral being absent, which caters attainability for start-up companies because of the lack of tangible assets, can be reflected by the entrepreneurs willing to make extra costs. It suggests a confidence among entrepreneurs in their future ability to manage and mitigate these costs through successful business operations, which isn't possible with collateral because it has to be something in present. A higher numbers of disagreements show reservations about higher costs associated with the absence of collateral, which indicates a small preference for a collateral, something which if done right, does not bring any extra costs or stress associated. Another influence on the attainability of P2P invoice financing are the fees associated with financing. The insights from question 2.3 indicate a positive perception towards the possibility of lower financing fees, even though the calculation based on certain factors can also mean a higher financing fee. 46 out of 75 (61.33%) respondents stated a positive expression towards the statement. Thus, a slight majority of entrepreneurs in this sample is positive towards the way financing fees are calculated and its potential. However, (22,67%) stated to have no answer to this question, which is a smaller portion, but above average. Thus for these insights a small precaution is taken. The entrepreneurs' being open to fee fluctuations based on the factors mentioned, with the potential of a lower overall fee reveals an understanding of financial trade-offs: start-up companies are willing to navigate variable costs in exchange for more favorable fees, indicating a belief that based on the factors that decide the financing fee, this would lead to lowering fees instead of higher fees. However, the disagreement from a subset of respondents underscores the unpredictability of financing fees with this approach.

Furthermore, a demographic analysis of entrepreneurs generally illustrates a perception in line with the general findings towards the attainability of P2P invoice financing for a majority of demographic groups among the variable age and their years in operation, although some noticeable patterns can be recognized. Among groups of age, significant support can be found for the attainability of P2P invoice financing, particularly among younger entrepreneurs. The entrepreneurs under 44 displayed the highest levels of agreement with the concepts presented in the questions from section 2, with 76,34%, 82,35% and 85,19% positive reflections respectively, which is above the combined average of 76,00%. This reflects a generational perception towards modern eligibility criteria, the absence of collateral and fluctuating financing fees, leaning towards more accessible and innovative financing solutions. On the other hand, older entrepreneurs, particularly those over 45 showed less positive responses with a positive perception of 46,67% (age groups 55-64 and 65 or above have a frequency of 1 and 2 respectively so they are not considered in analysis) for the age groups 45-54, which suggest that among those age groups there are more reservations about these new financing measures.

The same trend can be noticed among entrepreneurs with companies in various lifecycle stages. Although results reveal a widespread positive perception for the attainability features of P2P invoice financing, entrepreneurs with a more mature company reveal slightly more reservations towards the concept. New and emerging businesses, those operating for less than 6 years show an inclination towards modern financing features offered for attainability, with a positive perception of 85,71%, 85,90%% and 85,51% respectively, which suggests that these entrepreneurs perceive P2P invoice financing as a valuable financial management tool during growth phases. However, entrepreneurs with more than 7 years of operation, while still supportive, showed slightly more conservative views, with a 73,33% (operating duration more than 10 years has a frequency of 4 so it is not considered in analysis) positive response rate for operating duration 7-10 years. This indicates an acknowledgment of the benefits of P2P invoice financing among established businesses, but also acknowledges the demand for traditional financing criteria for certain entrepreneurs.

Overall, from the entrepreneurs in the sample, a positive perception can be sighted towards the features of P2P invoice financing that cater attainability. The most prominent features boasted by P2P platforms offering invoice financing; alternative eligibility criteria, higher fees as an alternative for collateral and fluctuating financing fees, are all perceived as positive features by a majority of entrepreneurs with an average of 76% stating a positive expression, compared to only 13,78% negative, among the three questions embodying the characteristic. This indicates that features applied in P2P invoice financing to serve the attainability of financing are perceived as aligned with start-up companies of entrepreneurs in the sample.

6.1.2 Perception on flexibility

Section 3 focusses on the next characteristic of P2P invoice financing; flexibility. Following a structure coherent to the importance of characteristics identified by the content analysis, focus lies on the tradeoff between flexibility and verification. The two questions in this section inquire about the opinion of entrepreneurs on the ability to decide which invoices to finance and to finance without long-term commitments and their associated consequences, respectively. See figure 10 for an overview of perception frequencies for the questions in section 3.

Question 3.1	Decide which invoices to finance				
Strongly agree	23	30,67%	Positive	56	74,67%
Agree	33	44,00%			
Disagree	11	14,67%	Negative	15	20,00%
Strongly disagree	4	5,33%			
Insufficient insight	4	5,33%	Mode	Agree	

Question 3.2	Long-term commitments				
Strongly agree	16	21,33%	Positive	55	73,33%
Agree	39	52,00%			
Disagree	11	14,67%	Negative	14	18,67%
Strongly disagree	3	4,00%			
Insufficient insight	6	8,00%	Mode	Agree	

Section 3 (combined average)		
Positive	56	74,00%
Negative	15	19,33%
Insuf. Insight	5	6,67%

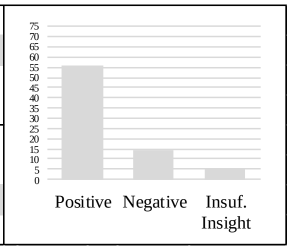


Figure 10: *Perception P2P invoice financing - answer frequencies – Flexibility*

Starting with flexibility in the form of being able to decide which invoices to finance, as opposed to financing all invoices or none. The insights from question 3.1 indicate a positive perception towards the flexibility to make this decision, even though this could mean subsequent verification. 56 out of 75 respondents (74,67%) stated a positive expression towards the statement. Thus, a majority of entrepreneurs in this sample is positive towards being able to make this decision. The strong support for selective invoice financing underscores the desire for personalized financial solutions among entrepreneurs, start-up companies seek to maintain control over their financial engagements, choosing which invoices to finance based on their immediate cash flow needs. This flexibility aligns with start-up companies' inherent uncertainty and dynamic environment, allowing them to adapt financing strategies in real-time. The negative perception towards this flexibility underscores the added complexity of separate verification for each financing undertaken, however with the majority of responses being positive, entrepreneurs do not seem to be thrown off by (additional) verification, which underpins their believe in growth of their (start-up) company. Another influence on the flexibility of P2P invoice financing is the timespan of required commitments. The insights from question 3.2 indicate a positive perception towards the absence of long-term commitments, even though this could mean subsequent verification. 55 out of 75 (73,33%) respondents stated a positive expression towards the statement. Thus, a majority of entrepreneurs in this sample is positive towards commitments staying short-term. This perception among entrepreneurs further illustrates the importance of contractual flexibility for them, and further illustrates the demand for adaptable financing arrangements. The absence of long-term commitments for financing allows for financial engagements to evolve along with the business, ensuring that financing remains a support rather than a constraint. Once again, (additional) verification does not seem to be seen as a constraint. The negative responses highlight a call for stability and predictability, underscoring the balance financial providers must create between flexibility and reliability to cater to personal needs of different entrepreneurs and their companies.

Once again, a demographic analysis of entrepreneurs generally illustrates a perception in line with the general findings towards the flexibility of P2P invoice financing for a majority of demographic groups among the variable age and their years in operation. The survey response highlight a preference for the features supporting the flexible nature of P2P invoice financing among all groups of age. Most noticeable as outliers is the age group under 25, with a positive perception of 66,13%, while still a majority, this is under the combined average, compared to the age groups 25-34, 35-44 and 45-54 with positive perceptions of 82,35%, 83,33% and 80% respectively against a combined average of 74,00%. While not as vastly supported by perceptions of different age groups as the features in section 2, it suggests that there could be generational differences towards flexibility against security, with the younger entrepreneurs reflecting less enthusiasm for flexible financing options. In the case of flexibility, demographic insights for operating duration reveal a strong positive perception is for flexibility among all stages of operating duration, with a positive perception of 85,71%, 76,92% 76,09% and 70,00% for entrepreneurs in operation for less than 1 year, 1-3 years, 4-6 years and 7-10 years respectively against a combined average of 74%. This suggests that flexibility is deemed important among various business stages, showing preference towards adaptability and minimal long-term obligations against security.

Overall, from the entrepreneurs in the sample, a positive perception can be sighted towards the features of P2P invoice financing that cater flexibility. The most prominent features boasted by P2P platforms offering invoice financing; flexibility in terms of deciding which invoices to finance and the absence of long-term responsibilities, are both perceived as positive features by a majority of entrepreneurs with an average of 74% stating a positive expression, compared to 19,34% negative, among the two questions embodying the characteristic flexibility. This indicates that features applied in P2P invoice financing to serve the flexibility of the financing process are perceived as supporting for the (start-up) companies of entrepreneurs in this sample. The negative perception is relatively low compared to the positive perception frequency, however higher compared to section 2, this still suggests that there are concerns or reservations among a portion of the entrepreneurs regarding the additional verification processes.

6.1.3 Perception on process duration

Section 4 focusses on the next characteristic of P2P invoice financing, the duration of the financing process. Following a structure coherent to the importance of characteristics identified by the content analysis, focus lies on the use of technology to shorten the timespan to achieve financing, this embodies process duration. The two questions in this section inquire about the opinion of entrepreneurs on the achievement of a short financing process and the ability to get quick estimated insights into financing potentials their associated consequences, respectively. See figure 11 for an overview of perception frequencies for the questions in section 4.

Question 4.1	Financing under 48 hours				
Strongly agree	22	29,33%	Positive	64	85,33%
Agree	42	56,00%			
Disagree	7	9,33%	Negative	9	12,00%
Strongly disagree	2	2,67%			
Insufficient insight	2	2,67%	Mode	Agree	

Question 4.2	Instant financing overview (unverified)				
Strongly agree	8	10,67%	Positive	32	42,67%
Agree	24	32,00%			
Disagree	8	10,67%	Negative	15	20,00%
Strongly disagree	7	9,33%			
Insufficient insight	28	37,33%	Mode	Insuf. Insight	

Section 4 (combined average)		
Positive	48	64,00%
Negative	12	16,00%
Insuf. Insight	15	20,00%

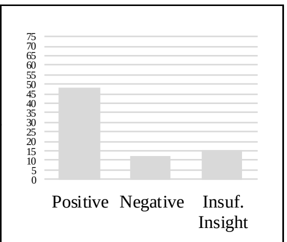


Figure 11: *Perception P2P invoice financing - answer frequencies – Process duration*

Starting with the duration of the actual process to receive financing. The insights from question 4.1 indicate a strong positive perception towards the duration to receive financing being shortened by the use of technology in the verification process, even though verification not performed by a human can still be simple-sighted. 64 out of 75 respondents (85,33%) stated a positive expression towards the statement. Thus, a significant majority of entrepreneurs in this sample is positive towards using technology to enhance the verification process and shorten financing receival times. The overwhelming positive perception places an emphasis on quick financing among entrepreneurs, which aligns with the fast-paced environment in which start-up companies operate. Immediate financing availability can be the difference between capitalizing on an opportunity and missing out, for start-up companies, which are inherently at larger risk, this difference is even more important. It also implies that entrepreneurs believe in the verification ability of technology over personal, human verification. The few negative perceptions indicate that some entrepreneurs still believe in the potential (and the ability for tailorized verification) of humans, even though this lengthens the financing process. Next is the ability to get almost instant insights into financing potentials. The insights from question 4.2 indicate a mixed perception towards being able to receive an overview of financing possibilities made using solely technology, which does not equate a concrete financing offer. 32 out of 75 (42,67%) respondents stated a positive expression towards the statement, this is not a majority, but it makes a positive expression the highest frequency. There is a significant portion (37,33%) stated to have no answer for this question, making it the second most frequent answer. When not counting the no answers given, a majority of entrepreneurs in this sample is positive towards the ability to receive an instant overview, however the insights from this question are taken with large precaution, since the large outlier in no answers given might indicate an unclear question or statement. It seems like entrepreneurs in general perceive this feature as something positive, once again indicating the believe in technology, seeing the benefits of an approximate financing overview, however due to the high amount of no answers, the insights from this question are not applied in the overall outcome of this research.

Furthermore, a demographic analysis of entrepreneurs creates a suggestion that findings lie in line with the general findings towards the process duration of P2P invoice financing for a majority of demographic groups in the variable operation duration, however this does not equate to anything concrete. For the variable age, no pattern could be identified among different age groups. This trend in operating duration can once again only be identified by a very slight decline in positive perceptions if the operating duration is prolonged .This suggests a need among less mature companies for financing options that can align with their dynamic and evolving operating needs which is less present in more mature companies, leaning more towards thoroughness and reliability in the financing process, although, once again being a very slight decline.

Overall, from the entrepreneurs in the sample, the perception towards the features of P2P invoice financing that cater the process duration are not convincing for a specific perception. While the most prominent feature boasted by P2P platforms offering invoice financing; a shortened financing process, is perceived as a positive feature, the other feature in the form of an instant financing overview does not give a clear answer. It indicates that the first feature mentioned serves the process duration of financing in a positive manner, supporting the needs of (start-up) companies of entrepreneurs in this sample.

6.1.4 Perception on accounts receivable management

Section 5 focusses on the last characteristic of P2P invoice financing, the widespread offering of accounts receivable management. Following a structure coherent to the importance of characteristics identified by the content analysis, focus lies on consequences of accounts receivable management being offered. The two questions in this section inquire about the impact of these consequences; higher fees and being noticeable by customers respectively, on the opinion of entrepreneurs regarding P2P invoice financing. See figure 12 for an overview of perception frequencies for the questions in section 5.

Question 5.1	Associated higher financing fees				
Strongly agree	20	26,67%	Positive	54	72,00%
Agree	34	45,33%			
Disagree	13	17,33%	Negative	18	24,00%
Strongly disagree	5	6,67%			
Insufficient insight	3	4,00%	Mode	Agree	

Question 5.2	Associated visibility by customer				
Strongly agree	12	16,00%	Positive	41	54,67%
Agree	29	38,67%			
Disagree	23	30,67%	Negative	30	40,00%
Strongly disagree	7	9,33%			
Insufficient insight	4	5,33%	Mode	Agree	

Section 5 (combined average)		
Positive	48	63,33%
Negative	24	32,00%
Insuf. Insight	4	4,67%

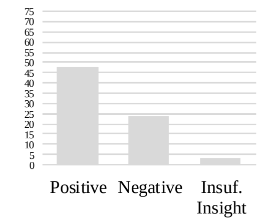


Figure 12: *Perception P2P invoice financing - answer frequencies – Accounts receivable management*

First, the additional fees present when accounts receivable management is offered by default in P2P invoice financing. The insights from question 5.1 indicate a positive perception towards accounts receivable management being offered, even though financing fees are higher for the inclusion of this service. 54 out of 75 respondents (72,00%) stated a positive expression towards the statement. Thus a majority of entrepreneurs in this sample is positive towards this service being offered still. The general approval of accounts receivable management services being offered as standard indicate a preference for ease-of-use in financing among entrepreneurs, if this has added costs as a consequence. This additional service is perceived as something supporting for their companies, even though it can mean higher financing fees, in this way P2P platforms can offer more value, addressing broader operational needs of start-up companies. However, an above average negative perception of 24% indicate that for this integration the costs might outweigh the benefits. Moving on to another consequence of accounts receivable management when offered by default in P2P invoice financing; its noticeability. The insights from question 5.2 indicate a divided perception towards accounts receivable management being offered, which means that the use of a financing service can be noticeable by the customer. 41 out of 75 (54,67%) respondents stated a positive expression towards the statement, while 30 out of 75 (40,00%) of the respondents stated a negative expression. Thus, a slight majority of entrepreneurs in this sample is positive towards this service being offered, while noticeable. However, the frequency of positive expressions is the second lowest among questions (only higher than Q4.2, mode is insufficient insight), while the frequency of negative expressions is the highest. The mixed support among entrepreneurs for the inclusion of account receivable management, which makes financing noticeable to the customer signals trust in the benefits of this service but also highlights the noticeability by customers as a concern. This openness suggests that entrepreneurs see the benefits of efficiency and outsourcing of financial tasks. Yet, the significant minority who are opposed to this visibility indicates a concern for customer perception and the importance of discretion in financial encounters.

Furthermore, a demographic analysis of entrepreneurs generally illustrates a perception in line with the general findings towards the offering of accounts receivable management as a standard service for P2P invoice financing for a majority of demographic groups in the demographic variable operating duration. For the variable age, no clear pattern could be noticed. For the demographic variable operating duration, for all groups the positive perception hovers around the combined average with 64,29%, 63,46%, 58,70% and 50,00% respectively. Thus we can state that in general, regardless of operating duration, there is appreciation demonstrated for financing solutions that streamline operations and enhance efficiency, while there are some concerns regarding the higher fees and noticeability that this service brings.

Overall, from the entrepreneurs in the sample, the perception towards account receivable management as a standard service of P2P invoice financing is divided. Among the two questions that embody the characteristic account receivable management, different perceptions are sighted. While account receivable management is perceived as positive by the majority when the consequence is higher costs, when the consequence of noticeability by customers comes into equation, this perception turns more negative. This is an important finding since (almost) all platforms researched offered this service as standard, while this feature of offering account receivable management applied in P2P invoice financing creates disagreement among entrepreneurs as to whether it is supporting for their (start-up) companies.

6.2 Overall perception on P2P invoice financing

Section 6 of the survey focusses on gathering the overall perception and any additional comments of entrepreneurs on the subject of P2P invoice financing as presented by figure 13, showing an overview of analytics for this section. Together with the prior analysis of results on different characteristics of P2P invoice financing and their features present in the platforms and the demographic analysis on age and operating duration of entrepreneurs, this section helps to illustrate a concluding perception towards P2P invoice financing in general. Also, allowing additional comments supports a potentially more in-depth reflection of entrepreneurs thoughts on certain characteristics of P2P invoice financing.

Question 6.1			General perception		
Strongly agree	26	34,67%	Positive	56	74,67%
Agree	30	40,00%			
Disagree	15	20,00%	Negative	16	21,33%
Strongly disagree	1	1,33%			
Insufficient insight	3	4,00%	Mode	Agree	

Question 6.2	Open question	
Positive	5	29,41%
Negative	5	29,41%
Neutral	7	41,18%

Figure 13: *Perception P2P invoice financing - answer frequencies – General*

6.2.1 General thoughts about P2P invoice financing

Starting with question 6.1, the perception of entrepreneurs when asked about their overall opinion on P2P invoice financing as a suitable financing option for their **(**start-up**)** company. In alignment with the perception regarding a majority of the questions **(**except questions 2.3, **(**4.2**)** and 5.2**)**, the frequency of entrepreneurs with a positive perception amounts to almost three-fourths of the total sample, 56 times **(**74,67%**)**, against approximately one-in-five with a negative perception, 16 times **(**21,33%**)**. This indicates that there is a strong majority believing in the value attributed to P2P invoice financing as a solution for supporting the financing needs of **(**start-up**)** companies among participating entrepreneurs in this survey. This approval suggests that entrepreneurs exhibiting **(**start-up**)** companies see P2P invoice financing as a potentially effective method for easing their financial needs and supporting business exploration. The majority of the survey participants acknowledge the potential of this type of financing based on the features as described in the survey, although not all features are received as overwhelmingly positive, it seems that based on the sample, entrepreneurs are inclined towards these new and technology-driven financing solutions, in this case invoice financing via P2P platforms.

Analysis of additional comments given in question 6.2 do not unveil any revolutionary findings. The 17 comments given in total, amounted to 5 positive and negative comments, along with 7 neutral comments. Positive comments related to general support for P2P invoice financing, while neutral comments stressed the fact that more research is required for them to consider P2P invoice financing, which is understandable given the exploratory scope of this research paper and the general availability of research regarding the subject. For the negative comments however, 5 out of the 16 entrepreneurs with a negative answer to question 6.1 left an additional comment, all regarding one of 3 features; financing fees, the quick financing overview and the noticeability of financing when using account receivable management, question 2.3, 4.2 and 5.2 respectively. While this does not create any significant new insights, it does strengthen the general results from this survey conducted.

Overall, the perception of entrepreneurs in the sample of this conducted survey is majorly positive for most of the features presented, which embody the four different characteristics of P2P invoice financing as identified by prior performed research and analysis. This indicates that the features present in P2P invoice financing platforms which can differentiates them and enables them to add value are perceived as positive, with the exception of features as mentioned above.

6.2.2 Statistical testing of survey data

The one-sample t-test conducted for perception of entrepreneurs towards each different characteristic of P2P invoice financing (across 75 respondents) to determine the mean perception of entrepreneurs towards the different characteristics, compared to a neutral mid-point of 2.5 (Harpe, 2015; Vieira, 2016), which is the mid-point on an ordinal scale ranging from 1-4 (corresponding to the 4-point Likert scale, where insufficient insight / no answer cannot be seen as a neutral option, hence why it does not contribute to scale count). This means that a mean perception <2.5 can be seen as below neutral or negative, while a mean perception >2.5 can be seen as above neutral or positive. This yields insights into the statistical significance of the frequency of positive perceptions. In this case, for the perception towards each characteristic (attainability, flexibility, process duration and accounts receivable management), statistical support can be found towards a statistical significance. For all characteristics, yielded p-values are very small, so the null-hypothesis can be rejected ($\bar{x}$=3.06, μ=2.50, t=6.82, p=<0.01 / $\bar{x}$=3.025, μ=2.50, t=5.47, p=<0.01 / $\bar{x}$=2.925, μ=2.50, t=4.78, p=<0.01 / $\bar{x}$=2.805, μ=2.50, t=3.05, p=<0.01 respectively). For the full results of the statistical test, see figure 14. This statistical test finds clear support for hypothesis 2 of this research paper for perception of entrepreneurs against all characteristics of P2P invoice financing identified, yielding similar values. This substantiates the qualitative explanations.

Overview T-Test on perceptions of entrepreneurs from survey data						
Overview	**Mean ($\bar{x}$)**	**Standard Deviation (s)**	**Standard Error (SE)**	**Test Statistic (t)**	**Degrees of Freedom (df)**	**P-value**
Formula	$\left(\frac{\sum x_i}{n}\right)$	$\left(\sqrt{\frac{\sum(x_i-\bar{x})^2}{n-1}}\right)$	$\left(\frac{0.76}{\sqrt{75}}\right)$ $\left(\frac{s}{\sqrt{n}}\right)$	$\left(\frac{\bar{x}-\mu}{SE}\right)$	$(n-1)$	
Sections						
Attainability	3.06	0.76	0.088	6.82	74	**0.0000000022**
Flexibility	3.025	0.835	0.096	5.47	74	**0.000000411**
Process duration	2.925	0.775	0.089	4.78	74	**0.00000755**
Accounts receivable management	2.805	0.865	0.10	3.05	74	**0.0034**
Population mean (neutral midpoint)	2.5					
Sample size (n)	75					

Figure 14: *Statistical test – T-test on perception of entrepreneurs from survey data*

7. CLOSING REFLECTIONS

7.1 Overview of findings

In this exploratory research paper, a literature review was conducted to create assumptions regarding the use of P2P invoice financing, specifically for start-up companies. The findings resulting from this literature review act as the foundation for the empirical research conducted. Start-up companies possess the following characteristics; a limited operating history, a strong orientation towards growth and a dynamic operating environment. Based on these characteristics, the theory is crafted that P2P invoice financing could offer advantages for start-up companies in terms of attainability, flexibility and process duration. P2P invoice financing is deemed to be more attainable due to the absence of traditional financial intermediaries. Therefore, eligibility criteria are not based on requiring financial records, credit history and a collateral. In terms of flexibility, P2P invoice financing was deemed to a flexible financing option due to the alignment of financing repayment with receival of money and the fact that this type of financing is not tied to long-term commitments, since after the repayment when receiving the money from the invoice, there is no commitment left. Lastly, P2P invoice financing was deemed to have a short process duration, due to the use of technology. Based on the analytical framework as constructed, this research paper aimed to explore the viability of P2P invoice financing for start-up companies by examining both theoretical assumptions and real-world findings.

The first type of empirical research conducted is a content analysis performed on online platforms offering P2P invoice financing. By conducting this research, characteristics can be identified based on features present on P2P invoice financing platforms. The analysis of this research has revealed several present features, together forming 4 characteristics of P2P invoice financing in line with the assumptions created in the analytical framework; attainability, flexibility, process duration and accounts receivable management. The characteristic most prominent among platforms is attainability, it can be identified that for a majority of the platforms researched traditional eligibility criteria in the form year numbers, a prognosis, minimum turnover and the provision of a collateral are not required. A traditional eligibility criteria which is required however is a minimum operating history, along with an alternative criteria; a credit check to be conducted on the start-up company's customer on the invoice, which goes paired with the fact that only business-to-business invoices are financed. Additionally, another characteristic was identified in support of attainability of financing; a low financing fee. It can be identified that for a majority of the platforms, the financing fee is below 5%, however it should be noted that this fee can fluctuate based on the credit-worthiness of customers. Based on the statistical test conducted on features embodying attainability of financing, it can be stated that the absence of requiring collateral and a minimum turnover is significantly present among platforms in the researched sample (one sample proportion z-test, $p<0.05$).

The next apparent characteristic is flexibility in financing terms, another prominent feature present on researched platforms. It can be identified that for all the platforms researched, the ability to freely decide which invoices to finance is offered, which means that if chosen for invoice financing via these platforms, it is not required to finance all invoices at once. This flexibility, along with short-term commitments aligns with the fluctuating revenues and dynamic operating environments which start-up companies encounter. It should however be noted that entering into a contract is required by some platforms, however in a majority of cases this is either not required or the contract is purely to determine the eligibility of the start-up company, thus it can be terminated at any time. This makes it more of an agreement then a contract.

The last characteristic derived from the literature review, which is apparent in P2P invoice financing platforms, is a short financing process duration. It can be identified that for a majority of the platforms, the time to receive financing is usually below 24 hours, with some platforms extending this time frame to below 48 hours. Additionally, a majority of platforms offer the option to do a quick scan, which means that the start-up company seeking for financing can get an immediate insight into their financing possibilities, although not being a concrete financing offer. Short duration to attain financing aligns with the dynamic nature of start-up companies and enables them to exploit growth opportunities and face fluctuating revenue streams.

Another characteristic of P2P invoice financing which became apparent from conducting the content analysis, while not present from conducting the literature review is accounts receivable management. It can be identified that this service is offered by a majority of platform as standard. In a majority of platforms offering this service, this also means insurance against negligence of the company's customer in paying the invoice. This service helps start-up companies manager their receivables effectively. This service being added as standard however does have a consequence for all the platforms for which it is the case; the customer has to pay the invoice to the bank account of the platform, making it noticeable that a financing service is used.

The second type of empirical research conducted is a survey taken by industry professionals, in the case of start-up companies; entrepreneurs. This research was performed to gather insights into the perception of entrepreneurs towards the features that characterize P2P invoice financing, based on start-up companies financing needs and preferences, generated from conducting the literature review and content analysis. Since the survey is based insights from the previous research- and analysis conducted, the findings are grouped into the same four characteristics.

By analyzing the survey results it can be identified that entrepreneurs, in general, show a strong positive perception towards the attainability features of P2P invoice financing as presented in the survey. Entrepreneurs appreciate the absence of traditional eligibility criteria, even though these are substituted with alternatives. This is indicated by a significant majority in positive perceptions towards the two questions focusing on these features. The same can be said for the possibility of low financing fees, however there are some reservations identified due to the possibility of higher financing fees as a result of the uncertain nature of start-up companies. This is indicated by a slightly higher amount of negative perceptions. Additionally, it can be identified that entrepreneurs who are younger and in earlier company life cycle stages express higher levels of positive perception, compared to their older and more experienced counterparts. Overall, alternative eligibility criteria, higher fees as an alternative for collateral and fluctuating financing fees, are all perceived as positive features by a majority of entrepreneurs, among the three questions embodying the characteristic attainability.

Furthermore, it can be identified that entrepreneurs also show a positive perception towards the flexibility features of P2P invoice financing. Entrepreneurs appreciate the flexibility in financing created by the ability to decide which invoices to finance and the absence of long term commitments, even though this means additional verification procedures as a consequence. This is indicated by a significant majority in positive perceptions towards the two questions focusing on these features, although the frequency of positive perceptions overall is slightly lower compared to the perception towards attainability features. Additionally, once again the perception towards flexibility features shows the same demographic patterns as the perception towards the attainability features. Overall, the features identified are all perceived as positive features by a majority of entrepreneurs, among the two questions embodying the characteristic flexibility.

Among entrepreneurs, a positive perception can be identified towards the short process duration of receiving financing when participating in P2P invoice financing. Being able to receive financing in under 48- or even 24 hours is seen as highly valuable by entrepreneurs, as indicated by a significant majority in positive perception towards this question, while only having a very small frequency of negative perceptions. However, the available quick-check feature in many platforms tells a different story, boasting a mix of perceptions, with the most frequent perception being insufficient insight, therefore the findings from this question cannot be taken into account. Also, no clear patterns can be found when looking at the demographic variables.

Finally, when analyzing the perception of entrepreneurs towards accounts receivable management, it can be identified that in general there is a majorly positive perception towards this service being offered when participating in P2P invoice financing, however the perception towards the consequences that are tied to this service are mixed. This is indicated by a significant majority of positive perceptions when confronted with higher financing fees as a consequence, while being barely a majority when confronted with the consequence of it being noticeable by customers that a financing service is used, boasting a way higher frequency of negative perceptions. Also, while the support for this feature of P2P invoice financing is higher among younger entrepreneurs than older entrepreneurs, the results are not clear enough to create a clear demographic pattern, so this is taken with precaution. Overall, accounts receivable management being offered as standard is perceived as a positive feature, however there are precautions regarding the consequences among entrepreneurs, mainly regarding the fact that making use of financing is noticeable by customers.

Based on the statistical test conducted on the combined positive perceptions of entrepreneurs towards the features presented, together forming perceptions against characteristics of P2P invoice financing, it can be stated that the perception of entrepreneurs towards all four characteristics is significantly positive (one sample t-test, $p<0.05$, combined averages for questions per section).

7.2 Conclusion

The goal of this research paper is to explore the viability of P2P invoice financing as an attainable financing option for start-up companies to address their financing needs. A content analysis on 15 P2P invoice financing platforms, along with a survey among 75 entrepreneurs was conducted with the aim to empirically explore characteristics of P2P invoice financing present and the corresponding perception of entrepreneurs towards them. This conclusion integrates the findings from both the content analysis and the survey to address the assumptions made to construct the analytical framework theory crafted from the limited- and indirect academic literature available, thereby addressing the research hypotheses as formulated and answering the central research question.

7.2.1 Acceptance or rejection of hypotheses

Starting with hypothesis 1: *"P2P invoice financing platforms demonstrate start-up friendly features to support the attainability of financing".* By analyzing the findings from the content analysis conducted, it has been revealed that in general, P2P invoice financing platforms indeed possess features that support the attainability of financing for start-up companies. For a majority of the platforms researched, traditional eligibility requirements in the form of financial records, a credit history and the provision of a collateral are not present. Instead, platforms require alternative eligibility criteria to be met, like a minimum operating history and a credit-worthiness check on customers. This aligns with the operational nature of start-up companies, often carrying high uncertainty levels, often lacking extensive financial histories and tangible assets due to their short operating history. This creates a challenge when adhering to traditional eligibility criteria, so their absence aligns with start-up companies' characteristics as identified. Qualitative explanations regarding the findings from the content analysis confirm presence of attainability features on a majority of platforms, furthermore, statistical support can be found for features indicating the absence of required collateral and minimum turnover, substantiating these explanations. By analyzing the findings from the survey conducted, further support is found, showing strong positive perceptions among entrepreneurs towards these features; the alternative eligibility criteria and low, but fluctuating financing fees. Therefore, based on empirical findings, substantiated by the statistical rejection of null-hypotheses for certain features, hypothesis 1 is accepted for this research paper.

Hypothesis 2 states: *"P2P invoice financing is perceived as a financing option able to address start-up companies' financing needs".* By analyzing the findings from the survey conducted, it has been revealed that in general, P2P invoice financing is seen by entrepreneurs as a valuable tool for addressing their financing needs. The characteristics attainability, flexibility and process duration, embodied by the features identified in the content analysis were perceived particularly positive by a large majority of entrepreneurs researched. Qualitative explanations regarding the findings from the survey confirm this positive perception towards characteristics of P2P invoice financing, substantiated by statistical support for the perception of entrepreneurs, based on combined data for questions in different sections, towards the characteristics of P2P invoice financing presented in the survey.

Flexibility is embodied by the ability to freely decide which invoices to finance, while the short process duration is embodied by the ability to receive financing in under 48- or even 24 hours. This shows that these characteristics of P2P invoice financing align with the characteristics- and needs of start-up companies as identified. However, accounts receivable management, as identified only by the conducted content analysis received mixed perceptions from entrepreneurs, mainly regarding the fact that this service being offered makes it visible to customers that financing is being used. Because this characteristic of P2P invoice financing was not identified by the literature review conducted, but was prominently present in the P2P invoice financing platforms researched, this should be something to consider in future research, which will be further explained in the corresponding section. Despite these mixed views on accounts receivable management, based on empirical findings, substantiated by the statistical rejection of null-hypotheses for perception towards characteristics of P2P invoice financing, hypothesis 2 is accepted for this research paper.

7.2.2 Answering the central research question

The research question formulated for this research paper states: *"Can peer-to-peer invoice financing be an attainable financing option for start-up companies to address their financing needs?"*. Based on the examination of empirical findings from both the content analysis and survey conducted, along with partial statistical significance uncovered, the 2 hypotheses constructed to address the central research question have been accepted, therefore making the answer to the central research question affirmative. The 2 hypotheses constructed as part of the analytical framework based on assumptions made from limited- and indirect academic literature existent aim to measure the alignment of P2P invoice financing characteristics with start-up companies' financing needs. First addressing the attainability of P2P invoice financing, followed by other characteristics aligning with start-up companies' limited operating history, orientation towards growth and dynamic operating environment.

Answering to the first part of the research question; P2P invoice financing is proven to indeed be an attainable financing option for start-up companies due to the reduced reliance on traditional eligibility criteria, making financing more attainable for start-up companies, often carrying higher levels of uncertainty due to their explained nature. Furthermore, for the second part of the research question, next to P2P invoice financing's inherent ability to address financing needed to accelerate cash flows and improving working capital- and liquidity rates, the flexibility- and short process duration of the financing option align with their orientation towards growth in a dynamic operating environment. The positive perception of entrepreneurs regarding the different characteristics of P2P invoice financing supports the potential of this financing option to meet their financial needs effectively. In conclusion, P2P invoice financing emerges as a promising and attainable financing option to address financing needs- and align with financing preferences of start-up companies. Due to the alignment of features, embodying characteristics of P2P invoice financing, with the financing needs of start-up companies, it can play a role in addressing their financing needs and therefore support them in their inherent orientation to exploit opportunities to growth. This research paper provides an initial understanding of P2P invoice financing, creating a foundation for both practical applications for start-up companies and P2P platforms, as well as further academic exploration of the subject in the research domains of both P2P financing and invoice financing.

7.3 Practical implications

The findings derived from this exploratory research paper lay the foundation for further academic research in different fields as described above, but also implies practical implications for both **(**managers of**)** start-up companies and P2P platforms. For start-up companies, this research paper provides valuable insights into the advantages P2P invoice financing can offer. By researching the different identified characteristics; attainability, flexibility, process duration and accounts receivable management, this research papers aims to explain how this correlates to start-up companies. This means that for entrepreneurs managing start-up companies, this research paper can serve as a guideline to decide whether or not P2P invoice financing fits with the characteristics of their specific company. Therefore, these entrepreneurs could consider P2P invoice financing as a viable financing option if these characteristics align with the financing needs- and problems faced; if their company is in need of financing to address working capital constraints, while facing challenge in attaining financing in a traditional manner, P2P invoice financing could present a viable option. For P2P invoice financing platforms, this research paper provides valuable insights into the features that are most valued by entrepreneurs, being the managers of start-up companies. This results in the conclusion that to attract start-up companies to their platform, the managers of these platforms should place emphasis on their attainable, flexible and short-term financing offerings in their marketing. Additionally, this research paper provides concerns among entrepreneurs about the consequences of offering accounts receivable management mainly in the form of visibility to customers, something which can be considered by platform managers.

7.4 Considerations

7.4.1 Limitations of research paper

Although this research paper has revealed foundational insights into P2P invoice financing, it is not without its limitations. First of all, the sample sizes for both the content analysis and the survey conducted, although being sufficient, were small. Starting with the sample size for the survey; although the sample was sufficient for an exploratory study as explained earlier, a larger sample size could enhance the generalizability of the results by capturing a wider range of perspectives, which would provide a more comprehensive understanding. Also, due to the credibility criteria for P2P platforms set to be included in the study, the sample may not cover all available P2P invoice financing platform options, particularly newer or smaller platforms. Therefore, the sample does not account for the full diversity of P2P invoice financing platforms available. Additionally, the research in this research paper was conducted from a Dutch perspective, focusing on European offerings of P2P invoice financing, which adds to this research not being fully inclusive for different parts of the world. Additionally, the demographic distribution of survey respondents in terms of age and operating duration was concentrated around a few demographic options. This concentration may have influenced the results and limits the generalizability and statistical significance of the findings. Moving on from general limitations, this research paper also possesses some shortcomings in the fact that during the empirical research conducted in the form of the content analysis, a prominent feature became present that was not found when conducting the literature review. The main feature found which is not backed by academic literature is accounts receivable management, a feature which was prominently present in the P2P invoice financing platforms researched but was not present in the indirect academic literature analyzed. During this process it was also identified that P2P invoice financing in most cases is only applicable to B2B companies, as a result of credit checks that need to be conducted. This limitation narrows the applicability of the findings to B2B contexts, both these empirical findings create an opportunity for further research to focus.

7.4.2 Future research opportunities

Building on the insights revealed by this research paper, future research should aim to address the limitations identified in the section above. By addressing these limitations, subsequent research papers on P2P invoice financing can provide a more comprehensive understanding of this financing option.

Firstly, future research could consider conducting the same research with increased sample sizes for either the content analysis, survey, or both. This would enhance the generalizability of the results, as explained earlier. This would capture a wider range of information available, contributing to a more detailed understanding of P2P invoice financing. A more extensive survey could capture a wider range of perspectives from a more diverse set of entrepreneurs, therefore a more diverse set of start-up companies, capturing the possibilities of P2P invoice financing as a financing option for more various types of companies. Additionally, by including more P2P platforms outside of the criteria set for this research paper could provide a more complete picture of the real-world P2P invoice financing landscape by capturing the full diversity of P2P invoice financing options available. Also, given that this research paper was conducted from a Dutch perspective, focusing on the European P2P invoice financing landscape, future research could explore this financing option in different geographical contexts, once again providing a more complete picture of the P2P invoice financing landscape, as well as making the findings more globally inclusive and applicable. Additionally, future research should address the demographic distribution limitations by ensuring a more diverse range of survey respondents in terms of age and operating duration. This would help in obtaining more generalizable and statistically significant results.

Another point is that future research papers could delve deeper into the characteristic of accounts receivable management, a feature identified to be prominently present in the researched P2P invoice financing platforms, while not being present in the indirect academic literature researched. Investigating this feature's impact on financing and operations of start-up companies could provide valuable insights into its benefits and challenges, contributing to a more complete understanding of P2P invoice financing. Future research could also explore the applicability of P2P invoice financing to B2C companies, examining the challenges and potential solutions for extending credit checks and financing options to these contexts.

The potential for future research described above is focused on addressing the limitations of this research paper as identified. However, since this research paper is exploratory, with the goal of laying out a foundation for a subject which is limited or indirectly focused on in existing academic literature, the future research possibilities are endless. The goal of this research paper is to open up P2P invoice financing as a subject for academic research, so future research papers can focus on further working out concepts created in this research paper or focus on totally different concepts within the scope of this subject. This means that the recommendations made in this section are purely suggestive, while not stating any concrete guidelines for further research.

8. BIBLIOGRAPHY

8.1 Appendices

Appendix 1: Full overview codes

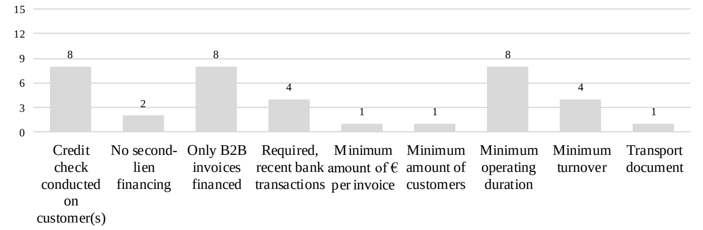
Group 1: Attainability

Sub-group: Positive

Code	Frequency	% of sample
Ability to finance invoices on second lien	6	40,00%
Not required; Collatoral	11	73,33%
Not required; Minimum amount of € per invoice	4	26,67%
Not required; Minimum turnover	11	73,33%
Not required; Prognosis	8	53,33%
Not required; Year numbers	8	53,33%
	Total	
Combined total freq. 85	48	

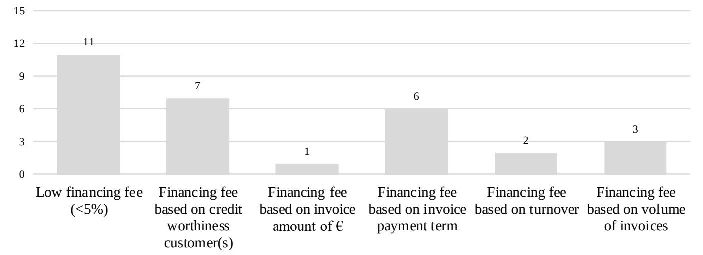
Sub-group: Negative

Code	Frequency	% of sample
Credit check conducted on customer(s)	8	53,33%
No second-lien financing	2	13,33%
Only B2B invoices financed	8	53,33%
Required, recent bank transactions	4	26,67%
Required; Minimum amount of € per invoice	1	6,67%
Required; Minimum amount of customers	1	6,67%
Required; Minimum operating duration	8	53,33%
Required; Minimum turnover	4	26,67%
Required; Transport document	1	6,67%
	Total	
	37	



Group 1.2: Invoice financing fee

Code	Frequency	% of sample
Low financing fee (<5%)	11	73,33%
Financing fee based on credit worthiness customer(s)	7	46,67%
Financing fee based on invoice amount of €	1	6,67%
Financing fee based on invoice payment term	6	40,00%
Financing fee based on turnover	2	13,33%
Financing fee based on volume of invoices	3	20,00%
	Total	
Combined total 30	30	



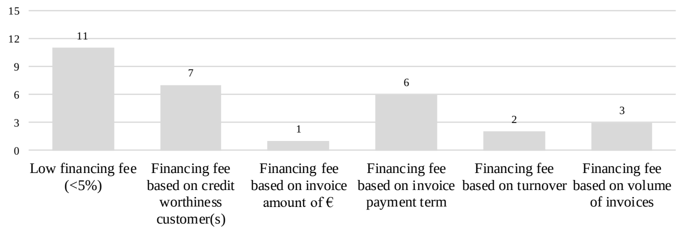
Group 2: Flexibility

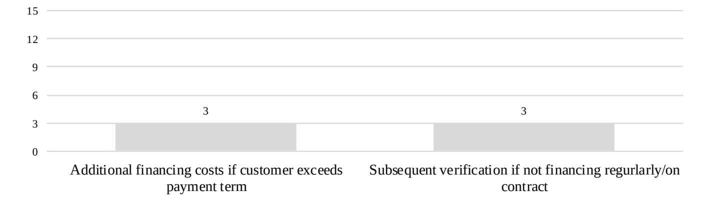
Sub-group: Positive

Code	Frequency	% of sample
Ability do decide on which financer for invoices	5	33,33%
Ability to decide which invoices to finance	15	100,00%
Contract can be terminated any time	9	60,00%
Possibility to finance an invoice partly	2	13,33%
Possibility to pay back financed invoice early	3	20,00%
	Total	
Combined total freq. 40	34	

Sub-group: Negative

Code	Frequency	% of sample
Additional financing costs if customer exceeds payment term	3	20,00%
Subsequent verification if not financing regurlarly/on contract	3	20,00%
	Total	
	6	





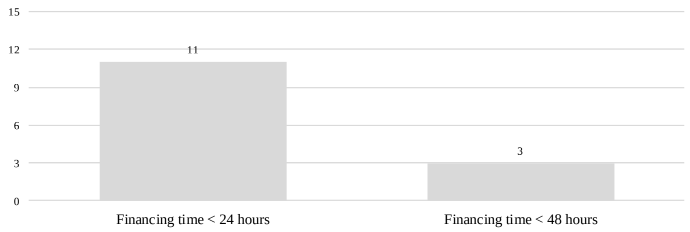
Group 3: Process duration

Sub-group: Positive

Code	Frequency	% of sample
Financing time < 24 hours	11	73,33%
Financing time < 48 hours	3	20,00%
Quick scan, insight into financing options	8	53,33%
	Total	
Combined total freq. 23	22	

Sub-group: Negative

Code	Frequency	% of sample
Financing time 1 week - 3 months	1	6,67%
	Total	
	1	



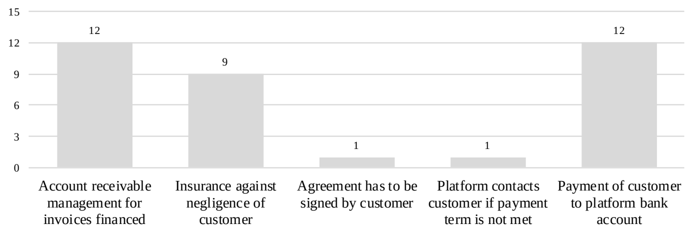
Group 4: Account receivable management

Sub-group: Present

Code	Frequency	% of sample
Account receivable management for invoices financed	12	80,00%
Insurance against negligence of customer	9	60,00%
Agreement has to be signed by customer	1	6,67%
Contact with cusomter by platform if payment term is not met	1	6,67%
Payment of customer to platform bank account	12	80,00%
	Total	
Combined total freq. 41	35	

Sub-group: Not present

Code	Frequency	% of sample
Payment of customer to own bank account	3	20,00%
Contact and collection of invoice with customer in hand	3	20,00%
	Total	
	6	



Appendix 2: Full survey

Section 1: Introduction	
Thank you for participating in this survey! My name is Noël Buker and I am a Master's student in Business Administration; Financial Management at the University of Twente. This survey is part of my master thesis in which I am researching Peer-to-Peer (P2P) Invoice Financing via a platform approach. This survey consists of four (small) parts, with 2-3 questions each. You are asked to reflect on how certain identified characteristics of P2P Invoice Financing could align with your start-up companies' needs. For each statement, you can indicate your level of agreement using a 4-point scale ranging from fully disagree, to fully agree. The survey will take about 5 minutes to complete. It is important to read all the given information carefully. All retrieved data will be processed and analyzed in a pseudonymized form, ensuring confidentially and alignment with the. So no names or personal information will be asked. The data will be used for academic purposes only and cannot be accessed by third parties. At any point in this survey, you are free to withdraw from participating.	
Q1.1 I have read the information above and understand- and consent that my data will be anonymously used for academic purposes.	
I consent	*----> Continue to Q1.2*
I do not consent	*----> Redirect to end of survey*
The research for this master thesis focusses on P2P Invoice Financing. Invoice financing (also known as factoring or accounts receivable financing) is a financing method used with the goal to improve cash flow for companies, which is done by selling- or lending against an invoice via an online platform, therefore receiving the payment earlier than the due-date of the invoice. This survey has the purpose of collecting the opinion of entrepreneurs on this type of financing, an entrepreneur in the scope of this research is considered an individual who is either actively managing their start-up company or has done this in the past.	
Q1.2 To which extend are you familiar with the concept of (Peer-to-Peer) invoice financing?	
I use / have made use of (P2P) invoice financing	*----> Give option to not participate in survey ----> Continue to Q1.3 / Redirect to end of survey*
I am familiar with the concept of (P2P) invoice financing	*----> Continue to Q1.3*
I am not familiar with the concept of (P2P) invoice financing	*----> Continue to Q1.3*
Q1.3 Are you an entrepreneur based in the Netherlands?	
Yes	*----> Continue to Q2.1*
No	*----> Redirect to end of survey*

Section 2: Attainability
P2P Invoice Financing utilizes a platform approach, which does not go through traditional financial intermediaries for attaining financing. Think about how financing can be affected, please indicate to which extend you agree with the following statements regarding P2P Invoice Financing and its absence of using traditional financial intermediaries.
Q2.1 I think that the eligibility requirements of financing relying on a minimum history or turnover and a credit-worthiness check of customers, compared to requiring financial records and a credit history, would be favourable for my start-up company.
Answer format in 4-point Likert scale
Q2.2 I think that financing with the absence of a collateral required, instead paying up to 10% of the face value, instead of providing a collateral, would be favourable for my start-up company.
Answer format in 4-point Likert scale
Q2.2 I think that the potential of paying lower financing fees would be favourable for my start-up company, while fluctuations can appear due to the financing fee being calculated on volume of invoices- or amount of € financed and the payment term.
Answer format in 4-point Likert scale

Section 3: Flexibility
P2P Invoice Financing, similar to other alternative financing methods, aims to align with the more turbulent nature- and environment of today's market. Think about how financing can be affected, please indicate to which extend you agree with the following statements regarding P2P Invoice Financing and flexibility in financing offerings.
Q3.1 I think that being able to decide which invoices to finance, instead of financing all your invoices together, once verified, would be favourable for my start-up company.
Answer format in 4-point Likert scale
Q3.2 I believe that being able to finance without long-term commitments would be favourable for my start-up company, even though this could lead to additional verification.
Answer format in 4-point Likert scale

Section 4: Process duration

P2P Invoice Financing utilizes technology to support the financing process. Think about how financing can be affected, please indicate to which extend you agree with the following statements regarding P2P Invoice Financing and its use of technology to support the financing process.

Q4.1 I think that being able to receive financing in under 48 hours, while being verified using the help of technology instead of a human would be favourable for my start-up company.

Answer format in 4-point Likert scale

Q4.2 I think that being able to view financing possibilities instantly, although not being verified yet, would be beneficial for my start-up company.

Answer format in 4-point Likert scale

Section 5: Accounts receivable management

P2P Invoice Financing is often offered in conjunction with account receivable management, in which the ownership- and management of the financed invoices if fully taken over. Think about how financing can be affected, please indicate to which extend you agree with the following statements regarding P2P Invoice Financing and the offering of account receivable management.

Q5.1 I think that the inclusion of account receivable management for financed invoices against a higher fee would be favourable for my start-up company.

Answer format in 4-point Likert scale

Q5.2 I think that the inclusion of account receivable management for financed invoices, even though the outsourcing can be noticed by customers, would be favourable for my start-up company.

Answer format in 4-point Likert scale

Section 6: Overall

Consider- and think about the different characteristics and implications of P2P Invoice Financing as discussed. Think about the opinion that you have on the potential of P2P Invoice Financing as a way of serving start-up companies' needs, please indicate to which degree you agree with the following statement.

Q6.1 I think that P2P Invoice financing could, or would've been a valuable solution for supporting the financing needs of my start-up company.

Answer format in 4-point Likert scale

Q6.2 To conclude, please share any specific experiences, opinions or additional comments that you have regarding P2P Invoice Financing as a financing option for start-up companies.

Open answer format

Section 7: Demographics

Thank you for participating in the main survey! Concluding, we have a brief final section that focuses on gathering some demographic information. Please be assured that your responses in this section, as with the rest of the survey, will remain confidential and will be used solely for the purposes of this study.
The questions in this section are optional.

Q7.1 What is your age?

Under 25	25-34	35-44	45-54	55-64	65 or above	I prefer not to answer

Q7.2 What is your highest level of education?

No formal education	Primary education	HBO Bachelor	WO Bachelor	Wo Master	Doctorate	I prefer not to answer

Q7.3 What is your nationality?

Open answer format	I prefer not to answer

Q7.4 In which industry are/were you active as an entrepreneur?

Open answer format	I prefer not to answer

Q7.5 How many years is/was your business in operation?

Less than 1 year	1-3 years	4-6 years	7-10 years	More than 10 years	I prefer not to answer

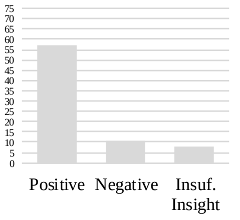
Appendix 3: Full overview survey responses

Question 2.1	Alternative eligibility criteria				
Strongly agree	24	32,00%	Positive	65	86,67%
Agree	41	54,67%			
Disagree	4	5,33%	Negative	6	8,00%
Strongly disagree	2	2,67%			
Insufficient insight	4	5,33%	Mode	Agree	

Question 2.2	Absence of collateral requirement				
Strongly agree	23	30,67%	Positive	60	80,00%
Agree	37	49,33%			
Disagree	10	13,33%	Negative	13	17,33%
Strongly disagree	3	4,00%			
Insufficient insight	2	2,67%	Mode	Agree	

Question 2.3	Financing fees				
Strongly agree	10	13,33%	Positive	46	61,33%
Agree	36	48,00%			
Disagree	6	8,00%	Negative	12	16,00%
Strongly disagree	6	8,00%			
Insufficient insight	17	22,67%	Mode	Agree	

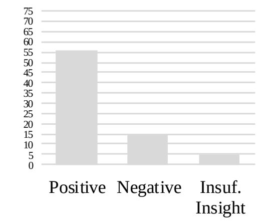
Section 2 (combined average)		
Positive	57	76,00%
Negative	10	13,78%
Insuf. Insight	8	10,22%



Question 3.1	Decide which invoices to finance				
Strongly agree	23	30,67%	Positive	56	74,67%
Agree	33	44,00%			
Disagree	11	14,67%	Negative	15	20,00%
Strongly disagree	4	5,33%			
Insufficient insight	4	5,33%	Mode	Agree	

Question 3.2	Long-term commitments				
Strongly agree	16	21,33%	Positive	55	73,33%
Agree	39	52,00%			
Disagree	11	14,67%	Negative	14	18,67%
Strongly disagree	3	4,00%			
Insufficient insight	6	8,00%	Mode	Agree	

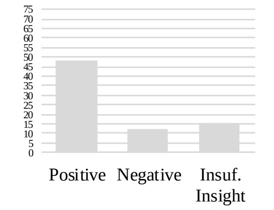
Section 3 (combined average)		
Positive	56	74,00%
Negative	15	19,33%
Insuf. Insight	5	6,67%



Question 4.1	Financing under 48 hours				
Strongly agree	22	29,33%	Positive	64	85,33%
Agree	42	56,00%			
Disagree	7	9,33%	Negative	9	12,00%
Strongly disagree	2	2,67%			
Insufficient insight	2	2,67%	Mode	Agree	

Question 4.2	Instant financing overview (unverified)				
Strongly agree	8	10,67%	Positive	32	42,67%
Agree	24	32,00%			
Disagree	8	10,67%	Negative	15	20,00%
Strongly disagree	7	9,33%			
Insufficient insight	28	37,33%	Mode	Insuf. Insight	

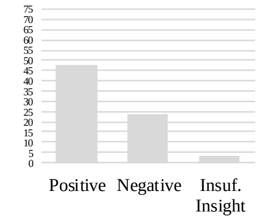
Section 4 (combined average)		
Positive	48	64,00%
Negative	12	16,00%
Insuf. Insight	15	20,00%



Question 5.1	Associated higher financing fees				
Strongly agree	20	26,67%	Positive	54	72,00%
Agree	34	45,33%			
Disagree	13	17,33%	Negative	18	24,00%
Strongly disagree	5	6,67%			
Insufficient insight	3	4,00%	Mode	Agree	

Question 5.2	Associated visibility by customer				
Strongly agree	12	16,00%	Positive	41	54,67%
Agree	29	38,67%			
Disagree	23	30,67%	Negative	30	40,00%
Strongly disagree	7	9,33%			
Insufficient insight	4	5,33%	Mode	Agree	

Section 5 (combined average)		
Positive	48	63,33%
Negative	24	32,00%
Insuf. Insight	4	4,67%



Question 6.1	General perception				
Strongly agree	26	34,67%	Positive	56	74,67%
Agree	30	40,00%			
Disagree	15	20,00%	Negative	16	21,33%
Strongly disagree	1	1,33%			
Insufficient insight	3	4,00%	Mode	Agree	

Question 6.2	Open question	
Positive	5	29,41%
Negative	5	29,41%
Neutral	7	41,18%

Appendix 4: Full overview survey demographics

Demographic distribution					
Age			**Operating duration**		
Under 25	31	41,33%	Less than 1 year	7	9,33%
25-34	17	22,67%	1-3 years	26	34,67%
35-44	9	12,00%	4-6 years	23	30,67%
45-54	5	6,67%	7-10 years	5	6,67%
55-64	1	1,33%	More than 10 years	4	5,33%
65 or above	2	2,67%			
I prefer not to answer	10	13,33%	I prefer not to answer	10	13,33%

Demographic: Age

Attainability				Flexibility				Process duration				Accounts receivable management			
Under 25	Positive	71	76,34%	Under 25	Positive	41	66,13%	Under 25	Positive	39	62,90%	Under 25	Positive	40	64,52%
	Negative	10	10,75%		Negative	17	27,42%		Negative	13	20,97%		Negative	18	29,03%
25-34	Positive	42	82,35%	25-34	Positive	28	82,35%	25-34	Positive	20	58,82%	25-34	Positive	28	82,35%
	Negative	4	7,84%		Negative	3	8,82%		Negative	3	8,82%		Negative	6	17,65%
35-44	Positive	23	85,19%	35-44	Positive	15	83,33%	35-44	Positive	12	66,67%	35-44	Positive	15	83,33%
	Negative	3	11,11%		Negative	2	11,11%		Negative	4	22,22%		Negative	3	16,67%
45-54	Positive	7	46,67%	45-54	Positive	8	80,00%	45-54	Positive	6	60,00%	45-54	Positive	5	50,00%
	Negative	4	26,67%		Negative	2	20,00%		Negative	2	20,00%		Negative	5	50,00%
55-64	Positive	3	100,00%	55-64	Positive	2	100,00%	55-64	Positive	1	50,00%	55-64	Positive	2	100,00%
	Negative	0	0,00%		Negative	0	0,00%		Negative	0	0,00%		Negative	0	0,00%
65 or above	Positive	4	66,67%	65 or above	Positive	2	50,00%	65 or above	Positive	2	50,00%	65 or above	Positive	3	75,00%
	Negative	2	33,33%		Negative	1	25,00%		Negative	1	25,00%		Negative	0	0,00%

Demographic: Years in operation

Attainability				Flexibility				Process duration				Accounts receivable management			
Less than 1 year	Positive	18		Less than 1 year	Positive	12	85,71%	Less than 1 year	Positive	10	71,43%	Less than 1 year	Positive	9	64,29%
	Negative	3			Negative	2	14,29%		Negative	3	21,43%		Negative	5	35,71%
1-3 years	Positive	67		1-3 years	Positive	40	76,92%	1-3 years	Positive	41	78,85%	1-3 years	Positive	33	63,46%
	Negative	11			Negative	10	19,23%		Negative	8	15,38%		Negative	19	36,54%
4-6 years	Positive	59		4-6 years	Positive	35	76,09%	4-6 years	Positive	34	73,91%	4-6 years	Positive	27	58,70%
	Negative	9			Negative	6	13,04%		Negative	6	13,04%		Negative	19	41,30%
7-10 years	Positive	11		7-10 years	Positive	7	70,00%	7-10 years	Positive	6	60,00%	7-10 years	Positive	5	50,00%
	Negative	3			Negative	3	30,00%		Negative	4	40,00%		Negative	5	50,00%
More than 10 years	Positive	9		More than 10 years	Positive	6	75,00%	More than 10 years	Positive	4	50,00%	More than 10 years	Positive	5	62,50%
	Negative	4			Negative	1	12,50%		Negative	4	50,00%		Negative	3	37,50%

8.2 Sources

- Bakker, M. H. R., Udell, G. F., & Klapper, L. F. (2004). Financing Small and Medium-Size Enterprises with Factoring: Global Growth and its Potential in Eastern Europe (SSRN Scholarly Paper 610386).
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2012). Crowdfunding: Tapping the Right Crowd. Journal of Business Venturing, 29.
- Beqiri, E. (2018). THE IMPLICATIONS OF INFORMATION NETWORKING AT THE PACE OF BUSINESS DEVELOPMENT. 27, 17-22.
- Berger, A. N., & Udell, G. F. (2006). A more complete conceptual framework for SME finance. Journal of Banking & Finance, 30(11), 2945-2966.
- Bird, B. (1988). Implementing Entrepreneurial Ideas: The Case for Intention. The Academy of Management Review, 13.
- Blank, S. (2013, mei 1). Why the Lean Start-Up Changes Everything. Harvard Business Review.
- Block, J., Hornuf, L., & Moritz, A. (2018). Which updates during an equity crowdfunding campaign increase crowd participation? Small Business Economics, 50.
- Brown, R., & Lee, N. (2014). Funding issues confronting high growth SMEs in the UK. LSE Research Online Documents on Economics, Article 57264. https://ideas.repec.org//p/ehl/lserod/57264.html
- Brush, C., Carter, N., Gatewood, E., Greene, P., & Hart, M. (2006). The Use of Bootstrapping by Women Entrepreneurs in Positioning for Growth. Venture Capital: An International Journal of Entrepreneurial Finance, 8, 15-31.
- Brush, C. G., Greene, P. G., & Hart, M. M. (2001). From initial idea to unique advantage: The entrepreneurial challenge of constructing a resource base. Academy of Management Perspectives, 15(1), 64-78.
- Bruton, G., Khavul, S., & Wright, M. (2014). New Financial Alternatives in Seeding Entrepreneurship: Microfinance, Crowdfunding, and Peer-to-Peer Innovations. Entrepreneurship Theory and Practice, 39.
- Bryman, A. (2012). Social Research Methods. OUP Oxford.
- Cassar, G. (2004). The financing of business start-ups. Journal of Business Venturing, 19(2), 261-283.
- Davila, A., Foster, G., & Gupta, M. (2003). Venture capital financing and the growth of startup firms. Journal of Business Venturing, 18(6), 689-708.
- DeVellis, R. F. (2016). Scale Development: Theory and Applications. SAGE Publications.
- Dushnitsky, G., & Shapira, Z. (2010). Entrepreneurial finance meets organizational reality: Comparing investment practices and performance of corporate and independent venture capitalists. Strategic Management Journal, 31(9), 990-1017.
- Ebben, J., & Johnson, A. (2006). Bootstrapping in small firms: An empirical analysis of change over time. Journal of Business Venturing, 21, 851-865.
- Fowler, F. J. (2014). Survey Research Methods. SAGE Publications.
- Freel, M. S., & Robson, P. J. A. (2004). Small Firm Innovation, Growth and Performance: Evidence from Scotland and Northern England. International Small Business Journal, 22(6), 561-575.
- Frost, J. (2023). How to Analyze Likert Scale Data. How To Analyze Likert Scale Data.
- Gilbert, B. A., McDougall, P. P., & Audretsch, D. B. (2006). New Venture Growth: A Review and Extension. Journal of Management, 32(6), 926-950.
- Hair, J. F., Babin, B. J., Black, W. C., & Anderson, R. E. (2019). Multivariate Data Analysis. Cengage.
- Harpe, S. E. (2015). How to analyze Likert and other rating scale data. Currents in Pharmacy Teaching and Learning, 7(6), 836-850.
- Herring, S. (2010). Web Content Analysis: Expanding the Paradigm (pp. 233-249).
- Howell, S. T. (2017). Financing Innovation: Evidence from Grants. American Economic Review, 107(4), 1136-1164.
- Johnson, R. A., & Wichern, D. W. (2007). Applied multivariate statistical analysis (6. ed). Pearson/Prentice Hall.
- Kickul, J., & Gundry, L. (2008). Prospecting for Strategic Advantage: The Proactive Entrepreneurial Personality and Small Firm Innovation. Journal of Small Business Management, 40, 85-97.
- Klafft, M. (2008). Online Peer-to-Peer Lending: A Lenders' Perspective. 371-375.
- Krippendorff, K. (2018). Content Analysis: An Introduction to Its Methodology. SAGE Publications.
- Lerner, J., & Gompers, P. (2001). The Venture Capital Revolution. Journal of Economic Perspectives, 15, 145-168.
- Lin, M., Prabhala, N. R., & Viswanathan, S. (2013). Judging borrowers by the company they keep: Friendship networks and information asymmetry in online peer-to-peer lending. Management Science, 59(1), 17-35.
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. Journal of Business Venturing, 29(1), 1-16.

- Moro-Visconti, R. (2020). Cash flow forecasting of debt-free startups.
- Morrel-Samuels, P. (2002, februari 1). Getting the Truth into Workplace Surveys. Harvard Business Review.
- Neuendorf, K. A. (2016). The Content Analysis Guidebook (Second edition). SAGE Publications, Inc.
- Pierrakis, Y. (2019). Peer-to-peer lending to businesses: Investors' characteristics, investment criteria and motivation. The International Journal of Entrepreneurship and Innovation, 20(4), 239-251.
- Pourebrahimi, B., Bertels, K., & Vassiliadis, S. (2005). A survey of peer-to-peer networks. Proceedings of the SAFE & ProRISC 2005, 570-577.
- Reid, G., & Smith, J. (2000). What Makes a New Business Start-Up Successful? Small Business Economics, 14, 165-182.
- Ries, E. (2011). The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.
- Robb, A. M., & Robinson, D. T. (2014). The Capital Structure Decisions of New Firms. Review of Financial Studies, 27(1), 153-179.
- Sekaran, U., & Bougie, R. (2016). Research Methods For Business: A Skill Building Approach. John Wiley & Sons.
- Shane, S., & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. The Academy of Management Review, 25(1), 217-226.
- Stam, E., & Garnsey, E. (2007). Entrepreneurship in the Knowledge Economy. Creating Wealth from Knowledge: Meeting the Innovation Challenge.
- Stebbins, R. (2001). Exploratory research in the social sciences: What is exploration? Exploratory Research in the Social Sciences, 2-18.
- Stice, D., Stice, E., & Stice, J. (2017). Cash Flow Problems Can Kill Profitable Companies (SSRN Scholarly Paper 3057698).
- University of Twente. (2024). Guideline on Ethics, Privacy & Research data Management BMS.
- Vieira, P. (2016). T-Test with Likert Scale Variables. SSRN Electronic Journal.