BCT Crowdfunding: Is It the Bridge of *Trust* Required for Funding EU's SMEs?

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Abstract

Small and medium-sized enterprises (SMEs) are the cornerstone of the European eDaconomy, representing 99.8% of all businesses and providing 66% of employment. Despite their critical role, SMEs face significant challenges in accessing traditional financing, particularly in the aftermath of the 2008 financial crisis, which led to a reduction in riskier lending by banks. Crowdfunding has emerged as a viable alternative, offering a decentralized and democratized avenue for raising capital, especially through platforms powered by blockchain technology.

This paper explores the potential of blockchain technology (BCT) to revolutionize crowdfunding within the European Union (EU), addressing the critical financial needs of SMEs. BCT enhances transparency, trust, and efficiency in crowdfunding by enabling features such as tokenization, smart contracts, and decentralization. These innovations offer solutions to longstanding issues in traditional finance, such as fraud, information asymmetry, and the reliance on intermediaries.

However, the paper also highlights the limitations and challenges of crowdfunding in Europe, particularly the disparities in crowdfunding trends between the UK, Nordic countries, and the rest of the EU. Financial data from 2018 and projections for 2023 reveal that while the number of crowdfunding campaigns in the EU is growing, the per-campaign value remains significantly lower compared to the UK, reflecting a continued focus on smaller-scale investments.

The integration of BCT into crowdfunding practices presents both opportunities and obstacles. Although it offers a promising path to more efficient and secure funding mechanisms, the successful implementation of BCT will require coordinated efforts from governments, regulatory bodies, financial institutions, and technology developers to navigate the complex legal and technological landscape.

In conclusion, while blockchain-based crowdfunding has the potential to reshape SME financing in Europe, realizing its full benefits will demand proactive engagement with emerging challenges and continuous adaptation to evolving regulatory frameworks.

Keywords: blockchain, crowdfunding

JEL classification: O52, M13, G23

1. Introduction

Small and medium-sized enterprises (SMEs) serve as the backbone of the European economy, constituting 99.8% of all businesses and generating employment opportunities for 66% of the population (European Commission, 2019). Within this landscape, the manufacturing sector relies significantly on SMEs, which contribute to 58% of jobs and 42% of the total value (European Commission, 2017). The continuous competitiveness of European SMEs hinges on their capacity for innovation. While economic activity has become more decentralized and vertically integrated enterprises less common, global value chains have expanded substantially over recent decades (Kano et al., 2020).

In an ideal scenario, startups and SMEs would have unrestricted access to capital, fostering innovation and driving economic growth. However, due to their size and ownership structure, they remain vulnerable to external shocks, posing challenges for sustaining profitability and liquidity (European Commission, 2019). Despite efforts, financial institutions like commercial and investment banks have fallen short in providing adequate funding for small businesses, resulting in a disparity between the supply and demand for capital in reality. An unfortunate

misconception has emerged, portraying SMEs as inherently risky and flawed due to issues such as insufficient planning and funding (Eldridge et al., 2021).

SMEs, which not only underpin economies but also fuel growth, require diverse financing avenues (Gros, 2018). Crowdfunding has gained prominence as an alternative to traditional bank financing, especially following the aftermath of the 2008 global financial crisis, which prompted banks to curtail riskier lending to new ventures. Crowdfunding, a recent

innovation in banking and finance (Ahlstrom et al., 2018), has become standard practice across various European industries, encompassing traditional corporate finance, venture capital, and even real estate. Dedicated crowdfunding platforms have emerged, democratizing investment and enabling individuals to financially support enterprises with even modest sums of money. Recent regulatory changes further facilitate this process, broadening the reach of crowdfunding campaigns.

The rapid growth of crowdfunding in Europe can be attributed largely to the dearth of conventional funding options available to SMEs in the region. While initiatives by the European Commission have improved the situation by providing subsidies and guarantees to financial institutions supporting SMEs, not all small businesses benefit from these measures. Consequently, banks, non-bank lenders, and crowdfunding platforms remain the primary sources of capital for many enterprises (Germanavicius, 2022).

Effective fundraising hinges on creating compelling propositions that resonate with potential investors. Entrepreneurs can sway support toward their new ventures, products, and services by presenting engaging content, be it written, visual, or auditory. Crowdfunding platforms have disrupted traditional channels by directly connecting creators with online audiences, circumventing intermediaries like banks, venture capitalists, and angel investors (Vismara, 2016). These platforms act as "network orchestrators," simplifying the process of navigating the extensive array of choices (Vrontis et al., 2020). Crowdfunding serves not only as a means to raise capital for diverse expenses such as business startups, creative projects, or medical expenses, but also as a channel for contributing to charitable and socially conscious endeavors (Camilleri & Bresciani, 2022).

The proliferation of digital financial services introduces a novel approach to providing a wide range of financial products and services to economically marginalized populations in a sustainable and cost-effective manner. Recent advancements in the financial sector, including microfinancing, mobile payments, crowdfunding, and blockchain technology, are enhancing the availability of financial resources to underserved communities. Notably, the widespread adoption of crowdfunding platforms and blockchain has created new avenues to reach financially stable individuals, households, and businesses (Muneeza et al., 2018).

The application of BCT in crowdfunding platforms is a new topic that has not been researched so far. That is why most of the works published in the field are new and have hardly been reviewed. included many arguments in this field which are innovative in nature and therefore difficult to academically criticize. However, some recently published studies show how much BCT applications are expected to have a substantial impact on the growth prospects of crowdfunding platforms.

Guggenberger et al (2024) discuss how blockchain-based tokens can enhance the crowdfunding process, particularly for early-stage companies, by addressing existing funding mechanisms and providing more equal opportunities for entrepreneurs and investors. They demonstrate that in order to succeed blockchain-based equity tokens are required to for platforms' transparency and interoperability while meeting regulatory requirements and facilitating secondary market trading. Zkik et al. (2024) research focuses on security aspects of blockchain crowdfunding platforms, emphasizing the potential for machine learning and advanced technologies to enhance platform security Midha et al. (2024) compare traditional platforms and blockchain powered platforms. Results indicate that blockchain platforms outperform traditional ones in several key areas, including faster transaction processing and lower fees.

The subsequent sections of this work are structured as follows. The following chapter delves into an exploration of the advantages brought about by Blockchain Technology (BCT) for crowdfunding platforms. In the subsequent chapter, an in-depth analysis of the limitations surrounding crowdfunding within the European Union (EU) is presented. The fourth chapter is dedicated to an examination of the current transient insufficiencies of BCT in meeting the financing needs of Small and Medium-Sized Enterprises (SMEs). Lastly, the final chapter serves as a comprehensive discussion, offering a synthesis of the findings and insights gleaned from the preceding chapters.

2. Benefits of BCT for Crowdfunding Platforms

A blockchain comprises interconnected encrypted blocks, serving as a shared digital ledger duplicated across all network nodes. Each blockchain block contains transaction details, data, hashes, and timestamps. After achieving

consensus, new blocks are added to the network. The blockchain frenzy aims to create digital currency enabling fee-free, direct transactions (*EuromoneyLearning, 2022*).

Future investors will demand a primary position. Stakeholders wish to monitor an organization's progress toward goals to provide informed support. This requires transparent and independently verified financial data, a challenge solved by blockchain technology. As an open-source, decentralized solution, blockchain eradicates trust issues when exchanging money between parties. Despite its novelty, blockchain has real-world applications, including crowdfunding (Choudary, 2021).

Among the benefits of applying Blockchain technology to crowdfunding are:

1. **Tokenization:** Fundraising event tokens are secure and transparent, traceable and verifiable, reducing fraud risk and boosting investor confidence. Tokens can power project launches and manage funds (*OpenGeeksLab, 2021*).
2. **Smart Contracts:** Smart contracts, executable code running on the blockchain, simplify agreement enforcement and rule creation. Various blockchains like Bitcoin, NXT, and Ethereum execute smart contracts. They facilitate automatic execution based on predefined conditions (Tsankov et al., 2018). Smart contracts erect barriers to prevent unauthorized or fraudulent fund dispersal. Funds are automatically transferred to the receiving party upon meeting conditions.
3. **Transparency:** Blockchain transparency fosters an inclusive distribution of voting rights, a leveling factor in corporate governance. Public voter information combats fraudulent voting. Cross-industry cooperation benefits from transparency by detecting market changes and maintaining equilibrium (Swan, 2015).
4. **Decentralization:** Start-ups no longer need intermediary platforms for fundraising, eliminating platform guidelines and associated fees. Crowdfunding becomes accessible to all income levels.

Blockchain's benefits extend to fraud prevention, money laundering mitigation, and information asymmetry reduction. Investors scrutinize block data to verify project legitimacy, enhancing crowdsourcing efficiency. Blockchain can navigate regulatory challenges, potentially reviving or boosting crowdfunding, even in restricted or weak governance contexts (Valanciene & Jegeleviciute, 2013).

In essence, blockchain technology amplifies transparency, trust, and efficiency in crowdfunding, revolutionizing the landscape and empowering diverse stakeholders.

3. Limitations of Crowdfunding in Europe

While crowdfunding offers a promising avenue for financing, it comes with its share of challenges that should not be overlooked. Crowdfunding may not be a comprehensive replacement for existing funding methods due to certain inherent drawbacks, similar to those faced by traditional funding sources. Equity-seeking entrepreneurs might struggle to attract investors, as they possess a deeper understanding of their idea's value compared to external parties. Requiring extensive disclosure to engage the crowd could raise concerns about devaluing the initiative. Public forums, like crowdfunding websites, may deter those seeking funds due to a lack of non-disclosure agreements, which are more enforceable with banks.

The herd mentality is another issue, where investors tend to follow others' opinions as an indicator of project quality. The all-or-nothing nature and collective intelligence of crowdfunding may lead to only a few proposals securing funding. Entrepreneurs with limited networks or financial backing may encounter challenges in gaining traction, reinforcing similarities to traditional finance and class biases. Implementing upper limits on investment amounts, the number of investors, and individual ownership percentages has been suggested to counter hoarding tendencies (Agarwal et al., 2013).

The crowdfunding landscape in the European Union (EU) is less mature than in other major economies, with significant obstacles hindering international expansion. Inconsistent rules and varying licensing requirements across EU member states impede the efficient scaling of crowdfunding platforms. Compliance and operational costs remain high, resulting in reduced financing options for small businesses and increased complexities for cross-border investments.

Graph A

The graphs were processed from the databases of the Cambridge Center for Alternative Finance and the European Crowdfunding Network

Graph A demonstrates the distribution of mass mobilization in the EU compared to neighboring countries - Great Britain (which in 2018 was still part of the EU - but was not included in the 2018 data set) and the Nordic countries.

A relatively large part of EU's crowdfunding is directed to donations or *reward basis*. The data show about 30% of the total value of crowdfunding, compared to 25% in the Nordic countries and only 20% in the UK. No significant change is observed between 2018 and 2023.

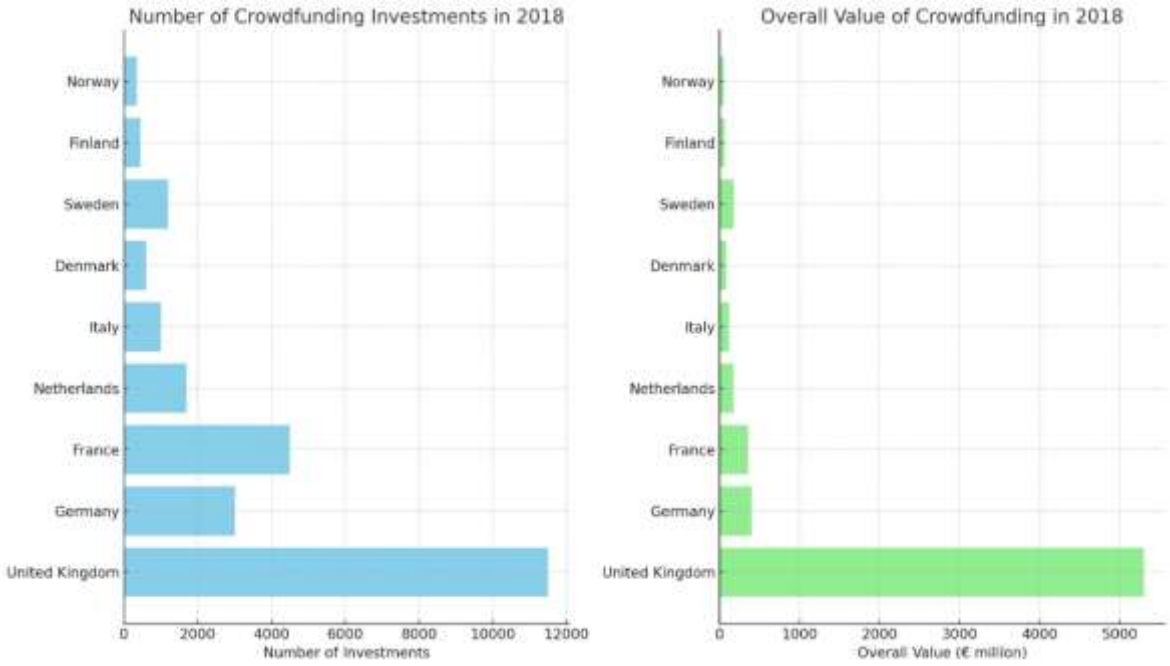
The complementary part is business-oriented crowdfunding: 70% in the EU, 75% in the Nordic countries, 80% in the UK.

Delineation between investment-based and loan-based crowdfunding is apparent under European law. Investment-based platforms often require MiFID II authorization to operate across the EU, though certain firms meeting equivalent standards may gain exemptions. Loan-based crowdfunding necessitates credit intermediation, money management, and debt collection. However, varying regulatory frameworks across member states lead to challenges in obtaining necessary licenses for crowdlending operations. Such complexities restrict the growth of crowdfunding platforms and may limit funding opportunities for a select number of initiatives (Collomb et al., 2019).

Another aspect reflecting the disparity in investment trends through crowdfunding platforms within the EU is evident in the financial data.

Graph B-1 illustrates the number of campaigns by country in 2018. The total number of campaigns in the United Kingdom reached 11,550, compared to 4,400 in France, 3,480 in Germany, 1,700 in the Netherlands, and 820 in Italy—these being the top four countries in crowdfunding within the EU. Remarkably, the total number of campaigns in these EU countries combined was still lower than in the UK alone.

Graph B-1

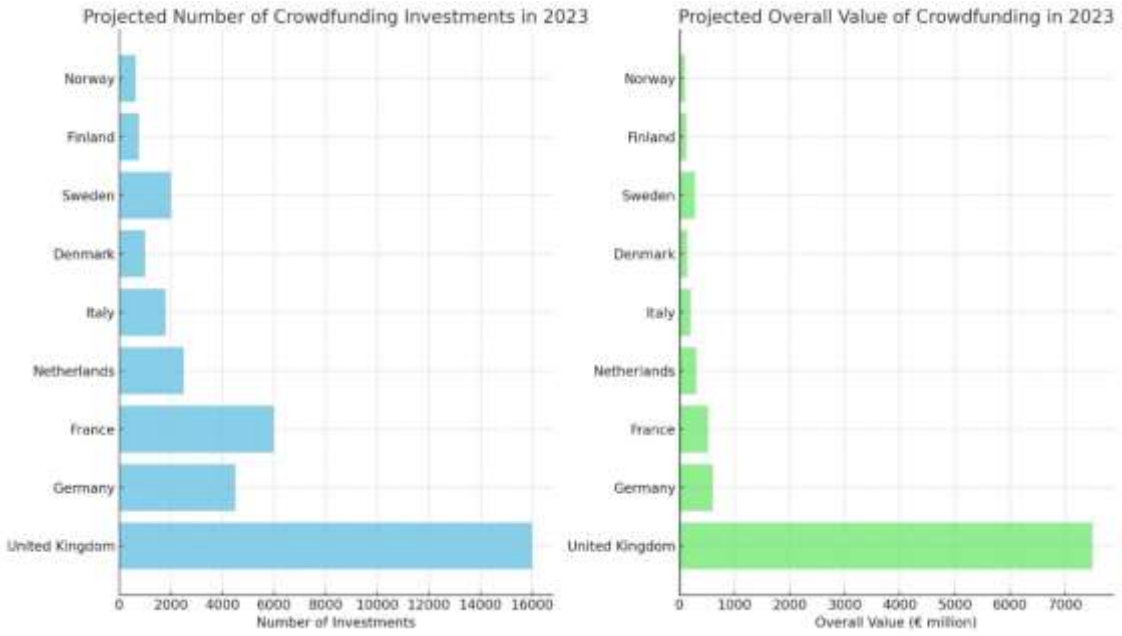


The graphs were processed from the databases of the Cambridge Center for Alternative Finance and the European Crowdfunding Network

When considering the per-campaign value, the differences become even more pronounced. In 2018, an average crowdfunding campaign in the UK raised approximately €478,000. In comparison, the average campaign in Germany raised €88,000, in France €103,000, in the Netherlands €133,000, and in Italy €115,000.

Graph B-2 shows the number of campaigns by country in 2023. The total number of campaigns in the UK increased to 16,100, while in the EU, France had 5,900, Germany 4,450, the Netherlands 2,200, and Italy 1,660 campaigns—these countries remain the leading crowdfunding nations within the EU. By 2023, the total number of campaigns in these EU countries combined had reached parity with the UK.

Graph B-2



The graphs were processed from the databases of the Cambridge Center for Alternative Finance and the European Crowdfunding Network

However, despite this increase in the number of campaigns, there was no significant improvement in the per-campaign value, indicating that a smaller proportion of campaigns were focused on raising larger investments. In 2023, the average crowdfunding campaign in the UK raised about €469,000, showing little change from 2018. In Germany, the average fundraising value saw a substantial increase to €195,000. However, in France, the average remained below €110,000, and in the Netherlands and Italy, we even anticipate a decrease in average campaign value to €95,000 and €90,000, respectively.

4. The Boundaries of Embedding BCT in Europe

The application of blockchain technology carries potential advantages and challenges that are context-specific and use-case-dependent. While blockchain offers promise in streamlining crowdfunding processes, including stock registration, equity transactions, and shareholder voting, there are numerous legal and technological issues to address before widespread adoption (Guo & Liang, 2016).

Contrary to misconceptions, blockchain doesn't require the complete elimination of intermediaries; traditional intermediaries, such as governments, will likely continue to play essential roles. Factors like ensuring fair opportunities, information accuracy, assigning accountability, conflict resolution, and agreement enforcement will sustain their significance. Policymakers and regulators must determine if existing frameworks are sufficient for blockchain's application or if new regulations are necessary. Topics such as consumer and investor protection, anti-money laundering compliance, and data privacy are central to the legal classification of tokens and currencies (Muneeza et al., 2018).

Compliance with the EU's General Data Protection Regulation (GDPR) is mandatory for all businesses, regardless of blockchain utilization. While blockchain networks often don't require personal information for participation, tracking activities back to individuals is challenging. Many established financial laws and practices don't align with blockchain's decentralized nature, requiring adaptations.

The regulatory landscape for blockchain-based crowdfunding and cryptocurrency investment varies across regions. The European Union's approach involves voluntary guidelines for initial coin offerings (ICOs) and crowdfunding, allowing flexibility. However, discrepancies and uncertainties remain, limiting seamless expansion.

The initial coin offering (ICO) market, despite its novelty, has revealed flaws reminiscent of traditional financial markets. These issues challenge the decentralization and disintermediation claims associated with blockchain. Tax considerations are complex, with ICOs potentially falling under various taxable categories based on location and investment nature. Inconsistent classification of cryptocurrency transactions as subject to value-added tax (VAT) rules adds further complications, creating regulatory uncertainties (Olivato, 2019).

In conclusion, while blockchain holds promise in revolutionizing crowdfunding and financial systems, significant legal, regulatory, and practical hurdles must be addressed before widespread implementation can be achieved.

5. Benefits of BCT for Crowdfunding Platforms in the EU

A blockchain consists of interconnected encrypted blocks, serving as a shared digital ledger duplicated across all network nodes. Each block contains transaction details, data, hashes, and timestamps. Upon achieving consensus, new blocks are added to the network, embodying the blockchain's pursuit of fee-free, direct transactions and digital currency creation (EuromoneyLearning, 2022).

Investors of the future will seek a primary position. Stakeholders aspire to monitor an organization's progress toward goals for informed support. This necessitates transparent, independently verified financial data, a challenge addressed by blockchain technology. As an open-source, decentralized solution, blockchain eradicates trust issues when exchanging funds between parties. Despite its novelty, blockchain finds real-world applications, notably in crowdfunding (Choudary, 2021).

Benefits of applying Blockchain technology to crowdfunding encompass:

1. **Tokenization:** Fundraising event tokens assure security, transparency, traceability, and verifiability, mitigating fraud risks and enhancing investor confidence. These tokens can fuel project launches and fund management (OpenGeeksLab, 2021).
2. **Smart Contracts:** Smart contracts, executable code within the blockchain, simplify enforcement of agreements and rule creation. Bitcoin, NXT, Ethereum, and other blockchains execute smart contracts, automating actions based on predefined conditions (Tsankov et al., 2018). Smart contracts act as barriers, preventing unauthorized or fraudulent fund dispersal and ensuring automatic transfer upon condition fulfillment.
3. **Transparency:** Blockchain's transparency fosters equitable voting rights distribution, a leveling force in corporate governance. Public voter data combats fraudulent voting, and cross-industry collaboration benefits from transparency by identifying market changes and maintaining equilibrium (Swan, 2015).
4. **Decentralization:** Start-ups are liberated from intermediary platforms for fundraising, bypassing guidelines and associated fees. This democratizes crowdfunding accessibility, catering to all income levels.

Blockchain's advantages extend to fraud prevention, money laundering deterrence, and reduction of information asymmetry. Investors meticulously analyze block data to verify project authenticity, heightening crowdsourcing efficiency. Blockchain adeptly navigates regulatory challenges, potentially reinvigorating or enhancing crowdfunding, even in constrained or weak governance settings (Valanciene & Jegeleviciute, 2013).

In essence, blockchain technology magnifies transparency, trust, and efficiency within crowdfunding, reshaping the landscape and empowering a diverse spectrum of stakeholders.

6. Discussion

In the realm of small and medium-sized enterprises (SMEs) and entrepreneurs, bank loans have long been the primary external financing source. Conventional loans are essential for these businesses to meet initial financial, operational, and capital expenditure needs. However, securing traditional bank finance can be challenging for small businesses, particularly those that are innovative, young, or rapidly expanding, due to their higher risk profiles. Since the onset of the current economic and financial crisis, banks have curtailed lending to businesses significantly. In response to these challenges, crowdfunding has emerged as a viable alternative fundraising method, fueled by factors such as limited available funds, the proliferation of social media, and user-friendly online platforms.

Crowdfunding holds particular importance for start-ups and small enterprises, especially during periods of economic instability and employment uncertainty. This significance is even more pronounced for newer businesses entering the market. Consequently, governments should streamline the loan application process for small businesses. A unified legal framework across all European Union member states would foster economic growth and new business creation. Despite conducive conditions, crowdfunding has faced hurdles within the European Union (EU).

Crowdfunding is a pivotal solution for entrepreneurs lacking the resources to establish their ventures, as evidenced by the ongoing expansion of the industry. Regulations governing fundraising activities within the EU have emerged due to concerns over unethical practices like money laundering, information asymmetry, and fraud, rendering conventional crowdfunding ineffective. Nonetheless, blockchain technology holds promise for the future of crowdfunding on a global scale. By revolutionizing administrative processes while preserving legal safeguards, blockchain aims to achieve its objectives without violating commercial activity laws. The transparency inherent in blockchain's distributed public ledger enables online business transactions free from external interference. The foremost benefit of blockchain technology is its complete eradication of information asymmetry, benefiting all parties involved in transactions requiring legitimacy confirmation.

7. Conclusions

While BCT holds the potential to revolutionize crowdfunding in the EU, its successful implementation requires collaborative efforts from governments, regulatory bodies, financial institutions, and technology developers. Addressing challenges and harnessing the full potential of BCT will require a proactive approach and continuous adaptation to the evolving technological and regulatory landscape.

The integration of Blockchain Technology has the potential to reshape and improve crowdfunding practices within the European Union. Its transparency, efficiency, and security features can address existing challenges and open new avenues for SME financing and investor participation. However, the journey toward realizing these benefits necessitates careful navigation of regulatory complexities and technological advancements.

In conclusion, crowdfunding platforms leveraging blockchain technology bring transparency, trust, and efficiency to the forefront, reshaping the landscape and empowering diverse stakeholders.

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