

VIKTORIA SOLTESZ

MOVING MONEY

HOW BANKS THINK

2nd edition

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Foreword

Have you ever ordered anything online? If your answer is yes, then you've used online payments. This typically involves your debit or credit card, mobile wallet, or any other payment method you've used to send money for the item you just purchased.

But have you ever thought about the journey your money takes? How it leaves your bank, the steps the funds must go through, and the systems involved? What challenges the banking system may face, which could impact you? Why do some payments go through while others get blocked? Why does an online business choose one specific payment provider over another? What decisions do banks have to make to ensure that money is handled as quickly and securely as possible?

Even though millions use online payments every day, the details of how these payments actually work remain unknown to most. Businesses constantly make decisions about finances, costs, and technology, yet many don't consider planning for their payment flows. While companies expand into new markets and invest millions in marketing, they may be incurring unnecessary banking fees and facing payment risks without even considering their impacts.

As we know, knowledge is power. If we understand the reasons and mechanisms behind a process, we can assess its risks, evaluate its costs, and make better, informed decisions about them. Online payments are often viewed as a necessary tool, but if we're curious

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enough to explore the real workings of the economy and global banking systems, we can uncover the language of payments. Transforming banks into allies while streamlining and minimizing risk and expenses can be more profitable than we ever imagined.

An ever-changing landscape

Over the years, the banking system has undergone remarkable transformations that have revolutionized the payments industry and transformed the way transactions are processed. These new technologies, compliance requirements, and seamless market integrations have introduced myriad changes, both positive and negative. Consumers, online businesses, banks, financial institutions, and all types of so-called 'Payment Service Providers' (PSPs) are constantly required to adapt, innovate, and improve.

We have moved well beyond the times when we depended exclusively on traditional cash or physical Point-of-Sale (POS) terminals. The advent of online payments has revolutionized the way we make purchases, allowing us to complete transactions instantly and effortlessly with just a few taps on a screen, transcending geographic boundaries. In this digital era, financial technology (fintech) companies have emerged as the new titans, reshaping the financial landscape with innovative methods to optimize payments. From cryptocurrencies to e-vouchers and gift cards, these new payment avenues have further expanded the scope of possibilities.

Using payments for any kind of business, whether large or small, requires an understanding of the complexities of banking and payment processing at its core. Throughout this book, we will explore the fundamental concepts, tried and tested techniques, and industry best practices of this specialized sector of the financial market.

Understanding the basics

Since businesses went online, understanding the fundamentals of digital banking and payment processing became not just a good-to-know, but a need-to-know. Here is why:

- Knowledge of specific payment terms helps with making informed business decisions about funds and finances.
- Picking the right banking or payment provider is important to stay ahead of the competition and provide the best customer experience while enhancing the business's financial operations and payment flows.
- Choosing the right banking or payment provider can also reduce costs and risks significantly.
- With in-depth knowledge about certain regulatory requirements, we can understand various banking decisions, and plan more efficiently when moving funds or expecting payments.

Understanding the roles of the various financial parties involved in a transaction is essential for successful business operations. However, staying ahead of the curve, and being knowledgeable about emerging trends, evolving practices and policy shifts in the finance sector can be a very costly and time-consuming exercise.

This is where payment literacy comes in to play. While traditional courses may cover how the economy and banks work, but they often don't explore their impact on online payments.

This book aims to bridge that knowledge gap by providing you the following:

- A detailed explanation of basic banking principles.

- Comprehensive and fundamental knowledge of online payment solutions.
- A better understanding of the requirements, risk policies, and compliance limitations associated with online payments, tracing their evolution from the basics of the economy and banking.
- Ideas on how to stay informed about emerging trends, positioning yourself at the forefront of innovation, meeting evolving customer demands, and seizing new growth opportunities.
- Exploration of various payment methods used globally and an understanding of why using different payment methods is essential for maximizing customer satisfaction, aiding in both client acquisition and retention.
- An understanding of the numerous regulations and compliance requirements in place to prevent fraud, ensure data security, and protect consumer rights. By grasping these regulations, companies can more effectively navigate complex legal landscapes, maintain compliance, and safeguard sensitive business and customer information.
- Finally, insights on how to create an overall payment plan for a complex online business, allowing you to apply your newfound knowledge practically.

A brief history lesson

Let's take a trip back in time to the days when people had small corner shops, selling goods to local customers. Back then, the main thing business owners had to worry about was their location and how to get people through the door. There were no difficulties in accepting payments at all. The customers simply came in and paid for the goods with cash or cheques, which were later taken to the banks in bulk. The only payment-related issue was making sure that there was enough change available in the cash register.

The concept of credit cards began to take shape in the 1950s in America, when Diners Club allowed regulars to charge their restaurant bills to a card. Over the next decade, American Express and Bank of America introduced their own versions of credit cards. Later, credit card networks, such as Visa and Mastercard were born, allowing cardholders to use their cards at more and more places, making them not only widely accepted, but super convenient.

Online banking is not new either. The first home banking service was offered in 1980 by the United American Bank. In 1995, Wells Fargo was the first U.S. bank which added account services to its website, and shortly thereafter, in 1996, OP Financial Group became the second online bank in the world and the first in Europe.¹

As digital channels and online banking became more common, shop owners implemented card reading machines to receive

¹ <https://en.wikipedia.org/>

immediate deposits to their bank accounts. This not only spared the tiresome and sometimes unsafe trips to the bank with the physical cash and cheques but also offered a new way for customers to buy on the bank's credit, which further increased sales. Shop owners could store their funds on their accounts immediately, securely and in a more convenient way, while the administration also became easier with instant record keeping and reconciliation.

The ever-growing popularity of Internet shopping also helped businesses to move out of the local high street and become fully global. By going online, many companies switched their main business from physical to digital. The 2020 pandemic further accelerated these changes in consumer habits, giving businesses the ability to reach customers in new jurisdictions and increase their shopping volumes exponentially. The rest, as they say, is history.

About the author - Viktoria Soltesz

I was never particularly clever or gifted with any financial or numerical knowledge, but I was curious, and I was always interested to find out how things worked. Understanding details always fascinated me, and I could spend hours digging through books which answered my many questions about the world around me. I was especially moved by why certain things happened in the world as they did. I guess curiosity is still my best trait, and this hunger for knowledge led me to become an online payment specialist.

Many businesses are created out of frustration over a lack of better options. This was the case with me as well. I started my online payment consultancy because I simply could not get certain answers to my questions. I wanted to know why subjective prices, undeveloped technologies, and seemingly confusing solutions existed in both payments and banking. Some things just did not make sense. I wanted to know how money moves, and why it stops. But after several years of extensive search, it seemed like I had more questions than answers. This triggered me more; I could not give up. I needed to know how banks think, who controls them and why. When I started to ask the right questions, finally I started to see the 'big picture' which explained certain connections and put things into the right perspective. It was unbelievable, but fascinating at the same time, that no one seemed to get it all figured out.

I knew if I am confused, there must be many others, too.

This was the time when I decided that I will collect all the banking and payment industry's wisdom which I could get my hands on, translate it to 'understandable', and share it with anyone who needs to hear it. First, with my clients at my consultancy, but since more and more people were amazed by some of my stories, I have decided to write it all down in a book and share it with the world. Today, my goal is to make payments easy, and to answer the most popular banking and payment-related questions which fills all the knowledge gaps about an industry which nobody seems to have a full understanding of.

Hungary

Allow me to share the journey that brought me to where I am today. I grew up in Budapest, Hungary, where I earned both a bachelor's degree in accounting and a master's degree in economics.

While I was interested in law, my parents always told me that "Whoever works with money, earns money." Needless to say, I liked money, so I decided to stay close to it. However, back in those days, education was not as globally standardized as it often is today. For instance, Hungary wasn't even part of the EU yet.

I enrolled in a bachelor-type accounting qualification course and studied the Hungarian version of an MBA, which led to a master-type degree in Economics. Besides obtaining the diploma, I gained knowledge about the ins and outs of business, including the basics of macro and microeconomics, law, human resources (which had a

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completely different approach from what it is today), and of course, finance.

The Accounting specialization taught me about bookkeeping, financial statements, financial planning, and the fundamental functions of banking. The Economics degree provided insights into how a financially healthy society should operate, how taxes are collected and utilized, and how monetary policies are executed through a country's financial institutions and banks. Both were essential in developing a solid, foundational understanding of the elementary question of 'how money moves'. However, there was not much emphasis on many other issues that have shaped the industry into what it is today. For instance, regulation and compliance were hardly mentioned, although they determine 'how banks think'.

England

Shortly thereafter, my curiosity landed me in the northeast of England, working for one of the largest accounting software companies in the world. I loved those years, both personally and professionally, as it was the first time where I had a chance to see how living in a different country, other than home, only differs in small details. Even though the people, the language and the currency were different, being there showed me that the world was based on the same principles, and life was basically the same everywhere.

The company represented everything, which was considered as 'high-level fintech' at the time: accounting, data security,

innovation, great operational standards, and strong employee training, all of which illustrated how a large company operates in the real world. We were selling accounting and payroll software, and the training offered us the opportunity to take advantage of the free industry-related education modules. These helped me to understand the differences between the Hungarian and the English financial and taxation laws and submission requirements. Despite these differences, 'debit' and 'credit' remained the same concept. Accounting was still based on profit and loss statements and balance sheets. The timing was particularly important because this was the time when Hungary, together with various other countries, entered the EU, so the taxation and regulatory harmonization issues were very relevant - and especially exciting for me.

It was fascinating to see how a company not only used the latest technology, but also created it. They summarized all the latest accounting and financial knowledge of the time and built it into their software packages as solutions to everyday business problems. It was an amazing learning curve, where I could get first-hand experience of how real life differs from academic studies. I observed all the daily accounting and banking problems which small and medium-sized businesses faced and had to find answers to. It was very exciting to see how businesses actually work, and the banking and funds-related questions completely differ from the case studies at the University.

Cyprus

Four years later, taking advantage of my privilege to enjoy the EU's free movement of workforce rules, I landed in Cyprus. I went there for the sun and the sea but stayed on as it offered so much more. The small island had also just joined the EU, but since the Cypriot economy was thriving and the Cypriot Pound was one of the strongest currencies in the world, they also had the opportunity to introduce the Euro.

Cyprus seemed like a safe haven, a land far away from the 2008 financial crisis, ideal for a young professional like me. It still had old technologies such as the fax and the 'bank book'².

I remember, the security question when calling on the phone to get sensitive information out of the bankers on someone's financial position was simply, "Who do you know in the bank?". Smaller villages still had 'honesty shops', where the customers were trusted to pay the correct amount by leaving their money in a cash box and taking what they had purchased - and nothing more. I just came from a place which had the complete opposite approach to almost everything, so it was fascinating to see how payments and banking worked at the other side of Europe.

While England was using the latest banking and financial software, Cyprus was still 'old-school'. But here I saw how the same financial issues could be resolved using a different mentality, which is based on trust, traditional systems, and classic methods. I felt like a time-

² The 'bank book' is a small, long, preprinted notebook, which people needed to take to the bank. Once there, the bank physically printed out the banking activities directly into it, thus creating a bank statement. This was the old alternative to online banking.

traveller, where I could apply my advanced knowledge in this conventional environment, while, at the same time, learning a lot about the historical concepts which developed a high level of financial trust.

While Cyprus was conservative in several ways, a surprisingly forward-thinking policy was at play. The island was very famous for its foreign-investment-friendly taxation scheme and for the high volume of new company incorporations. In 2010 alone, 19,278 new companies were registered in Cyprus³, while the total number of registered companies was over 250,000. It doesn't seem like much, but when we compare this to the Cypriot population of the same year (1.13 million) it shows an incredibly high number. I could not understand how we had nearly one company for every fourth person!

This was the golden age for the local accounting and fiduciary companies, too, as it seemed like every job advertisement was aiming to find accountants and company administrators to execute this enormous amount of work. I was lucky to be skilled and experienced at everything they were looking for, and quickly managed to settle into an accounting and audit role. I handled the books and audits of various international companies and planned complex tax structures. The businesses came from industries as diverse as shipping, construction, oil and gas, software development and even consultancy. The administration department managed the money movements of the local bank

³ <https://www.chambers.law/>

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accounts, while the accounting team created and booked their invoices.

This experience allowed me to gain substantial knowledge of both international and local taxation rules. Being exposed to various industries made me realise that even though they looked completely different on the outside, they weren't that different after all – they all used the same bookkeeping concepts, and the same banking facilities which moved their funds in similar ways.

A few years later, I was running the accounting and finance department of a large shipping group which included over 40 companies. My team handled complex global international banking transactions, made all financial decisions, set the budgets, and prepared all types of documents. We balanced heavy box files, opened and closed companies, and discussed the forex⁴ rates with bankers over the phone.

Since I spoke Hungarian, I also started to gain popularity within the local Hungarian community in Cyprus. I helped both startups and well-established businesses with their accounting and taxation questions. I was lucky enough to be able to match both my technical and language skills, and I could give professional, Hungarian explanations on the local Cypriot laws. While gradually building trust and recognition, I also earned new clients for my private accounting practice.

Throughout those years, I never stopped observing and evaluating. Cyprus was a booming tax hub, which allowed us, tax advisors, to be creative - legally and efficiently. It was interesting to see the

⁴ foreign exchange

contrast between the heavily regulated, small and medium-sized English enterprises and the Cypriot tax optimization system.

Through these newly formed companies which landed on Cyprus' shores, investment companies emerged as a unique vertical. Cyprus offered a welcoming regulatory and taxation environment for all kinds of brokerages, attracting a large number of hedge funds, venture capitalists, and forex companies. Foreign investors, interested in the developing potential of the area, set up branches on the island and their offices began to dominate the landscape of Limassol. More and more friends and associates of mine began to work in these Wall Street – like establishments. The tax-exempt status of these trading companies allowed them to pay premium prices for luxurious local premises and skilled workers. Over a few years, the city centre filled up with skyscrapers and brokers in suits, who spent their generous commissions on sportscars and extravagant parties.

The quick growth led to creative innovations too. Cyprus attracted international attention, not all of which was desired, especially when innovations began to test the limits of what regulators would tolerate. One such infamous financial instrument was binary options⁵, which failed just as fast as it conquered the online space, but still made a large amount of profit in its short lifetime. As local regulators came under more stringent global scrutiny, a series of

⁵ Binary options are a financial instrument where traders make predictions about the price movement of assets, such as stocks, currencies, or commodities, within a specified time frame. They are called 'binary' because there are two possible outcomes: a fixed gain if the prediction is correct or a loss if it's not. These options are often considered high-risk and speculative, due to their simple yes-or-no nature. They are banned in several countries, due to concerns about investor protection and fraudulent practices.

unfortunate stories made headlines. Nonetheless, the number of newly incorporated companies continued to grow, seemingly unstoppable, requiring an ever-expanding professional workforce. Locals, with no prior experience in investments, but hearing so much about the subject began considering themselves experts, often underestimating the complexities involved. Everyone had an opinion on trading, savings, and finances.

A change of direction

Due to my existing knowledge in the field, I gained more and more private clients from the financial industries, too. Although everyone was keen on finding quick solutions and minimizing tax burdens, the legal requirements had to be respected and maintained. However, when early-stage crypto exchanges and ICOs⁶ followed, Cyprus became a hotspot for crypto-related projects and these legal boundaries seemed even more blurred.

I was fortunate enough to see one of the biggest ICOs rise and fall firsthand, gaining millions in investments in a completely unregulated, yet still legal way. Although the ease of this process completely shocked me.

I respected, but strongly questioned some of the practices which effortlessly found legitimate solutions to circumvent traditional practices in the most unbelievable ways. These new and creative

⁶ Initial Coin Offerings (ICOs) are fundraising methods used by cryptocurrency and blockchain projects. In an ICO, a project offers digital tokens or coins to investors in exchange for funding. These tokens often represent ownership or utility within the project's ecosystem. Investors buy ICO tokens with the hope that their value will increase as the project develops. However, ICOs have faced regulatory scrutiny and risks, including potential fraud.

methods raised some eyebrows and created a deep disbelief about the justice system and the overall viability of such practices. My professional perspective on finance, blockchain, and cryptocurrency was still very traditional, so I started to dig myself deeply into learning more about this subject. I attended relevant conferences, spoke to leading industry experts, absorbed different opinions, and did my best to understand the very specific worldviews on the topic.

I didn't realize it at the time, but research on money movements was slowly becoming my new passion and hobby.

Problems lead to understanding

I remember the first time I heard the word 'compliance'. We wanted to change our bank to reduce our banking-related expenses, but for some reason, we were not able to. My team called 10 banks and got the same answer – "Sorry, but we can't help you". Two months of hard work and hundreds of documents later, I was baffled as to what was happening and called the banker. He told me that they were under international scrutiny and needed to tighten up their regulations and banking processes. This meant that we couldn't simply open a new bank account anymore based on 'who we know at the bank'. We needed to have apostilled documents in hand and fill out long questionnaires. The same situation was happening with my other clients too, so I quickly realised: this problem was getting more and more common – and out of hand.

My clients didn't believe me when I told them that we needed to present the bank with more than just photocopied passport copies.

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In the beginning, it was just surprising, but as the regulations got stricter and harder to fulfil, it seemed like the banks were taking over. Even though I was told many times, “My money, my rules”, the bank couldn’t care less, and ultimately decided where we could and couldn’t send our funds. It appeared as if they were making all the financial decisions on behalf of us, their clients. It all seemed crazy.

One day, when the banker called to tell us that the interest calculation that my team had made on a loan agreement was incorrect, I was completely shocked. I couldn’t understand how, or why a banker would do the accounting calculations on our behalf, to justify the volume of the transfer. In my experience, bankers had never done any type of calculations before, let alone complex and mathematically challenging ones! Little did I know that a few years later, this relatively new term ‘compliance’ would be an even more common topic in banking, than interest rates.

Card processors and different payment gateways soon started to ask for the same information as the banks, becoming increasingly difficult to please. They blamed Visa, Mastercard and other card schemes for their never-ending document requirement. They rejected applications and sometimes blocked funds. In a few extreme cases, they even disappeared without settling with my clients! I had more and more questions about banking and less questions about taxation. Clients no longer cared about the taxman but were afraid of the banker! It was no longer about taxes and intercompany agreements - payments became one of the main decision factors when setting up a group structure.

I realised that there was huge confusion in the market when it came to online payments. I started my research as I just could not understand how a licenced financial institution or bank could act in such a way. I started to dig deep into the industry's 'good, bad and ugly' sides and spent numerous hours online on different offshore forums. I went to different trade expos and shows to gain access to the latest industry gossip. The newly formed blockchain and cryptocurrency world held a whole other level of questions for me, and I couldn't wait to dive in!

The light-bulb moments

After a few months of deep research involving numerous phone calls, chats and meetings with various online businesses, banks, and payment providers, I finally started to understand the hidden connections between certain decision drivers. I began to grasp that there was a logical and justifiable system behind every decision. This was my first light bulb moment.

Combining this newly acquired knowledge with my economics and tax expertise, I slowly put the puzzle pieces together and realised what the fundamental driving factors behind this banking compliance mystery were. I understood why some applications, which seemingly did not make any sense, got accepted by the banks, while others, though having more legal justification for success, did not. I also started to observe patterns, whereby companies in similar circumstances, experienced similar problems, and similar payment issues with the same providers.

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I began building a strong network in the industry and thanks to my never-ending curiosity, I was gaining greater understanding and experience with the most common issues and problems. By finding solutions to the toughest cases, I also realised that this industry was changing all the time, so staying on top of the information flow was crucial for keeping ahead of the competition.

I also realised that if I took the time to explain certain compliance procedures and underlying reasons for banking decisions to my clients, they were more likely to accept them. By choosing alternative payment providers and banks thereby cutting short the client's application time, we could secure much better and safer options. We now had the opportunity to plan for risks, payment flows and costs in a more efficient way.

I also noticed that specific types of businesses needed specific types of payment processes and demanded unique solutions: for example, a payment method which might work for an online marketplace might be a terrible idea for an investment firm. Different providers worked with different banks and specialised in various payment aspects, which might be regulated differently. To top it off, I saw that many major decisions were being made subjectively in an "I know you, so I am willing to take a chance on you" kind of way.

When I shared my newly gained knowledge and insights with the public by speaking at different international conferences, I suddenly realised that everybody was suffering from the same issue: lack of information. Even though everyone had the same concerns and questions, hardly any information was available

online. Moreover, the people who we expected answers from, appeared to be the most clueless!

The overall understanding of the flow of funds within a company and most of the online payment processes and methods were still handled by the accounting departments. The online payment industry is a very closed community which is built on trust and connections. It seemed like the knowledge that I had gained over the previous few years was not obvious, or easily available. I realised that even supposedly 'common sense' concepts such as "Why we shouldn't keep \$1 million in a single bank account", had to be explained to different business owners and accountants, solely because this information wasn't taught at schools. This type of financial literacy can only be gained by relevant and specific payment experience. I had an even harder time explaining this to my clients in an easy-to-understand manner, while at the same time asking for sensitive information about their finances, personal details, and payments.

I started seeing examples of total mayhem. I heard how some clients were benchmarking payment operations and selecting providers by purchasing a product or a service from their competitors to see which bank or payment processor they were using, hoping that the necessary due diligence and research had been done. In some cases, they even went as far as to hire the rival's payment manager to disclose and take advantage of his top connections in banking, payment partners, providers and so on. Sneaky, but not very clever because besides being a very subjective evaluation method, it was also time-consuming, misleading, and unreliable, not to mention costing the business an arm and a leg.

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Much of the valuable information (realistic pricing, trustworthy providers, working methods, etc) could only be gathered at the trade shows and conferences where accountants, owners and payment executives gathered to share the latest industry gossip and outlooks. During these official and non-official conversations, we shared our latest news, challenges, what worked, what didn't and what was new. Needless to say: payment providers and banks were also working for their own pockets – so forget asking any banker or payment provider for an honest opinion. The sales teams promised the sky and often delivered mud in the hope of business volume, rather than advising with honesty and transparency. I have seen how much this information can save to a business. I have learnt: a company's payment and banking network truly adds to its 'net worth', as well-established connections are invaluable.

Ignoring certain banking and payment risks is more common than anyone would think. I saw one of the biggest online casinos using only one payment processor, just to get better fees on the increased volume. Their little cost-cutting project was successful until their trusted solution provider lost millions of incoming deposits due to a huge technical failure. There was also a time when I discovered that one of the leading e-commerce websites was still working under payment contracts which were signed 10 years earlier. Or I could mention the case where the payment manager was happily enjoying some side commission from a certain provider, lobbying the management with lines like "Don't change what isn't broken", or "It's expensive but at least it works", to justify this decision.

I've seen numerous new payment providers come to life in a short time, reselling each other's solutions under a different brand name. Their clients thought they had diversified their risk by using multiple payment processors but were in fact using the same acquirer via different front-end solutions. Of course, when the one, underlying bank had an issue, suddenly, all their payment options were blocked!

Despite being an accountant and a tax expert, in earlier times even I had difficulty understanding the different compliance requirements of the banks. No one ever trained me in any of this, so I learned what I now know through experience and by listening and reading what industry legends had to say. It was obvious. Businesses NEEDED this knowledge, but there was no one who PROVIDED it. This was the time when I decided that I would dedicate my career to educating businesses on online payments and providing them with the common banking and payment knowledge they would need to succeed.

PSP Angels

One of my first clients called me 'Angele Mou', which means 'My Angel' in Greek, after saving him thousands in banking fees with some simple advice. So, when I founded my company, I named it PSP Angels. The name perfectly reflects our vision: to be the saviour of the many online companies trying to navigate this costly and difficult-to-follow 'payment maze'. I decided that my company would be an independent payment consultancy, giving honest advice on all payment-related questions by explaining in simple

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terms how the industry works. I truly believe that if we start with the basics and understand exactly how the banking system functions, including the reasons behind certain decisions, it will affect every part of the business from operations, product design, marketing, legal, strategy, and of course, finance.

The payment expert

In today's competitive environment, knowledge is key. I honestly believe that if we at least establish that the online payment industry exists while providing some basic knowledge about it, it will help a lot of businesses understand the decisions made by their banks and help them make informed choices when choosing a bank or a payment provider to handle their funds. This knowledge would also help to gain different perspectives concerning other business decisions.

Various simple concepts are not covered by the basic accounting or law qualifications, and one's management consultant will not always be able to reply to certain payment-related questions either. However, the lack of understanding in certain areas, such as Visa and Mastercard schemes, banking communication methods (SWIFT, ACH), and compliance issues can lead to costly and risky business decisions. Hiring a better accounting or legal firm might resolve some issues, but without an actual payment expert, there could still be massive risks and associated costs around the payment flow, which businesses might be unaware of. Payment and banking aren't rocket science, but knowledge of the industry is well-hidden and too quick to change. Some specific information

just can't be found online in one place, and that makes this online payment knowledge unique and very special.

Using a wider selection of payment methods to increase customer satisfaction and service is also common practice, but often done without proper planning. For example, if a well-established European online business wanted to expand into Indonesia without knowing that the most popular payment method there was QR codes, their acquisition, and therefore profit, might suffer significantly. Think about it: if fewer people can pay successfully, marketing efforts to gain customers are wasted, reputation suffers and of course, there is the lost revenue too.

The common practice is to usually spend the marketing budget first, then later find a local payment provider, matching the perceived need. This idea seems to be outdated though and is changing fast, as various countries now have special payment preferences. A global standard doesn't yet exist, as people in certain countries prefer to pay using their mobile, while other countries may use prepaid cards, wallets, a special type of Neobank (Venmo or Revolut) or even rely on open banking. Various payment methods have various price tags and technological requirements. Therefore, targeting a new geography by spending the marketing budget first, is no longer the case. It is much more cost-effective to approach local payment providers first, obtain preliminary pricing, and understand their terms and conditions, technical information, and other relevant details, to make better financial decisions on where to spend the marketing budget. Approaching customers based on their preferred payment method can result in cheaper

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and safer income flows, which, of course affects the whole operation.

Unfortunately, not many companies plan their payments accordingly. My goal is to introduce a new approach in both payment planning and execution. A good payment plan not only reduces operational and marketing costs and risks but also gives a competitive advantage to businesses in this cut-throat online environment. However, I must emphasize that a payment expert can only give a snapshot of this industry. Payment consultancy is a quickly evolving and very creative profession. My advice to a client today might be completely different in the following year, given the technological advancements and ever-changing compliance requirements. Rapid changes might mean a series of obstacles for some, but I like to think of them as opportunities.

Not planning payments seems like a missed opportunity to me, as it would be such an easy and budget-friendly way to increase both acquisitions and retention. Having various payment service providers can additionally lower the risk associated with depending solely on a single source of third-party technology for collecting funds from clients. It's like hedging against the odds.

Additionally, encouraging customers to use the company's preferred payment method, (for example to pay with bank wire [0,2%] instead of cards [3%] to get 5% off on their next order) might further increase profitability and customer retention.

These are just a few of the tricks we will discover when we start to understand 'how money moves'!

From e-commerce to online education, from startup hurdles to global group expansion, the goal is the same: speaking the language of banking to find allies instead of enemies in the financial world. The basic banking and payment knowledge provides a very strong foundation for decision-making in a company.

By writing this book, I aim to reveal a lot of hidden information about this exciting industry and put things into perspective. I also hope that it can help bring the industry together, by creating a safe space for discussion between clients and service providers while being a catalyst for valuable discussions around the topic. I hope that after reading this book, both users and providers will understand each other better and work towards achieving the common goal: helping people move their money in an easier, cheaper, and more seamless way.

Chapter 1 - The History of Banking

Introduction

To understand the history of currencies and payments, we need to understand the basics of how banks are interconnected and how they communicate with each other. Let's say someone in Athens wants to send money directly to someone in the Philippines. Obviously, not all the banks are directly linked to each other worldwide, so the money cannot simply flow through. Much like road systems, financial institutions and banks form a global network, where intermediary entities represent multiple banks within a specific region. These intermediaries act as bridges or side roads, connecting to other intermediaries or banks in different areas, ultimately allowing global connectivity.

Today's banking is the result of a long journey as old as civilisation itself. One could argue its pros and cons immeasurably, but the fact remains that it is the most effective system we could come up with to date. Let's take a look back.

The barter

The barter system emerged as one of the earliest forms of payment in ancient civilizations like Mesopotamia and Phoenicia in around 6000 BC. In this system, goods and services were directly exchanged between parties without the need for a standardized currency. One person gave a sword in return for some barley. Although the system allowed direct exchange without a centralized

regulatory body, it had a few fundamental limitations. Prices were subjective and very hard to determine, as goods didn't have a common value. There were issues with the availability of goods for exchange, and dividing goods for trade was also difficult. Due to these shortcomings, gradually more sophisticated forms of payments emerged.

First banking records

The people of ancient Mesopotamia and Egypt had a unique way of banking, using seeds and barley as currency. These so-called 'Grain Banks' were the pioneers of early banking. People would keep their precious grains stored in temples, and the bankers would keep track of who owned what. Record-keeping was very burdensome, and a lot of grain was wasted in the process. Some banks even offered loans in the form of seeds, given to farmers. It created a divide among the working class, with the farmers having a special advantage. As time went on, people realized that this grain-based banking system just wasn't practical either.

Gold's role in history

Gold has played a significant part in transactions throughout history, dating back to ancient times. It has been recognized as a valuable and enduring form of currency. Gold holds a universal value and is often used as a standard unit of exchange, representing a fixed amount in monetary systems.

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Central banks used to maintain gold reserves to support the value of their currencies and provide a natural hedge against inflation. During times of financial crisis, gold served as an important commodity which could back the currency due to its intrinsic value and limited supply. However, the lack of gold supply led to the realization that modern banking could not rely on this restrictive value base.

Today, no major currency is backed by gold. In the past, some currencies, like the U.S. Dollar, were backed by a specific amount of gold, a system known as the gold standard. However, most countries have moved away from the gold standard, and today, currencies primarily rely on fiat systems, where their value is not directly tied to any physical commodity.

The fiat system

To explain this important and influential system, I'd like you to think about a friendly poker game. In this game, participants agree to use alternative value units such as candies, as tokens. These candies represent specific values - a red candy might represent one unit, while a blue candy could symbolize five units. Outside of the game, these candies have no real value. Their value is assigned by the players subjectively, and their value only applies within the game. The players collectively determined and agreed on the value assigned to each candy, ensuring a common understanding during the game. This system allows for a smoother game with value recordings and exchanges.

Centralized authorities, much like the game organizers or hosts, manage the distribution and exchange of candies among players, ensuring fairness and consistency. The values of these candies are based on their scarcity within the game, which is artificially controlled to maintain balance and integrity.

Now, let's say we want to change tables. Another poker table is having a much more exciting game than ours, but they are using beans as their tokens. Our candies might be exchanged for beans, but the candy/bean exchange value is determined by the other table's players, based on their demand for our candies. If our game is not that exciting, we get fewer beans for our candies, as fewer people want to play at the candy table. However, the value of the beans is booming as everyone wants to get into that game.

In this example, our poker games represent countries, while the candy and bean values represent their fiat systems – essentially currencies which are not backed by a commodity, but rather a value assigned by the players. The centralized control in facilitating any transactions is the central bank, and the exchange is the ever-changing value between the countries based on their current economies. The story is much more complex, but it demonstrates the basic rules and the role of currencies in modern economies today.

Commodity and non-commodity-based fiat systems

You might ask, “Why don't we use actual items of value as units for the game, so we can trade these outside of the poker table too?”. Well, the original idea of money was based exactly on this logic.

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In a **commodity-based financial system**, the value of a country's currency is directly linked to a unit of value or a commodity, such as gold or silver (or grain). But in this case, the supply of money is determined by the availability of the chosen commodity, i.e. how much gold a country physically owns. This not only raises questions about the physical safeguarding and logistics of the gold, but the value of the currency can get very volatile, too. Let's say another country discovers a new goldmine and floods the market with fresh gold, the gold price falls due to the excess of supply. The lower price of gold will then affect the whole underlying economy, creating instability. A commodity-based system also limits a government's ability to implement monetary policy⁷ to address economic challenges. Central banks can't easily adjust interest rates or control the money supply during economic downturns, which might need to be done during recessions.

A **non-commodity-based financial system**, also known as the fiat currency system, is the candy and bean value system in our previous example. It was developed to better accommodate economic growth, stabilize prices, facilitate global trade, enhance financial stability, and offer greater control over monetary policy. These systems replaced older models, such as the gold standard, which had limitations in responding to economic challenges and supporting the evolving needs of modern economies.

⁷ Monetary policy is a set of actions and tools used by a country's central bank to manage the supply of money and credit in the economy. This is done to control inflation, promote economic growth, reduce unemployment or to maintain a stable exchange rate.

Fiat currencies, managed by central banks, allow for more adaptable and responsive approaches to economic and financial management, making them the prevailing standard in the contemporary world. It operates without a direct link to physical assets or commodities. FIAT means 'authoritative sanction', originally taken from the Latin fiat – 'let it be done'. In this system, currency derives its value from the trust and confidence of the people who use it, as well as government regulations and monetary policies. In the poker table example, the value of the candy and the bean comes from the 'trust' that other players at the table will also use them as a value representation.

That's right, the fiat system is completely trust-based. It works because people trust that the government will not devalue the currency or inflate the money supply. However, fiat money can be more volatile than gold, and it is more susceptible to inflation. If people lose trust in the government, the fiat system can collapse. The value of the currency is strongly connected to the trustworthiness of the issuing government. Fiat however is more flexible than the gold standard, and it allows governments to control the money supply to stabilize the economy.

The fiat system is relatively new, and it is still evolving. Although it's far from perfect, this system is still the most widely used monetary system in the world today as it is relatively stable while being easy to implement and maintain.

Bretton Woods

One notable event in the history of gold and currencies is the Bretton Woods system.

In the aftermath of the two World Wars, the world's leaders wanted to create a new international monetary system which would prevent the economic chaos leading up to the wars. In 1944, they met at Bretton Woods, New Hampshire, to plan for a new system. The Bretton Woods system was based on the idea of fixed exchange rates. Each country's currency was pegged to the U.S. Dollar, while the dollar was convertible into gold at a fixed price of \$35 per ounce. This system was designed to promote international trade and investment by making it easier for countries to do business with each other.

The Bretton Woods system worked well for the first few decades, but when various U.S. domestic factors such as the Vietnam War and the Great Society programs increased their budget deficits, the government was unable to maintain its commitment to convert dollars into gold at the fixed price and the system began to break down in the 1960s.

In 1971, the Bretton Woods system collapsed when President Richard Nixon abandoned the gold standard. This resulted in floating exchange rates, where various currencies are allowed to fluctuate freely against each other. From that point on, the dollar has been backed not by precious metals, but purely by the full faith and credit of the U.S. government. Since 1971, there have been numerous calls for the end of the U.S. Dollar as the world's reserve currency, however to this day, we continue to use this system.

While notable legacies such as the creation of the International Monetary Fund (IMF) and the World Bank resulted from the Bretton Woods Conference, the collapse of the monetary system showed that the world was not willing to rely on a single country to provide stability for its currencies. Through the subsequent economic cycles of uncertainty and volatility in the global economy, countries continue to search for an effective monetary system which can promote sustainable growth and stability.

Reserve currency

The reserve currency is the basic currency, which handles most of the world's international transactions and strictly speaking, provides the common value globally, helping various economies trade with each other most efficiently.

Let's imagine that a Nepalese farmer is selling flower seeds to a Peruvian factory. If the farmer accepts the Peruvian Sol as payment, they might face difficulty receiving this currency in their bank account or face exchange losses due to its rarity. Therefore, it is unlikely they will accept the funds in this way and will most probably ask for payment in USD, EUR, or GBP.

Trading with different currencies is also greatly affected by its country's economy and stability. If a revolution or war suddenly erupts in Peru, the Peruvian Sol loses value overnight, and the Nepalese farmer might receive less than expected for this currency.

The difficulty escalates if we pair each country's currency against each other. The values will be very hard to determine for each pair if we solely base the price on the current demand and supply for

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the relevant currency pair. How many people would be offering Nepalese Rupee and want Peruvian Sol in return, at the same moment when our Nepalese farmer wants to exchange his currency?

The easiest way to do this is to use a 'common denominator' as a base level. This means that to convert the value of each currency and determine its strength against other currencies, one base currency needs to be used for international trade. By using this base currency, you can measure the worth of other currencies in relation to it. This standardization simplifies international transactions and allows for a consistent way to assess the value of various currencies in the global market.

The rise of the USD

The reserve currency has changed over time, depending on which empire was ruling the world at that moment through colonisation – i.e. France, England, or Spain. International trades flowed through a basic, commonly accepted currency which the colonies and the rest of the world could translate their values into. This common currency maintained its value, was widely accepted, and allowed traders to be involved in the global flow of money.

These currencies were also backed by gold or other commodities to further strengthen trust and their value in global trade, as we have seen it earlier. Until the early 1900s, England had the upper hand and since they had colonised large parts of the world during that time, the sterling was the reserve currency and London became the financial capital of the world. Following the First World

War, however, the British economy started to lose its power and America emerged as the dominant economy, making New York the new global financial hub. Most of the world's gold was transferred from England to the U.S. for safekeeping and speculation purposes in the 1920s, eventually making the USD the major reserve currency globally.

There are several other factors which have led to the dollar maintaining its international reserve currency status. Large volumes increase demand, and since most of the world's oil transactions are traded in dollars and this industry is traded in billions of dollars daily, this creates a huge demand for the use of USD to facilitate these transactions. Demand stabilises value, enhances trust and subsequently, increases acceptability.

Between 1999 and 2019, the dollar accounted for 96% of trade invoicing in the Americas, 74% in Asia-Pacific, and 79% in the rest of the world.⁸ More recently, 88% of all foreign exchange trades in April 2022 were still dollar-based⁹.

Strong currency value enhances the economy too, so the U.S. is making sure that no one threatens this dollar power. However, there are already some discussions about trying to create an alternative to the USD. The second strongest economy, China, wanted to step up and offer the yuan as the new reserve currency, however the one-sided political circumstances and the lack of a trusted and independent evaluation on the actual value of China's economy makes this currency much riskier. The Euro could also

⁸ <https://www.federalreserve.gov>

⁹ <https://www.bis.org>

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have been a great potential alternative, but the 2008 financial crisis and the never-ending internal conflicts and political differences created a very turbulent economic climate and a lack of trust in Europe as a whole. All other currencies are less traded or trusted, for now.

BRICS

BRICS is a collaboration of five significant global economies: Brazil, Russia, India, China, and South Africa. This alliance started as BRIC in 2009 but expanded in 2010 to include South Africa. On 1 January 2024, another six countries joined BRICS: Egypt, Ethiopia, Iran, Saudi Arabia, and the United Arab Emirates.

BRICS was initially centred around investment opportunities in these areas since together these countries were home to over 41% of the global population.¹⁰ The group has since evolved into a more cohesive geopolitical entity. The member governments hold annual summits, working together to shape policies on a global scale and aiming to counter the current U.S. and EU-based systems. Although discussions about the creation of an independent currency by BRICS nations as an alternative to the U.S. dollar have surfaced, these deliberations are currently more speculative than concrete. Nonetheless, some experts believe that such a move could potentially pose a challenge to the existing dollar-dominated global financial system.

¹⁰ <https://en.wikipedia.org/>

Central banks

Central banks are financial institutions which serve as the highest authority over all other banks within a country. Central banks often act independently of the government and political influences to make decisions that are in the best interest of the country's economy. In our poker table example, this is the 'game host' who issues and distributes the candies (or beans), while determining the overall rules of the game.

History of central banks

Central banks were established to provide and maintain a stable and organized financial system which facilitated global trade and supported economic development. The first central bank was Sveriges Riksbank in Sweden, which was established in 1668. Its primary purpose was to issue currency and stabilize its value to promote trade, military, and economic growth. In 1694 the Bank of England established itself as the most influential central bank in the world and served as a model for many others. The Bank was founded by the need to finance the wars against France and to address growing public debt, however, its role expanded beyond issuing currency when it became the lender of last resort to support other banks in times of financial crisis.

In the 19th century, central banks were established in various countries across Europe and North America. These institutions played vital roles in regulating monetary policy, issuing currency, and managing national reserves. During the 20th century, central banking gained prominence globally. In the United States, the

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Federal Reserve System was established in 1913 to promote monetary stability. Other significant central banks, such as the European Central Bank (ECB) and the Bank of Japan, were established later in response to changing economic and political circumstances.

Throughout history, central banks have evolved and adapted their roles to suit changing economic and financial landscapes. They continue to play a crucial role in modern economies, implementing monetary policies, regulating financial institutions, and ensuring overall economic stability.

The many functions of central banks

Central banks serve several crucial functions which are essential for the stability and functioning of a country's economy:

1. Responsibility for controlling money supply and interest rates, issuing, and managing currency, acting as the government's banker, and providing forward guidance and financial support during crises to maintain stability.
2. Supervise and regulate financial institutions and banks to ensure their stability and compliance with relevant laws and regulations.
3. Oversee and operate payment systems to facilitate secure and efficient transactions between financial institutions and individuals.
4. Monitor and assess risks in the financial system, taking measures to safeguard its stability and prevent potential crises.

5. Work towards promoting financial inclusion, ensuring that all segments of the population have access to financial services and products.

In short, these functions form the basics of monetary politics, which keeps the economy in balance, making sure there's enough cash to keep things running smoothly without going overboard. The wrong policy decisions can have unintended consequences and may result in adverse effects on the economy.

Capital controls

One special function of the central bank is regulating the flow of capital in and out of a country, which could impact the stability of the national currency. Capital controls can help prevent speculative attacks on a country's financial markets, or during an economic crisis, prevent massive capital flight, which could worsen the crisis. These measures can include changes in taxation policies, prohibitions, and legislative processes.

In our poker table example, if the candy table game gets dull, the players might start to leave and join the more exciting beans table. To join the game, the players start to exchange their candies into beans in large volumes. The candy game host, to save the game, might decide that for a short time, no candy can be exchanged into beans, to keep the players at the candy table and ensure that enough players stay on, thus continuing the game.

The implementation of capital controls can have significant effects on a nation's currency exchange rate. By regulating the flow of capital, authorities aim to manage currency depreciation or

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appreciation and minimize the impact of sudden fluctuations that can destabilize the economy. Capital controls can have both positive and negative consequences. On one hand, this system can help protect domestic industries, preserve foreign exchange reserves, and manage financial risks. On the other hand, it can limit foreign investment, hinder capital mobility, and restrict market access, which may have negative implications for economic growth and international trade.

The use of capital controls varies across countries and is often influenced by specific economic circumstances, policy objectives, and global market conditions. Governments aim to strike a balance between safeguarding national interests and fostering a conducive environment for economic growth and development.

The reserve requirements

Setting the reserve requirements of commercial banks is another tool used by central banks to affect the spending behaviours in a society. Reserve requirements refer to the minimum amount of cash which banks must hold in reserve against their deposits. Basically, the central banks tell commercial banks, "Hey, you need to keep a certain amount of money in your vaults to cover your debts and the funds of your depositors." By adjusting these requirements, central banks can influence the amount of money that banks can lend to customers and can trigger a chain reaction that allows more money to circulate in the economy.

Let's say the central bank decides to raise the reserve requirement by 10%. If a high-street bank has total deposits of \$90 million, it

needs to safely put away \$9 million and let the rest of the cash float the streets. Increasing reserve requirements limits the lending capacity of banks and decreases the money supply, while reducing reserve requirements frees up cash for lending, resulting in an increase in the money supply.

Fiscal policy

Fiscal policy is a tool which is used by governments to manage their economies through taxation and government spending. It involves adjusting tax rates and public expenditure to achieve various economic goals. For instance, cutting taxes and increasing government spending can stimulate economic growth, while higher taxes and reduced spending can help control inflation. Governments can also run budget deficits (spending more than they collect) or surpluses (collecting more than they spend) depending on economic conditions. Fiscal policy is a crucial element of economic management and works alongside monetary policy to maintain economic stability.

Unlike monetary policies implemented by central banks, fiscal policies are authorized by government officials. They serve to address deficiencies and excesses in the private sector, particularly during economic recessions and inflationary periods. The core idea behind fiscal policies is that the government can adjust its actions to promote strong and sustainable economic growth and reduce poverty.

Philips curve

The Phillips curve is a basic economic concept which illustrates a very unusual correlation: the relationship between inflation and unemployment in an economy. It suggests that when unemployment is low, inflation tends to be high, and vice versa.

The Phillips curve is named after economist A.W. Phillips, who first observed this relationship in the 1950s. According to the theory, when the unemployment rate is low, companies face increased competition for workers, which leads to higher wages, so the workers spend more. This excess demand for goods and services drives up prices, resulting in higher inflation. On the contrary, when the unemployment rate is high, there is less competition for workers, which results in lower wages, so people can spend less. This decrease in demand drives the prices lower, so the inflation gets lower, too.

The Phillips curve suggests that policymakers can affect this correlation, and adjust interest rates or money supply, to influence the position on the curve. For example, if a government wants to reduce unemployment, it may stimulate economic growth and accept higher inflation. On the other hand, if they prioritize price stability and aim to lower inflation, they may implement certain monetary policies, which could lead to increased unemployment in the short term.

The Phillips curve has faced criticism and challenges over the years. The relationship between inflation and unemployment is no longer as stable as it was once believed to be. Other factors such as supply

shocks and productivity changes can also heavily influence the trade-off between inflation and unemployment.

The functions of banks

Banks are responsible for fulfilling various functions to maintain the flow of funds in an economy. They can collect, store, and enable payments on behalf of their customers. They facilitate financial transactions, provide access to funds, manage risks, and offer a wide range of financial services to individuals and businesses. Some banks also manage investments on behalf of their clients, including the buying and selling of stocks. In the past, banks also provided financial advice and guidance to their customers on managing their finances and investments. This is less popular nowadays, as other financial institutions began to specialise in this sector over time, providing a higher level of service and expertise in the field of investing.

Banks fulfil two primary functions. The first is the **safekeeping** of funds, which essentially provides a secure place for individuals and businesses to store their money. This basic functionality allows people to trust that their funds are safely held within the bank.

The second function is **lending** and **borrowing**. When individuals come together and pool their money in a bank, this pool can collectively support the ventures of third parties, such as building a business or buying a house. In this scenario, the bank utilizes the pooled funds to assist a business to gain their start-up capital or provide a mortgage for a person to purchase their home, while also

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earning interest on the funds and providing returns to the investors.

Bank responsibilities

As we have seen, central banks and governments play a major role in maintaining a stable society via various monetary and fiscal policies. They have the responsibility to make sure that the financial system in a country is well set up and kept in order, securing the best possible outcome for their citizens. To explain it simply, all monetary and fiscal policies are aimed at achieving two main outcomes: taxing and maintaining legitimacy.

Taxing

As the old proverb says, two things are certain in life: death, and taxes. While death is a natural certainty, taxation needs to be enforced. If there were no laws to make sure everyone paid their fair share, many people would avoid paying taxes altogether. Cutting back the cash-based economy and regulating the financial system is one of the best ways to fight against tax avoiders.

Since the governments cannot rely on people's goodwill to make the relevant submissions and pay the necessary taxes, they needed to develop a system which checks that the numbers on each tax form are true. That's why tax offices work closely with banks. They can see how much money goes in and out of people's bank accounts, so, if someone says they earned a certain amount, but their bank records show something different, a red flag is raised.

But how can we be sure that all monies are monitored? When any company is responsible for managing money on behalf of another person or a company, it's important to ensure that this money doesn't go untaxed. If these funds are not reported back to the tax office, there might be a risk of tax evasion. Every cent therefore must be allocated to an owner, declared in a tax statement, and documented with a clear trail of where it came from and where it's going. This is the reason why financial institutions and banks always ask for the tax number of a person or company when opening a new account and must maintain updated records too. Without this monitoring system in place, not many would pay taxes and society would collapse very quickly. Therefore, any company holding funds on behalf of any third party typically needs to hold a financial license. They must report back to the tax authorities in a strictly regulated way, about each client, which guarantees that everyone complies with the established rules and contributes their fair share of taxes.

However, this information is not widely known, and non-compliance can be many times accidental.

My consulting practice involves startup evaluations for Venture Capital and Hedge Funds. During these assessments, I've checked various business plans and ideas. I have noticed, that often, the business plan is based on a misunderstanding of how the financial system works. The best examples are the startup copies of the popular online marketplaces that offer an advertisement platform, such as Airbnb, or Amazon, which accommodates matchmaking between buyers and sellers. Many times, these marketplaces collect money from the buyers, hold it on behalf of the sellers,

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deduct their commissions and then pay out the sellers in some way. Large companies have all the necessary financial licenses to do so, but this is unknown to many startup owners. Holding and handling anyone's funds might be illegal without holding the relevant financial licenses, even for one cent. If any seller 'forgets' to declare their taxes on the earned amount which is still pending payouts by the marketplace, it can pose a huge tax avoidance risk. Moreover, the marketplace is financially responsible for all client funds, which is an apparent security risk. Without having a relevant professional to advise on the get-go, several startups miscalculate their budgets and fund impossible ideas.

Illegal transactions

It's clear: In a healthy society, no citizen should be able to buy any illegitimate products or services. But who's responsibility should it be to stop the criminals? Law enforcement can only come into the picture after the wrongdoing has taken place. Hence, the system is set up so that this responsibility lies with the regulated financial institutions and banks, who allow these fund flows. Currently, the financial system should have every obstacle in place to make sure that law-breaking does not happen. Whenever a financial transaction takes place, it must go through a regulated system which makes sure that the activity is completely legitimate and is coming from legal and taxed sources.

Since this is a huge responsibility and requires multiple checks, any company which handles funds on behalf of any third party typically needs to hold a financial license. This licence enforces the

monitoring of financial transactions, ensuring legitimacy and preventing money laundering. All financial institutions and banks are required to identify their customers, verify their information, and monitor each fund movement. This entails various checks and facilitating accurate reporting to tax and regulatory authorities. Whenever a new account is opened, the bank ensures proper identification and subsequently shares relevant information with the necessary bodies.

That is the reason why a company which sells apples can only open an account for their apple-selling business activities. If they use their account for selling investment services for example, then the bank has the full right to restrict their account and report them to the relevant authorities for fraud.

The legality of some business activities can also be a tricky area to navigate. In some cases, the seller may not even know they are involved in prohibited activities. In the context of online payments, customers can come from multiple countries, each with different legal restrictions on certain products and services. This makes the situation even more difficult as when we are tapping into the different legalities of different countries, filtering out what's legal and what's not, can get very complicated.

As an example, take an online business from Italy that sells vaping products. Even though vaping is completely legal in Italy, and the business plans to sell only within Italy, it must use geo-blocking for certain countries to block purchases from places where vaping is banned. If a customer from Argentina tries to purchase a product, where vaping is currently illegal, it's not only the Italian company's

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but also the bank's responsibility to block the payment and stop the delivery of such illegal goods. Since the products are sold online, which essentially means worldwide, banks must enforce the regulation on behalf of the merchant and take the appropriate measures before allowing this client to enter the global payment flow and use of any of its banking services.

It's not about the actual wrongdoing, but rather about the possibility of unlawful behaviour, which the banks need to consider and eliminate for every transaction. This requires an extensive infrastructure and legal investment from the banks, and even then, they might not have the full capacity to monitor and react to new regulations around certain verticals globally.

Cryptocurrencies are another good example, whereby the regulation changes very quickly from country to country, so understanding and enforcing legal boundaries are almost impossible for smaller financial institutions and banks, which then ban these activities altogether.

The only way to make sure that this enforcement is being maintained is if the central bank and the government set up certain rules and guidelines which the banks need to follow. This is called compliance. The bodies that govern these rules are known as financial regulators.

Deposit security

Remember the poker table example? The value of the candy and the bean comes from the 'trust' that other players at the table will also use them as a common value representation. Since banks

accept deposits from individuals, businesses, and organizations, providing a safe and secure place for them to store their funds, the system needs a way to maintain confidence and trust.

When a large number of people lose their trust in a bank, they rush to withdraw their money. This is called a bank run. It can create a self-fulfilling prophecy, as the more people withdraw their funds, the more the bank's financial health deteriorates as it won't be able to pay out everyone: their money is lent out to others as mortgages or business loans. This sudden demand for withdrawals can overwhelm the bank, causing it to run out of cash to meet everyone's requests. This, in turn, can further erode confidence in the bank's stability, leading to more withdrawals, and ultimately, the bank may go bankrupt.

To ensure that depositors' funds are protected, the fiat system must have mechanisms which encourage people to continue using and trusting the banking system, even during times of economic uncertainty. Therefore, central banks established various Deposit Guarantee Schemes (DGS) worldwide to provide a safety net for depositors and maintain confidence and trust in the banking system.

The European Union first implemented this system as a response to the Global Financial Crisis of 2007-2009, where EU banks were responsible for funding the compensation, relieving the burden on taxpayers. Under the EU DGS, depositors are guaranteed up to €100,000 coverage.

In the United States, the Federal Deposit Insurance Corporation (FDIC) was established in 1933, in response to widespread bank

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failures during the Great Depression. Under the scheme, the FDIC provides deposit insurance typically up to \$250,000 per depositor per insured bank. This coverage includes various types of deposit accounts such as savings, checking, certificates of deposit (CDs), and certain retirement accounts like IRAs.

Not all types of financial products or investment accounts are covered by the scheme, though. Things like stocks, bonds, mutual funds, and annuities are not insured. The coverage limit can also be subject to change by regulatory authorities and may vary based on account ownership categories. However, knowing the risk of the bank which holds our funds is essential to be able to make any reasonable financial decision.

The Cyprus crisis

This experience determined my relationship with banks for a lifetime. I was working as the head of an accounting department in Cyprus in 2013. We'd recently come out of 2008 and its aftermath, which had been a very tough time. The global financial crisis came from the U.S. but affected almost every country in some way - the worldwide economic downturn and credit freeze affected financial institutions and economies across the globe.

The Cypriot banking sector had substantial exposure to Greek sovereign debt. The Greek bonds, which were considered relatively secure before the crisis, experienced significant declines in value as Greece's economy deteriorated. Laiki Bank, also known as Cyprus Popular Bank, was one of the major financial institutions in Cyprus and suffered most of these losses. The high levels of non-

performing loans due to the real estate bubble and bad investment decisions made things worse, and as news of the banking sector's problems emerged, there was an overall loss of confidence in the stability of Cypriot banks.

In March 2013, fears about potential bank failures and concerns that deposits might not be safe led to a bank run. As a response, Cyprus imposed capital controls to limit the amount of money which could be withdrawn or sent abroad, to prevent massive outflows of capital. Laiki Bank eventually had to be shut down, and its assets and liabilities were divided based on performance. The valuable assets and loans were transferred to the Bank of Cyprus, but deposits over a certain threshold in both Laiki Bank and the Bank of Cyprus were subject to a 'haircut'. As per the European Union's Deposit Guarantee Scheme, the funds up to €100,000 were protected. This helped to avoid the public's outrage and political instability. However, deposits above this amount suffered a one-time levy, which could be as high as 47.5%! Trust me, it was not a fun time to be a Head of Accounts for a Group which had large amount of deposits in various local banks. The Cyprus haircut was a contentious and controversial measure, which resulted in a severe shock and led to many economic challenges for the country. The haircut created a significant loss of trust in not only the country but in the Eurozone as a whole. And in me, too, towards banks.

Banks' bailouts

There were 565 bank failures from 2001 through 2023 in the USA alone.¹¹ The Silicon Valley Bank was the 16th largest bank in the United States, and its collapse also caused another banks' shutdown. Panic in the market following SVB's failure led depositors to withdraw large sums of money from Signature Bank out of fear and a growing loss of trust in the banking system. As we have seen, banks simply don't have enough reserves to pay out everyone at the same time, so regulators feared that this could easily lead to a spiralling domino effect, potentially creating huge panic and the risk of the collapse of the whole financial system.

Both depositors and regulators needed to find a solution, which resulted in a large-value bailout - once again. A similar bailout had to be implemented after the 2008 crisis, too. This sparked various arguments which claimed that through these 'guaranteed government bailouts', banks have lost their accountability over their operations, and this would result in further risks and even more bailouts at the expense of the taxpayers. While this may be true, currently there is no viable alternative which can replace this system, other than stricter regulations around banking operations and money management. This however generated another debate about how far we could go with the monitoring of funds before we turned into a 'Big Brother' economy.

¹¹ <https://www.fdic.gov/>

Hawala

Hawala is an informal money-transfer system which originated in Southeast Asia during the 8th century. It operates outside the conventional banking system as the transactions conducted through Hawala channels are typically untraceable as the parties involved remain anonymous. Hawala is still a very popular method in areas where traditional banking services are not available, as it offers a cheaper and faster alternative to traditional wire transfers. The system relies on a network of intermediaries called 'Hawaladars' who facilitate the transactions.

Imagine you live in a village in Bhutan, where the banking system is not developed enough, to send money to your friend, Bob, in India. Instead of travelling far to find a reliable bank, you approach a Hawaladar in your local village, to help you. This Hawaladar's name is Sam.

You give Sam 100 Bhutanese Ngultrum (local money) and tell him to send the equivalent amount in Indian Rupees to Bob in India. Sam contacts his associate, Sameer, who lives in India, and instructs him to give Bob the equivalent amount in Rupees, which might be 95 Rupees, for example.

Now, here's the key: Sam now owes his associate, Sameer, in India 100 Bhutanese Ngultrum (or 95 Rupees). So, when Sameer's friend, who lives in Bhutan, approaches Sam, Sam will give the 100 Bhutanese Ngultrum owed to his friend, instead of transferring it back to Sameer, in India. In this way, the money is effectively transferred from you to Bob, without any actual physical

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movement of money across borders. It's all based on trust and the network of individuals like Sam and his associate, Sameer.

While Hawala can be efficient, it also operates outside of formal financial regulations and can be associated with money laundering and illegal activities. So much so in fact, that several countries have banned the Hawala system.

Blockchain

One of the latest internet developments is Blockchain, which we have all heard of by now. This technology allows record keeping in a decentralized and distributed way. It is basically a digital ledger which records all transactions across a network of computers. It operates on the principles of transparency, security, and immutability. Each transaction is grouped into a block, and these blocks are linked in chronological order, forming a chain of blocks, hence the name 'blockchain'.

Information in the blockchain is stored in a secure way which prevents tampering or alteration after a block is added, ensuring the integrity of the recorded data. This technology eliminates the need for a central authority or intermediary to validate transactions, as consensus mechanisms among network participants verify and validate the accuracy of data. This decentralization and cryptographic security make blockchain highly resistant to fraud and unauthorized alterations.

To explain, let's revisit our poker game example. Instead of the 'bank' who controls the game, this time everyone keeps a record of all the wins and losses on their own, on a sheet of paper. Each time

a player wins or loses, they announce it to the group, and everyone notes it down. As the game progresses, everyone's sheets of paper look similar, with matching moves and outcomes. Let's say someone leaves the table for a few minutes, to pour a drink. This time some players will still record the moves, but some papers might miss some moves. To ensure that nobody cheats or alters their sheets, the group follows a rule: before a move is officially added to everyone's sheet, the majority of the players must agree that the move is valid. This way, if someone tries to cheat or make a false move, the group will catch it and correct it via collective agreement. The collection of these individual sheets of paper becomes a 'blockchain'. Each sheet corresponds to a 'block', and the sheets are 'chained' together because they all rely on each other to verify the accuracy of the moves. This setup makes it hard for anyone to cheat, or to change what's been recorded to their advantage without everyone noticing.

The internet versions of these verifying players became what's now known as 'blockchain nodes', who are effectively the validators of the system. These nodes are specially authorized computers which are connected to each other. Whenever a transaction occurs, it is broadcasted to everyone's computer in the group or 'hub' where its legality is confirmed. This whole system is known as blockchain.

Cryptocurrency

Now let's move on to cryptocurrency as it goes hand-in-hand with blockchain. The value of the transaction on each blockchain is known as the cryptocurrency. Much like the poker game candies,

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where we have assigned separate values to each colour of candy, based on common agreement, the cryptocurrency is used by the blockchain to represent the value of the blockchain itself. Think about the poker game itself as the blockchain, and think about the candy, which is the game's value representation, as the cryptocurrency itself. Each cryptocurrency therefore runs on a separate blockchain.

Cryptocurrency is a type of digital or virtual asset, which relies on cryptographic techniques¹² for secure transactions and to control the creation of new units. Each cryptocurrency is represented by a digital token which holds a certain value, and ownership is recorded on the blockchain. Unlike traditional currencies, which are issued by governments, cryptocurrencies operate on blockchain technology, which are decentralized networks. This decentralization is necessary for transparency, security, and autonomy.

The value is still determined by the trust in the system, but this time the trust is within a community (blockchain participants) and not in a centralized government. The value of cryptocurrencies therefore can be volatile, with prices often subject to significant fluctuations. This volatility, combined with their relatively new and

¹² Cryptography is a fundamental concept in the world of payments and finance. It's a bit like a secret code which helps protect sensitive information during transactions. Essentially, it's a technique which relies on complex mathematical algorithms and keys to secure the communication and data exchange between parties involved in a payment process and plays an essential role in cryptocurrencies.

complex nature, has led to debates about their long-term viability and regulatory challenges. Cryptocurrencies are not monitored or controlled by anyone, so it's easy to understand why they are a threat to the traditional system and are considered to jeopardize society's economic functions.

Stablecoin

Stablecoin is a special type of cryptocurrency which is designed to have a steady value, unlike many other cryptocurrencies which can experience significant price fluctuations. Stablecoins are pegged to an underlying asset, often a traditional fiat currency like the U.S. Dollar (i.e. Tether), the Euro or a commodity like gold. If we think about our candies, here we say, "Each candy is now always worth 1 USD". This means the price of one candy is no longer dependent on the demand from the new players to join the game, nor on how much fun the game is. It's no longer based on demand and supply but on the USD itself.

There are different types of stablecoins. Some are backed by actual reserves of fiat currency (like the commodity-based fiat system) or other cryptocurrencies, but some are algorithmic stablecoins which use complex algorithms to regulate supply and demand to maintain a consistent value. Stablecoins offer a reliable unit of value within the cryptocurrency ecosystem, making them suitable for various purposes such as digital payments, remittances or storing value on the blockchain.

Stablecoins in payments

Stablecoins are currently the most traded crypto assets worldwide. It's easy to see why: they can be used as fiat but with less regulation and delay. Stablecoins are also used to hedge against the volatility of other cryptocurrencies, as they maintain their value and can be stored on the blockchain anonymously.

This ease, however, comes with the dangers of counterfeit cash. The loss of confidence in banknotes can have serious economic and social implications, which was demonstrated in Somalia in 1991. When the country plunged into a devastating 20-year-long civil war, it was left without a functioning government. Since the people still needed a way to trade and use a payment system, they flooded the market with counterfeit money. Even though these counterfeit notes were easily distinguishable from genuine currency, they were accepted at face value. This widespread acceptance of counterfeits led to a significant decline in the currency's value, making each note worth only a few cents. Today, the Somali Shilling supply is a mix of both legitimate and counterfeit banknotes which were accumulated over the years. Shockingly, approximately 95% of the local currency in circulation is still counterfeit, representing the prevalence of this issue.

Circulating fake currency in the enemy's country was also used as a warfare tactic. During the American Revolutionary War, Great Britain wanted to break down the economy by destabilizing and reducing the value of the Continental Dollar. The counterfeiters were known as 'shovers' as they would literally 'shove' fake currency into circulation.

To understand the issue, we need to understand how central banks conduct monetary policy by adjusting the supply of money. Introducing 'new money' into our economic system has several dangers if not done right.

As we have discussed before, the traditional USD-based monetary system runs on people's confidence as it is regulated and safeguarded. The USD is backed by the biggest economy in the world and controlled and managed by the USA's Federal Reserve (FED), providing a sense of security. The Federal Reserve carefully regulates the flow of funds by enforcing certain regulatory checks via the banks. We have seen that this regulation is also a reason why we cannot buy any illegal services or products online: it's not because of the lack of supply, but because of the lack of financial institutions, banks and payment providers, who are willing to facilitate these transactions.

We can translate the dangers of counterfeit money also to the usage of the stablecoin. Tether's (USDT) 1:1 value to the USD means that people now have the alternative to transfer value between each other, bypassing carefully constructed monetary policies. The current circulating supply of Tether is \$83 billion, whereby the overall USD volume is around \$2 trillion¹³. This means we potentially have a completely unregulated and unaccounted money flow of 4% of the total USD supply! This number is high enough to undermine the integrity of the financial system and poses a significant problem.

¹³ as of August 2023

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Monetary policies also play a crucial role in influencing interest and even unemployment rates (think about the good old Philips curve) among other economic factors. Introducing new money into the system without the approval of the FED circumvents financial regulations and dilutes the value of the currency by creating an excess supply of money, inevitably leading to inflation.

Additionally, when stablecoins like USDT are used as an alternative to traditional USD without the necessary oversight, people can engage in transactions without adhering to taxation regulations, leading to potential tax evasion. This could have the unintended consequence of undermining the stability and integrity of the monetary system and the effectiveness of its policies.

Avoiding regulation and taxes by using cryptocurrencies, however, is riskier than many people think. Even though today's banks, tax offices and other government-related official bodies may lag in technology, every cryptocurrency transaction is recorded and permanently stored on the blockchain. Looking ahead, in the next five to ten years, as technology advances, these entities will gain the ability to retroactively trace all cryptocurrency transactions and impose appropriate penalties for any undeclared and untaxed transactions.

CBDC

Central Bank Digital Currency (CBDC) is the central bank's response to cryptocurrencies and stablecoins. CBDCs are a digital form of a country's official currency which are issued and regulated by the central bank. Unlike traditional physical banknotes and

coins, a CBDC is purely digital and operates on a blockchain or similar technology. It represents a direct digital counterpart to the country's physical currency issued by the central bank and holds the status of legal tender. CBDCs differ from other digital currencies, as their functionality is centralised, they are backed by the central bank's authority, and align with monetary policies and regulations.

As we have seen previously, the main purpose of the central bank is to regulate the commercial banks who are then enforcing certain laws and processes to stop tax avoidance and illicit transactions. Compliance checks, submissions and regulations can be very burdensome and expensive. The main benefit of CBDCs is to shift the compliance responsibility from the banks to the currency itself. They can also enhance the central bank's ability to monitor and manage the economy by offering real-time insights into financial transactions.

By issuing digital currency which has a certain expiry date, governments can encourage people to spend the funds instead of saving them, boosting the economy further. Attaching the digital currency to certain people's identity and certain types of spending can also ensure that the funds end up where they are intended to. This can be specifically useful when it comes to social benefits and other types of governmental support. One unfortunate example where this may be applied is when family members are gambling away the support for children's food or education.

CBDCs could also eliminate the necessity of accounting or bookkeeping records by simply attaching a small self-execution

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code to the digital currency, which automatically deducts and transfers the relevant amount of taxes to certain authorities. It could be much easier to follow the route of the payment, which would then eliminate the need for various compliance checks on the purpose of the funds. Tracing criminal activities and validating the source of funds could also be much easier in the future.

CBDCs would aid central banks in formulating effective monetary policies, responding to economic shifts promptly while modernizing payment systems, reducing transaction costs, and enhancing financial inclusion. This system could provide secure and efficient banking solutions, particularly in regions with limited access to traditional banking services.

Needless to say, CBDCs have also sparked debates and discussions within the financial and economic landscape. Some critics worry about the potential impact on commercial banks, as CBDCs might attract deposits away from banks, potentially destabilizing the financial system. Privacy is another concern, as CBDC transactions could be closely monitored by the central banks, raising questions about individual financial privacy. Additionally, the implementation of CBDCs raises technical challenges and potential cybersecurity risks, as managing digital currencies at the scale of a national economy requires robust infrastructure and protection against cyber threats.

If CBDCs disrupt traditional banking systems, a new form of collaboration will be needed among central banks, regulators, and technology providers. Managing a whole new, worldwide financial and legislative shift is a very time-consuming and expensive

project. The discussions also touch on geopolitical effects and the potential shift toward a cashless society.

As of June 2023, 11 countries have adopted CBDCs, with an additional 53 being in advanced planning stages and 46 more researching the topic¹⁴, so we can see that the future is closer than we think and CBDCs are being seriously considered.

¹⁴ <https://www.statista.com/>

Chapter 2 - Regulation and Compliance

Intro

Recently, I had a new client who asked me for advice on investing in a startup investment platform. The idea was simple: they wanted to list all businesses and projects which needed funding and offer these opportunities to the public. Any individual or company could access the platform, filter the options by size, risk, or type, and pay their deposit to the platform, which would then arrange the paperwork and start the investment accordingly. The platform was supposed to take a cut on every successful match, acting as a broker. They were looking for an initial investment to build the platform and required my help to plan the whole payment flow.

To start assessing this case, we need to remember the main purpose of the banks: stopping tax avoidance and making sure that all payments are legal. The risk department doesn't care about the good intentions of the money's movement, but rather, they want to know 'what could go wrong'. Therefore, we always need to consider the worst-case scenario as this determines the overall risk for the whole project.

Generally speaking, most people have limited or no financial acumen. If society lets people invest their funds based on their own, often limited judgment, it could potentially lead to a social disaster where people could easily lose their life savings, and eventually turn to the government for help. Hence, the system must have certain blocks in place, which only allow investments

through a specialist who understands the markets, explains the possible risks, and monitors the transactions, saving people from their own, poor financial decisions. This means the investment platform in question needed to acquire the relevant investment licences to be able to operate. Without these licences, the platform could have never been opened as they would not have been able to find any financial institution or bank which would have assisted them with the collection of deposit payments and other funds from their clients.

Allowing individuals complete freedom to make their own financial judgments can have detrimental consequences for an entire nation. It may sound like an overstatement, but I've seen it happen not that many years ago. Let me explain.

Due to its accession to the EU, Hungary eased its policy on foreign exchange operations and allowed the free flow of capital. Citizens could pay abroad with a HUF (Hungarian Forint) card and take out a foreign currency loan. At the beginning of the 2000s, the Central Bank of Hungary introduced high-interest rates to curb inflation, but interest rates on international markets were very low. This meant that people could get lower interest rates for a Swiss Franc-based mortgage, than for a Hungarian Forint one. Of course, many families took advantage of the lower repayments, and signed mortgage agreements with the banks, committing for 20 or 30 years without ever considering the risks. However, when the Hungarian Forint depreciated against the Swiss Franc, this strategy backfired, and the monthly loan repayments skyrocketed. This left families unable to repay their mortgages, causing financial distress for many Hungarian households. To avoid public outcry, the

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government had to intervene and implement major measures to save these people from suffering the results of their own, poor financial decisions. It is worth mentioning though, that the banks were also partially responsible as the risks had not been clearly explained to the borrowers either.

Let's suppose we have a close friend or relative who starts a business, and we want to support them financially. The system cannot save us here from making a dangerous investment, though these kinds of investments are typically on a smaller scale. When it comes to public offerings for larger companies however, which usually involve much larger amounts, they must be controlled and regulated somehow, otherwise people could lose their livelihoods in the blink of an eye. A lack of regulation led to many false promises in the early stages of crypto investing, where the majority of investors lost their funds. Therefore, offering investment opportunities to the public typically falls under the scope of securities regulation, which varies by jurisdiction.

Payment checks

Every time a payment takes place, the identity of the payer, as well as the funds (over a certain limit) must be verified by the bank which accepts the funds. Investments can be a very easy way to 'launder money'¹⁵, so the responsibility to stop such activities not only lies with the brokerage itself but also with the financial

¹⁵ Money laundering is the process of making illegally obtained funds appear legal by hiding the source and integrating them into the legitimate financial system. It's illegal and associated with various criminal activities.

institution or bank that accepts the deposits on behalf of the broker.

The fund is not only checked when it enters the platform but also when it leaves. If someone invests and gains a profit, there must be a control mechanism which ensures that the relevant taxes are paid on this gain. As mentioned, people don't like to pay taxes, so if there is no enforcement around these payouts by the broker who facilitates these proceeds, the client might 'forget' to declare this extra income, which can lead to tax evasion. Even if the platform promises that all taxes will be deducted and paid, the regulator still needs to check if indeed, all the processes are in place, function and are enforced.

These are just a few reasons why regulation and compliance play a huge part in banking and payments. To be able to understand the 'whys' and the 'hows', we need to first understand the history which led to the development of the current system.

Arbitrage

Arbitrage refers to the practice of taking advantage of price differences for the same asset, commodity, or financial instrument across different markets or platforms. Arbitrage exploits inefficiencies in the market which can lead to temporary deviations in prices. The goal of the arbitrage is to make a risk-free profit by buying low in one market and selling high in another, profiting from the price discrepancy.

Arbitrage opportunities can arise due to a variety of factors, such as differences in supply and demand, trading volumes, exchange

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rates, platforms, or even slight delays in information dissemination between markets.

A good example of this is Currency Arbitrage. Suppose you notice that in the foreign exchange market, the exchange rate for the U.S. dollar (USD) to the British pound (GBP) is \$1.30/£ in the United States, but in the United Kingdom, the exchange rate is \$1.35/£. This price difference represents an arbitrage opportunity. If you start by converting \$1,000 into £769 in the United States ($\text{USD } 1,000 / \$1.30/\text{£}$) and take the £769 to the United Kingdom and exchange it back into U.S. dollars at the rate of \$1.35/£, this activity alone yields \$1,039.65 ($\text{£}769 * \$1.35/\text{£}$) which means you've made a profit of \$39.65 without any risk or investment. With the expansion of real-time information flow on the internet, nowadays these arbitrage opportunities are much more limited and unique than they once used to be.

Regulatory arbitrage

Regulatory arbitrage is like traditional arbitrage but exploits the differences in regulatory and legal frameworks between different countries. Companies can reduce their regulatory or tax responsibilities and costs, or achieve certain goals by strategically selecting jurisdictions with more favourable regulations.

After the stock market crash of 1929, many U.S. companies wanted to expand their operations globally and established offshore branches in international jurisdictions. Although these offshore subsidiaries were often created for market expansion and to be able to launch products in international markets, companies

quickly realised that certain countries, such as the Cayman Islands, British Virgin Islands, Hong Kong, and Singapore had significantly lower taxes than the U.S. and became popular destinations for setting up these offshore branches.

Later, as businesses started selling online and became truly global, more and more people had the opportunity to start businesses even with just a small investment, without being physically present in the target market. E-commerce only requires a server and an internet connection, offering endless business opportunities across borders. Entrepreneurs had the chance to establish a company in any jurisdiction as they chose, the world was their oyster.

With the tightening of tax regulations and increasing tax burdens in larger economies during the late 1960s to 1970s, smaller countries grabbed the opportunity to attract foreign investments by lowering their tax rates. Many businesses saw this opportunity and took advantage of the differences in tax regulations between countries. It was very tempting to set up a company in a low-tax jurisdiction and enjoy the financial benefits, particularly when large accountancy firms also advised on how to legitimately take advantage of these practices. Some countries offered relaxed regulations and secrecy provisions, creating an attractive environment for tax planning and asset protection. The allure of tax havens allowed individuals and corporations to minimize their tax burdens and retain more of their income or profits, in a completely legal way.

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More and more companies set up their headquarters on small little (often tax-free) islands, and with this newfound freedom, invoices started arriving from unfamiliar places, like Tortola, British Virgin Islands. Just to give you an idea: this sunny country hosts over 375,000 active BVI Business Companies¹⁶ there, while the population is just 31,122 (in 2021)¹⁷

This strategy proved successful, as the inflow of capital stimulated economic growth and development in these smaller nations, too. Some less developed countries, once reliant on industries like fishing and agriculture, experienced booming economies as they attracted overseas funds and payments from foreign businesses. This novel income brought significant increases to real estate, increased local salaries, and improved the infrastructure, too.

On the other hand, larger economies found it difficult to lower their taxes to compete with the tax havens. The world opened up, and they could no longer prevent businesses from getting better tax deals elsewhere. As a result, they had no choice but to place their tax burden on local companies that couldn't afford to relocate and were left to pay the higher taxes on behalf of those who'd escaped. This situation led to a new common enemy for both the public and big economies - tax avoidance.

While the structures used by businesses were legally untouchable, there was growing concern about the loss of substantial tax revenue. Traditional taxpayers demanded regulations to stop what they saw as unfair. As time went on, it became clear that the

¹⁶ <https://bvi.gov.vg/>

¹⁷ <https://www.worldometers.info>

borderless and tax-free business practices couldn't last forever. The rise of tax havens also increased the opportunity for actual tax evasion and money laundering, in addition to the erosion of tax bases in larger economies.

The leading countries realized they needed to take significant action to address this issue. The global community recognized they had to cooperate on an international level, to fight tax havens, but not all jurisdictions agreed to participate. As a response, these leading countries understood that they had the most influence over global cash flows and used this power to hit businesses where it hurt the most - their pockets. What seemed too good to be true, eventually caught up and resulted in stricter ethical and legal practices. Major economies, such as Europe and the United States, strengthened their banking systems and regulatory frameworks, implementing robust anti-money laundering (AML) and due diligence checks. These measures aimed to discourage tax avoidance and ensured that businesses and individuals fulfilled their tax obligations.

Initiatives such as the Base Erosion and Profit Shifting (BEPS) project led by the Organization for Economic Co-operation and Development (OECD) have been established to promote transparency, fair taxation, and the exchange of tax information among countries. The aim was to prevent tax abuse and ensure a level playing field for businesses operating internationally. Countries began to communicate and collaborate, aiming to create a more unified global taxation strategy.

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Tax evasion

Tax planning and tax avoidance is the legal practice of minimizing tax liability by using legitimate methods and following the tax laws and regulations. Tax evasion, on the other hand, is the illegal act of deliberately underreporting income, inflating deductions, hiding assets, or engaging in other fraudulent activities to reduce tax liability. Tax evasion is a crime and can result in penalties, restrictions and even imprisonment.

One of the classic routes of tax evasion is when an owner has both a trading company and a service company which are located in different countries and subject to different taxation rules. The trading company executes the business as normal, and pays its dues according to the local tax regime. The service company is based in a low-tax jurisdiction and has one purpose only: to provide the IP rights, software, marketing, management or any other services where the value of which is hard to determine to the trading company. The trading company pays for these services, so its costs increase. Increased cost leads to reduced profit, so the tax lowers. The funds are therefore a profit to the service company, which is taxed at a lower rate.

For example: Bob, is the owner of a group of companies. Company Apple is registered in Appleland, where the corporate tax is 35%. Company Banana is registered in the Banana Republic where corporate tax is just 5%.

Company Apple is expected to create a profit of USD 1,000,000 during the year for its operations in Appleland. Bob would rather not pay the USD 350,000 tax in Appleland, so he issues an invoice

from Company Banana to Company Apple for USD 1,000,000, for marketing services on the last day of the year. This results in a nil profit for Company Apple, so his tax is $\text{USD } 0 * 35\% = \text{USD } 0$. The profit is now with Company Banana, USD 1,000,000, which is taxed at 5%. Therefore, Bob will pay only $\text{USD } 1,000,000 * 5\% = \text{USD } 50,000$.

This is obviously illegal tax evasion but demonstrates the basic logic of exploiting different tax structures. To fully understand what is legal and what is not and how a business operates, we need to understand the responsibilities of its key personnel, their motivation, actions, pricing, and levels of involvement.

Arbitrage today

As markets become more efficient and technology improves, arbitrage opportunities tend to diminish due to banking hurdles.

While it is still legally possible to establish an offshore company, finding a bank which is willing to work with such entities has become a challenge. Banking procedures have become too complex and costly for those who choose the 'unethical' route. The initial trick has expired, as companies now face difficulties with their offshore holding entities. Many had to close these setups to regain acceptance by local banks, realizing that the once legal, though immoral, ways of business cost more in banking fees and risk than taxes.

Today, countries continue to open up as relocation options are expanding, but in a different way. Nations which offer attractive social, taxation, and lifestyle conditions will keep attracting

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businesses and digital nomads who will further develop these regions. However, the ever-changing financial and legal landscape can be confusing and often resembles a banking minefield, where the larger economies regulating and smaller economies rebel against the restrictions. In this dynamic environment, adaptability is the key to survival. The market eventually balances supply and demand, but until then, there are still opportunities for those who apply a bit of creativity. The cat-and-mouse game never ends - tax authorities trying to pin down tax avoiders, while businesses continue to seek cost-effective solutions.

From an ethical standpoint, businesses must consider whether they are taking advantage of the situation and becoming part of the problem, or if they are trying to find other ways to operate ethically, leading the way to a more sustainable solution. These days, striking the right balance between legal creativity and ethical practice has become a major value proposition, and several companies choose to eliminate tax optimization practices in favour of public opinion on social responsibility.

History of compliance

Drugs have more to do with compliance than we would think. During the 70s, the illegal drug trade was booming, and it had serious economic and social consequences on the U.S. economy. President Nixon launched the 'War on Drugs' campaign, which implemented stricter measures to combat drug smuggling, but these activities were still fuelled by the cartel's funds which were flowing into the U.S. from hidden, offshore accounts. The Bank

Secrecy Act (BSA) was originally established to stop these traffickers and improve transparency in financial transactions while preventing illegal money movements. While it was supposed to make life harder for drug smugglers, cartels, and organized crime groups, it eventually became the basis for the international laws that today strengthen the legitimacy of global banking transactions.

With advancements in technology, financial institutions and banks are facing new challenges daily to fight both tax avoiders and financial criminals. The emergence of digital payments, cryptocurrencies, and online transactions has necessitated the ever-changing development of innovative solutions and frameworks to address risks and ensure compliance in the rapidly evolving financial landscape.

Shell companies

Shell companies are legal entities which have no actual business operations or substantial assets. Their primary function is to act as a local transactional vehicle for foreign companies to gain access to the local banking and taxation ecosystems. Shell companies can also be utilized by corporations to establish a presence in foreign markets to expand their operations globally. By setting up a shell company in a foreign country, businesses can take advantage of local regulations, specific tax incentives or other business-friendly perks which are only available within certain environments.

Shell companies can also provide a means to protect assets, as by transferring assets to a shell company, businesses can separate

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them from their main operations, reducing the risk of legal claims or financial liabilities affecting those assets. Startup businesses may also establish shell companies as they may have no actual offices to trade from yet, and to hold initial assets or intellectual property before formally registering their business.

Many of them are established for legitimate reasons, but the opportunity of tax planning or maintaining privacy in business transactions could be viewed as a grey area for some. The lack of transparency and potential for misuse has made shell companies the subject of scrutiny and regulation by governments and regulatory bodies worldwide. Today we have active shell company-specific initiatives to improve transparency, implement more stringent regulations, and enforce measures to deter their misuse for illicit purposes.

Banking for shell companies

Since the structure of a shell company might also allow anonymity and can be used to conceal true ownership, financial institutions and banks find it challenging to conduct thorough due diligence and risk assessments on these entities. The lack of transparency and the limited availability of reliable information can hide the flow of money and make it difficult for authorities to trace and identify the parties involved. That is the reason why today, many financial institutions and banks no longer accept applications from shell companies.

Continuing with this logic, financial institutions and banks went one step further and even rejected businesses when the Director was

living outside of the company's jurisdiction. The idea is simple: if someone lives in a country, uses its infrastructure and enjoys its benefits, they pay taxes to that country in return. The same applies to businesses. If someone, living in Germany sets up a small company in Cyprus simply because the taxes there are lower, despite being both the shareholder and director of that company, that person is engaging in straight-up tax evasion and will not be supported by any bank. Imagine if anyone could easily set up a foreign company and benefit from lower taxes, there wouldn't be any tax income in some countries!

Banks need to be provided with a solid reason as to why a company is located in a foreign location. Usually, this can be proved by a local office where the activities are taking place, or by having a local director based in the country. Locality is usually proven by having a utility bill under the name of the company or its director.

Although there are still some online financial institutions and banks that provide services to these types of companies, they are considered dealing with a higher risk portfolio of clients, and required to scrutinize the company's activities and setup to ensure that no tax evasion or any other wrongdoing is occurring.

Nominees

A nominee is an individual or entity designated to act on behalf of another person, group, or company in a specific capacity. This engagement is usually formalized through a legal agreement or contract. Nominees are used to localize a company, protect privacy, or facilitate transactions. They hold a position of trust and

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responsibility, carrying out duties that range from representing shareholders in a company to signing documents or holding assets in a trust. By acting as intermediaries, nominees help simplify complex arrangements and shield the identities of the actual beneficiaries, contributing to efficient and discreet management of various legal, financial, and administrative matters.

Originally, the nominee structure was used mainly by shell companies, whereby a local director would help the foreign party with various local transactions. Many transactions once could only be executed by the physical presence of a person. Nominee directors would be sent to the bank to have their 'wet' signature on certain documents, which then needed to be physically submitted to the local government office. At other times, involvement with a certain business needed to be hidden for public relations purposes. Even if the business was completely legal, certain activities could damage the reputation of an individual. For example, if a green advocating politician is benefitting from an oil business, or a religious individual is running an adult website, these otherwise completely legal activities could look very bad on a cover of a magazine.

Unfortunately, this setup offered a perfect opportunity for misuse, and many companies started to abuse it. It was much too easy to use the nominees to hide the real identities of the key personnel in illegitimate company actions or tax evasion incidences. The nominees could also cover their responsibility and might get away with any misconduct by showing their engagement agreements with the 'real' owners or management, by saying "see, I was only acting as a nominee, this is the person you want". By the time legal

enforcement traced the real culprits behind the multiple nominee appointments, it was too late. Often nominees were even used to act as shareholders and paid out their 'dividends' on paper to avoid taxes for the real beneficiary. It's easy to understand why this created a lot of problems around taxation and financial responsibility.

Nowadays a nominee structure is no longer recognized in several countries, which means that the nominee has the same responsibility as the actual person behind them. So, when it comes to fraud, mismanagement of the company or tax avoidance, whoever's name appears on the paper will be taken to court and penalized, possibly even sent to jail. Nominee shareholders also bear the burden of taxation on the dividends which they have not earned, while the real shareholders are unable to spend their funds due to the lack of evidence on how they earned them.

The unlimited Power of Attorney (when all responsibility and rights are unilaterally shifted to the nominee) is also no longer in fashion, and a nominated person can only act in very certain, specifically described acts on behalf of another individual.

The aim is to create an overly risky situation for the nominees, who in turn would either reject or increase their service prices up to a level where it no longer makes financial sense for the business to use. While not many accountants are willing to go to jail to pay for their client's actions, there are still several companies that offer nominee services where it is still legal, but they must operate within a strict framework.

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European directive on shell companies (ATAD3)

The European Commission issued a directive on shell companies in 2021 with full effect expected to be in place by 2024. To determine if a company falls under the category of a shell corporation, the directive established a set of criteria or indicators. Shell companies will not be eligible for the tax advantages and benefits provided by any EU member states. Some of the red flags are:

- More than 55% of the entity's income is earned or paid out via cross-border transactions.
- More than 65% of the entity's income is gained from passive sources such as dividends, royalties, interest, etc.
- More than 55% of the book value of the entity's real estate is located abroad.
- The primary business activity is outsourced or performed abroad.

Of course, this is a very short and simplified version of the directive, but it demonstrates the seriousness of efforts to combat tax avoidance through shell companies.

U.S. directive on shell companies

The United States has also taken significant steps to regulate shell companies through the National Defence Authorization Act (NDAA). This act aims to ban all anonymous shell companies in the country. As part of the NDAA, the Corporate Transparency Act (CTA) requires companies to disclose relevant information which reveals subsidiaries and ownership details. By eliminating the

anonymity associated with shell companies, the CTA seeks to put an end to financial crimes and promote greater accountability.

The risks of nominee services

A few years ago, I received a call from a worried client. Their bank had suddenly blocked their merchant account for seemingly no reason, freezing their funds and offering no explanation on the issue.

Upon further investigation, we requested all the company documents and discovered that they were using nominee director services for their entity, provided by their local accounting firm. Since this was a fairly common practice, we didn't expect this to be the issue. However, the director's name came back as a hit on a certain banking fraud list. As expected, this nominee director wasn't just working for our client's company but was also representing another 20 companies under the accounting firm's administration. Unfortunately, one of these other companies had committed a significant case of fraud. This fraudulent act had placed not only the company itself but all its key personnel, including our nominee director on the global banking 'watch list'.

Even though our client's company had nothing to do with the fraud and had no connection to the other company, in the eyes of compliance they were still connected via this mutual nominee director. This resulted in several days of blocked funds, sleepless nights, and stalled business operations, not to mention serious financial damage.

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Although cases like these are rare and hard to predict, we must understand the consequences and risks behind every detail and set a contingency plan to manage the damage when things head south.

AML

AML (Anti-Money Laundering) is the collective term for the regulations and procedures which are designed to fight money laundering and the financing of illegal activities. These regulations are designed to ensure that the relevant institutions have robust systems in place to detect, prevent, and report suspicious transactions.

Money launderers use various techniques, such as layering funds through complex transactions and utilizing offshore accounts, to disguise the sources and ownership of the illicit funds. A classic example is when a criminal opens a restaurant and declares all their other illegal cash profits as 'restaurant proceeds'. They pay all the taxes for the business and deposit the now legal funds into the bank, to be able to purchase high-value goods such as a house or a car, now legally. Online money laundering is based on the same idea but without the cash movement. Funds from fraudulent schemes or online scams can be declared as legal by setting up a fake website, selling virtual goods (digital photos or music) or in-game purchases for online games. That is why cash businesses and online services are usually classified as higher risk from a banking perspective, as there is a higher potential for money laundering.

AML measures involve thorough due diligence on customers, monitoring transactions for suspicious activity and reporting any

suspicious transactions to the appropriate authorities. AML regulations are enforced by regulatory bodies and government agencies around the world. Non-compliance can result in severe penalties, including hefty fines, loss of reputation, and legal consequences.

AML measures are not limited to financial institutions and banks. All companies are required to establish internal policies, procedures, and controls to identify and mitigate the risks of money laundering. These include implementing customer identification programs, conducting ongoing monitoring of customer transactions, and training employees to recognize and report suspicious activity. This is the reason why everyone faces considerable difficulty when buying a house, a car or even an expensive watch and being subjected to various checks.

FATCA

The U.S. has a unique system of citizenship-based taxation, which means that U.S. citizens are required to report and pay taxes on their worldwide income, regardless of where they live. This can lead to significant complexity and potential double taxation for those living abroad, especially if their host country also taxes their income.

FATCA, or the Foreign Account Tax Compliance Act, is a U.S. federal law introduced to combat tax evasion by U.S. citizens and residents who hold financial accounts and assets in foreign countries. FATCA requires all foreign financial institutions (FFIs) to report information about accounts held by U.S. taxpayers to the U.S. Internal Revenue

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Service (IRS). This legislation aims to ensure that U.S. taxpayers accurately report their foreign financial holdings and income, thus curbing opportunities for tax evasion. By identifying accounts held by U.S. taxpayers, banks help facilitate the exchange of financial information between FFIs and the IRS.

This has led to increased scrutiny and reporting requirements for Americans living overseas, making it more difficult to maintain financial privacy. All foreign financial institutions and banks need to fill and submit a FATCA form for each U.S. citizen applying with them, and to submit all relevant information about account holders to determine their U.S. tax obligations. This is an obvious extra cost, risk, and headache, so U.S. citizens often just get automatically rejected for financial services abroad.

KYC / KYB / KYD

KYC (Know Your Client) and KYB (Know Your Business) are crucial processes implemented to verify the identity of an individual or business and assess the risk associated with clients and partners. These procedures are an integral part of AML and counter-terrorist financing (CTF) efforts.

KYC involves collecting and verifying customer information such as identification documents, proof of address, and other relevant data, to ensure that the identity of a person is accurately established. By conducting KYC checks, businesses can assess the risk profile of their clients and determine the level of due diligence required.

KYB, on the other hand, focuses on understanding the business entity. This process includes gathering information about the legal

structure, ownership, key personnel, and financial health of the business. KYB helps to assess the legitimacy and credibility of an organisation, identify potential risks, and comply with regulatory requirements.

KYD (Know Your Deposit) is another important aspect of the compliance process. As we have seen, businesses are responsible for making sure that all received amounts come from a taxed and legitimate source. KYD procedures verify the origin and the type of funds (salary, heritage, winnings, sale of an asset, etc). If someone cannot prove clearly where their funds came from, this raises a red flag, and these funds will not be accepted by any business.

The implementation of KYC, KYB, and KYD processes varies across jurisdictions, as different countries have their own regulations and requirements. These procedures require regular updates and monitoring, as the information should be always kept up to date. In recent years, advancements in technology have facilitated the automation of KYC and KYB practices using digital identity verification, artificial intelligence, and data analytics. However, the increasing administration costs of the businesses are usually passed on to the end clients, resulting in increased banking and service fees.

Public company details

Company details are usually public. If we know the company name, we can usually run a simple and free online search to see who the directors are, where the address is, etc. As many times is the case, the country's national company registrar offers this free search

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service. Some countries also even offer financial information and tax records about the entity.

Public company data allows investors, customers, and the general public to access vital information about a company's operations, financial health, and ownership structure. This builds trust and confidence within the business community. Transparency also helps the financial markets. Lenders and creditors use this public company information to evaluate a company's creditworthiness during the loan application process. Investors can scrutinize and compare different companies, which helps efficient price determination in the stock markets. Public disclosure also encourages companies to take responsibility for their actions and since their financial performance is shared, this might motivate them to be socially responsible and follow ethical behaviours.

The legal requirements of what to disclose differ from one country to another. Sensitive trade secrets and other confidential details of the operation are usually not disclosed.

Standard company verification in the EU

Although there is no single standardized online company verification method which applies to all European Union (EU) member states, each one has its own system for verifying company information. The EU has been promoting digitalization which facilitates cross-border business information sharing, such as the 'E-Justice Portal'. While the portal doesn't directly offer uniform company verification, it does provide links to national business registers and relevant authorities in each country. For specific

company verification including the company's legal status, ownership, financial reports, and other relevant details, someone would need to visit the official business register website of the EU member state where the company is registered.

Standard company verification in the U.S.

Like the EU, the U.S. offers search and access to information through the 'Secretary of State' or 'Department of State' websites. Each state in the U.S. maintains a database of registered businesses, including corporations, limited liability companies (LLCs), partnerships, and other types of entities. These databases include information about the company's legal name, registration date, registered agent, business address, and sometimes more detailed information about its ownership and management.

Hiccups in the compliance process

During a seemingly routine account application, one of the banks asked our client to provide two forms of photographic ID for the verification of all key personnel. This is not an unusual request and normally does not cause an issue. This time, however, one of the directors was a British citizen, who had no driving licence. The issue is that Great Britain doesn't issue ID cards to its citizens, so our director could only provide a passport for verification as his official photographic document. Since banks often use an automated emailing system and due diligence tool, we were unable to proceed with the application unless we provided all documents, which in this case was simply impossible. It took us well over 2

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months to convince the compliance officer why we were unable to fulfil this request. At one point the director was seriously considering taking the driving test just to meet this simple and basic compliance requirement, as it seemed like a quicker and cheaper way to get verified.

There was another time when we assisted a business that had a Romanian director. In Romania, the ID card is single-faced, meaning the back of the card is completely blank. When we tried to scan the back of the card as we were instructed to do by the bank, it came out as an empty white sheet, which was rejected by the compliance system. They thought we were sending them an empty page by mistake. We had to spend several hours on the phone and write well over 15 emails until we managed to prove that the problem wasn't on our side. Finally, we managed to speak to a human who escalated the issue to management, who in turn had to obtain special approval from the Head of Compliance.

These examples of exceptional case handling show how time-consuming, expensive, and stressful compliance can be. All the financial institutions and banks implement and apply AML and KYC processes in good faith, to achieve a common goal. However, we often see that compliance loses the focus of its original intention and becomes very routine. Not everything fits in a pigeonhole and when we ignore common sense just to avoid issues with regulators, this is a clear red flag. Although the idea behind it is positive and many of the compliance processes are innovative and admirable, the majority of real-life examples are unfortunately still very burdensome, aiming only for the checkbox ticks. With tech advancements and AI, this expensive and time-consuming process

will hopefully become easier and more enjoyable, improving this critical component of the overall user experience.

The KYD Process

KYD checks and processes are aimed at checking the amounts and verifying the origin and legality of the funds themselves.

SOF (Source of Funds)

SOF refers to the origin and background story of funds which are about to be transferred to a business. As mentioned earlier, not only financial institutions and banks, but most businesses who handle larger value payments have a responsibility to verify the legitimacy of the funds and understand the nature of the customer's financial activities. To do this, they employ various methods to verify the source of funds, which could include requesting documentation such as bank statements, employment contracts, tax records, sales agreements, or other supporting evidence.

Assessing the source of funds also allows financial institutions and banks to evaluate the risk associated with a particular customer or transaction. Customers who are engaging in high-risk activities, such as those involved in cash-intensive businesses or industries prone to money laundering, usually trigger enhanced scrutiny. Understanding the source of funds also helps financial institutions build customer profiles, which aids in monitoring and detecting suspicious activities. Monitoring changes in a customer's source of funds over time can help identify anomalies or potential red flags.

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SOW (Source of Wealth)

SOW refers to the origin or accumulation of a person's aggregated wealth or financial assets over time. Usually, individuals gather wealth through their salary, inheritance, or ownership of their investments. Other sources of wealth may include royalties from intellectual property or even a lucky win at the horse race. All of these are usually subject to taxation, with documented track records. During the SOW process, businesses have to make sure that the declared wealth amount aligns with their financial activities and tax returns. This includes providing documentation and evidence to support the declared source of wealth, such as business ownership records, investment statements, or legal documents related to inheritance. However, there is a thin line between detailed checks and privacy. Even though the verification should be conducted in a manner which respects customer privacy and complies with data protection laws and regulations, it can be a very burdensome and lengthy process which might feel as an invasion to privacy.

Implementation challenges of compliance policies

As with everything in life, the devil is at the details and the obstacle lies within the varying interpretations and implementations of the compliance standards. Grey areas exist not only between companies and financial institutions but also within the departments or branches of the same organizations. Inconsistency results in uneven enforcement and can potentially expose the organizations, even the whole system, to unwanted risks.

In some cases, poorly written and rushed regulations can create more problems than they solve. One example of this is the EU's cookie consent banners, which were designed to protect user privacy. These banners are often long and complex, making it difficult for users to understand what they are agreeing to. Instead of providing clear and concise information to users about the use of cookies, they often overwhelm visitors with confusing messages and complicated choices. As a result, users are frequently presented with a stream of pop-ups every time they open a website, and they hurriedly accept without fully understanding the implications. Simply clicking 'accept' without reading the banner defeats the purpose of the regulation.

This is just one example of how well-intentioned regulations can go wrong if they are not carefully drafted. Regulators must take their time to understand the potential unintended consequences of their regulations before they are implemented.

Another issue is that often there is no clear guidance in the law about what is required during a due diligence check, or to what extent the checks need to be performed. This can lead to a completely subjective approach, where different compliance officers may have different interpretations of the law, resulting in confusing and inconsistent outcomes.

There are several self-proclaimed due diligence tools on the market, but these tools can often produce conflicting results. The data sources used by these tools may be questionable, and these systems are often unchecked by regulatory bodies, nor approved by the responsible authorities. This lack of clarity and consistency in

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due diligence can create several problems for businesses. It can not only make it difficult to know what is required to comply with the law, but it can also lead to inconsistent results across different businesses. This can increase the risk of non-compliance and make it difficult to defend the process against legal disputes.

GDPR and other data protection laws might further confuse businesses, that must verify submitted documents. Companies may not have the authority to contact third-party providers to validate the information in the documents. Imagine, if every time someone opens a bank account the bank would call the electricity authority to verify the utility bill, which they collected as proof of residence. This is not only very time-consuming and expensive for both the bank and the electricity company, but also very confusing to pinpoint whose responsibility is the authentication. Not to mention, to what extent a private company must be required to give out the personal information of a customer to another company (bank). This leads to documents being collected just to 'have it' without an actual purpose. I've seen it happen many times, that a utility bill is accepted after just a quick glance as the compliance officer had no expertise nor resources to check its validity in any way. In the present era with the utilization of AI, deepfakes and similar truth-altering technologies, it's not hard to see the inherent risk of collecting documents which are then left unchecked.

Ensuring consistent compliance across a diverse workforce can also be challenging. Businesses may have employees with varying levels of awareness about compliance matters, as well as employees who are located in different countries with different regulations. One department might collect, verify, and store a document differently

than another. One colleague might pass a passport copy as valid, which could be too blurry for another. Harmonizing processes can be particularly challenging when companies grow while legislation is changing quickly.

Compliance fatigue is yet another issue to consider. I have personally experienced employees becoming overwhelmed by the sheer volume of compliance policies and procedures. This can lead to a reduced level of vigilance and understanding, which can result in unintended violations. In some cases, compliance policies might conflict with operational efficiency or innovation. A clear example is when the salesperson's commission is on hold until the compliance collects the last notarized document from a client, who then 'pushes' the compliance for agreement daily. This can lead to resistance from employees who feel constrained by rigid guidelines. This tension can also hold back the organization's ability to adapt and grow.

Bank reconciliation

One aspect of my work is to attend different trade expos and conferences, whereby I meet existing clients, expand my network, and meet potential new clients. Here I also connect with financial institutions, payment providers and banks. These meetings are particularly important because there is a lot of hidden industry gossip which is only revealed over a cup of coffee.

One of the most interesting conversations I had about banking occurred early in my career, in Malta. I met a startup developer who was building various banking-specific reconciliation software for

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Tier 1 and correspondent banks. After a long conversation with them about IT setup and banking communication, I was very surprised to hear that several large, well-known banks were still working with old, outdated legacy systems which had been built back in the 80s.

There had been some software updates since then, but these updates were often just an ad hoc solution, patching up problems as they arose. He said that it's almost impossible to replace whole banking systems and build a new one from scratch, without any major issues occurring. Unfortunately, updating existing databases and software is not only a banking issue, as almost every tech company is facing similar challenges. Banking, however, is particularly important as the global economy depends on codes which might not have been checked or updated for decades.

When it comes to technology, connectivity is vital. As we said earlier, the global banking system is very similar to the roads and highways, allowing us to get from one point to another. The correct infrastructural setup and maintenance are needed for a smooth journey. However, different countries might use different types of roads and adhere to different driving laws. Getting to France from the United Kingdom might be challenging as the driver's seat is on the opposite side. To ensure smooth connectivity and overcome the dangers and accident risks posed by driving on the opposite side, measures need to be taken, such as providing warnings and signs on arrival.

Banking channels are similar. One of the major known issues is the compatibility differences between databases and their

communication with each other. These often show up as significant value differences between banking records. Since the core information database of one bank might not synchronise perfectly with the other bank's system, various translation and integration systems must be run to ensure security and mitigate the loss of data. However, variances might still occur.

For example, a correspondent bank clears and settles in bulk to their various banking partners at the end of each day. Due to the differences in foreign exchange calculations, the numerical variances show up in the totals. Surprisingly, even today several banks are still relying on manual entry work, which is cheaper and quicker than a whole system replacement. This might result in mistypes and system mismatches and when different details appear in the descriptions, the automated system might not be able to allocate every transaction correctly. If the description doesn't correspond well enough with the original description, the payment cannot get routed correctly and might remain uncleared for days. It's not uncommon for banks to have funds floating in suspended accounts until the issue is resolved.

Although we all know that banks use various networks such as SWIFT, SEPA or ACH, they still usually have their own banking front and back-end systems. This is why every bank statement, although similar, differs in the small details. Smaller banks still often rely on manual input, even though the instructions are sent digitally. For example, when a customer initiates a transfer and sends the automatic input for payment, the bank might just collect these instructions on an Excel sheet, and manually key every instruction into the system at the end of the day.

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Despite the current issues and hiccups, technology, banking systems and the underlying communication between them are improving every day on a global scale.

Bank fraud systems

Often, IT systems are the reason why certain transactions go through, while others are flagged. Once we understand that the bank's technologies are far from perfect, it can give us a deeper insight and understanding of why we face certain types of banking issues.

One of my clients had been transacting with a foreign company for years, without any issues. One day the banker called him and asked for more information about a certain transaction. Even though they told the bank that they had been doing the same transaction with the same partner, in the same volume for over 2 years, the bank still demanded to have some sort of supporting document. The bank's fraud system had just flagged this amount randomly, as suspicious. Understandably, the client was surprised to see why the same exact transaction, which had been occurring for years, raised an issue this time. Turned out that the bank was going through a software update and the management had set the fraud alert limits lower than before. It had nothing to do with the client, nor with the transaction, yet the client suffered the costs of verification.

Another interesting case happened to another client of mine, where the business accepted funds directly to their bank account from various individual customers, as payment for their online

services. The payment had to include the name of the person who sent the funds for identification purposes. One day a Hungarian customer sent the funds, whose name was Erzsébet - the Hungarian name for Elizabeth. When the payment was sent, 'é', as a special character, was not included in the description, due to system limitations. The recipient bank received an incoming fund transfer with the description 'Erzs_bet'. The transaction was flagged due to the word 'bet' in the description, which indicated that this client was paying for gambling services, which the business did not have any license for. Moreover, the bank froze the account and restricted any further incoming funds until the issue had been cleared. This, however, took weeks and long explanations about Hungarian names. During this time, several other customer fund transfers were blocked and sent back, which not only resulted in an increased number of complaints but also caused serious reputational damage and a significant loss of income for that period.

Chapter 3 – Companies

Intro

In my humble opinion, basic accounting principles should be taught at schools from a young age. This knowledge not only helps people with interpreting business information but is also important when someone makes decisions about their own personal finances. Budgeting, for example, is easier when we understand how to categorize and track income and expenses effectively. Being familiar with accounting can also help with interpreting bank statements, understanding tax obligations, and making informed decisions about savings. Knowing 'what doesn't sound right' drastically improves anyone's ability to identify suspicious scams, too.

Spending a few hours to learn the basics does not cost a lot, but it can be extremely valuable when it's needed. Not knowing isn't an excuse when facing penalties and legal issues due to a lack of knowledge on the subject. Overall, accounting is the language of money. And a global one too!

I studied bookkeeping and accounting in Hungary from 2001 to 2004, during the time when Hungary joined the EU in 2003. All my knowledge on the subject was in Hungarian and followed Hungarian laws: we learned about the local taxation system and the country-specific legal framework. I remember I was very concerned about how I would translate this knowledge if I ever left the country and started working abroad. When I began my accountancy career

in the UK however, I was pleasantly surprised about how the logic, the systems, the calculations, and the record-keeping is essentially the same worldwide. Certain expressions and details differed, of course, yet the fundamentals are international. The common system makes it easy for everyone to understand any business operation, taxation, and personal financial information at its core. A cost is a cost, and the income is the income, all recorded in a similar way.

Despite common beliefs, accounting principles extend far beyond the professional accountant's or business owner's knowledge and are beneficial in almost any career. Just about every role, ranging from HR to marketing, handles some sort of financial data, such as budget and profitability. Recording costs is vital when planning for projects and campaigns. Knowing the basics can be very handy to see the big picture and understand processes from the beginning to the end from a financial perspective.

Understanding financial data can also help find answers to many payment-related questions. Banking is basically the top layer of the global accounting system where all individuals and businesses are interconnected via payments. Some elementary legal knowledge about local and global taxation systems and company setup gives an overall idea of how financial transactions work around the world.

Basic accounting

Accounting has 5 major terms, which I'll explain in a very simplified way below:

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- **Assets** represent the company's possessions. This is what the company owns, such as cash, equipment, or its physical facilities.
- **Liabilities** represent the company's financial obligations. This is what the company owes to others, like loans or unpaid invoices.
- **Equity** represents the company's worth or value, what the owners can claim on the company's assets after deducting its liabilities.
- **Income** represents the amount that the company receives as remuneration for its operations, such as selling products or providing services.
- **Cost** represents the amount that the company has spent to acquire, produce or create such product, service, or asset.

Accrual accounting

A few years ago, I was running the accounting and finance department of a large shipping group, with over 40 companies. I handled their complex global international banking transactions, as well as the accounting and audits. I remember one day when we finished the audits, I took 10 of the company's financial statements to the director for his signature. He was also one of the shareholders of the group, so he read all the reports, one by one, checking the numbers. His eyes slowly started to narrow as he hit the 5th company report. He turned the pages back and forth and finally looked at me and asked if I was happy with the results. Profits

were great, we were hitting targets, so I replied a confident, “Yes”. Then he said, “According to these reports I should be a millionaire, but I see an empty bank account. Please explain.”

Later, during my time doing company audits, I saw the same, recurring pattern. The company made a large profit but had a low bank balance. Almost every owner had the same reaction as my old boss, demanding answers. I felt like a broken record, explaining the same logic over and over again. This concept perhaps is harder to understand and one of the main reasons why companies fail. This unusual accounting idea, which baffles many, is the principle known as **accruals**.

Many people think that accounting only records transactions when money physically changes hands. For example, if you sell a product today but don't get paid until next month, you wouldn't record the sale until you receive the money. This might seem logical, but this would mean that a business might pay no taxes in one month, and pay double in the following, even though it worked and earned the same amount during both periods.

Accrual accounting matches revenues and expenses with the periods in which they occur, allowing businesses to understand their true financial position at any given time. This methodology requires the recording of financial events as they happen, even if the money has not been paid. It provides a more accurate picture of a company's financial health for a given period.

While the income statement may reflect a high level of sales, the cash may not have yet been received. This means that even if we make a profit, our pockets might be empty as the payment will come

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later. A company might also have high upfront costs like inventory purchases or capital investments which may require large sums of cash but aren't immediately expensed on the income statement.

Similarly, we might see a lot of cash but are still making losses, as expenditures such as depreciation and amortization can reduce accounting profits but don't have an immediate impact on cash flow.

Debt repayment could be another reason. If a company takes out loans to finance its operations or growth, repayments can consume large amounts of cash, which might also result in an empty bank account even though profits might be high. Additionally, the company might have other financial obligations which are not reflected in the profit and loss statement but require cash outflows. These could be tax liabilities, dividends, research, development costs, etc. Costs like these can use up cash resources in large amounts.

In real life, accrual can really mess up cash flows, leading to serious financial issues. Many times, companies collect GST or VAT after sales, by law, but this money does not belong to them. I have seen some companies using these funds to finance their own operations and are then unable to pay their obligations when the time comes. Understanding that profit and the cash in the bank account are totally different is a very basic, but essential concept which everyone must understand.

The Corporate Veil

Another important legal concept is the corporate veil, which states that a company is independent from its owners and directors. This is a very important principle to understand as many people think that if the owner of a company is rich, he will be forced to repay the company's dues, so an unpaid invoice's payment promise is more secure with a company which has a wealthy owner. This can be misleading, however.

Every company is treated as a separate 'person', and owners usually have a limited liability towards the company's financial obligations. This company 'person' can own property, sign contracts, and be involved in legal matters just like an individual would, on its own accord. As every individual is separate from another, the same idea applies here with companies too. The veil acts as a protective shield, safeguarding the personal assets of the owners and directors from the debts and legal responsibilities of the company. Although directors still take some sort of legal responsibility and can be held accountable for their actions and decisions within a company (mainly when intentional wrongdoing takes place), if the company goes bankrupt or faces lawsuits, the investor's and director's personal assets (savings, house, etc) are usually untouched.

This limited liability means that investors normally have no legal responsibility over the company's operations. They can only lose their investment in the company up to the value of what they invested and aren't liable for any further loss. This protection creates the necessary trust needed for people to invest in

companies and make the stock market feasible. This is why we use the term 'limited liability' for most typical companies.

Company types

There are several different types of company structures, each with distinct characteristics and legal implications. Different countries have different company setups, taxation laws and other requirements. Choosing and operating under a certain company type is based on various factors, such as the jurisdiction of the director or offices (see Chapter 2), taxation considerations, and other legal aspects. As a bare minimum, every company needs to have an owner, a director, and an address.

Broadly speaking, the owner receives the benefits which the company generates and has a limited liability for its actions. The director has ultimate power and can be held responsible for the operation of the company, and the address gives substance to the company, showing where it belongs and operates from. Let's take a look at the main company types and their differences below:

Sole trader / self-employed

A sole trader, also commonly known as a sole proprietor or self-employed person, is a type of business structure where a person operates a business on their own without partners or shareholders. In this arrangement, the individual is both the owner and director (operator) of the business, all in one. This one person assumes full responsibility for the company's operations, finances, and

liabilities. Sole trader businesses are common among freelancers, consultants, small-scale entrepreneurs, and individuals who want to start a business with relatively low upfront costs and minimal administrative burdens.

Since the self-employed person owns the business entirely and makes all the business decisions, they are their own directors and take all the responsibilities, too. There is personal liability for the debts, obligations, and legal liabilities of the business. The corporate veil here is not in effect, and therefore all personal assets are at risk if the business encounters financial difficulties or legal issues. The generated profits are typically subject to personal income tax and both profits and losses are reported on the individual's personal tax return.

Depending on the jurisdiction, there might be specific tax regulations and deductions available to self-employed individuals, but establishing a sole trader business is relatively simple and involves far fewer legal formalities compared to other business structures.

Partnership

A partnership is like a 'grouped' sole tradership between multiple individuals, in which two or more individuals or entities come together to collaborate and jointly operate a business. Partnerships typically involve sharing profits and losses between the partners, based on a predetermined agreement. The distribution of profits doesn't necessarily have to be equal and can be determined by the partnership agreement. Partners are both owners and directors,

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taking a role in the decision-making processes of the business. This means they have unlimited personal liability for the debts, obligations, and legal actions of the business, the same as with the sole tradership.

Partnerships can have different types of partners, such as general partners and limited partners. General partners have more involvement in the business and take on more liability, while limited partners have limited liability but limited involvement in management. Depending on the jurisdiction and the type of partnership, the partnership itself might not be considered a separate legal entity. Instead, the partners are collectively responsible for the legal and financial aspects of the business.

A partnership agreement is usually written at the incorporation of the partnership, outlining the terms and conditions of the partnership. This agreement specifies the roles and responsibilities of each partner, the profit-sharing arrangement, decision-making processes, and more. Typically, legal firms, consultants and doctors operate under this setup, which clearly divides the responsibility and profits of the partners based on individual contributions to the partnership.

Limited liability company

A limited liability company (LLC or LTD) is a business structure which is based on the corporate veil concept. It's a distinct legal entity which offers its owners (shareholders or members) limited personal liability for the company's debts and obligations. These companies have a minimum of one director (who sometimes can

be the same person as the shareholder) who manages all company activities and therefore takes responsibility for the operations and submissions.

In this setup, ownership is usually established through ownership interests, which are equivalent to shares. These ownership interests signify how much of the company each member owns. This structure is used to determine ownership stakes (i.e. shareholding percentage), influence in decision-making (i.e. voting), and financial entitlements (i.e. dividends). The owners of the shares or the membership are usually offered non-publicly, where ownership is held by a relatively small group of individuals such as founders, family members, or a select group of investors. These shares are not available for purchase by the public, which forces the investors (owners) to be familiar with and have a direct connection to the project to be able to invest in the company directly. Direct investment needs a certain level of personal connection to the management, therefore reducing the level of risk from the investor's perspective.

Listed company

A listed company, also known as a publicly traded company, is a LLC or LTD company whose shares are listed and traded on a stock exchange. Offering the shares (i.e., asking the public for investment in the company, in return for future dividend payouts) is very strictly regulated because it can harm the public in case the company doesn't fulfil its obligations and spends the investments in a different way to what was promised. When we have a life

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insurance or investment portfolio where we expect a return on our investment, the stock market must make sure that the companies which offer shares for investment are monitored and audited so no fraud can occur. Collecting funds for a common goal, and then letting investors down might not be an intentional fraud but can harm society and trust in the system. The regulated stock market protects and enables investors, including private individuals, institutional investors, and other companies, to buy and sell these shares with confidence.

Investing in the stock market is a complex process and is usually limited to specific brokers and financial experts who hold the relevant licences. Giving out financial or investment advice is also subject to a licence. If anyone could just invest their money without limitations, or recommend investment and saving opportunities, people would fall for their own biases and limited knowledge, easily gambling their money away.

Although we still see stock market failures from time to time due to mismanagement, the system is generally set up to make sure that people are less likely to lose their life savings based on one bad decision. This avoids the subsequent reliance on society and taxpayers to save them and put them back on their feet with financial support and benefits.

That is why for a company, listing its shares on a stock exchange comes with regulatory and reporting obligations (mainly to see where the investor's funds have been spent) and the process can be complex and costly. Listing can also expose the company to increased public scrutiny and require a minimum profit but usually

offers more fundraising opportunities compared with private companies. Valuation of the company is often easier than the limited liability company shares, due to the publicly available market prices.

Non-profit / NGO / Charity

A non-profit organization (often abbreviated as NGO, which stands for Non-Governmental Organization) or a charity is an entity established with the primary goal of serving the public or a specific cause rather than generating profit. These organizations operate in various sectors, including social, environmental, health, education, human rights, and more, and they play a vital role in addressing social issues and contributing to the betterment of society. Non-profits rely on various sources of funding, including donations from individuals, grants from foundations and governments, fundraising events, and sometimes income from fee-based services. Unlike general, for-profit companies, any surplus funds generated by non-profits are reinvested into their mission rather than distributed as profits to owners or shareholders.

Non-profit organizations could be exempt from paying income taxes, due to their primary purpose of benefitting the public. However, this status must be checked and granted by the government since it requires adherence to specific rules and regulations. Non-profits are therefore subject to strict financial reporting and accountability standards to ensure that their resources are used appropriately and effectively to fulfil their mission. Generally, no company or individual can collect donations

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without having the relevant licence, as it would be an opportunity for fraud and misuse of funds without supervision.

Money laundering via non-profit organisations

Non-profits face an elevated risk of money laundering due to their specific role in society. The high level of public trust they enjoy makes them a tempting proposition for criminal exploitation. As these companies rely on donations and contributions, sometimes anonymous ones, these might be lacking in source of funds checks. Criminals who run non-profit businesses might make substantial donations to these organizations and pay themselves out in large salaries, bonuses, or other benefits (such as housing or cars) as operational expenses. Some non-profits also have complex structures where the owners are various international companies, a situation ripe for tax evasion.

Key personnel

Even though companies are independent legal entities making their own decisions and taking responsibility for their actions, they are still run by people. As I have seen happen many times, when an individual is involved in multiple operations, particularly when these operations are located within different jurisdictions, they may be motivated to take advantage of their situation, move funds, use assets, utilise different tax structures or share liabilities between the various businesses. We looked at this earlier with the example of Company Apple and Banana.

Shareholder / Owner

As shareholders, owners or stockholders are individuals, entities or other types of organizations who own a company fully or partially, ownership is represented by the shares of stock they hold. When owners invest in companies, they expect a return on their investments (dividends), and their investment value to increase, so they can sell it later once it has generated a profit.

The setup can be compared to real estate ownership, where the asset is the house (company), the ownership is full or partially shared (shareholding percentage) and the profit generated on the asset is the rent (dividends). The rent received is portioned the same as the ownership percentage of the house. The house value can also grow or decrease depending on the property market (much like the original investment value in a company). Lastly, the owners can spend money to renovate their house (which is the same as when owners contribute more money to a company, which then usually increases its value further).

Since the company is the shareholders' asset, shareholders usually have the right to vote on important company matters, such as electing the directors, approving major corporate decisions, and ratifying significant changes in company policy. The role and influence of shareholders can vary based on the company's corporate governance structure, the number of shares they own, and the rules and regulations of the jurisdiction in which the company operates.

UBO

An Ultimate Beneficial Owner (UBO) is the individual who ultimately owns or controls more than 25% (sometimes even 10%) of a company's shares or voting rights, or who otherwise exercises control over the company or its management. Understanding who the UBO is becomes especially crucial in financial transactions, regulatory compliance, and due diligence processes. Financial institutions often require this information to comply with KYC and AML regulations.

For instance, in a business arrangement where a company is owned by multiple entities, the financial institutions involved would trace ownership through every layer, cutting through all the corporate veils, to identify the natural person or persons who are the UBOs, ultimately benefitting from the structure. This kind of scrutiny becomes increasingly common in international transactions where ownership structures can be complex and span multiple jurisdictions. The identification of a UBO is not just a formality but a regulatory necessity that can have significant implications for both the companies involved and the financial institutions servicing them. These checks are also important to identify the final taxpayer of the dividends of the companies and report this back to the relevant tax offices to make sure the individual is unable to cheat on his tax responsibilities.

Director

A company director is an individual who holds a position of responsibility and leadership within a company or corporation.

They are appointed by the shareholders of the company and are tasked with making strategic decisions, overseeing the company's operations, and ensuring that the company operates within legal and regulatory frameworks. The specific roles and responsibilities of a company director can vary depending on the size of the company, its industry, and the country in which it operates. There can also be more than one director.

As we have seen, the owners' risk is limited to the amount which they have invested in the company. Being a company director comes with its own set of legal responsibilities and potential liabilities. Directors can be held accountable for the actions and decisions of the company, and they must act in the best interests of the company and its shareholders.

Directors are responsible for ensuring that the company is managed ethically, transparently, and in compliance with laws and regulations. They may establish internal controls and processes to prevent fraud and misuse of company resources. Directors also oversee the financial health of the company by reviewing financial statements, budgets, and reports to ensure the company's financial stability and growth. They must also be able to identify and manage potential risks that the company may face (e.g. legal, financial, operational, or reputational), while ensuring that the company complies with all applicable laws, regulations, and industry standards.

Directors have a fiduciary duty to act in the best interests of the company and its shareholders. This duty includes making decisions that promote the long-term success and financial stability of the

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company. The decision to set and distribute dividends is ultimately made by the board of directors rather than the shareholders. Since directors have access to detailed financial information and insights about the company's current and future financial position, they are the most suitable to decide whether the company has sufficient profits, cash reserves, and liquidity to support dividend payments without compromising the company's operations or growth prospects. This power is very important as otherwise, shareholder greed could potentially bankrupt the company if no profit is left to invest for the future in the first beneficial financial year. Directors have a broader perspective on the company's strategic goals and plans, so they are more suited to decide how dividend payments might impact the company's ability to invest in growth opportunities, research and development, acquisitions, and other strategic initiatives – all done following legal and regulatory requirements.

Secretary or administrator

A company secretary or administrator might be required by law, to ensure that the company adheres to legal and regulatory requirements. They keep track of changes in laws and regulations that could affect the company's operations. They also manage communication between the company and its shareholders, while handling company records and documentation, maintaining records of board meetings, minutes and other important documents, ensuring that they are accurate and up to date.

The director's power over the shareholder

Early in my career, I had a client who had invested in a small online family business operated by his wife. He was the 100% owner/shareholder, while the wife was listed as director of the company. I was helping them to set up the company and handled their books. One day after an argument, the husband called me as his wife had changed the banking passwords for the company. Even though he called the bank, they gave him no information about the company's accounts whatsoever. He said to me, "I own the company, so I should have the right to instruct the bank as it holds MY money. My wife is just an employee, she has no ownership of the company, and she had no right to lock me out". While I couldn't resolve their marital issues, what I could do was explain to him why he was wrong!

When someone owns a company, they have the ultimate right to choose its directors. In return, they enjoy limited liability, so they are not personally liable for the debts, obligations, or losses of the company beyond the value of their investments. This is where their authority ends.

Once the directors have been appointed and registered, they have personal responsibility over the company operations. Since they make all decisions related to company funds, all banking and financial information must be handled by them. Confidentiality is essential, and strictly limited to the director and any authorized personnel of the director's choice. The bank's decision to limit the husband's access to online banking was to maintain data security due to the bank's compliance requirement.

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The only legal way to resolve this was if the husband, acting in his capacity as a shareholder, enforced his right to remove the director and appoint a new one. In this case, he could choose to appoint himself as the director, alert the bank about the changes, revoke the previous director's access rights, and receive a new password. Although this can be a very lengthy process, it's a good lesson on why shareholders need to be very cautious when appointing a director who has ultimate power over their investments.

Company documents

During due diligence checks, companies need to submit all their documents for KYB checks (as we have seen in Chapter 2). The main company documents would usually include the certificate of incorporation, address certificate, register of shareholders and directors (other personnel too, if required by law), memorandum and articles of incorporation/association, licences, etc. This helps to establish where and when the company was incorporated, for what purpose, under what structure and who the key people behind it are.

Due diligence checks also aim to discover the current company position by inspecting documents such as banking and financial statements, annual reports, and board resolutions. To check the company's current activities in more detail, the requested documents can include corporate policies and procedures, supplier and client contracts and agreements, business licenses, and annual reports.

Of course, interpretations and assessments can vary depending on who checks them, and this can sometimes result in a subjective compliance process as we've mentioned before. Furthermore, since every country has different compliance requirements, the required documentation can vary significantly. However, understanding the basics of important company documents helps us understand the main aspects of any due diligence process.

Legal opinion

A new client approached me a few years back, asking me to help them find a new payment processor and some different banking options. Since his business activities were restricted only to certain countries, we asked him to contact his lawyer. We were after a so-called 'legal opinion'.

The legal opinion is usually a document which showcases details of the business operation, explaining its background from a legal standpoint and referring to relevant paragraphs within the local legal statutes. This document was needed to state the limitations of business activity in certain countries, explaining in detail the legal background of what was allowed and what was restricted. The legal opinion basically shifts the bank's responsibility to the lawyers, as this document proves the complete legality of the operation. This is quite a common request and for certain standard industries, the document can look quite similar.

However, when the client sent the completed legal opinion over to us, I noticed a familiar name – the lawyer who had issued the document was actually the same one who had issued a similar legal

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opinion a few weeks earlier to another client of mine, about a similar case.

Driven by my curiosity and knowing how much lawyers charge for this simple document, I wanted to compare these opinions to discover the exact alterations and differences in the text, thereby estimating the amount of work the lawyer had put into it and understanding the nuances of the business operations between the two companies. Since the business activities were very similar, I was expecting some sort of similarity between these documents. What I found however completely shocked me.

The two documents were entirely identical, and clearly fake, where only the names of the companies had been altered. Same signature, same date, same formatting. I immediately contacted the lawyer's office to alert him about this finding. It turned out that he wasn't even in contact with any of these companies, and these legal opinions were issued initially to a completely different company. When the lawyer reported the case and further investigations were conducted, it was discovered that there was a service provider company which helped businesses with various company incorporations globally, acting as an agent. This company was re-selling various company formation and accounting packages in multiple countries, setting up tax plans and gathering legal opinions. This activity is not subject to a licence and was handled by a single person, working from his bedroom, somewhere in Asia. This person had noticed a gap in the system and realised the business opportunity available from faking legal opinions, as they are rarely checked. Taking advantage of this lucrative gap in the market, he had sold hundreds of fake legal opinions worth

thousands of dollars over the years, unnoticed, by changing only the company name. Thankfully this particular case was exposed, but we are unaware of how many documents remain unchecked during the due diligence process of the many small and medium-sized enterprises (SMEs), providing untold opportunities for criminal activities.

Chapter 4 - Banking & Risk

Intro

Banking is an expensive activity. If I wire 20 bucks to my friend, who sends it to his friend, who then sends it back to me, chances are that most of my original money is gone, spent on banking fees. We don't see this with cash, so why do we pay all these fees to the banks?

As we've seen previously, banks are independent entities which operate differently from other businesses. They are subject to strict regulations differing from country to country, so every time money moves, different systems are used, and compliance checks are performed. The funds flow through various technologies and licensed financial institutions, who then need to report the movements back to their regulators in some way. These complicated and expensive systems are the result of the synchronisation of different entities, all of which need to be compensated, maintained, and audited. This is the reason for the astronomical costs.

The lower the banking fee, the more certain we can be that the sender and the recipient banks are regulated under similar domestic rules, which we see for example on the SEPA instant network or with the ACH transfers which are typically free for most consumers. This is also the case (or at least the idea is) with cryptocurrency on the same blockchain. However, once the money hits international routes, the expense undoubtedly increases. These varying laws and

regulations across regions and countries require different approaches to accepting, handling, storing, and transferring funds. This 'double due diligence' process is very costly but is an unfortunate necessity. The system is set to ensure that the receiving bank is protected from potential risks, mainly when the funds arrive from offshore and particularly from less regulated countries. No bank is willing to take the risk of a hefty penalty or losing their license by trusting another (potentially unknown) bank's compliance checks. This means that as a standard approach, every bank treats all newly arrived, external funds as 'unknown' and puts them through rigid compliance checks, even if these funds are coming from another bank. This lack of trust between banks costs billions in banking fees to us, the users.

The current banking system is far from perfect of course but is the best we could come up with. It is still the most effective way globally, otherwise we wouldn't use it. There is clearly plenty of room for improvement and serious efforts are being undertaken to perfect it further. The final goal is to harmonize the regulatory framework and requirements for all banks globally, or at the very least reduce the necessity of the same compliance work being done repeatedly, within a single territory. These efforts are slowly but surely showing some success (i.e., in the EU or the U.S.), but we are still a long way off from being able to seamlessly send funds between international banks with only one simple check.

Blacklists and sanctions

Let's revisit our poker table. If a player is going against the rules, the poker table can restrict them from further play as a penalty. Moreover, if this player is cheating on other poker tables, the 'poker committee' can ban their participation from any game, forever. Decisions are made by the majority of players, but sometimes the dominant players may have the final word on the details, as it usually happens in real life. The global banking system uses the same logic to punish violators and restrict actions which are deemed dangerous to the integrity of the global financial system. This applies not just to individuals, but companies and even whole countries too.

Banks have common black or grey lists, which restrict certain clients from accessing particular banking services or conducting specific financial activities. This could be due to their involvement in financial crimes, fraud, or other risky behaviour which has been considered harmful to the stability of the financial system. Card networks, such as Visa and Mastercard also operate their own databases which contain information about accounts which have been closed by card processors around the world. Other lists track companies that are bankrupt or excluded by investors and banks for any other reasons. World Bank also has a listing of Ineligible Firms and Individuals.

Sanctions are a bit more serious, as they are imposed by governments or international bodies against specific individuals, entities or countries for various reasons. For example, as history has shown us, certain actions of Iran, North Korea or Russia are deemed

unacceptable by the international community. These political, security, or human rights concerns resulted in sanctions, meaning any attempt at trade to or from these countries has great difficulty in joining the global financial markets through common banking means. Sanctions can not only include restrictions on trade and financial transactions, but might also mean travel restrictions, currency bans, and more. The sanctions intend to influence certain behaviour or achieve specific policy goals by exerting economic pressure and diplomatic influence.

Some restrictions are a must, while some are recommendations. The main controls are primarily enforced by banks or financial institutions, as they handle the most vital form of global communication – the money flow. They risk penalties, legal consequences, or the loss of their banking or financial licences if they don't comply with the rules. All businesses and individuals are required to conform and show reasonable effort not to engage in transactions with individuals, entities or governments who are known to be acting against the common rule.

OFAC

A prime example of sanctions in action is the OFAC list. OFAC stands for the 'Office of Foreign Assets Control'. It is an office within the U.S. Department of Treasury which administers and enforces economic and trade sanctions, based on U.S. foreign policy and national security goals. OFAC's primary responsibility is to implement and oversee sanction programs targeting individuals, entities, and countries involved in activities such as terrorism,

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narcotics trafficking, money laundering, and other threats to U.S. interests.

OFAC keeps a list of individuals, organizations, and countries subject to sanctions, known as the 'Specially Designated Nationals and Blocked Persons List' (SDN List). These designations restrict or prohibit U.S. individuals and entities from engaging in transactions with the listed parties and freeze any assets they may have under U.S. jurisdiction. The sanctions imposed by OFAC can take various forms, including travel bans, trade restrictions, and prohibitions on financial transactions. OFAC's actions are intended to achieve foreign policy and national security objectives by isolating and pressuring individuals and entities engaged in illicit or harmful activities.

Banking and financial institution types

As we have seen, there are various methods through which interbank transfers can be initiated and executed. There are also various bank classifications and the account types they offer. Understanding the differences is essential for gaining insight into how money and payments are processed, transferred, held, issued, and acquired within the banking system.

Retail banks

Retail banks are the classic 'banks' which everyone knows and uses. They provide a range of financial services to everyday consumers. They cater to the banking needs of regular people, offering services

such as savings accounts, checking accounts, personal loans, mortgages, and credit cards. People can deposit and withdraw funds, make payments, and access various banking services. Retail banks prioritize serving individual customers and their needs, focusing on providing accessible, personalised, and convenient banking solutions to help them manage their finances.

Commercial banks

Commercial banks are the business banks. They provide services to businesses, corporations, and other commercial entities. They play a vital role in supporting the financial needs of businesses, facilitating economic growth, and offering various financial products and services which are tailored to the specific requirements of their commercial clients.

These banks usually provide business loans and lines of credit to help businesses fund their operations, invest in growth opportunities, and manage their working capital. Commercial banks also offer cash management services to businesses to optimize their cash flow, manage their receivables and payables, and streamline their financial operations. Services may include electronic funds transfer, payroll services, merchant services, and treasury management solutions.

These banks act as custodians for business deposits and provide a range of deposit accounts, such as checking accounts, savings accounts, money market accounts, and certificates of deposit. They also facilitate international wire transfers, foreign currency exchange, and letters of credit to support import and export

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activities. These banks help businesses navigate international trade regulations and offer financial solutions to mitigate risks associated with cross-border transactions.

Investment banks

Investment bank's services relate to the investment and capital markets. Unlike commercial banks, which focus on traditional banking activities, investment banks primarily deal with the buying and selling of securities and other financial instruments on behalf of their clients, who may include high-net-worth individuals. They provide personalized investment advice, portfolio management, and other financial planning services while assisting their clients in diversifying their investment portfolios, minimizing risks, and maximizing returns.

Investment banks facilitate capital raising for corporations and governments. They assist companies in issuing stocks and bonds in the primary market, enabling them to raise funds for various purposes such as expanding operations, funding projects, or refinancing debt. Investment banks help structure these offerings, determine the appropriate pricing, and underwrite the securities, assuming the risk of selling them to investors.

They also play a crucial role in merger and acquisition (M&A) transactions as they provide advisory services, and assist with strategic planning, valuation, negotiation, and deal structuring. These banks might also help source potential buyers or sellers and facilitate the transaction processes, including due diligence, documentation, and regulatory compliance.

Intermediary / Correspondent banks

Intermediary banks, also known as correspondent banks, are essential in facilitating international transactions between sender and receiver banks. Banks don't have direct relationships with every single other bank, globally. That is why intermediary banks play a vital role in facilitating international transactions, especially to facilitate direct bank-to-bank relationships. They work like the highways that connect various towns with each other. These banks establish relationships with multiple banks and provide a network through which payments can be routed.

When a payment or transfer is initiated by a sender, the payment is often routed through an intermediary bank before reaching the acquiring or recipient bank. These banks are basically the 'middlemen' of the banking world, servicing other banks, rather than focusing on individual or business clients.

Intermediary banks ensure that transfers are processed smoothly, enabling the different banks to communicate with each other with ease, convert funds if necessary, and deduct the appropriate fees and charges along the way.

These banks can also provide essential treasury services, including settlements, check clearing, funds transfers, and currency exchange. By offering these services, correspondent banks enable local businesses to operate effectively in international markets and navigate the complexities of cross-border transactions.

Correspondent banks work by maintaining account deposits with other banks and recording debit and credit transactions. The terms

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'Nostro' and 'Vostro' are commonly used to describe the relationship between correspondent banks and their client banks. Nostro is derived from Latin and means 'Ours', while Vostro means 'Yours'. Let's look at an example.

Nostro account

Sushi Bank is a Japanese bank which conducts international business, including transactions in Euros (EUR). To facilitate its operations in Europe, Sushi Bank maintains a Nostro account at Olive Bank in Greece. In this Nostro account, Sushi Bank holds a balance in Euros. This account allows Sushi Bank to efficiently conduct business transactions in the Eurozone and manage its Euro-related activities without the need for constant currency conversion.

Vostro Account

Olive Bank is a Greek bank which provides domestic and international banking services. They offer Sushi Bank to hold a balance in Euros with them. This account is a Vostro account from Olive Bank's perspective. Olive Bank manages the Vostro account on behalf of Sushi Bank in Euros.

Multicurrency transactions

The first time I had the opportunity to understand how banks connect globally, I was having issues sending a payment overseas. I was working as a Chief Accountant for the Cypriot branch of a

global group and had to authorize a payment from our EUR account before sending it to Hong Kong. Based on the invoice details, the purpose of the transfer was to book a venue. It was a large amount, but this was a common exercise, and I didn't think too much of it. A few days later, the recipient complained that the funds had still not arrived.

Back in those days, banks still used faxed payment orders, which had to be followed up by a courier who physically delivered the original document with the handwritten signature on it to the bank the next day. In hindsight, this was the perfect setup for all types of manual errors to occur. We waited one week, two weeks, still nothing. I knew international payments took some time to clear, but this was taking longer than expected and I didn't understand what had happened.

We spent hours on tracing the payment, covering every step from checking the fax machine, to interrogating the poor courier boy, making him swear on his life that he hadn't lost the order. It got to the point where I started to suspect that the recipient was lying to receive a double payment from us. The bank confirmed that they could see that the funds had left the account but couldn't help any further as it was out of their scope of authority. Since the date of the event was quickly approaching, the management had started blaming me for the issue, I had to dig deep and resolve this once and for all. I went to visit the bank manager, and after drinking several Cyprus coffees, I finally learned that banks thankfully have an option to request a 'tracer'. This document is a lesser-known way to pinpoint the location of the sent funds, checking across every step, even within the intermediary banks, in detail. It was

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subject to a small extra fee, but I needed answers, so I got an authorisation from the management and requested the report immediately.

The panic kicked in when the bank sent back the findings a few days later, saying that the funds were floating between banks, and even though they could locate it, they couldn't do anything to get it back. They told us that we should wait as, "Funds don't disappear like this", and we would "Eventually get a refund when the bank in question discovers the issue". It was already the third week, and I knew this response wasn't good enough for the management. I needed to decide if I should send the funds again, hoping for the best, or wait and fail the deadlines, facing the consequences of the non-payment.

Before making my mind up, I made numerous phone calls, contacting everyone who worked at the bank and searching the internet frantically. I suddenly came across an article which said that not every bank had the opportunity to exchange certain currency pairs. This gave me an idea.

I figured that the recipient's account was in Hong Kong Dollars, and since I sent Euros, I suspected that the issue might have been with the exchange. Little did I know, but our bank in Cyprus had no Hong Kong Dollars and could not exchange the funds on the spot. They sent the funds in Euros to the intermediary bank, which then processed the payment further, in Euros, to Hong Kong. At this point, Euros could not be automatically exchanged for Hong Kong Dollars within the local bank, so the recipient's bank could not accept the incoming Euros to a Hong Kong Dollar account and

refused to clear the transaction. This resulted in sent, but unclaimed funds, lost in the banking system somewhere. Because of the looming deadline, I had to make the difficult decision and send payment again, but this time in Hong Kong Dollars.

Thankfully the recipient received the funds within 2 days, and the original transfer was also returned, however, the bank had charged a large amount of fees for the money's international trip around the world. Although nowadays most banks automatically offer internal exchange services, so thankfully many of us will not experience this issue, it was a great lesson for me to understand how intermediary accounts work and handle international payments. This story also opened my eyes to the fact that not every bank can communicate with each other to resolve simple issues like this and if I learned 'how banks think', I could spare a considerable amount of headache for myself.

Routing

When a payment is initiated, the system needs to determine the best route for the funds to travel. This could involve several steps and intermediaries along the way, such as banks, payment networks, and processors. Routing finds the most efficient and cost-effective path for moving money between different parties or financial institutions. Modern payment systems, including online banking, mobile payments, and electronic funds transfers, rely on advanced routing algorithms to provide users with a seamless payment experience. Security measures and regulatory requirements are also factored in during routing.

Clearing

Clearing is the process of reconciling and settling financial transactions between different parties. As we mentioned, payments go through a series of steps. First, the payer's bank verifies the payment details and ensures there are sufficient funds in the account. If necessary, intermediary clearing houses facilitate communication between banks, and then the payment instructions are matched with the recipient's account details to confirm that the transaction can proceed. Once this confirmation is in place, the actual transfer happens, moving funds from the payer's account to the recipient's. After the settlement, involved parties reconcile their records to ensure the transaction was accurately processed and to address any discrepancies.

Clearing also involves generating reports which provide information about how the transactions have been cleared. These reports are the 'tracers' which are used by financial institutions and banks to keep track of their payment activities and ensure proper documentation.

Omnibus or pooled account

This arrangement is commonly used in financial services, such as investment management and brokerage services, but today we see more and more pooled accounts as wallets and other systems which handle funds in bulk. An omnibus account is a single account held under the name and administration of the bank, financial

institution, or broker, on behalf of multiple clients. Instead of maintaining separate accounts for each client, the institution pools together the assets and transactions of all the clients in this single account. It allows the institution to efficiently manage and execute trades and other transfers for multiple clients as a group, to save cost, increase security or streamline various operations. The concept is particularly useful when dealing with large numbers of clients or when clients engage in similar types of transactions. A good example of this could be an investment fund or portfolio, to which multiple investors have contributed their individual funds. The pooled account manager typically provides regular reports or statements to each client, detailing their specific activity within the omnibus account. Pooled accounts are popular for certain types of companies such as E-commerce, online retailers, or high-risk industries. Obtaining banking services can sometimes be difficult since financial institutions may hesitate to provide individual accounts to such businesses due to the potential for increased regulatory scrutiny, higher rates of fraud or chargebacks, or concerns about money laundering and other financial crimes. By using a pooled account, multiple businesses contribute their funds into a shared account, and the financial institution manages the transactions and activities within that account. The risks and benefits are shared among the participants, making it more feasible for the underlying financial institutions to provide services to even extra high risk businesses without exposing themselves to issues which might arise by running individual accounts for them.

Risks with pooled accounts

Often, pooled accounts offer lower fees and a quicker onboarding process, which can certainly be very appealing. However, businesses must be aware of the risks involved with this setup.

The financial institution aggregates all incoming and outgoing transactions into a group and channels it with one bulk transaction via the connected correspondent account. With this increased volume, the financial institution can negotiate better fees with the correspondent bank. The other benefit is that businesses often only need to pass the compliance of the financial provider, and not the correspondent bank, since this provider is taking full responsibility for the pooled funds and transactions. This can significantly reduce application times, and we have seen cases when the pooled account was opened within a few days, as opposed to weeks as we have experienced with traditional, individual account applications.

However, putting all trust in the hands of the provider comes with a new set of risks.

If the provider handles funds in bulk, the lack of individual control can lead to unauthorized or improper use of funds. Even if the account is managed by a trustworthy entity, errors can occur, leading to complications such as wrongful transfers or misplaced funds. Also, pooled accounts often blur the lines of ownership. When funds are mingled together, identifying the rightful owner of each portion becomes challenging. This can lead to disputes and legal complications, particularly when there is a need to allocate interest earnings or distribute funds back to the individual contributors.

Regulatory compliance is yet another risk. Different jurisdictions have their own sets of rules and regulations concerning the management of pooled funds. Failure to adhere to these regulations can result in penalties, legal ramifications, or even the freezing of the account. Overall, however, I think the biggest risk with this setup is the risk of the other companies' operations.

A financial institution is as good as its worst transaction. Since the transactions are pooled, one bad apple (mismanaged transaction) can affect the whole account. If one fraudulent transaction or unchecked source of funds appears, or the entity receives one complaint which triggers a regulatory check, the risk of freezing all funds on the account becomes high. This means that even though an individual business itself is making sure that all its operational risks are mitigated and has all the relevant KYC and AML checks set, if the financial institution accepts one company with a looser setup, and things go bad, this can affect everyone's fund flows within the pool. I usually say, "If it's too good to be true, it usually is". Since the participants of the pool are not disclosed publicly, businesses can only estimate risks based on various, sometimes hidden details like onboarding time, or reputation of the account manager, which can reveal certain risks.

Compliance burdens around pooled accounts

Companies shall only accept payments from companies they are contracted with, due to their compliance policies.

For example, I have a company which conducts business with Company Orange. I render services to Company Orange, and I

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charge them for my service. Company Orange will recognise this amount as cost and deduct this expense from their profit. This is clear.

However, if I allow Company Orange to ask another entity, let's call it Company Bergamot, to pay for these services, I might assist them with tax evasion. If Company Bergamot pays the invoice, which I have issued to Company Orange, even though I get paid, and I have nil demand in my books, I can only assume that Company Bergamot has an internal claim towards Company Orange for the funds. This transaction falls out of the scope of my authority, so I'm not able to follow up if Company Bergamot will indeed receive the funds back from Company Orange or not.

If Company Bergamot never gets invoiced and paid by Company Orange for this service, tax evasion might take place, as Company Orange might declare this service as its cost, reducing its taxable profit, but never pay for these costs. This means that my company should reject the opportunity to issue an invoice to Company Orange and get paid by Company Bergamot, as I should only get paid by the company to whom I rendered and charged my services to.

If we translate the same logic to a pooled account, where the recipient is not the company, but the financial institution or bank that is maintaining the account on behalf of the company, this can result in declined funds. In another example let's assume that Bank Broccoli is managing a pooled account, where Company Carrot holds funds. Company Carrot renders services and issues an invoice to Company Lemon. Company Lemon must pay Company Carrot for

this invoice but sees that the recipient of the funds is Bank Broccoli, as they manage the account for Company Carrot. In this example, Company Lemon can refuse to pay to any account which is not under the name of Company Carrot for the above tax evasion opportunity. Sometimes a simple letter is sufficient, where the pooled account provider confirms that the funds are kept and declared under the name of the payer. However, if this involves overseas financial institutions, compliance might not accept this as enough evidence that the relevant restrictions have been implemented to avoid any wrongdoing.

The same applies when receiving funds. It's particularly difficult when a payment processor is collecting incoming payments on behalf of a company and then settles in bulk to an account. If the regulatory obligation of the payment processor is to make sure that the recipient's bank account is under the same company name as the recipient of the funds, they might refuse to send funds to a pooled account. This means the company might be left without a payment processor, just because they do not have a bank account either.

This can be very surprising for a company that opens a wallet type pooled account with a financial institution, starts trading and only then realises it cannot receive payments from certain clients and needs to open another account, which can take some time. Since holding back payments might cause serious issues around the cash flow, when a company opens any type of account with any financial institution, preliminary checks must be made to make sure the account can be used for certain purposes.

Acquirers

Acquirers play a vital role in the payment industry, acting as intermediaries between merchants and card networks to facilitate electronic transactions. Acquirers collaborate with major card networks, such as Mastercard and Visa, enabling merchants to accept card payments from customers. When a customer makes a payment using a card, the card network connects to the issuer (customer's bank) with the acquirer (merchant's bank). The acquirer verifies the transaction details to ensure their accuracy and legitimacy, thereby authorizing the payment.

Acquirers assume all responsibility and risk in handling transactions on behalf of merchants, verifying card details, processing payments, and safeguarding against fraud or unauthorized activities. They also manage potential issues like refunds or chargebacks.

Card acquirers generally need to be licensed financial institutions as they handle funds and need to adhere to certain rules and standards set forth by card networks like Visa and Mastercard. These requirements may include data security standards, fraud protection measures, compliance checks, etc. In the European Union, the Payment Services Directive (PSD2) allows for specialized payment institutions to provide acquiring services. U.S. acquiring services are often provided by banks and payment processors. Some large-scale retailers or businesses with significant payment volumes might get a special arrangement under the scope of the local regulatory framework to act as their own acquirers.

Issuers

Issuers provide payment cards and related services to their customers. These cards are linked to the customer's bank accounts and enable them to make purchases, withdraw cash, and access various banking services using their cards.

When a cardholder initiates a transaction, such as making a purchase or withdrawing cash, the issuer authorizes the payment. It verifies the cardholder's identity, checks the available balance or credit limit, and approves or declines the transaction based on the customer's account status. Issuers are also responsible for safeguarding their customers' funds and protecting against fraudulent activities. They employ security measures, such as advanced fraud detection systems and transaction monitoring.

Issuers work together with acquirers and card networks to facilitate card-based transactions and to ensure smooth payment processing, authentication, and settlement between the cardholder's issuer and the merchant's acquirer.

Issuers generally need to be licensed financial institutions for the same reasons as the acquirers. However, many prepaid card programs or loyalty payment solutions are managed by large retailers or airlines who work with a licensed bank or financial institution and therefore can issue their own cards to their customers, tied in with their in-house loyalty programs.

Neobanks

I remember the first time I explained the concept of Revolut (similar to Venmo) to my mother. She is a proper boomer, a 1950s child, and still uses the traditional banking system where (at least) she uses online banking, but sometimes still needs to visit a branch for verifications or signatures. When she first saw the application, she was very sceptical and hit me with questions like, “But how do you know if it’s safe? Where do I go if this thing gets deleted from my phone? Who guarantees that my money is there?”.

Not having a physical presence behind a company which holds your money can be baffling. Trusting your hard-earned cash to an application seemed like a far-fetched idea once, but is now more frequently used, even by the older generation. Mobile-based application banking started simply as an extension of the existing idea of Internet banking, but it was such a cool, new concept that everyone liked, and it caught on immediately.

Compared to traditional banks, neobanks generally offer an innovative idea, ease of use and technological advancements. They often offer their services with minimal or no monthly fees, making them an attractive option for cost-conscious customers. Neobanks enhance the banking experience for their users by providing innovative mobile applications and streamlined interfaces. Customers can easily manage their accounts, conduct transactions, and access various financial services with just a few taps on their smartphone screens. Neobanks offer convenient, 24/7 access to banking services.

Since customers can perform transactions anytime and anywhere, neobanks eliminate the need to visit physical branches during traditional banking hours. They often incorporate advanced technologies and innovative features into their platforms, such as automated savings tools, real-time spending insights, budgeting capabilities, and personalized financial management tools.

While some neobanks are still in the early stages of development and may partner with established commercial banks to access banking infrastructure and regulatory compliance, fintech applications are expected to take over the banking industry soon.

Main Financial Licenses

Banks

Not every company, which offers financial services, are a bank. There are various financial licenses which are similar to the classic banking licenses, but they have different characteristics, and roles, and operate under different regulatory frameworks. While the various banks offer a wide array of services and are heavily regulated by the central banks, other types of financial licenses can specialize in electronic money services and operate under specific, less stringent regulations by offering less than fully-fledged banking activities. By being aware of the various licenses, their basic regulations, and restrictions, we can make better decisions when we chose our banking and financial partners, plan payment flows and assess risks and costs.

Electronic Money Institutions (EMI)

An EMI is a specialized type of financial institution which focuses mainly on providing electronic money services. Authorised to operate in the EU, EMIs issue electronic money, which is a digital equivalent of physical currency stored on electronic devices, such as prepaid cards, mobile wallets, and digital accounts. Their main transaction services include cash withdrawals, money remittances, and external payment transfers.

EMIs are not included in the scope of the European Deposit Insurance Scheme and therefore cannot guarantee deposits, like traditional banks. This makes them a slightly riskier option; however, they make up for it by offering better user experience, more innovative features for financial transactions and are usually quicker to accept new applications. . The key distinction between an EMI and a regular bank is that EMIs exclusively function with deposited funds and cannot offer loans in the same manner as banks. This means that they usually cannot issue or receive interest fees from customers. This means all their clients' funds have to be secured in a separate account in an actual bank and cannot be used for any purpose by the EMI (this holding bank, however, can re-invest these funds under its own management).

Payment Institutions (PI)

PIs are less regulated than EMIs, but they are also authorized to carry out payment services. PIs are often referred to as 'hybrid institutions' or 'independent financial providers' due to their ability to offer a range of financial services beyond payment facilitation,

such as executing electronic transfers, processing card payments, offering digital wallets, facilitating mobile payments, and enabling cross-border transactions. PIs act as intermediaries between payers and payees, ensuring the secure and efficient transfer of funds.

The role of correspondent accounts in EMIs and PIs

EMIs and PIs are often intermediaries which only facilitate electronic transactions and money transfers. They typically use correspondent banking relationships to hold and transfer funds, often maintaining multiple correspondent accounts to cascade between the options, and to secure an easier flow of money. If one banking channel is experiencing compliance or technical issues, the operation can be kept seamless by transferring traffic to an alternative banking channel.

Another area where EMIs and PIs shine is in handling higher-risk operations. Since higher-risk companies and industries often struggle to find traditional banking services, they may be willing to pay higher fees for access to financial services and can therefore be a very lucrative business if managed well.

Some EMIs and PIs have relationships with special correspondent banks which allow them to be able to take on these higher-risk clients, opening a market niche here. Competing with established players in the financial sector can be very challenging, requiring significant innovation or investment, so often smaller, new EMIs and PIs use this method to enter the market.

A list of the correspondent accounts used by an EMI or PI is usually not public for various reasons, such as competitive and security

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concerns. This means that end clients may not always know which correspondent bank is actually holding or handling their funds when they are using services provided by an EMI or PI. Even worse, various EMIs and PIs can use the same underlying bank. While the customer might think they have diversified their risk by keeping their funds in various financial institutions, they might be wrong and in fact, have all their eggs kept in one basket.

Diversifying risk like a basketball star

Rumour has it that NBA star Giannis Antetokounmpo spread his money across various bank accounts, keeping \$250,000 in each account to secure his funds under the FDIC rule¹⁸. Marc Lasry, the billionaire co-owner of Antetokounmpo's team, said he can't have accounts at 50 different banks, as the banks are all interconnected using the same correspondent accounts. "Let me tell you something, if JPMorgan goes under, your little dinky banks are going to go under too." Marc isn't wrong, but how can we make sure that our EMIs, PIs and banks are all safe?

This shows the importance of the treasury function. Having a treasury is vital when managing financial assets and resources, mainly when a company is dealing with large or diversified financial assets. Treasury is responsible for overseeing and optimizing the company's liquidity, investments, and financial risk.

¹⁸ <https://finance.yahoo.com/>

Bank account types

Understanding the different types of bank accounts is crucial for individuals and businesses alike. There are several various types, which all serve different purposes.

Current account

A current account is where a person receives a salary, makes payments for bills and expenses, and transfers money to other people or accounts. A current account allows individuals to make frequent transactions. It is designed for everyday banking needs, such as receiving and transferring money. With a current account, individuals can easily manage their finances and have access to their funds whenever they need them. Some current accounts may offer additional services like checkbooks, debit cards, and online banking, making it even more convenient to manage individual finances.

Savings account

A savings account is a type of bank account which is commonly used by individuals who want to earn interest on their deposits. It offers a way to save money over time. Banks provide different types of savings accounts, depending on individual circumstances (i.e. young people, family, or retirement savings accounts) or on the length of the deposit (i.e. 5-year fixed deposit).

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The interest rate is based on the central bank's rates, individually set by the banks, and is calculated annually. This interest rate supposed to influence customer habits, as we discussed earlier.

Business account

A business bank account is a specialized type of bank account designed specifically for businesses and other organizations. It is distinct from personal bank accounts and serves various purposes related to the financial activities of a business entity. Business bank accounts offer features and services tailored to meet the unique needs of businesses, which often involve higher transaction volumes, cash flow management, and financial reporting.

These dedicated accounts are owned by the company and not by an individual, regardless of the individual's connection to the company (shareholder, director, etc). Business bank accounts are usually only accessed by the director(s) or an authorized representative of the company (i.e. CFO) who have been previously approved by the bank and gained individual access.

The most common, rookie mistake I see involving business accounts is when companies fail to alert the bank after a significant change occurs in the company. Usually changes involving shareholders, directors and even new addresses are filed, but often, amendments in operational activities are not mentioned. Many businesses think, "Why would I alert my bank about my new target markets, new suppliers or new services" However, this could be a big mistake.

Imagine a business which is running a factory and has a bank account. This account is used to handle large volumes of incoming funds from its industrial clients from Canada. If the company changes its strategy and starts selling consumer goods to individuals in Nigeria, and large amounts of funds start arriving from Africa from various individual accounts, the bank can freeze or even close the account, suspecting a potential fraud, as this is not in line with the activity history of this company.

Another example is when a company which has been trading in soft drinks for years suddenly changes the management, who decides to also sell alcoholic beverages. Alcohol is subject to a specific license, but forgetting to alert the bank about this can also result in problems.

Trust me, blocked and frozen business accounts is the least you want to deal with. Delayed payments and angry banks can cause a lot of headaches and could easily put the whole operation in jeopardy.

Merchant account

A merchant account is a specialized type of financial account which allows businesses to accept payments via credit or debit cards. Essentially, it serves as an intermediary between a business's sales and its bank account. When a customer makes a purchase using a credit or debit card, the funds first go into the merchant account. Here the funds are held by a licensed financial institution, which accumulates all these individual transactions. These accumulated funds are then usually transferred from the merchant account to

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the business's regular bank account, according to a pre-established schedule, which could be daily, weekly, or monthly.

Merchant ID / MID

A merchant ID, short for Merchant Identification Number, is a unique numerical code which is assigned to businesses which engage in electronic payment processing. It serves as an identification and differentiates individual merchants within the payment ecosystem.

When a business establishes an agreement with a payment processor or acquirer to accept electronic payments, such as credit or debit card transactions, the payment processor assigns a merchant ID to that business. This ID is used to track and manage transactions associated with that specific merchant. The merchant ID is crucial for various purposes, including tracking sales, processing refunds, preventing fraud, and reconciling financial records.

Settlement account

A settlement account is a specific type of account which is used to accept funds from Payment Service Providers (PSPs) and acquirers. Often a settlement account is provided together with the merchant account as a group service, but in some cases, the PSP is unable to offer these services. When that happens, the merchant needs to allocate a separate bank account to the PSP to receive the collected funds. The PSP needs to make sure that the settlement account is

under the same company name as the merchant account for AML purposes, as we have seen earlier with the pooled account example.

Accounts for various websites

I once had a client who ran several websites under the same company umbrella, selling similar products, but each website was aimed at different target audiences in various EU countries. The websites were designed and marketed according to the country it was targeting, using the local language and offering the relevant local payment methods. Opening the merchant accounts was a long and painful compliance process as the banks and the payment providers checked every website in fine detail. Finally, we successfully set up the payment plan, signed up two payment processing companies (in case one failed, the other would ensure that the sales process was still intact) and started processing. The client assumed that all was set, and said they no longer needed our payment monitoring services. They thought that they could handle the processes internally from there.

A few months later the client called me, upset that both payment channels had been blocked and his funds got frozen until certain checks had been completed. After a few minutes, we figured out what was the problem. Turns out that the marketing team had created a few new websites and instructed the developers to automatically integrate the same payment channels on the new websites, too. Since the developers had all the relevant codes, all have already been used and tested, they felt no need to alert the processors first, and integrated them, then started to accept

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payments. They thought this new traffic was covered under the same agreement as the other websites, since they were owned by the same company.

Once the payment processors realised that an unknown website was sending traffic to the existing channels, their account was automatically blocked by the fraud team. It was a massive issue already, but still could have been handled quickly, and painlessly. However, the highlight of the story came up when we contacted the providers and learned that one of the websites had forgotten to add the refund policy section, which was a basic card scheme requirement and therefore resulted in an automatic rejection for that website. Since he used the same channel, all his MIDs were blocked until he had provided all documents for the websites and cleared all the compliance questions. This little hiccup put the operation on hold for almost a month, resulting in a serious financial issue, which snowballed into further cash flow problems. As we can see, the work of a payment consultant never ends, and if this client had still been under our, or any other payment professional's umbrella, the issue could have been easily avoided.

Banking acronyms

I would say that one of the biggest challenges in banking is to understand the abbreviations, acronyms and general lingo used by bankers. It is not that difficult to learn, and by understanding the basics, we can at least be aware of their existence, and consider their benefits and limitations when planning any payment route.

SWIFT

SWIFT stands for Society for Worldwide Interbank Financial Telecommunications. It is the main standardized messaging network and system used by financial institutions worldwide, so it is probably one of the most well-known acronym, when dealing with global payments. SWIFT uses a standardized communication format for various financial transactions including payments and receipts, and securities trading among others, and acts as a bridge for communication between banks and other financial entities across different countries.

SWIFT messages include specific details about the transaction, such as sender and receiver information, transaction type, amounts, currencies, and any relevant codes or identifiers. These messages ensure that all parties involved have a consistent understanding of the transaction's details, helping to minimize errors, reduce delays, and enhance transparency.

Every financial institution participating in the SWIFT network is assigned a unique code, comprising 8 or 11 characters. The first 4 characters represent the Institution Code, which identifies the specific bank or financial institution. The next 2 characters indicate the Country Code, helping to locate the country where the institution is based. The following 2 characters denote the City Code, specifying the city where the institution is located. The last 3 characters form the Branch Code, which identifies a specific branch or office of the institution.

IBAN

The International Bank Account Number (IBAN) is perhaps the first thing someone asks, when sending payments internationally. This number is a result of a standardized identification system used by banks to accurately identify overseas bank accounts. The IBAN was introduced in Europe to simplify international transactions. The number consists of a combination of number codes and alphanumeric characters that provide specific information about the account. Important to remember that the IBAN is not a replacement for the bank's numbering system but is used as an additional identification mechanism.

The IBAN begins with a two-letter country code, followed by two numbers known as check digits, which help detect errors in account identification. The next four digits represent the Bank Identification Code (BIC), which is a network code used by banks for international payments through the SWIFT network. The following five digits indicate the branch code, which helps locate the specific branch of the bank where the account was opened. The remaining characters/digits represent the account number itself.

For example, an IBAN which reads GR12 ABCD 3456 1234 5678 9012, can be easily broken down to:

- Country Code: GR - Greece
- Check Digits: 12
- Bank Identification Code (BIC): ABCD
- Branch Code: 3456
- Account Number: 123456789012

Although several countries don't use this system, (such as the U.S., Canada, New Zealand, Philippines, Singapore, and South Africa among others), it is still important to understand the meaning and reference of this number when we are dealing with international transactions. Since we know it includes all details of the bank and the country, at least we know where we are sending payment when we use this number and can avoid unnecessary questions such as, "Send me the bank's address" or "We need the BIC number, too".

ABA routing number

The American Bankers Association (ABA) routing number, often referred to simply as a routing number, is a nine-digit numerical code used in the U.S. to identify financial institutions and banks. It plays a crucial role in directing various types of electronic transactions, such as direct deposits, wire transfers, automatic bill payments, and electronic checks. It's also used when setting up direct deposits or making electronic transfers between bank accounts.

Each bank or credit union in the U.S. is assigned a unique routing number by the American Bankers Association. The routing number is used to identify the financial institution and its specific branch location where an account is held. This helps ensure that electronic transactions are accurately directed to the correct bank and branch.

The first two digits of the routing number generally indicate the Federal Reserve district where the bank is located, while the subsequent digits help identify the specific bank and branch within

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that district. For example, with the ABA Routing Number 123456789:

- 1234 is the Federal Reserve Routing Symbol,
- 5678 uniquely identifies the institution,
- 9 serves as a check digit for error validation.

BIC or SWIFT code

A BIC number, also known as a Bank Identifier Code or SWIFT code, is an internationally recognized code used to identify specific banks or financial institutions when conducting international transactions. The BIC code serves a similar purpose to the routing number in the United States but on a global scale.

The BIC code is typically an alphanumeric code composed of 8 to 11 characters, including the bank's four-letter institution code, a two-letter country code and an optional two-letter location code indicating the specific branch or department. Commonly used in conjunction with the IBAN, the code helps ensure that international money transfers, cross-border payments, and other financial transactions are accurately routed to the correct bank and branch.

For example, with the ABCDUS33XXX SWIFT code:

- ABCD represents the bank,
- US represents the country,
- 33 identifies the city of the bank's head office,
- XXX indicates that the SWIFT code is for the primary office of the bank.

Sort code

A sort code, also known as a sorting code, is a numerical code which is used in the United Kingdom and Ireland to identify specific banks and their respective branches. It is used for routing and processing financial transactions, particularly for electronic funds transfers and direct debit payments. The sort code is typically a six-digit number, and each bank branch has its unique sort code, allowing transactions to be directed to the correct destination. If you see a sort code, you can be sure the bank is in the United Kingdom or Ireland.

SEPA

SEPA stands for Single Euro Payments Area, which is a financial network established in Europe to facilitate seamless and cost-effective (often free) money transfers within the Eurozone. It's a regional initiative as opposed to SWIFT, as it is focused on simplifying and standardizing euro-denominated payments within the EU and associated countries. SEPA aims to create a unified payment system across these countries, allowing individuals and businesses to make euro payments within the SEPA zone as easily and efficiently as they would domestic payments, without incurring additional fees or delays. SEPA operates under the regulation of the European Payments Council (EPC), which ensures a standardized and harmonized payment framework across participating countries.

SEPA has significantly improved the integration and connectivity of the European payment landscape, enabling individuals and

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businesses to easily conduct financial transactions across borders. One argument against using crypto payments in Europe is that SEPA is now offering everything that crypto aimed to resolve originally – payments via SEPA are free and immediate. This is a key argument against the use of crypto – that it has lost its purpose within Europe.

ACH

The Automated Clearing House (ACH) was established in 1974 and is a network which enables the transfer of funds between different banks across the United States. This network has been widely used for various financial services, including payroll payments, tax refunds, and other types of transactions.

The network groups transactions into batches and processes them at specific times of the day, which allows for faster transaction clearings.

CHAPS

CHAPS is short for Clearing House Automated Payment System and is used for high-value and time-sensitive interbank electronic money transfers in the U.K. It was built to handle specific payments, where quick and reliable fund transfer is essential. CHAPS is therefore primarily used for large transactions which require prompt and guaranteed completion, such as property purchases, business payments, or financial market transactions. As the system processes individual payment instructions as soon as they are

received, each transfer is settled immediately, in real-time. This instantaneous settlement system eliminates delayed payments and uncertainties. The infrastructure is provided by the Bank of England.

BACS

BACS stands for Bankers' Automated Clearing Services and is a popular electronic payment system in the U.K. that processes various types of electronic payments such as direct debits, standing orders and bulk payments (for payroll runs, for example) in a three-day clearing cycle.

Faster Payments Service

The Faster Payments Service (FPS) is an electronic payment system, again in the U.K. which allows near-instantaneous payments and transfers between bank accounts. It is designed to provide a quicker and more convenient alternative to traditional payment methods like checks and BACS transfers. The system enables fast transfers of money, often within a matter of seconds or minutes, 24/7, including weekends and holidays. This rapid processing time makes it particularly useful for urgent payments.

Interchangeability of various bank account types

Before I started my payment consulting journey, one of my early clients was a small online business, catering exclusively to European clientele. I handled their accounts, so it was obvious that I would

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also help them set up a bank account. We were aiming for something cheap and easy to handle. He had his eye on a traditional account offered by a high street bank, but which would take 2 months and numerous personal visits to set up, not to mention the 70 pages of printed and signed documentation required. As an alternative, I found an online EMI which was able to open an account in a day, simply using a mobile application. My client needed cards and online banking for their day-to-day transactions, and they needed them fast, so we decided to use this online EMI. One little thing needed to be noted: it only offered the option of the SEPA payment channel. The client understood that this limited him to accept and send payments only within the EU, but since he was active in just two EU countries, it never struck him as being a problem, and this limitation was quickly forgotten.

Guess what happened a few months later? He found a cheaper Chinese supplier and wanted to send a payment overseas. Needless to say, he tried, failed, then called the bank, and finally me.

Although it had been explained to him several times, when someone isn't familiar with the banking systems, it's not an easy task getting into a detailed explanation of why SEPA is not automatically connected to the SWIFT network. He argued that he never experienced this before while using larger, high-street banks. This is usually true, as these types of banks have various correspondent accounts serving both SEPA and SWIFT transfers seamlessly, usually not disclosing which channel has been used for each type of payment. But when it comes to smaller financial institutions, such as EMIs and neobanks, this can be a very

important factor that needs to be considered when opening an account with them.

Risk

We mentioned risk a lot. But why is risk so important? Does it apply to all business operations? And does it affect funds, too? Well, yes it does. Risk represents potential exposure to events which can threaten a company's success in achieving its goals - financial or otherwise. It involves both subjective and objective elements, so each business must conduct its own tailored risk assessment, as there is no universal approach that suits all situations. Effective risk management is especially important when the risks in question have a direct impact on payments or company funds. Managing these risks skilfully is crucial for success in a constantly changing and uncertain landscape. There are 4 main categories of risk.

Operational risk

Operational risks are based on the factors of how we run the business. Potential losses could come from inadequate or failed internal processes, technical or system failures, human error, or even external events (natural or man-made), which could impact the daily functions of a business or organization. To manage operational risk effectively, businesses often conduct risk assessments to identify the most likely sources of operational risks and assess their potential impact. Once risks are identified, procedures are put in

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place to either mitigate these risks or to respond effectively when something goes wrong.

Strategic risk

Strategic risk is the potential for loss or adverse effects on a business due to poor planning, ineffective management decisions, or external circumstances which can impact long-term business goals and objectives. This type of risk represents the potential loss when a business' chosen strategies do not work out as planned or if those strategies are not properly executed. For example, many brick-and-mortar retail shops face strategic risk if they do not adapt to the growing trend of online shopping.

Strategic risk can arise from various aspects, including technological changes, shifts in consumer preferences, regulatory developments, or even geopolitical events. Companies usually involve their senior management and board of directors in the evaluation and mitigation of strategic risk to ensure alignment with long-term objectives and stakeholder expectations.

Reputational risk

Reputational risk refers to the impact of negative publicity, public perception, or uncontrollable events which can adversely affect the reputation of a company, along with its revenue and value. It is often a consequence of other risks manifesting and not being managed effectively. These days, social media virality is a big

reputational risk, as a negative review or comment can rapidly spread, exacerbating the impact.

Compliance risk

Compliance risks refer to the challenges and obstacles businesses encounter when attempting to adhere to various regulatory requirements and standards. In highly regulated sectors like pharmaceuticals, healthcare, finance, or food production, (and many more) companies must meet a wide array of regulations to guarantee the safety, quality, and legality of their products or services. Failing to meet these compliance standards could lead to fines, legal action, and even the suspension or revocation of licenses. Typically, organizations perform a comprehensive risk assessment to identify potential areas of non-compliance and create policies designed to mitigate these risks.

Risk assessment

One day an old client called me with a story. I hadn't spoken with him for ages, but we were connected on social media, so he'd been observing my journey in the world of payments from afar. He had a couple of trading companies, which had been using the same traditional bank for decades for all their banking needs. He explained that even though he wasn't a crypto enthusiast, he had wanted to try this "new thing called Bitcoin". He'd gone online, registered with one of the biggest and most well-known crypto exchanges, sent them €500 from his bank account, and trusting his

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luck, waited a month for the value to increase. He was lucky indeed, as one month later the value of the same crypto asset increased to €550.

Thinking that he shouldn't push his luck any further, he initiated a withdrawal on his investment directly back to the bank account he'd sent the original funds. Even though he'd gotten lucky in his trading, his luck ran out when it came to his bank. Apparently, not only did they deny receiving any proceeds from a crypto exchange, but they also flagged his account and placed him in a higher-risk category for his crypto-related trading activities. His shock deepened when he got a phone call from the bank. This same bank handled all his company accounts, whereby he was listed as the ultimate shareholder and director, so since he himself was categorized as high risk, the bank also put all his companies into a higher risk category, which resulted in him paying higher bank fees. Unfortunately, his Bitcoin adventure and €50 profit eventually resulted in the loss of approximately €2000 in banking fees within just one year.

Bank's risk

When a company applies to engage the services of a new bank or financial institution, the procedure is far from straightforward. The company goes through a stringent compliance process, submitting all necessary documents, and even after complying with all these requirements, the application might still get rejected. As banks are not obliged to provide reasons for their decisions, companies are not only surprised but also left without any guidance on what could

be improved for future applications. Given that the due diligence process is very time-consuming and costly, such feedback would be invaluable. Without answers, however, the business often finds itself submitting multiple applications, hoping eventually to find a provider who is willing to take them on.

Banks usually generate most of their revenue through lending activities and by charging service fees. Since central bank interest rates turned negative in recent years, depositors haven't been motivated to keep their funds in a bank without the possibility of earning interest. Not only that, clients also had to pay the bank to hold their money. This 'negative interest' led to fewer deposits. Fewer deposits mean fewer opportunities for banks to lend, which has pushed banks to rely more heavily on generating income through their service fees.

To maximize profits, banks have diverse and complex strategies. Some enforce minimum balance requirements, while others charge fees for specific transactions. Fees can be charged for withdrawals or transactions, and interchange fees may be applied for debit and credit card usage. There are even banks which specialise exclusively in foreign exchange activities, earning through commissions rather than traditional account fees. Regardless of the revenue stream, all banks are businesses and share a common objective: sustainable profit generation.

An essential part of a bank's operation is the evaluation of risk over the portfolios it handles. As we have seen earlier, higher-risk companies have a harder time finding and maintaining banking and payment connections, so these companies are usually willing to pay

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higher fees in return to providers who are willing to take on the risk. More risk-taking usually results in more profit. The internal risk assessment evaluates and determines the banks' own, independent risk appetite, which is the guideline of how high the bank can go in risk profiles. If a bank manages several low-risk client accounts, the overall risk profile is low, so to gain more profit, the bank is more likely to have a higher risk appetite for new client applications.

A correspondent 'salad'

Let's say Tomato Bank has been operating for several years, serving steady local businesses, such as supermarkets, fast food chains and retail stores. They are in the fortunate position of having a well-known supermarket chain, who bank millions with Tomato, as one of their main clients. These types of clients usually pose lower risks and offer consistent and steady revenues. To maintain and grow profits, Tomato Bank faces a dilemma. Gaining new clients is hard as it involves technical innovation or a large marketing budget. Merely increasing fees might alienate existing customers. Since banking has evolved, Tomato is now facing stiff competition from various online alternatives, who are offering competitive fees and innovative technologies to tempt away their loyal clientele.

One strategy might be to open accounts for riskier clients, who are willing to pay higher fees.

If Tomato Bank has a large low-risk base, which is the case in this example, taking on a few riskier clients would have a minimal impact on their overall portfolio. Even if these new clients face the rare occurrence of fraud or misconduct, these 'bad' transactions

would be balanced out by several 'good' transactions on the bank's overall portfolio level, keeping the risk score of the bank manageable. The bank's risk appetite would then determine how much and what type of risk would be acceptable, to keep this fine balance in line.

The same risk management principles apply to correspondent banking. These banks hold accounts with other banks, and the customers in this case are the banks themselves. Correspondent banks manage their risk in a similar way as individual banks, but on a larger scale, as they handle aggregated traffic instead of individual client transactions. In this case, a correspondent bank would evaluate the combined risk scores of their customer banks, which then would allow some banks to specialize exclusively in high-risk activities. Moreover, it's common for banks to maintain multiple correspondent banking relationships, which allows for internal risk allocation and effective portfolio management with their clientele.

Let's say the correspondent bank - Salad Bank - offers accounts to the Cucumber Bank, the Pepper Bank, and our earlier mentioned Tomato Bank. Cucumber Bank is a small, cool, but old investment bank that operates by holding and investing various company's funds on the stock market within strictly regulated conditions. Cucumber has been on the market for years and operates without any issues. Pepper Bank is a bit spicier and focuses on high-risk clients, charging them higher fees.

Salad Bank must make a decision here – whether to accommodate Pepper Bank's exclusively high-risk clients or not. If Tomato Bank's overall volume of low-risk business is large enough to balance out

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Cucumber Bank's medium-risk score and still has room to accommodate a smaller number of new transactions from Pepper Bank, Salad Bank could still maintain its overall risk score within the desired boundaries. If it offers a new banking channel to Pepper, allowing it to operate only within the high-risk sphere, Salad Bank could charge larger fees to Pepper. Pepper Bank could then recharge these fees to their exclusively high-risk clients, who are happy to pay higher fees. This delicate balance would, of course, need to be maintained.

The problem occurs if Tomato Bank loses its big supermarket chain, as its low-risk volumes would suddenly shrink, affecting both Tomato Bank's internal risk score, as well as correspondent bank Salad's overall risk score. Tomato would then be forced to close operations on their riskiest clients to return to an acceptable risk level. Even though it seems unrelated, the big supermarket chain's decision affects Pepper Bank's spicy clients too. As Salad Bank's overall risk score has now increased, it would result in account closure for Pepper Bank's overall traffic, even though Pepper Bank has been operating perfectly. If Pepper Bank does not have an alternative correspondent bank account connection, this could potentially lead to the closure of their whole business.

Of course, this is a very simplified explanation, but it illustrates how banks 'think' and operate in terms of risk and acceptance. Understanding the risk management practices of banks is vital for any company hoping for successful banking partnerships. Since risk assessments are often highly subjective and take place behind closed doors, companies should always have alternative payment

or banking channels ready as a backup plan for rapidly changing situations.

Banking risk categories

As we have seen, banks use 'risk categories' to classify businesses based on various characteristics. This classification is completely subjective, and the scores measure the likelihood of an adverse situation occurring. Understanding these categories is vital to understanding how 'banks think' and why they accept or reject a business, or particular transaction.

High-risk businesses have certain features which make them inherently more susceptible to various risks. Keeping in mind that financial institutions and banks care mainly about the **possibility** of wrongdoing, not the motive. Even if a business has the best intentions and clear track record, when the processes are loose and the wrongdoing has an opportunity to occur, this might result in rejection or higher fees, as the risk is present.

Here are a few of the most common instances which are classified as business risk:

- Subscription-based payment models can face an increased risk of disputes. When customers forget to cancel their subscriptions, banks face extra work as they need to start investigations to determine who is in the right.
- Large number of transactions increase the likelihood of errors or might be hiding a few fraudulent entries, which can easily disappear among the many transactions.

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- Businesses with offshore relations are often flagged for concerns related to ethical concerns, money laundering or fraud.
- Industries which work with less quantities but higher values per transaction, such as commodities or jewellery. As we saw with the Salad Bank example, the bank's portfolio is managed as a whole, where a predetermined percentage of transactions have to be low, medium and high risk to balance out the pool as a whole. This means that even if only one transaction is fraudulent but is for a larger amount, it can affect the whole portfolio's risk score in percentage terms.
- Reputational risk is another aspect that, while subjective, carries some weight. For example, a bank that accepts an arms manufacturer as a client could face public backlash, particularly if those arms are later implicated in conflicts that cause humanitarian crises. Similarly, providing services to adult entertainment businesses may be lawful but can risk isolating certain parts of the customer base with strong ethical, religious or moral objections to such industries. The fallout could extend to non-profit organizations, religious groups, or socially conscious investors severing ties with the bank. A snowball effect may follow, causing further customer attrition and adversely affecting revenue and therefore shareholder value.
- Licenced or regulated entities where one non-compliant transaction can cause a penalty or prosecution for the

entire financial institution or bank that allowed this transaction to happen.

There are various other industries and activities which might be deemed as high risk from a banking perspective. To assess the level of risk, we always must ask ourselves, "What's the worst-case scenario? What can go wrong here?", instead of, "It will never happen" or "The bank has to believe me, I know what I am doing".

A lack of internal resources, and a solution

Often, the main issue is that the bank doesn't have the capability and compliance means to filter out certain transactions effectively. When I was consulting for a freshly incorporated EMI a few years back, the management decided that they didn't want to handle any blockchain or crypto-related transactions, simply because they didn't have anyone on the compliance team who understood the industry. We discovered, however, that their corresponding banking connections did indeed have the necessary risk appetite to serve this industry. Realising we needed to find a bridge to facilitate this opportunity - higher risk equals higher profit when accepting this underserved clientele - we sourced a legal firm which specialized in giving legal opinions on these specific blockchain/crypto operations.

The legal firm's services were broken down by country, using a subscription-based system whereby they sent alerts any time there was a change in legal framework. We could subscribe to different packages based on the desired number of countries of our choice, meaning that now the EMI's compliance team had very strong legal

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assistance and could always remain up to date with this very specific vertical. The cost of the legal service was minimal in comparison to the profit potential of opening to a whole new industry type. The decision was a no-brainer. The EMI managed to secure a great new revenue stream which would have otherwise been overlooked.

Similarly, I once worked with a partner EMI who had a great risk appetite for investment brokerages. Being a startup, they chose to serve higher-risk clients to gain a larger market share. They were small but very good, and we used their accounts on numerous occasions when our investment broker clients needed to open an account to accept or send money via the SWIFT network. Everything was working perfectly until one day when we received an email from their compliance team, saying they were no longer accepting this vertical. I had a really good connection with their Head of Compliance, who used to work as a Compliance Officer at another investment brokerage firm I was familiar with. After a simple phone call, it turned out that she was about to take maternity leave and she was the only one who understood this business inside out. The EMI did not want to take the risk of onboarding any new clients from this vertical until she returned to work. This just shows that serious decisions can sometimes happen for such trivial reasons.

Startups

Startups represent a specific risk category that many financial institutions are hesitant to engage with. These businesses are in the

early stages of their operations, unvetted by other payment providers or banks, which creates anxiety among banks, as no institution wants to be the first to discover operational hiccups that could lead to misconduct or fraud.

Additionally, startups generally deal with lower volumes and fewer transactions, which for the bank translates to minimal revenue from fees. Their operations are often dynamic, with frequently changing strategies, which can be challenging to track from a compliance perspective. Startups also face budget and staffing limitations, and as we have seen, applications can take up a lot of resources.

Startups also tend to overpromise and underdeliver. Often, financial institutions and banks spend a lot of time, effort, and resources to onboard new startups, but their activity never 'starts up' (pardon the pun!) and stays so low that the bank fees obtained from the business may not even cover the initial costs of the onboarding.

My advice for startups is to establish a relationship with a suitable provider as soon as possible, ignoring the higher fees or less favourable terms. This allows the business to begin generating proof of a solid, risk-monitored operation with growing transaction volumes. This will turn tables and give them the power of negotiation with the banks and payment providers. Since the business has fewer activities at the beginning anyway, the higher fees won't incur a large cost, but with this improved risk profile, startups are better positioned for future bargaining with the existing, (or even new) providers. Financial institutions usually offer more competitive rates or better terms to more established businesses.

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While banking fees might often be subjective, financial institutions do have a vested interest in retaining valuable customers. A company may initially face higher fees or less favourable conditions due to its elevated risk profile as a startup. However, after a few months of consistent volumes and demonstrable operational success, the bank is more likely to renegotiate fees and other terms to maintain a profitable relationship with the business. And if not, the company can always take their business elsewhere -now with a proven track record.

How to appear lower risk?

Lower risk means lower fees. To appear as a lower risk to payment service providers and financial institutions, businesses should focus on presenting a story which has no opportunity of wrongdoing or fraud from any angle. They must show a strong and credible profile, clear goals and objectives, and ensure that all provided information is complete, accurate and up to date. Discrepancies or inconsistencies in the information or hiccups in the logic of the flows can raise red flags during the assessment process and may lead to rejection (or higher fees).

Here are the top things that financial institutions are looking out for:

1. **Stable and positive financial histories** - Maintaining a healthy credit score, showing a consistent income source, and avoiding excessive debt or financial liabilities.
2. **Having a clear and well-defined business model** - The nature of the products or services on offer, along with a

clearly outlined payment flow must be coherent and well understood.

3. **A transparent and straightforward business structure** - Clear terms and conditions, privacy policies, as well as compliance with all relevant laws and regulations, all help to build confidence.
4. **A transparent transaction history** - A record of regular, legitimate transactions signals an experienced business, is less likely to engage in wrongdoing.
5. **Robust security measures** - Implemented to protect customer data and financial information is also important.
6. **Sales and marketing plan** - A well-documented and clear commercial plan which realistically supports the financial estimations is also beneficial.
7. **Online reputation** - This is another factor which is scrutinized, and although it is completely subjective, it may give some indication of how the business operates. Compliance might check social platforms, followers, and even political beliefs and comments.

An identity mismatch

I had a special case a few years ago when a client approached me after suffering multiple rejections from various banks. During preliminary checks, we couldn't find anything wrong with the application. The company papers were all in order, the structure was clear, and the website was well-built. It turned out, however, that the company had an 'online twin', which operated in the exact

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same industry under a very similar name, but in another country. The problem was that this 'other company' was overpromising and underdelivering, leaving several upset clients who in turn, started creating a negative social media presence for this company. The upset clients gave very poor reviews across major evaluation websites, posting photos of faulty or broken products. The bank's compliance team had spotted this adverse social media presence, assumed it was the same company and decided not to take the risk, fearing it might give them extra work in the long run.

My client had to contact every single provider, supplying proof that they were a completely different entity and had never been in contact with or served these disgruntled customers. Thankfully, the 'evil twin' was shut down soon afterwards (deceptive companies don't usually last long), however, the bad reviews have remained online till today.

This has left my client in the position where if they ever apply for a new provider but don't specify this issue during the application process, compliance might make the wrong assumption once again and reject the company from the get-go. Even though both the review website's evaluation methods, as well as the compliance checks have been improved since, this example shows what major damage adverse online media can do to a banking relationship.

Website risk assessment

As we've said, financial institutions play a vital role in ensuring the legitimacy and security of online transactions. Several factors, such as the website's design, content, domain name, level of security

certificates, and even online reviews are crucial in determining a merchant's authenticity.

During AML and KYC procedures, compliance teams carefully examine specific aspects of a merchant's site. This includes various things, such as the site's status, business name, shipping methods, privacy policies, terms and conditions, service descriptions, intellectual property claims, or the payment page. The goal is to assess risks, prevent potential fraud, and avoid any other issues while ensuring the layout remains simple and user-friendly.

Legitimate businesses often invest in professional and up-to-date themes, whereas fraudulent ones may resort to generic templates. Important pages like the 'Contact Us' and 'About Us' sections can provide valuable information about the business and the team. Compliance will look for real photos of management, comparing them with the ones on the application. Generic stock images of strangers are usually seen as a misleading scam.

A trustworthy website will clearly describe the products or services it offers. Vague, short or incomplete descriptions might signal that the merchant is hiding something, potentially leading to misunderstandings and a higher risk of complaints. Compliance teams might consult with customer service or make test purchases to ensure that the service is legit and efficient.

Correct and valid information about return and refund policies, as well as shipping procedures, can help prevent potential issues arising from delayed deliveries or disputes. This will reduce the ongoing work of the financial institution or bank in case of a complaint. Privacy policies indicate how the merchant processes

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and safeguards customer data, while terms and conditions offer insights into business practices and dispute resolution procedures.

Additional factors, such as the registered business name and address, should be visible at the bottom of the site. The domain extension, like .com, co.uk, or .cn, can reveal the site's geographic origin. Unusually spelt URLs or domains with strange extensions may signify a fraudulent site.

These are just a few examples to show what financial institutions and banks are looking for predominantly, to make sure a business is legitimate and valid. By using basic common-sense, most of these issues can be easily filtered out, however many online businesses remain unaware of how deep compliance will go when evaluating an application.

Surprising? Maybe yes. But if we consider how much responsibility lies with compliance, we start to understand why every new application and financial transaction is considered to be a major risk, which can significantly affect the whole operation of the financial institution or bank. That is why maintaining a good banking relationship, while not without its challenges, is certainly worth the effort.

There is still an awful lot of subjectivity at play, more than you might imagine, and many things are still based on good communication and genuine effort. There is a lot that a business can do to start and maintain a positive and healthy relationship with a bank, simply by paying attention to the details and being as helpful and transparent as possible. As businesses grow in volume and introduce new products or services, the bank's risk appetites might also shift.

Staying up to date with these changes is crucial for success in a competitive environment.

A business is as risky as its riskiest product

I had a client whose business was selling various beauty products online. It was a very neat business, with great management and vision. They targeted young people all over Europe who were hungry to try (and buy) everything new in beauty. The website sold various face creams, serums, and makeup products, and was very successful. One day the client approached me to check and approve a new product range which they wanted to introduce to the site. Their new manufacturer specialized in CBD face creams which were offered for external use only and were claimed to work miracles on the skin. But there was a major issue with this: cannabidiol (CBD) is an active ingredient in cannabis and is derived from the cannabis plant. Although it doesn't cause a high and is not addictive, you still need to grow cannabis to harvest CBD, so in several countries, this specific ingredient is subject to restrictive laws. Since the plants might be grown in unsupervised conditions and possibly breaking the law, plus potentially causing reputational damage to the payment facilitator and bank, the traditional banks usually reject these types of businesses that offer CBD products, automatically. Since the product was really considered to be 'the best new thing' in beauty and presented a fantastic business opportunity, we decided to see if we could find a way to list these products on the website. Since 95% of the website was still selling traditional 'low risk' products, we hoped that the existing provider

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would be willing to take this extra risk, however, the estimated volumes on this new product only were just too high for their bank. The client appointed us to evaluate whether we could help them to change providers to a higher-risk friendly one, who could accommodate these product listings. We had 2 scenarios to compare.

1. Maintaining the 'status quo' meant we retained the tried and tested payment providers and banks whom we trusted. They offered lower processing fees and meant no extra development and integration costs as they were already working with the website. However, we also had the lost opportunity for the large volumes of potential sales on these new CBD products.
2. The alternative was to go ahead and add the new products while engaging a new provider with a higher risk appetite (and fees). As research, application, negotiation, agreement, testing, and integration takes time and valuable effort, we had to bear in mind the elevated risk of hiccups and costs. Starting a new payment provider relationship from scratch might also force us to use new and unfamiliar technologies, tackle security uncertainties, and result in overall higher processing fees for the whole website.

We worked hard and crunched the numbers for every possible scenario. The estimated volumes were too good to miss out on, but the elevated risk posed a threat to the whole operation. Eventually, we recommended that the best decision was to separate the two product lines (regular and CBD) to get the best of both worlds. We

opened a new, independent company which specialized in CBD products alone as a sister to the main, while keeping the original product-line setup and payment processors intact with the other business. This resulted in a slight increase in banking risk since the company was now in a group which was involved in high-risk activities, but the increased banking costs were minor compared to the extra profit which was eventually generated by the new CBD products.

Chapter 5 - Card Networks, Alternative Payments & Local Payment Methods

Intro

I grew up in a family where my Mum was always very strict about spending and regarded financials very seriously. She took pride in not taking out any bank loans unless it was an absolute necessity. I inherited this mentality towards money and carried on the tradition, trying to spend only as much as I could afford. But before 2008, credit was just too easy to resist. One day, when I was living in the UK and visited my branch, my banker pulled me aside and told me that they'd like to offer me a credit card.

The banker's offer was very intriguing. I was told that it wouldn't cost me anything to have it, and I could have a small balance, 'just in case'. Accidents and emergencies could occur at any time, so this card could be my little 'emergency fund' without the need to put aside any savings. Moreover, as I was young, I didn't have a credit score yet. If I wanted to have a mortgage later, the bank would have no record of my financial reliability. This card could help me build my credit score, which could eventually save me a lot of money later down the track, with lower interest rates. All I had to do was to be clever about it, and always pay back the full balance at the end of the month, so as not to incur any interest fees.

It all made sense. It didn't cost anything to have it, but I thought, it would cost a lot not to. So, I went for it.

I had a choice between Visa or American Express. Not knowing what these things meant, I randomly picked Amex, as it sounded cool, got the card, and started spending.

Everything worked perfectly until I moved to Cyprus. Even though I tried multiple times, my card was just no longer working. I called the bank for answers, and it turned out that back in those days the smaller shops in Cyprus were only accepting Visa and Mastercard - if indeed they were accepting cards at all. I could no longer use my 'jolly joker' card and build my credit score. It was a big surprise for me, as it didn't even occur to me to check the type of card I had, let alone understand why there even were different card networks.

Not much has changed since then, I assume. If I ask anyone on the street to tell me what type of card they use (Visa, Mastercard, Amex), I am quite certain the majority wouldn't be able to answer this seemingly simple question. And why would they? For the everyday person, a card is a card.

Comfort and convenience have created a blissful ignorance around understanding how these card networks actually operate and what role they play in our everyday lives.

Credit and debit card networks and card issuers play a crucial role in the seamless processing of payments. They serve as intermediaries, facilitating transactions between banks for moving funds. Understanding these fundamental concepts is essential to grasping how payment systems operate and how payment processors leverage these card networks, to streamline transactions. This knowledge will shed light on payment processes

and the significance of the various financial entities in the modern economy.

Major Card Networks

Visa

Visa is the major global credit card network, established in 1958 and originally aimed at middle-class clients and small businesses. The credit card program was designed to provide a convenient payment method for everyday purchases and following its initial success, the network capitalized on the growing trend of card payments worldwide.

In 1974, Visa made significant strides in the international market, expanding its reach beyond the United States. The following year, in 1975, Visa introduced its first debit card, further enhancing its payment offerings and becoming a major player in the financial industry. In 2008, Visa became a publicly traded company and launched one of the largest Initial Public Offerings (IPOs) in history. This move allowed the public to invest in Visa's success and solidified its position as a major player in the global financial market.

Today, Visa is the leading player in the credit card industry and operates in more than 200 countries and territories, partnering with numerous financial institutions to offer a wide range of credit, debit, and prepaid card services.

Visa does not issue cards directly to consumers but operates as a payment network by collaborating with financial institutions, such as banks and credit unions, to issue Visa-branded cards to their customers. These financial institutions act as card issuers and are responsible for providing credit or debit cards to individual consumers. When partnering up with Visa, they can set their terms for the cards they issue, deciding which customers can access the specific card benefits.

Mastercard

Mastercard is the second-largest card association in the world. It has established partnerships with major financial institutions, enabling it to facilitate payment processing and issuing cards within its own network.

The history of Mastercard dates to the 1940s when U.S. banks began issuing paper-based payment instruments for use in stores, such as checks or notes. These instruments were physical documents that individuals could carry and present to merchants when making purchases. These represented a promise to pay a certain amount of money. The merchant, in turn, could later redeem or cash in these paper instruments at the issuing bank. The system name was Interbank Card Association, which underwent a rebranding in 1966 and became the Mastercard Network as we know it today.

Over the following decades, Mastercard experienced significant growth and expansion. It acquired major debit networks, including Maestro, which further strengthened its position in the payments

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industry. The company also made strategic acquisitions of other corporations and payment processors, which allowed Mastercard to enhance its payment processing services and stay competitive in the evolving market.

In 2006, Mastercard made significant changes to its business structure and decided to launch its stock, becoming a publicly traded company. This move marked a new phase in the company's development and helped it attract more investors. Today, Mastercard is accepted in over 210 countries worldwide.

Mastercard operates on a similar principle as the Visa network. To enable card transactions, it forms partnerships with banks, credit unions, and other financial institutions, which issue the cards to their customers. These issuers determine the benefits and terms that cardholders will receive.

Not every online business can accept both Visa and Mastercard, as the acceptance is determined by the payment provider, which may be limited to accepting one but not the other.

American Express

American Express, commonly known as Amex, is another major card network. Like Visa and Mastercard, American Express also facilitates customer payments, however, it issues its own cards directly to customers.

American Express generates revenue through various means, including annual membership fees paid by cardholders, interest rates on outstanding balances for cardholders who carry balances,

and processing fees charged to merchants for accepting American Express cards as a form of payment.

By offering its own credit and charge cards, American Express operates as both a card network and an issuer, allowing it to have direct control over the customer experience and the terms of card usage.

Discover

Discover is a significant card network which operates similarly to American Express. Discover issues its own cards, which means it doesn't need to rely on intermediary banks to issue its credit cards. Being both a card network and an issuer, Discover also generates revenue primarily from the interest rates charged on outstanding balances. This approach incentivizes cardholders to borrow more money using their Discover cards, as it encourages long-term loans compared to other card networks.

JCB

JCB, short for Japan Credit Bureau, is a prominent international card network based in Japan. JCB also operates as both a card issuer and an acquirer, serving over 34 million merchants across the globe and is accepted in more than 24 countries. While its operations are centred in Japan, JCB has strategically partnered with various banks and financial institutions to expand its coverage and achieve a global presence.

RuPay

RuPay is a widely used and popular card network in India. It primarily serves the Indian market and may have limited acceptance outside of India - although it has started expanding internationally through partnerships with other payment networks. Their transactions are usually processed within India, which often leads to lower transaction fees for merchants and consumers within the country.

Card types

Various types of cards cater to different financial needs and preferences and allow features like cash-back rewards, high credit limits, or other benefits.

Generally, all cards provide layers of anti-fraud measures for every transaction, enhancing security for both consumers and merchants. They are printed with a unique number, which is essential for making card-not-present (CNP) transactions, such as online or phone payments. The cards usually also have magnetic strips which store data like the Card Verification Value (CVV) and cardholder's information, adding an extra layer of protection against fraud.

Debit cards

Debit cards are connected to the bank account where the money is stored. Here the funds are owned by the account holder. By using the card, the owner is spending their own money, meaning

that the balance is always positive as the funds spent were present in the account. The transaction is typically declined if there are insufficient funds in the account to cover the purchase unless special arrangements for overdraft services have been made.

Credit cards

Credit cards allow customers to access funds on their bank's credit to make transactions. The funds are not owned by the customer, but by the bank, so essentially the card is just a tool to borrow money up to a predetermined limit. The balance on the credit card is always negative, as the funds spent are borrowed from the bank and will go up to zero when repaid.

The cardholder is required to make at least a minimum payment by the due date to cover their debts. This payment can be a partial repayment of the total balance owed. If the cardholder does not pay the full balance by the due date, the remaining balance carries over to the next billing cycle, and interest is charged on the outstanding amount. The business model of the credit card expects customers not to be able to repay their balance in full, hence generating profit on this interest.

Prepaid cards

Prepaid cards are an alternative option to make purchases without the need for traditional credit or debit cards. These cards allow cardholders to load a specific amount of money onto the card and then spend it. The amount loaded on the card provides a controlled

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option for budgeting. Some prepaid cards also come with the option of being reloaded with additional funds, either online, through mobile apps, or at designated reload locations.

Prepaid cards can also be used as a secure travelling option as if the card is stolen, only that card's balance is in jeopardy, without affecting the main bank account balance.

Although we see them less and less, there are still various, anonymous prepaid debit cards available for purchase. These cards can be used for purchases or ATM withdrawals, without the need for personal identification or a name on the card. This is an obvious AML threat, as these cards could be used in the placement, layering, and integration stages of a money laundering operation. Exploiting the special features of prepaid cards such as anonymity, global reach, portability, and ease of funding all pose risks, while potentially supporting criminal activities.

Gift cards

Gift cards are like prepaid cards but are intended for single or limited use and with one vendor only. They are usually preloaded with a specific amount and can only be used at certain retailers. Gift cards are also used in various ways with scams and fraud because if bought at retail locations, the purchase can stay anonymous and help criminals make purchases and avoid taxes.

Risks associated with top-up cards and crypto

For all the various reasons we've seen, online businesses are usually considered higher risk than face-to-face operations by financial institutions and banks. Not knowing who pays and where the sale takes place is an obvious risk for any business handling and bearing responsibility for the transaction. Many of these businesses have an even harder time joining the global banking flow, due to their extremely high-risk scores: e.g. adult entertainment, casinos or foreign pills and pharmaceuticals. It could be due to various factors: the nature of the business, reputational risk, the need for a licence or legal opinion, or any other subjective measure.

A long time ago when compliance was still in its early days, people invented various solutions to accept payments for these 'hard to bank' businesses. As the internet has become a more and more accepted platform for business, the demand for serving these 'higher risk' verticals with payment and banking means has also increased.

The first 'creative' payment methods were the anonymous top-up cards, the aim of which was to hide the identity of the payers. By visiting a certain website or going to a local kiosk, the payer got a virtual or physical card, often anonymous, with a connected wallet which stored the funds. To top up the balance, one could use another card or send the funds via bank transfer, and the wallet balance could be used for online payments without revealing the payer's identity. This was particularly useful when someone wanted to pay for adult services or online gambling but avoid

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awkward conversations about their spending habits, in the case where someone read their bank statements. Using anonymous payment methods meant that the spent amount appeared as a balance top-up to a wallet or card transfer, without stating the end merchant's name.

The alternative to these top-up cards was the online gift cards. As we saw earlier, these gift cards could be purchased anonymously online, often without limitations. Accepting anonymous gift cards for services, became the new 'online cash' and allowed criminals to sell their offerings globally via the dark web.

Of course, these methods came under massive scrutiny by both regulators and card schemes, resulting in stricter compliance processes globally. Nowadays many of the AML and KYC measures restrict banks and financial institutions from assisting these business models, simply because offering them payment and banking services provides the opportunity for tax avoidance and/or enables illegal transactions.

In the last few years, however, crypto emerged to be the go-to vehicle for anyone wanting to bypass regulation and accept payment for anything and everything on their terms. With regulators lacking in technical knowledge resulting in the slow development and implementation of new crypto laws, witty fintech companies were able to get ahead of the curve and legally bypass regulation for a few years, by using crypto. This allowed crypto exchanges to quickly replace the classic top-up and gift card systems and become the main high-risk payment facilitators worldwide.

The idea was based on the classic setup: businesses sent their customers to a crypto exchange, where they could buy crypto with traditional payment methods such as cards and bank wires. Then this crypto was automatically sent to the merchant as a form of deposit or payment, to be used in exchange for the 'higher risk' goods or services. Exchanges argued that they couldn't be held liable for the use of the crypto after the sale had been concluded, in the same way a knife-seller is not held responsible if the client uses the purchased knife for cooking or to cause harm.

However, some imaginative startups went a step even further and became the actual payment processor, using their exchange solely to assist these high-risk online merchants with their payment processing. Traffic to these exchanges came almost exclusively from high-risk merchant websites, often with automatic assistance which sent the crypto directly to the merchant's wallet.

Although this plan worked well for a little while, they forgot about one thing - the banks and financial institutions that collected the traditional payments on their behalf. Despite the short window of opportunity for such setups in the past, payment and banking providers quickly realised what was going on and stepped up to restrict the activities of these new-found exchanges. By blocking their payment flows, their operations stopped. Unquestionably, these were clear cases of fraud and had to be shut down, quickly.

In the early days, some of the payment and banking providers gave these 'crypto startups' the benefit of the doubt when they applied for new banking or merchant accounts. Compliance still spent a lot of time and effort filtering out who was legitimate and who wasn't

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by asking for business plans and deep-dive questions about the source of their traffic. However, when most of the applications turned out to be fraudulent, the providers ended up rejecting all crypto-related startup applications, automatically.

This is just an example to show that blatantly obvious tricks which aim to bypass the system don't last long. Taking advantage of the lack of regulation is not only unethical but also very dangerous. Since these 'opportunities' can attract the wrong type of creativity, they may look beneficial in the beginning but have the potential of landing not just the company but its key personnel on global card processing, even banking blacklists, permanently. Simply put, it's just not worth the risk.

Card payment participants

Understanding the key players and steps involved in card payments is like understanding the rules of a game - essential knowledge for anyone who's playing. Knowing how an amount travels from a customer's wallet to the business bank account can help everyone involved solve problems faster, facilitate better payment decisions, and even save money. In any card transaction, several steps are involved which are all subject to mistakes, failures, and charges. Each player in the process has a specific role, involving multiple technologies and systems. Knowing these roles and steps can help one manage risks, negotiate better rates and terms and lead to a more successful payment flow.

Card issuers

As we have seen previously at Chapter 4, card issuers are financial institutions such as banks or credit card companies. They are responsible for the issuing of physical cards to consumers, which are used to make payments with various merchants and online platforms.

Card acquirers

Also discussed, a card acquirer is a financial institution which processes credit and debit card transactions. The acquirer authorizes and settles transactions, essentially acting as a bridge between the merchant and the card networks such as Visa, Mastercard, and American Express.

Payment processors

A payment processor is the collective name for all entities which facilitate the processing of electronic transactions on behalf of merchants. When a customer makes a payment, the payment processor is responsible for securely transmitting the transaction details to the respective card networks and issuers involved in the transaction. They can be the acquirer themselves or be acting as a middleman between the customer's issuers and the business' acquirer in the payment flow. The payment processor uses encryption and other security measures to protect sensitive cardholder information during transmission.

Payment gateways

Gateways are also payment processors, and typically provide easy integration options with e-commerce platforms and websites, making it convenient for merchants to set up and manage their online payment system on a single dashboard. The platform offers users an easy overview, grouping all the various payment processors in one place, making the reconciliation work for the accounting department or management so much easier. Concentrating all business's payment means in one place means we don't have to log in individually to all the different payment providers' site and download the reports in various formats. The comprehensive reporting and analytics can also help businesses gain insights into their sales performance and customer behaviours.

Gateways usually offer various pre-integrated payment methods to merchants, for example, credit and debit cards, digital wallets, bank transfers, and other local payment options. Often, gateways also have built-in fraud prevention tools and provide risk management services to protect merchants from chargebacks and potentially fraudulent transactions, as well.

Gateways can be purely technology providers, meaning they might not even need to have a financial license. In this case, they can only offer the technology platform, where all payment data is handled and summarised, but cannot collect, transfer or in any way touch any of the merchant's funds. This means that the acquirers or payment processors still need to collect, hold, and settle the processed amounts to the merchant's settlement account

individually, where the gateway only helps with the tracking of these funds.

If online businesses use these tech gateways, they usually sign two different agreements. One is with the actual acquirer who holds the financial license and takes the responsibility of safekeeping and reporting on the financial transactions, while the other one is with the gateway, who might charge fees for usage of the specific gateway services.

Since gateways usually also receive a commission from the acquirers, for bringing in new clients, often gateway services are offered for free. However, this can be misleading as the business model is not always explained to the clients. This is particularly useful knowledge for when we have to select and negotiate with gateways and acquirers.

Conversion/success rate

The 'conversion' or 'success' rate is the percentage of completed transactions relative to the number of initiated transactions (i.e. how many payments actually went through out of 100). Understanding this metric is crucial for assessing performance as it can vary greatly, illustrating user experience and helping to maximize revenue.

Let's say we have an online clothing store. If the store receives 100 orders in a day and 90 of those successfully go through the payment process, the payment conversion rate for that day would be 90%. This is an industry average as often, people have insufficient funds to complete the transaction, they enter their

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security code incorrectly, or there is some other technical glitch which prevents the process from being completed. A high conversion rate suggests that the payment process is smooth and user-friendly, leading to satisfied customers and robust sales.

A low conversion rate can however be a red flag, signalling issues that may require immediate attention. These could range from technical glitches to a lack of payment options, both of which can lead to cart abandonment. Even if we have the best marketing and sales processes in place, when the payment provider only manages to process three cards out of ten, we are only collecting 30% of our revenues. Low success rates are not only a significant loss for the business but also lead to higher levels of customer dissatisfaction, potentially clogging up customer service and resulting in negative reviews.

A sudden drop in the conversion rate might also signal that unauthorized transactions are being attempted, perhaps fraud or some other security issue is occurring in the background, necessitating further investigation and potential security enhancements. This issue alone can cost a business hundreds of thousands, if not monitored properly. We must keep in mind that providers might also charge us for all the attempted, rejected, or non-completed transactions as well, not only for the successful ones.

Cascading between payments

Cascading refers to the technological distribution of transactions to different acquirers or payment channels on the gateway, to

optimize the success rate and ensure seamless payment processing. This dynamic approach allows merchants to have a backup plan in case a transaction is declined by the initial acquirer.

The traditional payment flow may have limitations, as some applications follow a fixed order of acquirers or payment processors, making it challenging to adjust or re-route transactions. However, with cascading, merchants can implement a more flexible and adaptive payment processing flow.

Let's look at an example: when a customer makes a payment, the transaction details are sent to the payment gateway for processing, and then the payment gateway forwards the transaction to the initial acquirer for approval. If the initial acquirer declines the transaction, cascading comes into play. The payment gateway will automatically re-route the declined transaction to a secondary acquirer, which serves as a backup option. This acquirer receives the declined transaction and processes it for approval. The transaction may be approved, allowing the payment to proceed successfully, but if the transaction is declined again, cascading can continue to route it to additional acquirers until approval is obtained or the transaction is ultimately declined.

This faster and more reliable payment processing through cascading can lead to increased customer satisfaction, as customers experience smoother and more efficient transactions and overall increased acceptance rates for the business.

The downfalls of using a gateway

With our independent payment consulting work, we always try to be as transparent as possible. Payment consultants help businesses make well-informed decisions by explaining the different options and assisting them in navigating between the various payment solutions.

Gateways, although offering valuable benefits, share a common downside: they are usually restricted to using their pool of pre-integrated payment processors, and they aim to convince the clients to stay within their ecosystem. It's easy to see why: gateways not only get paid by their clients (if they do) but also use their partner payment processors to generate referral commissions. Even though they aim to maximise the client's payment success, they are often too biased to recommend the competition's solutions, even though they might be more suitable for the client's purposes.

A classic example of this conflict of interest is when our clients are looking for a new payment provider, but they are already engaged in the service of a gateway which offers 'payment consulting services' as well.

One day, I received a call from a large investment brokerage group, looking to explore new payment provider options overseas. They were already committed and integrated with a well-known, high-risk-friendly gateway's services which, despite its amazing functionality, was reputed for gaining referral commissions from their partner providers. Although the gateway had various built-in payment options, the client had specific requests and wanted to

see more solutions. The gateway was aiming to keep clients within their network and was motivated to prevent this client from exploring other, possibly better, options available in the broader market. This was especially alarming as this gateway claimed to offer 'personalised payment consultancy services', while it was clear that their agenda was to keep the client's full volume under the same roof and advise against diversification.

In this situation, the first step we took was to explain to the Head of Payment how gateways worked, and what their actual business model was all about. We clarified that exploring other payment options, which might not be integrated into their current gateway, could uncover more tailored solutions, more favourable rates, and advanced features. Moreover, integrating these new channels into the existing gateway was still a possibility, as the gateway offered this option and wouldn't risk losing a good customer for one new integration. Furthermore, diversifying payment and banking providers is always a good idea, despite the classic advice of any provider or gateway. If all payment channels are concentrated with a single tech provider, this bottleneck might pose an unnecessary risk to the whole operation.

Understanding the nuances of the financial motivators within the payment ecosystem can reveal these hidden agendas, sparing a lot of risk and cost in the long term. Businesses should always question who benefits when certain advice is given. When we engage a bank or a payment provider to deliver an honest opinion about the payment market or ask them about their competitor's services, the findings might not be as objective as we would

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expect. Working with an independent consultant can secure the best outcome and eliminate any biased motivations.

Transaction flow

The journey of a card transaction starts at the website's online shopping cart and doesn't end until the merchant receives the payment in their bank account. The merchant's online payment gateway first requests authorization from the customer's card issuer. The request includes transaction details like the amount, merchant information, and card credentials. This phase ensures that the customer's account has sufficient funds or credit limit to cover the purchase.

Once the card issuer receives the request, it performs several checks for factors like account balance, spending limits, and potential fraud. If everything appears in order, the issuer sends an authorization code back to the merchant. This process usually occurs within seconds, making it virtually seamless for the customer waiting at the counter or in front of a computer or phone screen.

The transaction is authorized here, but not yet finalized. The customer's account may show a pending transaction, but the funds haven't been transferred to the merchant's account just yet. They are simply reserved, awaiting the next stage in the process, commonly known as 'batching.'

The authorized transactions are grouped in a batch which are then sent to the merchant's acquirer for further processing. The acquirer acts as the mediator between the merchant and the customer's card issuer. It forwards the batch to the appropriate card network,

like Visa or Mastercard, which in turn directs it to the issuers for settlement.

Upon receiving the batch, the card issuer transfers the corresponding funds to the acquirer, which then settles the funds to the merchant's bank account, based on the pre-agreed settlement terms.

Card payment expressions

Although it might seem that card numbers are random, they actually follow a strategic order of crucial information. This precise sequence adheres to rigorous standards which are set by the ISO (International Organization for Standardization) and enforced by the ANSI (American Network of Standards Institute). These global standards ensure the usability of cards worldwide.

Card numbers

Visa, Mastercard, and Discover use a 16-digit format, while American Express cards are 15 digits. There's a common misconception that a card number somehow reflects the connected account number, but this is not the case.

The first six or eight digits are the Issuer Identification Number (IIN), or the Bank Identification Number (BIN). These digits identify the financial institution which issued the card. The first digit shows the card network. American Express starts with the number 3, Visa with the number 4, Mastercard with 5 and Discover with the number 6.¹⁹

¹⁹ <https://www.forbes.com/>

The check digit

Card issuers also use mathematical tools to combat data breaches and fraud. The Luhn Algorithm or Modulus 10 which was developed in the 1960s, utilizes identification digits to determine validity. When adding the check number to the rest of the card numbers, the sum should equate to 0. This helps detect mistype and errors during online purchases, as an incorrect number will not yield a sum of 0.

MCC codes

A Merchant Category Code (MCC) is a four-digit number assigned to businesses by credit card networks to classify the type of products or services they offer. This code helps categorize and differentiate merchants based on the nature of their business. Each MCC represents a specific industry or sector. It provides insight into the types of transactions a merchant conducts and allows credit card companies to apply appropriate processing rules, fees, and regulations.

For instance, a restaurant's MCC code is 5812, which falls under the 'Eating Places' category, while a retail store's MCC code is 5311, which is 'Department Stores'. Credit card networks use MCC codes to determine how to process transactions which can affect factors like interchange fees, authorization rules, and fraud prevention measures. MCC codes can also identify spending patterns and allow issuers to offer rewards or benefits for spending in specific

categories, like travel or dining. They help in financial reporting, as they provide a structured way to categorize transactions for accounting and analysis. Some transactions, like gambling (7995) or cash advances (6050), might have specific regulations or restrictions, based on their target areas. MCC data is also used to gain insights into consumer behaviour, industry trends, and spending patterns.

Miscoding and transaction laundering

Transaction laundering refers to a deceptive practice where high-risk (or even illegal) transactions are disguised as lower-risk (or legitimate) transactions within the payment processing system. This method is used to hide the true nature of transactions, and typically involves a low-risk online merchant profile, acting as a 'front' for these activities.

The launderer sets up a seemingly low-risk business profile and processes payments under the lower-risk MCCs to hide the real activities and bypass the restrictions and fraud prevention tools. The higher-risk transactions are mixed with lower-risk ones, making it difficult for authorities, card schemes or even financial institutions to detect them. Unfortunately, some payment processors also employ this system to meet the requirements of lucrative yet high-risk industries. This activity is known as 'miscoding'.

Technically speaking, miscoding isn't very complicated. Payment processors usually collect and send all their client's payment data (so-called 'traffic') to the acquirer in bulk, all under one Merchant

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ID. If they handle and manage the merchant funds, (which is usually subject to a financial licence) their gateway appears as the main merchant for the acquirer. The processor's traffic in this case is the aggregation of all their client's transactions into one 'bulk', so it's often difficult to figure out which transaction belongs to which client or activity.

While aggregating traffic under the same merchant ID is common and legit, miscoding transactions in order to pass transactions under a different MCC code is, of course, a fraud. If transaction laundering or miscoding is discovered, the payment processor faces a significant penalty and could be blacklisted from all card schemes, not to mention having their access to the international banking system blocked. The penalty is often devastating, which can lead to bankruptcy of the processor, and this often results in the non-settlement and frozen/vanished funds of the rest of their clients, too. This means, that even though our business is completely legit, if we pick a less regulated and shadier payment processor, our funds might be in danger without us even knowing about it.

Ticket

The ticket is a unique identifier or code which is generated to represent a specific transaction or payment request. It serves as a reference point for tracking and managing the transactions within a payment system. It helps link various pieces of information related to the transaction, such as the payer's and payee's details, the payment amount, the payment method used, and the time of the transaction. Payment systems, financial institutions, and businesses

can use these tickets to reconcile their records and track the status of transactions when needed.

Ticket value

The ticket value is the amount associated with an individual transaction. It's the price or value which is linked to an individual payment or purchase. If someone buys a few products online for a total of 20 USD, the ticket value of that transaction is 20 USD, rather than the cost of the individual items. Understanding the ticket value helps businesses determine the average or individual transaction size, which is valuable information for payment-related, financial, and other strategic decisions.

Chargebacks

The chargeback mechanism is a form of consumer protection, allowing cardholders to dispute transactions in cases such as fraudulent activity, failed delivery of services, or when the goods received are not as described.

In the early days of credit cards, the power balance was heavily skewed in favour of the merchants and credit card companies. Consumers had limited recourse if they were victims of fraud or if a merchant failed to deliver a promised product or service. The introduction of the chargeback system offered a safety net which encouraged more people to adopt credit card usage with confidence. Today, if someone orders anything online but is unhappy with the delivery or the product, a chargeback will allow

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them to dispute the transaction, forcing the seller to act and either resolve the issue or give a refund.

Starting a chargeback is easy - a cardholder can contact their card issuer to initiate a chargeback which investigates the matter. If they believe that the cardholder's claim is valid, the transaction amount is immediately credited back to the cardholder's account, and an equivalent sum is withdrawn from the merchant's bank account. Next, the merchant is informed of the chargeback and provided with an opportunity to respond. If the merchant can prove that the transaction was legitimate, and the product or service was delivered as promised, the chargeback may be reversed in favour of the merchant. The process can be lengthy and costly as it involves several layers of communication between the merchant, the acquirer, the card network, and the issuer.

While this system is generally praised for its role in consumer protection, it also presents challenges for merchants. For instance, a high volume of chargebacks could indicate to financial institutions that a merchant is high-risk, which may result in higher transaction fees or, in extreme cases, termination of the whole processing service. For this reason, many businesses invest in chargeback prevention measures, such as secure transaction methods and transparent customer service policies.

Chargeback types

A chargeback reason code is an alphanumeric combination of 2-4 digits provided by the issuer (customer's bank) when a chargeback is initiated. It serves as a categorization and explanation of the

reason for the chargeback, helping merchants identify the specific issue raised by the cardholder.

When the issuer notifies the merchant of a chargeback, the reason code is included in the notification. This code acts as a reference point for the merchant to understand the nature of the chargeback and to build a defence against it. By knowing the reason code, the merchant can identify the specific triggers or issues that led to the chargeback being filed.

Each card network has its own set of reason codes, and they can vary across the different networks. There are various classifications of chargebacks, with the main ones being:

Merchant error chargebacks

This type of chargeback usually arises from legitimate transactions which were not executed properly by the merchant. This most commonly includes unauthorized or mistaken transactions, wrong deliveries or technical errors. The chargeback not only results in a reversal of the transaction but also often includes additional penalties for the company, affecting its standing with its payment processors, and motivating them to do better the next time.

True fraud chargebacks

True fraud chargebacks usually occur when stolen or unauthorised cards are used.

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Friendly fraud chargebacks

There's a joke in the industry which says, "There is nothing friendly about friendly fraud". Friendly fraud is when the customer has simply forgotten about the purchase, or the card might have been used by a family member.

The classic example is when a child uses the parent's card to purchase a video game online without informing them. When the parent notices the charge on their statement, they don't recognize it and assume that it's fraudulent, triggering a chargeback procedure.

Cyber shoplifting chargebacks

Cyber shoplifting, also known as digital shoplifting, involves customers intentionally making purchases with the intent to receive the goods or services but later filing chargebacks claiming non-receipt. This type of fraud is hard to prove unless the company has strong evidence that the client indeed received the delivery (signed delivery letter) or downloaded the digital product.

Chargeback frequency

There are certain times when chargeback activity is increased, most often holidays, when people purchase more than they can afford. When realizing they have overspent, customers try to minimize their losses and outsmart the system. Since there are no repercussions or fines for the customers making fraudulent chargeback claims, once they realise how easy it is to take

advantage of the system, they are much more likely to repeat this type of fraud.

Chargebacks commonly occur in e-commerce or other online-based businesses and are one of the reasons why these types of businesses are considered higher risk.

Chargeback investigations

Chargeback investigations require considerable effort from both acquirer banks and payment processors. The process of a chargeback involves multiple steps, starting from the initial claim by the cardholder to the final resolution. It's not just a simple reversal of transaction, but a comprehensive audit that entails reviewing transaction records, verifying signatures, scrutinizing delivery confirmations, and sometimes even checking interactions between the merchant and the customer. This investigation requires human resources and specialized skills, consuming valuable man-hours that could be dedicated to other, more productive tasks.

Furthermore, there is the aspect of operational disruption. When a chargeback claim is initiated, specific teams or individuals within the financial institution must shift their focus from routine activities to this case. The shift can slow down overall operational efficiency, potentially leading to a backlog of other tasks.

To mitigate this, chargebacks often come with higher set fees. These fees serve multiple purposes. First, they act as a financial cushion, compensating the bank or processor for the extra effort and time invested in handling the chargeback. Second, they serve as a penalty for the sellers. By making the cost of initiating a

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chargeback considerably high, merchants are motivated to enhance their processes and operations to become more effective, thus reducing the number of cases that banks and processors have to deal with.

In the industry where it is most common - e-commerce - a frequent chargeback situation might involve customers disputing charges for items they claim they didn't receive. If the acquirer bank charges a substantial fee for chargeback investigations, the merchant is much more likely to improve their delivery and tracking systems to prevent such disputes in the first place.

Chargeback alerts

Some payment processors offer a feature called 'chargeback protection', which may include waiving the chargeback fee if the merchant wins the dispute. There are also various companies which offer effective chargeback handling, such as a real-time alert system which allows both parties to resolve disputes before they escalate into fully-fledged chargebacks. This system is connected to various banks, which automatically send an alert, as soon as the consumer raises a dispute with the issuer. The merchant has a small window of time to act swiftly, offering options such as issuing a refund or providing additional information that may resolve the dispute. Therefore, the need for a full, formal chargeback process can be avoided – and this is beneficial for all parties. The merchant can avoid the chargeback, the bank will not need to open a full investigation, and the customer will also be satisfied.

How to handle chargebacks

Handling chargebacks is a crucial process for every business. Chargebacks can have a significant impact on a company's revenue and can consume valuable resources. To build and manage effective operations, technology and customer service processes, companies must be fully aware of their payment flows, procedures, providers, and options.

While chargebacks are sometimes unavoidable, there are steps that merchants can take to effectively handle them and reduce their occurrence. Here are a few:

- **Identify the reasons:** The first step is to identify the primary reason behind the customer's dispute. Understanding the source of the problem can help merchants identify any weaknesses in their sales process or customer service. This can involve reviewing transaction details, customer interactions and reason codes provided by the issuers and acquirers.
- **Prevention:** Once the reasons have been identified, sellers should take steps to prevent similar incidents in the future. Implementing robust security measures, fraud filters, and verification tools can help fend off criminal fraud attempts.
- **Third-party chargeback services:** Handling and fighting chargebacks can be time-consuming and resource-intensive so it might be a good idea to outsource some parts of it, even the whole process, to increase the chances of successful dispute resolutions.

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- **Benchmarking:** The general industry standard for chargeback ratios is typically under 1%. However, it can vary based on the industry and the specific acquirer's policies. This ratio is an important indicator for a business to evaluate its operational effectiveness, and it can serve as a KPI, since an increased percentage can affect its ability to maintain or open a new merchant account with payment providers.
- **Documentation:** Proper record keeping can win disputes, so in all ways possible, companies should keep signed receipts, photographs or emails proving that the customer received what they paid for and are happy with the purchase.

Descriptor

A descriptor is the identifier which is shown on the customer's bank or credit card statement, indicating the reason for the payment. This note often appears next to the charged amount, showing the name, product or other important information about the purchase which provides context for the charge.

When a customer sees an unfamiliar charge on their statement, their first instinct may be to dispute it, especially if they suspect it could be a case of fraud. The descriptor acts as an important tool in mitigating chargebacks, as a clear and easily identifiable descriptor can help customers recognize the reason for a particular charge, reducing the likelihood that they will question or dispute it.

MID aggregation

A few years ago, an e-commerce client approached us with the problem of having a large number of chargebacks. He had used various payment providers in the past, but wanting to optimize his costs, he'd entered into a new agreement with a young provider, who offered very low fees and promised stable, error-free processing. On paper, everything looked great, however, when we dug a bit deeper, we found that this provider was using very generic descriptors (e.g. PSP123), which had nothing to do with our client's name or products. When we questioned the payment provider, they told us that the descriptor was set, and they couldn't change it due to their particular system setup. This is a classic case when to save costs, the provider channels (or aggregates) all payment traffic via one Merchant Identification Number (MID).

Traffic aggregation is a common and legal practice for younger gateways, who have limited resources for technology, but want to enter the market quickly. Instead of opening a new MID for each client individually, the provider accepts several but similar businesses under one pooled channel, consolidating their various payment transactions, and typically passing them through a single acquirer.

The aim is to simplify the management of transactions, streamline payment flows, and negotiate better terms or rates with their acquirer, as the consolidated volumes are higher than those on independent MIDs. By bundling these transactions together, businesses can achieve economies of scale, making the payment

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process more efficient and cost-effective, like the pooled account setup which we looked at earlier.

This was the case here, too. The provider aggregated all their client's transactions, originating from various websites, mobile apps and physical stores. Instead of dealing with multiple payment processors, which can be complex and costly, this gateway used a single acquirer, and benefit from the lower costs, which they passed on to their clients. By grouping all similar transactions, the MCC code remained the same, so technically no transaction laundering took place, and it helped the gateway to simplify the process of managing the funds and reconciling its accounts with the acquirer. The MID descriptor was shared with all clients as a set value, but unfortunately due to its generic nature resulted in a larger number of chargebacks for the businesses.

Traffic aggregation in payments may simplify things but can be risky. If one bad transaction enters the pooled channel, the whole process can be affected both in terms of a blocked MID, as well as delayed settlements. Regulation, security and as it happened in this case, chargeback issues can arise from this setup.

Although the provider's fees were lower, the point of the single MID was not communicated with the client, who unknowingly faced increased risk in his payment flow. Checking descriptors is a small but very efficient way to reveal if something else is happening in the background, which the business may not be aware of.

Rolling Reserve

The rolling reserve is a form of a security deposit which mitigates the processor's and bank's potential financial losses, due to chargebacks and fraud. The rolling reserve is usually a percentage or a lump sum, which is held back from the settlement, for a certain number of days, so the processor can handle chargebacks and refunds even if the business is nonresponsive. Once the agreed-upon time has passed, the reserved funds are released back to the merchant.

For instance, if the agreement sets a 10% rolling reserve for 180 days, then 10% of each day's sales will be held by the processor and released back to the merchant 180 days later. The term 'rolling' indicates that this is a continuous, ongoing arrangement, where for every day that new sales occur, a new batch of funds goes into reserve and a corresponding batch is released.

Rolling reserves are commonly applied to businesses considered 'high-risk,' as they provide the payment processor with a level of security, while also encouraging the merchant to maintain good business practices to reduce chargebacks or fraud. Higher percentages or longer retention periods can seriously affect the cash flow and liquidity of a business and are often overlooked during financial planning. Although rolling reserves are listed under assets in the books of a company, access to this asset is limited, so when evaluating the financial health of a business, this number is critical to consider.

As rolling reserves can also be an agreed-upon fixed amount, which may be helpful with budgeting and planning, but also means a

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chunk of the business's assets is being put on hold without any benefit or return to the business. Due to inflation, this amount is only losing value, and since it's kept elsewhere, also poses an asset management risk. Since this 'blocked amount' affects several areas of a business, when setting up a new project, factoring it in is essential for setting the right profit margins and cash flows.

Settlement terms

Settlement terms are the rules and timelines which outline how and when a payment processor sends the collected funds to the business.

As we have seen earlier, when a customer makes a purchase using a credit card, the retailer's payment terminal communicates with the customer's bank to get transaction approval. Once approved, the transaction might look complete from the customer's standpoint. However, the retailer hasn't received the funds yet. The funds are accumulated in the merchant account and will be settled in bulk to the settlement account at a certain point. The settlement terms dictate precisely when the company's bank account will be credited, which can often take a couple of business days.

This delay can affect not only cash flow but also increases risk. The funds, despite belonging to the business, cannot be used until received. Knowing when funds will be available can help in planning expenses, payroll, and investments more effectively.

Settlement terms are often referred to as T+ number of days. The 'T' stands for the Trade Date, the day on which the transaction

occurred while the number indicates the number of days which will pass before the provider settles.

Providers can also set up a minimum settlement amount, for example, €5000, meaning they won't release the funds unless this amount is hit.

For example, if a business agrees with a payment provider on the T+2 settlement term, and they receive the following proceeds:

Monday - €1,000

Tuesday- €1,500

Wednesday - €2,000

Thursday - €2,500

They can expect a settlement on Wednesday for €1,000 (Monday + 2 days) and Thursday for €1,500 (Tuesday + 2 days). However, if the business has a minimum settlement amount of €3,000, too, they will not get the funds unless the total dues are over €3,000. This means they will not get the funds on Wednesday for the €1,000 (Monday + 2 days) nor Thursday for €1,500 (Tuesday + 2 days), but only on Friday for the €1,000 + €1,500 + €2,000, which is now over €3,000.

MATCH and VMF list

The MATCH (Member Alert to Control High-Risk Merchants) list, also known as the Terminated Merchant File (TMF), is a database maintained by Mastercard which contains information about merchants or businesses which have been terminated from

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processing credit card payments. Visa also maintains a list called the 'Visa Terminated Merchant File' (VMF).

When a merchant has excessive chargebacks, commits fraud, or violates the payment network rules, the payment processor or acquirer can add them to the MATCH or VMF list. Both lists serve as a risk mitigation tool for payment networks and financial institutions, as they help prevent fraudulent or high-risk merchants from repeatedly abusing the payment system.

Being on such lists is a significant issue, as all payment processors and acquirers use these lists to assess the risk associated with a potential client. This means that if an entity appears on one of these lists, the company and, in some cases, even its key personnel are restricted from securing new payment processors and access to financial institutions or banks.

Being removed from these lists is possible but involves a complex process, as it must be initiated by the same bank or payment processor who made the listing in the first place. Usually, deletion only takes place if the offender addresses the issues which led to the listing, such as excessive chargebacks or fraud, while providing evidence of its efforts to resolve these problems. This can include proof of improved customer service or a noticeable reduction in chargebacks.

As evaluation and removal can be subjective, much like the listing itself, the businesses have the right to appeal to the reporting entity with additional information to support their case. While removal isn't guaranteed, there is a chance that the reporting entity agrees with the business and will initiate the process for removal.

As this process takes time and outcomes vary, working closely with the reporting entity and understanding their requirements is vital to be able to get deleted.

Removal from the list

A while ago, an old client got in contact and told me that his company had been placed on a blacklist of some kind, which had since resulted in his operation coming to a standstill. His business was a successful online store, selling all over Europe, with a very active clientele. They used various processors based on their target areas, to offer local payment methods to their clients and to diversify the risk of having only one processor, as it should be. The blacklisting had happened in August when half of his team were on holiday, so no one had any idea what had happened. Luckily, we had a good relationship with one of these payment providers, so after getting the necessary authorisation from the client, we contacted them to find out more about the issue. It turned out that the client was indeed on the MATCH list, but they couldn't tell us why.

I reviewed all their historical transaction data, customer correspondence and other relevant materials to find answers. We even made a test purchase through their website to observe the whole process in action, but it went through just fine. Despite this, the provider records showed a sudden spike in chargebacks. It was puzzling.

The client and I decided to dig deeper and went through the flow of business operations in great detail. We examined the whole

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chargeback process, but all spot checks appeared to be in order and were handled well. When reviewing customer feedback, however, we couldn't find any responses to recent customer complaints in the French market. Bingo!

The client was using a specific French processor for their French website's traffic, but numbers were very low, and their last communication was over six months ago. I quickly jumped on the French version of the website and checked the contact details for rebates and problems around payments. It turned out that a few weeks ago, during the latest website refresh, the content team had mistakenly included the email address of a team member who had originally handled chargebacks but was no longer working for the company. The result of this mistake was that all clients with payment issues were writing to this email and receiving bounce backs as a Mailer Daemon message. Thinking the website was a scam, they immediately initiated a chargeback. Moreover, this email was also recorded on the payment provider's automatic system to receive the chargeback alerts, meaning that the company was completely unaware of the issue. It had all happened so quickly that by the time the team realised the issue, the French provider's fraud team automatically placed the client on the MATCH list. Since removal from the list must be initiated by the same bank or payment processor which made the listing, the client now knew that he needed to contact the French processor to sort out this issue.

After collecting all the necessary documentation and fixing the email address, a formal explanation and request were submitted to

the payment processor that had initially placed the client on the MATCH list.

Within a few weeks of submitting the request, the client received a notification stating that they had been removed from the MATCH list. Operations resumed and business got back to normal. Yet, this was a valuable lesson for the client to maintain not only a good relationship with all his payment processors, but also a proper handover procedure around email communication.

Card fees and charges

A Venture Capital (VC) fund once asked us to evaluate several small startup ideas from a payment and financial health perspective. We had to review around twenty business plans and give recommendations on their viability and sustainability, along with their financial and payment effectiveness. We saw amazing logos, creative websites, and innovative tech advancements, but almost all these business plans failed to include any kind of payment plan, nor show any estimated banking costs.

As we've seen, startups are automatically classified as higher risk and may face higher processing and banking fees. We've also seen that even though something is legal, it might not always pass the bank's compliance. To penetrate the market, several ideas worked around lower profit margins, and since startups usually have a limited budget, cash flows are already tightly planned.

If a business's financial planning doesn't include a decent buffer on the margins to cover payment processing and banking fees, as well

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as considering at least a 5% rolling reserve, the idea has a huge chance of falling flat on its face right from the get-go.

Nowadays, many incubator programs and startup accelerators thankfully offer basic payment planning and banking advice, however, there are still a lot of important details that get overlooked, which can be a nasty surprise when the business starts operating. Understanding every element of the payment processing fee structure is essential to evaluating the pros and cons of a contract when engaging with a new provider.

Card payment costs

Determining the real value of online payment and banking costs can often be misleading and needs to be calculated carefully. Let's say a Swedish company is selling a product online for €100.00 + VAT 25% = €125.00. The product costs the company €80.00, therefore their profit is 20%, or €20.00. The card processor charges the company 3%.

You would think we are done but wait. The agreed fee for the card processor is €3.75 (3% of the €125.00), however as the profit is only €20.00, so the fee makes the processing cost almost 1/5th of the profit. This is a very substantial cost and needs to be considered when setting profit margins and selecting payment and banking providers.

Let's now dig into the most common card payment fees businesses will encounter regularly, that need to be factored into their payment plans.

MDR

MDR stands for Merchant Discount Rate. It is a fee that the merchants (sellers) are charged by banks or payment processors for accepting electronic payments, such as credit card or debit card transactions. MDR is a percentage of the transaction amount and is deducted from the total payment before it is deposited into the merchant's account. The MDR covers various costs associated with processing electronic payments, including Interchange Fees, Payment Processor Fees, and Network Fees, but also might include Fraud Prevention Costs and Technology and Infrastructure fees.

The MDR is agreed upon between the merchant and the payment provider who provides the merchant account. It can vary based on factors such as type of business, payment method used, volume of transactions, and negotiation between the merchant and the service provider.

Qualified Discount Rate

The Qualified Discount Rate is the percentage rate that the company pays to its payment processor for processing 'qualified' transactions, which meet specific criteria.

For example, swiped or chip-inserted transactions where the card is physically present are often classified as qualified transactions because they generally pose less risk of fraud compared to manually entered card numbers. Transactions which don't meet these criteria are considered riskier or more complex and might require additional

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verification (and therefore cost). These transactions are often classified as 'mid-qualified' or 'non-qualified' and are usually subject to higher processing fees. A classic example of the higher risk category is the transactions made online, with certain types of international, business or government cards.

ICC charges

ICC charges, also known as Interchange Charges or Interchange Fees, are paid by the merchant's bank (acquirer) to the cardholder's bank (issuer) for each credit or debit card transaction. The ICC charges are typically set by the card networks (such as Visa, Mastercard or Discover) and are determined based on various factors such as the type of card used (credit or debit), the payment method (physical payment or online) or the ticket size. These fees cover the operational costs of processing transactions, maintaining payment networks, and security.

ICC charges can vary between different card networks and may also depend on the country or region where the transaction occurs.

IC++

IC++ (Interchange++) is a pricing model which offers a transparent and detailed breakdown of the card processing fees. Under the IC++ pricing system, merchants are charged three main components:

1. The card scheme fees, which are charged by the card providers (Visa, Mastercard) to the merchant's bank

(acquirer) for using their systems. The current prices of the card schemes are public and can be found on the card scheme's websites.

2. Interchange fees, which are charged by the client's bank (issuer) to the merchant's bank (acquirer) as we have seen above.
3. Processing fees, which are charged to the merchant by their payment service provider/gateway for using their services.

This pricing model shows exactly how much businesses pay for each component of the card processing transactions. The breakdown gives a better understanding and control of the costs, so companies can make more informed decisions about their operation and marketing decisions which might affect the fees.

For example, if a business knows that its domestic debit card charges are lower than its business credit card fees, it might encourage acquisitions from local individuals rather than foreign businesses, as the same sale will result in a better profit. This can sometimes be quite a significant difference, for example, a UK Visa Platinum Business Credit card's ICC fee is 1.90% while the Consumer Debit card is 0.20%²⁰. If a marketing campaign targets certain demographics or countries or offers various benefits for using certain types of cards (i.e., paying with a debit card gives you x% discount), this could well result in higher returns for the same amount of effort.

²⁰ <https://www.visa.co.uk/>

Blended pricing

Blended pricing combines overall costs into a single, simplified and fixed rate which makes pricing easier to understand and calculate with. This pricing model is especially beneficial for smaller businesses, as it provides a straightforward and predictable cost structure, which can be beneficial for budgeting and financial planning. The downfall is that payment providers usually provide this fixed rate by calculating with the 'worst case scenario', matching the overall fee to the higher levels, to cover their risk, however the ease of calculation might be worth the extra cost to some businesses who prefer straightforward estimations.

Tiered pricing

Every payment service provider has the same goal, which is to increase processing volumes for each client. It's easy to see why: when accepting a new client, the payment provider must bear the initial due diligence, onboarding costs and risks, which can be enormous. Having the same volume, coming from an already existing and known business is much cheaper and easier. It is therefore in the provider's best interests to increase the traffic of their established clients, rather than finding and onboarding new ones. This is what tiered pricing is for, as it categorizes transactions into different levels (tiers) based on their qualification criteria.

The most common tiered pricing model is based on volume – the more the business processes, the lower the percentage of the fees go.

This however contradicts with one of the risk aversion tactics I mentioned earlier, whereby businesses should avoid unwanted risks by keeping all their eggs in one basket, as it could create a bottleneck in the operation. If the provider's technology or underlying banking connections fail, the merchant can suffer serious financial damages in the resulting downtime.

One of the major roles of payment planning is to balance out this processing risk with the benefits of the volume discount. Businesses should carefully review the terms and conditions of tiered pricing models to ensure they understand the specific criteria for each tier and understand how this may impact their payment processing costs and associated risks.

Transaction fees

One major fee which is usually overlooked is the transaction fee. These fees are usually added separately on top of the MDR % rate. Since transaction fees are usually charged by the processor's technology provider or gateway, as a flat fee per transaction attempt, these fees might be charged every time a financial transaction takes place, even if the transaction is unsuccessful. Customer mistakes, such as mistyped card numbers, insufficient funds or rejected cards can end up being very costly for a business that overlooks this issue. This is why gateways usually have an automated system in place which blocks repeated attempts (for example the same card can be only used 3 times within one day), but businesses must be aware of the risk and the associated fees when agreeing to such pricing.

Let's try a calculation

Now that we understand the most common payment processing fees, let's put it all together. As we've seen in an earlier example, determining the real value of online payment and banking costs can often be misleading and needs to be calculated carefully.

Going back to the earlier example where the Swedish company was selling their product online for €100.00 + VAT 25% = €125.00. The product cost the company €80.00, so we've seen that their profit is 20% or €20.00.

Let's say this company is a startup, and in its first month makes 10 sales, all for €100 each. Their card processor charges them a blended fee, which is MDR 3% and TRX (transaction fee) of 20c. Their rolling reserve has also been set for 10% for 180 days since they are a startup. Settlement fees are €5.00.

With its first 10 sales, the company income is €1,000.00 + VAT 25% = €1,250.00. The payment processor charges 3%+20c each sale, which is €37.50 + €2.00 = €39.50, plus the settlement fee of €5.00, and retains 10% (the €125.00 rolling reserve).

The total payment processing cost therefore is €39.50 + €5.00 = €44.50, plus €125.00 which we will not see for another 6 months. So the amount, that the company will receive is €1,250.00 - €44.50 - €125.00 = €1,080.50.

Let's see how it affects our cash flow: We received €1,080.50 but the VAT is €250.00, and the product cost was €800.00. So, at the end of its first month, the company is left with €30.50 in the bank

account. Although €125.00 will eventually arrive in 6 months, the company has no funds to finance further purchases. Even worse, if we calculate the actual profit of one unit, it shows now around 16% instead of the original 20%.

This is a very simple example and calculation, of course, but gives an idea of how payment costs can spiral out of control if not budgeted for properly.

Alternative payment methods

People think about payments in different ways, with their preferences influenced by age, experience, culture, and knowledge about the different systems.

I have a friend who once told me, “If they don’t have PayPal, I automatically assume the website is a scam and won’t pay”. This surprised me, but then I remembered my Mum, who (although now having been well-trained by me on the security and chargeback options of online payments), only ever orders from websites which offer cash on delivery services.

Some consumers prioritize speed and convenience, opting for methods like contactless payments or quick checkout options. Others may prioritize security and choose payment methods which offer robust fraud protection. There are several countries, where certain payment instruments are unavailable, due to their geographic or financial limitations. Many payment methods are not available in certain jurisdictions due to religion (Islamic finance), or regulatory and compliance restrictions (for example cryptocurrencies). When people have no access to basic and

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traditional financial means, such as having a bank account; cash-on-delivery or prepaid card options become essential to conduct any online business. Companies need to understand, evaluate, and implement the most relevant payment means to maximise their sales. By offering multiple ways to transact, businesses can accommodate a broader spectrum of customers, and increase customer satisfaction – and profits.

For instance, credit and debit cards are widely accepted and convenient but may not be the best option for an online yacht rental company dealing with high-value transactions, due to fees and fraud risks. Digital wallets like PayPal or Apple Pay offer an added layer of security and are quick to use but require both parties to support the specific platform. Cryptocurrencies offer the possibility of anonymous, cross-border transactions without the need for an intermediary but are not universally accepted and can be volatile in value.

Digital payments

The digital payments revolution will threaten the classic banking sector's central role in payments, and the rise of alternative payment methods is definitely something which every business needs to consider.

Today, the banking sector is rather saturated in the EU and the U.S. as the regulator has end-to-end coverage over these markets, raising the entry bar high for all new players. However, emerging markets such as India, China, Africa and LATAM are full of opportunities. The economic influence of these areas has massively

increased during the last decade, giving birth to all types of fintech innovations, both locally and globally. When markets operate under looser financial regulations, it offers an easier penetration and market share grab for startups, who then go on to create new technologies, applications, and systems.

Businesses and users win too. With the new methods, payment providers, and perhaps more secure ways of banking; online transactions have options of flowing through the safest, quickest, and cheapest ways possible.

But the change is not always easy. With more options, companies without professional help might face 'decision paralysis', as the sheer abundance of choices can lead to anxiety, confusion, and ultimately, an inability to make the right decision. Getting familiar with current options and educating ourselves about new developments is essential for staying up to date with the latest trends and advancements. Knowledge helps us to pick the right mix of payment options, which is not just beneficial but also necessary for the complex and interconnected world of online commerce.

Point of Sale system (POS)

A Point of Sale (POS) system refers to both the hardware and software used by businesses to process payments and facilitate sales transactions. We usually see the hardware part of the POS system in the form of the POS machine - every time we go shopping, this is where we tap the card.

However, the POS system can be much more than that. It can also be a CRM system, allowing businesses to track sales and inventory

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while acting as an accounting system and a gateway, able to accept and track various forms of payments.

Bank wires

Bank wires are one of the oldest methods for transferring funds directly from one bank account to another. Originating from a time when electronic communications were nascent, the term 'wire' may seem a bit dated but remains an industry standard. Most banks charge a fee for this service, which varies depending on the institution and whether the transfer is domestic or international. While the transaction is secure, it relies heavily on the payer's understanding of who the payee is; scams have been known to occur, in which individuals are tricked into wiring funds to fraudulent accounts. Wire transfers are often used for large sums and international dealings.

Digital wallet (E-wallet)

Digital wallets, also known as electronic or e-wallets, are applications which enable users to store and manage digital funds and engage in electronic transactions, eliminating the need for physical cash or cards. Rather than being tied to a single account or line of credit, a digital wallet can also link multiple cards and accounts, giving the user more flexibility.

Digital wallets might streamline the payment process, too. For instance, a consumer at a retail store can simply tap their smartphone or watch on a POS terminal equipped with near-field

communication (NFC) technology, to complete a purchase. The transaction occurs almost instantly, with the digital wallet managing all the background authentication and fund transfers.

E-commerce platforms also often integrate digital wallet services to reduce checkout times, thus enhancing the customer experience. Studies have shown that quicker, simpler checkout processes can reduce cart abandonment rates, which is a significant issue in online payments.

Mail Order Telephone Order (MOTO)

MOTO stands for 'Mail Order/Telephone Order', and although this method may seem a bit outdated compared to newer payment technologies, it still serves specific needs effectively. In a MOTO transaction, the payer provides their credit card details either over the phone or through a mail order form, rather than making a payment in person or via an online interface. It is still used to serve certain demographics (mainly seniors) who do not have access to the Internet or prefer to talk to a human when making a payment from home. For instance, I am still paying my car insurance with MOTO, as this was the only payment method offered by my insurance company. Since these transactions are categorized as 'card-not-present,' they are inherently riskier than in-person payments.

The risk of MOTO

During my early years of working as an accountant, I often helped my friend's businesses with professional advice. One of my friends had a small village cake shop, which was an integral part of the local community for generations, priding itself on delivering exceptional customer service – and delicious cakes.

One morning, she got an order for a large chocolate cake from a young lady over the phone. The timing couldn't have been better, as they had recently implemented a new POS system which allowed her to finally accept card and MOTO payments, which was a big thing back in those days. She took the order and put the card details into the system, processing the EUR 50.00 payment without any issue. The cake was picked up promptly by the lady's 11-year-old daughter in the same afternoon.

Little did she know, this seemingly routine MOTO transaction was a classic fraud. A few weeks later she received a call from her local banker (who was the payment processor) saying that the credit card used for the cake purchase had been reported stolen. She called me in a panic, and I helped her to investigate the case. It turned out that the daughter had stolen her Mum's card and made the order, together with various other purchases online, as a prank. Although my friend later received a visit and an apology from the family, the payment for the cake was never received, and her banker still had to go through with the official chargeback procedure, penalising her business. She was devastated to learn how unlucky she was. Since her system was very new, it had only processed a few MOTO payments before the incident, totalling

around 300 EUR. This made her overall MOTO fraud percentage around 16%, which is an incredibly high number. The banker had to freeze her account and start an official investigation, even though this was a clearly exceptional case. The frozen funds resulted in serious delays for her, as she couldn't pay her suppliers on time and continue business as usual in the following weeks. Overall, this little prank cost her business several hundred Euros and many sleepless nights. Although incidents like this can happen every day, business owners must be aware of the risks when implementing new payment methods and prepare backup options for every scenario.

Direct debit

Direct debit is a method of electronic payment which enables businesses to collect money directly from individual's bank accounts. It is commonly used for recurring payments like utility bills, subscriptions, and loan repayments, even if the amount is different each time. With direct debit, the business is 'pulling' the funds from the payer's account and controls the payment, as they are also able to initiate any changes to the amount.

Standing order

A standing order is a similar setup to the direct debit, but in this case, the instruction is set up by the customer to 'push' a fixed amount of money at regular intervals to the relevant account. Since the customer controls the standing order, any changes to the

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amount or the payment frequency must be initiated by the customer and not by the business.

Pay by link (Payment request link)

Pay-by-link payments are an efficient, user-friendly means of collecting payments online. The business sends a unique, secure hyperlink to a payer, which when clicked, redirects them to a payment gateway where they can finalise the transaction securely with a card, digital wallet, or other available method.

In a business-to-business scenario, pay by link can be particularly useful for speeding up invoice payments. Instead of sending a PDF invoice and hoping that the payer's accountant will copy the bank details correctly to the bank wire instructions, the payment can be finalised with a few clicks. This not only reduces the time spent on financial administration but also accelerates the cash flow for the supplier. These links are usually encrypted and time-sensitive, offering an added layer of security.

Vouchers

Vouchers or coupons represent pre-purchased or given values, which can later be redeemed for certain goods or services. These financial instruments are often used for promotional purposes but can also function as straightforward payment methods. They can also be electronic and usually contain a code which can be entered online or presented in-store for redemption. Vouchers and coupons are common tools in marketing strategies and are often issued

during promotional campaigns to attract new customers or retain existing ones.

As we have seen, the use of online vouchers, coupons or other tokens representing monetary value poses certain fraud and unauthorized activity risks, as they can be used as a medium to support illegal activities, money laundering or purchasing restricted items. Online businesses must be aware of the risks before implementing any cash equivalent systems to their payment flow, otherwise, they might face serious operational, payment and banking issues when 'creative' customers appear, taking advantage of the loopholes.

A quick bong story to illustrate

A while back, I was approached by a company that sold various kinds of bongs²¹. These water pipes or narghiles are very popular in the Middle East and Asia but have also recently gained wide popularity in Europe. The company wanted to enter the wider European market but as expected, was struggling to find a payment provider. They had a very professional website and delivery system, and the bongs were all beautiful, many of them being handmade. The business owner explained that since he was only selling the bongs, not the 'fillings' you smoke with it, this was a completely legal and low risk operation, and he believed that the business had great potential. The issue was that these bongs were considered

²¹ A bong is a water pipe that is commonly used for smoking cannabis, tobacco, or other herbal substances.

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paraphernalia²² by many payment providers and fell into high-risk category. Even though he had no responsibility over what people did with the bongs after they were purchased, these types of products were restricted by many payment providers and banks, for reputational reasons. To overcome this obstacle, he had the idea to set up a voucher website, whereby he would sell gift cards and vouchers of various values. These could then be redeemed at his shop, thus bypassing the rejections of the payment providers.

From a business standpoint, this was actually a good idea, as online voucher sites exist, and his products were completely legal. However, bypassing the system in this way was obviously fraudulent. On another note, selling online vouchers is considered an even higher risk than the actual bongs from a banking standpoint since the payment provider never knows what the voucher will be redeemed for exactly. If his vouchers are redeemed for drugs or other illegal products on the dark web, this poses an even higher risk to the payment processor than the legal, but high-risk bongs.

We quickly decided to drop the voucher idea and managed to find a high-risk friendly payment provider, who not only understood his business but also helped him with banking. Of course, finding specific payment providers for high-risk businesses is a challenge, and it could take a long time if not done by a seasoned payment professional. However, any idea which is intended to bypass a payment system is never the answer, under any circumstances.

²² Typically refers to objects or equipment that are used for specific activities, often ones that are specialized or illegal. The presence of such paraphernalia is often indicative of intent to smoke drugs, i.e. engaging in unauthorized or illegal activities.

QR codes

QR (Quick Response) codes are graphical representations of information which can be easily scanned by mobile phones. We see a lot of them lately in restaurants when asking for a menu. These black-and-white shapes and patterns can store various types of data, including payment information.

QR codes are very easy to use as they eliminate the need for physical cash or cards, allowing for contactless transactions. QR codes can be generated and displayed by anyone, using various methods such as mobile apps, payment platforms, or physical printouts. They also offer encryption and authentication mechanisms to protect payment data. It's no surprise that they are very popular in Asia and could be the next challenger to replace card payments in the future.

Open banking

In 2016 in the UK, the Competition and Markets Authority (CMA) published a report on their investigation into competition and innovation in the retail banking industry. They found that big banks dominated the market and that consumers and small businesses would benefit from increased competition. To remedy this, the CMA and the UK government mandated nine of the largest banks to implement common standards for open banking. This would ensure that there were standard APIs that allow customers to securely share their financial data or safely initiate transactions.

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Trusted companies could use these APIs to offer new innovative services to customers and SMEs, thus increasing competition.²³

Open banking is a system where banks and other financial institutions open their databases to third-party services to allow them to access financial information about their users and facilitate financial transactions. It's a radical departure from the traditional model where the payment institutions and banks maintained a walled garden around their services and protected customer data. Since traditional banks held too much power in the marketplace and hoarded customer data, they could maintain high fees and offer less competitive rates, thus putting consumers at a disadvantage.

While some banks were initially hesitant to open their databases to outsiders, the regulatory mandates left them with little choice. Open banking has since encouraged traditional financial institutions to upgrade their technological capabilities, lest they fall behind their more agile fintech competitors. In parallel, consumers have been granted unprecedented control over their financial information, being able to share it with whichever service providers they see fit, giving them more choices over financial products and services.

While open banking offers several advantages, the primary concern is data security. When financial data is shared between multiple platforms, it becomes more vulnerable to unauthorized access or cyberattacks. Also, people might not fully grasp what data they are sharing and the implications thereof, potentially putting

²³ <https://www.openbanking.org.uk/>

them at risk of divulging sensitive information with less-than-reputable services.

Open banking is serious competition to traditional card schemes like Visa, Mastercard, and others. The core principle of open banking, which allows third-party service providers access to consumer banking information, gives rise to new and sometimes more efficient payment solutions that can even bypass traditional card networks.

Card schemes typically operate as middlemen in the transaction process. When a purchase is made using a debit or credit card, the transaction needs to go through several layers, including acquirers, card networks, and issuers, each taking a fee along the way. Open banking solutions, in contrast, enable direct connections between consumer's bank accounts and merchants, effectively cutting out the need for these intermediaries.

To close the gap, many card schemes are now developing their own open banking solutions, partnering with fintech companies, or even acquiring promising startups. They are working to evolve their business models to include, rather than compete against, the possibilities presented by open banking.

Buy Now Pay Later (BNPL)

Buy Now Pay Later (BNPL) is a financial arrangement which allows consumers to purchase goods and services immediately but delay payment to a later date. Unlike traditional credit cards or loans, BNPL services usually offer a more simplified application process

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and immediate approval, making them a highly accessible and seemingly low-risk alternative for the average consumer.

Typically, payments are divided into smaller, more manageable instalments, which are then spread out over a specified period. The schedule is laid out clearly from the outset, so consumers are aware of their financial commitments. Some providers even offer interest-free periods, hoping to boost sales and gain more customer's engagement. Offering BNPL could also lead to higher conversion rates and increased order values, as the immediate financial burden on the consumer is reduced.

BNPL services have seen considerable growth, particularly with online shopping. Many e-commerce platforms have integrated a BNPL provider into their checkout processes, making it easier than ever for consumers to opt for this payment method. But, as usual, nothing good comes without its downsides:

- **Late or Non-Payment:** If customers fail to make their instalment payments, the merchant may not receive the full amount for the goods or services provided. This can create cash flow problems for the business.
- **Increased Customer Returns:** This method often encourages impulse buying, which can lead to an increase in chargebacks, complaints, and product returns, which can all be costly for the sellers.
- **Increased Costs:** BNPL providers usually charge higher merchant fees for their services than traditional payments.
- **Regulatory Compliance:** Depending on the region and the specific BNPL service used, businesses may need to

navigate complex regulatory requirements, including consumer protection laws. Non-compliance can lead to legal issues and financial penalties.

Market-specific payment methods

One of our clients was a large online business which had great success in the European market. They only offered card payments, but their providers were reliable, and the payment success rate was well over 90%. Realising the opportunities far beyond Europe, the group focused their attention on expansion into the booming Latin American market. They launched a pilot program targeting a smaller country which they randomly picked off the map (Paraguay), going with a modest marketing budget to test the waters. The goal was to quickly find a local LATAM payment partner who accepted major cards, covered all countries, and kept similar success rates and fees.

The company was completely unaware of the fact, that the Latin American payment and banking landscape differed greatly from Europe. Processing options and potential fees vary largely country by country, and there was a much lower success rate on card payments. Less than 7% of Paraguayans owned a credit card in 2017²⁴, and more than 90% of businesses still used cash, while digital payment was still in its infancy.

The client realised that they needed to put a lot more planning into this project. New payment methods and mainly local cash meant that an increased amount of due diligence, testing, training, new

²⁴ <https://www.statista.com/>

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fraud protection rules and revised pricing were needed. Many other operational, technical, and financial aspects also needed to be reconsidered. Eventually, we presented various payment processing options and potential fees throughout LATAM, country by country, considering all aspects of the operations and integration, but this definitely turned out to be a larger mission than what was initially planned. It was fortunate that the client didn't spend the marketing budget first to test the waters, and then look for payment and banking options, as we have seen happening many times before.

Online businesses need to adapt and understand that the world of payment methods is diverse and ever-evolving, with each geographic location showcasing its unique preferences and practices. From traditional cash transactions to cutting-edge digital wallets, the way people pay for goods and services varies significantly across different regions. Understanding the popular payment methods in each part of the world provides valuable insights into the global landscape of financial transactions.

Today one of the major determining factors for a business entering new markets is the payment providers. The banking relationships, costs and local availability of certain financial institutions can make or break any project. These considerations should be carefully evaluated before any marketing budget is spent on acquiring new customers from a new area.

Payment systems around the world

There are countless different payment methods globally. Alternative payment methods often emerge in response to local market demands and regulatory environments. New payment systems and providers pop up daily, and existing ones are continually evolving due to technological advancements and changing consumer preferences. I wanted to touch base on just a few, to show the variety and abundance of options available globally.

Europe

In Europe, cards continue to be one of the most popular payment methods, in particular, domestic debit cards. SEPA Direct Debit, e-wallets, and contactless payments and Revolut is also very popular, and Europe is starting to adopt open banking.

North America

Credit and debit cards remain the most popular means of payment, but electronic fund transfers, also known as EFTs, are common for direct deposits and automatic bill payments. These are facilitated through the Automated Clearing House (ACH) system in the United States, and Interac in Canada. PayPal, Venmo, and digital wallets like Apple Pay and Google Pay are all widely used for peer-to-peer payments and even for commercial purposes.

South America

In South America, although cards are widely embraced as one of the most used payment methods, most citizens still have no access to traditional banking. Brazil is the biggest market, which alone holds a 39% share of total South American revenues²⁵. Cash is still king but, in several countries, where the currency has been suffering from high inflation, people have turned to crypto or other alternative payment methods.

Africa

In Africa, the lack of major banking systems has led to a significant shift in focus towards mobile wallets as a primary payment method. Particularly in rural areas, where traditional banking infrastructure is limited, mobile networks play a crucial role in processing most transactions. In many African countries, mobile network operators have partnered with financial institutions to offer mobile money services, allowing users to deposit and withdraw cash, make payments, and access a range of financial services through their mobile phones, without needing a traditional bank account.

Middle East

In Middle Eastern countries, the payment landscape has recently undergone a significant transformation from traditional cash transactions to the adoption of online payment methods. This shift towards digital payments has been driven by technological

²⁵ <https://www.statista.com/>

advancements and increasing access to digital infrastructure across the region. Cash is still widely used for daily transactions in many Middle Eastern countries, especially in small businesses and traditional markets. Islamic banking principles are followed in some Middle Eastern countries, leading to specific Sharia-compliant payment methods.

Asia Pacific

In the Asia Pacific region, the explosion of e-commerce platforms has revolutionized the payment processing industry, leading to the widespread adoption of mobile payments and domestic card schemes. Consumers in this dynamic region enjoy various digital payment methods, using mobile wallets and digital applications for purchases, transactions, and fund transfers.

Russia

MIR, which stands for 'MIR Card Payment System', is a national payment system in Russia. It was introduced to promote the use of domestic payment cards and reduce the country's reliance on international payment systems like Visa and Mastercard. MIR operates as a payment network which enables electronic transactions using MIR-branded cards. These cards can be used for various types of payments, including retail purchases, online transactions, and cash withdrawals from ATMs.

The primary goal of the MIR system is to provide a secure and reliable payment infrastructure that is entirely based within Russia, which not only enhances the country's financial independence but

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also contributes to data security by keeping sensitive transaction information within the national borders. MIR has gained significant support from the Russian Government and financial institutions, mainly after the sanctions.

China

China's payment landscape is dominated by a combination of digital wallets and card networks. WeChat Pay, Alipay, and UnionPay are the three major payment platforms based in China, each with its own unique features, target audience, and range of services. WeChat and Alipay are prominent digital wallet platforms, while UnionPay is a major domestic card scheme which facilitates payments and transactions within the country. Some of these methods started to expand beyond China and gained popularity in various other countries as well.

India

The Indian market is huge, where the landscape of payment methods has been rapidly evolving, thanks to various government initiatives which are aimed at promoting digital transactions and financial inclusion. Today, various payment options cater to India's diverse population from digital payments for urbanites to rural residents who still prefer cash transactions.

Australia and New Zealand

Australia and New Zealand are still mainly using cards, but there are also various digital payment methods which are gaining popularity. BPAY, one of the most used electronic payment methods in Australia, enables individuals to pay bills, including utilities, insurance premiums, and even tuition fees directly from their bank accounts. POLi payment is an open banking method, which allows secure payments without registration. Afterpay and Zip are the local 'buy now, pay later' services.

Creative banking

I always say that money is like water. It will eventually adapt and find its own way to flow.

When there is a need, people always find imaginative ways to find legal (or less than legal) alternatives for their money movements and create new payment ecosystems.

In prison environments around the world, where traditional currencies are unavailable, inmates have found innovative ways to conduct transactions. Cigarettes have become a de facto currency and are traded for goods and services, creating a prison economy based on this alternative form of value.

Some communities have introduced their own local currencies to encourage spending within the local economy and to focus on their own supply chains. For example, the Bristol Pound in the United Kingdom is a local currency accepted by participating businesses. Residents can exchange their national currency for Bristol Pounds

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and use them for transactions within the city, supporting local businesses.

Suffering from hyperinflation and capital controls back in the 1980s, people in Latin America used to immediately exchange their salary in local currency for the local casino's chips, which represented a more stable dollar value. Their savings were not only more secure and easier to handle, but with this move, they bypassed the foreign exchange controls while also hedging against inflation.

Even today, in Africa, people with no access to traditional banking travel to the village and buy top-up minutes for their mobile phones. These mobile minutes don't expire and can be transferred to another number for free or used for calls. Using these mobile minutes as a form of commodity, people started to trade between themselves. For example, one coffee is worth 12 minutes, while a T-shirt could be worth 20. By using this system, people were able to capitalize on the mobile provider's technological and value system, accessing a form of quasi-banking, for free.

In response to hyperinflation and economic instability, many Venezuelans have turned to cryptocurrencies like Bitcoin or stablecoins as a store of value and a means of conducting transactions. Cryptocurrencies provide a way for individuals to protect their savings and engage in cross-border trade without relying on the volatile local currency.

These examples are endless, but they all showcase the adaptability of people in different regions when faced with financial challenges or limitations. These methods not only highlight human resilience

and creativity, but also show the massive risks society is open to, if not regulated properly, by allowing tax avoidance, illegal transactions and other money laundering activities.

Chapter 6 – Technology and Data Security

Intro

Understanding the technical aspects of 'how money moves', and in particular, payment flows from a system perspective is vital for anyone who is dealing with payments. This knowledge offers insight into how transactions are processed at the back end and is essential for realising the capabilities and limitations of the different routes and options.

Knowing how an internal system integrates with various payment gateways can help businesses make informed decisions about managing and even implementing a new payment or banking provider. This understanding also allows us to better evaluate the security measures in place. As security is a major concern in payments, having even a bare minimum of technical knowledge better equips us to assess whether the provider is employing any type of encryption or fraud detection systems.

Often, technical familiarity assists us with more effective problem-solving and troubleshooting skills, too. When any payment or banking-related problems occur, businesses need to be able to quickly identify the source of the issue and act as soon as possible. Being able to trace the payment through all technical steps, from source to the end makes it easier to identify the areas which need to be checked closely to be able to pinpoint the problem.

Of course, the payment industry is constantly evolving, with new technologies and payment methods emerging all the time. However, understanding the basics can give us a great advantage, and can also significantly affect any decisions around the whole payment flow.

White label

Something referred to as a 'white label' is a fully supported product or service which is made by one company but sold by another. The white label user company is a reseller, who purchases a fully supported product, removes the original branding, and applies another, reselling the product as if it were its own.

I remember the first time I realised how many 'white label' solutions existed in payments. A long time ago, I was testing various gateways for a client of mine. He could not decide which one to pick nor understand what justified the price differences, so he asked me to evaluate the different options and present him with the findings. He was right, as all these gateways seemed to have the same functionality, menus, and reports. Even the buttons were in the same place. A few clicks later, I realised that all these gateways were all white labels from the same software company, that sold the same code repeatedly to various brands, who then appeared on the market as individual brands. On the surface, this doesn't sound like much of an issue, however when we realise that we are not served by the company whom we have signed the agreement with, but by an independent third-party software company that is handling the development, technical integrations, customer support and even

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troubleshooting for thousands of clients like us, the risk assessment takes a completely new turn.

White labelling is getting more and more popular as it allows businesses to enter the market quickly by offering tech products and services, as if it was their own, without having to invest in creating them from scratch. On the flip side, this enables even less experienced providers to offer financial, payment or banking solutions to their customers in a very short time, focusing only on the sales and marketing but not on the actual product itself, which can lead to various issues down the line.

Software as a Service (SaaS)

In a traditional software model, companies purchase software, install them on their hardware (servers), and manage all activities themselves, internally. With SaaS, all of this is outsourced. Software as a Service (SaaS) refers to a cloud computing model where software applications are provided over the internet rather than being installed on individual, centralised computers.

The software is kept and maintained on remote servers and is all managed by a third party, whereby the users can access it via a web browser for a fee. This is a cost-effective solution for any business, as they don't have to invest in hardware or employ a large IT staff for software maintenance, but they get the same benefits as if they were. It also enables smaller companies to access sophisticated technologies which were previously affordable only to larger enterprises. Still, there are several issues with this setup, in terms of operation and risk, as this setup is a clear bottleneck (we can only

use the service via the internet), high risk (sole reliance on a single provider) and security (fully outsourced and relied upon).

Banking as a Service (BaaS)

Banking as a Service (BaaS) is technically SaaS with a financial licence. This model enables businesses or fintech companies to offer various payment, banking, and financial services to their customers without the need to become licensed banks or financial service providers themselves. BaaS offers the software and the financial licence in one, whereby the user company can integrate the bank's service to their platform and provide all the bank's services as if it were their own.

The user business can 'piggyback' on the partner's financial license and technical setup, to offer a variety of financial services to its customers. The BaaS platform ensures that all transactions and data exchanges between the business and the service provider comply with the necessary regulatory, reporting and security standards.

It's a win-win for all parties. By utilizing BaaS, businesses can expand their service offerings and enhance customer experiences without the cost and regulatory complexities of acquiring a financial license. Banks can benefit from these partnerships by gaining new clients and extending their services to a broader customer base, while the customers can enjoy a larger variety of services, regulated financial products and enhanced experience.

Marketplaces

As we have seen, marketplaces have become very popular in the last few years, but this setup comes with a traditional payment issue, when the marketplace also wants to handle the payments. The idea, as so often is the case, is to collect payment from buyers, deduct the marketplace's commission, hold onto the funds until the transaction has been completed and then release the payment to the buyers directly. The flow is well known and works well, however, if a company wants to collect, hold, or handle any 3rd party funds, there is usually a legal requirement to hold an appropriate financial licence, in order to do so.

Several providers therefore offer solutions via BaaS, whereby the online marketplaces use the BaaS provider's financial licences and technologies. The licenced financial institution is offering an easy-to-integrate connection to the marketplace's platform and takes over the financial aspects of the whole payment flow. They take the responsibility of verifying the senders and source of funds, then collect, hold, and handle the transactions, in line with the marketplace's previously agreed terms and conditions. Within this partnership, the licenced financial institution gains new users and charges fees, while the marketplace not only handles funds in a safe and regulated way but may also offer various financial products to its clients. This could be a buy now pay later method, wallet service or even connected cards whereby the sellers can spend their earnings, directly through the marketplace's platform. As always, the devil is in the details, so connectivity, security and integration

can all make or break the partnership and need to be carefully evaluated before even discussing the fees.

Website platforms

When a new idea is born to sell products or services online, the first step is usually to set up the website. Today, there are various ways to build one, quick and cheap, without even having any technical or developer skills. In the last few years, we have seen numerous website builder platforms come to market, offering a very convenient checkout process as well as a built-in cart. Many startup companies therefore decide to build their websites with these providers, due to the benefits and convenience.

These website builder sites also often come with built-in Payment Service Providers (PSPs), which are very easy to set up and use. Although the pre-integrated payment systems are beneficial for many, these systems handle an enormous number of clients, meaning they can afford to only cater for the 'general public' and accept only clear-cut cases and lower-risk merchants.

The problems start when the business decides to sell higher-risk products, (for example CBD-enhanced face creams or smoking paraphernalia) or run the business from a higher-risk jurisdiction (offshore). This can lead to serious problems with the providers, who might then drop the existing business, or simply reject them from the get-go. If the business does not recognise this and is not prepared with a 'Plan B', finding, evaluating, integrating, testing, and using external PSPs for an existing website can be a very challenging and time-consuming task, which can even lead to the

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closure of the project entirely. Unfortunately, we have seen this happening many times.

Often, finding a higher risk-friendly payment provider, who also offers integration to these very specific 'one-stop shop' platforms is very rare and therefore costly, with potential technical and security downfalls. When a provider knows they have the upper hand due to their scarcity, they are usually less motivated to provide customer excellence and are also in a better position during term negotiations.

A lesser-known fact but important to mention, is that several website builder platforms don't even support external payment provider integration. One reason for this is the increased workload for the platform, perhaps not worthwhile given the limited number of clients using this feature, but also financial reasons. As we have seen with the gateways, these platforms are also motivated to promote their own interests with a system cross-sell, whereby they can also generate extra profit from their customer's processing volumes. This means they are not only earning from their website's building and hosting services but also on the payment processing and banking fees.

Unfortunately, when companies want to change their payment provider, they are forced to change the whole website, which can result in serious operational delays and costs.

Companies also need to keep in mind that pre-integrated providers are usually easier to set up and use, but this convenience might come with increased cost, lower security or less efficiency than specialised, external PSPs.

This is why companies need to evaluate all their options before deciding on a website setup. Starting a new website from scratch, which can then be easily integrated with various payment providers in the future, might often seem costly at first but can turn out to be a cheaper and easier solution later for certain business types or product ranges. There is no good or bad way to assess which website and PSP is the best option for a business. A bit of planning can spare a lot of headaches, costs and time later down the line.

Data security

One day I arrived at the gym a little earlier than my class was due to start. I decided to power myself up with a cup of coffee at the reception area and reply to a few emails while waiting. At one point, I overheard the receptionist calling a few gym members and asking for their payment approval on the phone. Being nosey, as I am, this caught my attention, so I went over to see what was happening. It turned out that the receptionist had a notebook where the member's names, addresses and full card details were written. At the end of each month, the accountant passed a list to the receptionist with details of whose card payments had failed, and the receptionist had to call every member on that list on the phone, manually enter their card details into the gym's payment system and ask them to authorize the transaction by dictating the received SMS code.

This is clearly a major security threat. Sensitive personal and financial data was kept in a simple notebook under the receptionist's desk, without any protection or encryption. Anyone

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sitting in the reception area (like I was) could overhear the details. Of course, after speaking to the manager, the case was handled but surprisingly to me, he told me that several similar businesses were still operating in this way.

Payment data security

Since payment providers handle sensitive financial data on behalf of their clients, they are entrusted with the responsibility of safeguarding this data from potential risks and threats. To achieve this, all providers must comply with various risk assessments and data encryption standards, making sure that all points in the transaction process are safe and secure. Many financial institutions have advanced algorithms which can flag abnormal transactions, for example high-value purchases occurring in geographic locations far from a customer's usual places of activity. If such a transaction is detected, the institution must take measures such as freezing the account and reaching out to the customer for verification.

Although Financial Data Security Compliance is vital for all Payment Services Providers and banks, all companies need to monitor suspicious activities on an ongoing basis, acting as a whistleblower in case they observe or experience any misconduct.

Payment Card Industry Data Security Standard (PCI DSS)

PCI DSS stands for Payment Card Industry Data Security Standard, which is a set of guidelines designed to ensure that all companies which accept, process, store, or transmit credit card information

maintain a secure environment. The primary objective of PCI DSS is to protect cardholder data from unauthorized access, thereby reducing the risk of financial fraud. This standard was established by the Payment Card Industry Security Standards Council, which is a consortium of major credit card companies like Visa, Mastercard, American Express, and others.

Essentially, if an organization handles card payments in any capacity, they are expected to comply with these standards. This might include hotels, who store and might charge your card later (for example adding a mini bar charge on the checkout to the card) or any online businesses which accept any card details within the website's own environment (for example when the customer types in the card details, on the merchant's own website and not on an external payment page).

Compliance with PCI DSS involves various measures such as encryption of cardholder data, network security, regular software updates, and employee training. Typically, organizations must undergo an annual PCI assessment conducted by a Qualified Security Assessor (QSA) or perform a self-assessment, depending on the volume of transactions they process and how they handle cardholder data. Failure to comply can result in fines and penalties, increased transaction fees, and, in extreme cases, the revocation of the ability to process card payments entirely in the future.

Dangers of card handling

I recently had a request from an old client who had started a new venture and launched an online concierge service. The idea was

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great: for a small monthly fee, customers could use the platform's customer service agents to arrange flights, hotels, taxis, and other travel-related services, and even check-in for them so they could avoid the late charges in case they forgot to do so. Since I travel often, I could really see the benefit and the potential of this setup. There was one issue - the payment setup.

The business wanted to retain the customer's card details on file so that any time a purchase took place, they could arrange the payment on behalf of the customers. They imagined that the data could be stored in a spreadsheet, whereby the various customer service agents had access, using the card information whenever a purchase took place. As the company had no vision about security setup and data handling, we quickly dropped the idea of getting PCI DSS certified and agreed that even though it was more of a hassle for the clients, the company simply couldn't handle payments on behalf of clients in this way. Essentially, the customers had to initiate and approve every payment, despite the concierge service being the one conducting the online search, finding the offers, and arranging the details.

It was a lucky catch as if this company, unaware of the actual risk, started to store and handle customer card details without adhering to the relevant PCI DSS compliance, they could have faced serious penalties or even the risk of complete closure.

GDPR

The General Data Protection Regulation, commonly known as GDPR, is known by many, however there is still a lot of confusion

around it. It's a regulatory framework which was established by the European Union in 2018. Its primary objective is to give individuals greater control over their personal data while simplifying the regulatory landscape for international businesses.

The main challenge is that GDPR is not restricted to businesses based in the European Union. Any entity, regardless of its geographic location, which processes any personal data of EU citizens must adhere to these regulations. This far-reaching impact implies that even a website, which is operated in Togo, for instance, falls under the influence of GDPR if it collects or processes data from EU residents. Of course, this complexity has also placed a significant compliance burden on every organization, especially smaller ones, who struggle to fully understand and implement the regulations.

One of the cornerstone principles of GDPR is the notion of 'consent', whereby individuals must explicitly grant permission for their data to be used for a particular purpose. As we have seen, the automatic appearance of 'cookie consent' pop-ups on every website has resulted in 'reflex clicks', where the visitors might spontaneously agree to conditions without even knowing what they agree to.

Non-compliance with GDPR can result in severe financial penalties. Fines can go up to €20 million or 4% of a company's annual global turnover, whichever is higher. This created barriers to entry and competition as this can be particularly challenging for small businesses with limited resources.

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I remember when GDPR was introduced, my company was utterly confused about how to implement this very new and very strict procedure into our everyday operations. Despite all the best efforts of this law, I still encounter companies who are sending out unwanted emails, from which I have no opportunity to unsubscribe whatsoever.

Risks of GDPR

One of my earliest clients was a successful forex brokerage, whom I knew from incorporation. They had invested a lot in their quality service and modern website, which gave them very steady growth and a devoted customer base. Running their newsletter, they had accumulated a wealth of customer data over the years, including names, addresses, deposit histories, and even some payment card details. They believed that this data would give them valuable insights into their customers and enhance their marketing strategies.

It was well before 2018 and when GDPR was introduced, they implemented a standard pop-up consent form on their website, as it was recommended by their website developer team. It was the industry standard, and everyone did the same. Whenever a customer visited the site, a pop-up would appear, asking for permission to gather and utilize their data for marketing purposes.

The problem started when one of their competitors filed a formal complaint with the Data Protection Authority (DPA). Their complaint alleged that the website was not acquiring proper consent and was potentially mishandling customer data. We were

very surprised when we learned that the DPA had initiated an in-depth investigation into their data practices. They scrutinized the pop-up consent form and concluded that it indeed failed to meet GDPR's requirements. The form was not sufficiently clear, specific, and transparent, and it did not provide users with a genuine choice. As a result, the company was required to pay a substantial fine and received an official warning which has been set as an example for the rest of the industry. Luckily, their legal team challenged the case, as back in 2018, even though GDPR was a European Union (EU) regulation, its application varied greatly among EU member states, which led to inconsistencies in interpretation and enforcement. After several months, they finally won the case, but this taught them a valuable lesson in creative competition ethics.

2D/3D secure

2D and 3D Secure are both fundamental pillars of current online payments, originating from the early 2000s. Both serve as additional layers of security, aimed at minimizing fraudulent activity during online transactions.

2D Secure (Two Domain Secure) sits between the merchant and the payment processor and validates the cardholder's details at the point of purchase. Basic details like the card number, expiration date, and CVV are verified, but no additional authentication steps are involved.

3D Secure (Three Domain Secure) adds a third entity into the process: the issuer itself. Alongside validating the basic card details as in 2D, another layer of authentication is introduced. This might

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be an OTP (one-time password), a temporary code sent to a verified phone number or email, or some other authentication method which must be entered to complete the transaction. This process confirms that the person who is making the transaction is indeed the cardholder.

The first version of 3D Secure was introduced by Visa under the name 'Verified by Visa'. Mastercard quickly followed suit with a similar solution called 'Mastercard SecureCode'. These implementations paved the way for the launch of 3D Secure 2.0, which offers a more streamlined user experience utilising biometric data like fingerprints or facial recognition. Today, regulations require the implementation of these security measures. In the EU, the Revised Directive on Payment Services (PSD2) mandated something called Strong Customer Authentication (SCA) for online transactions. No doubt regulations and security will continue to evolve hand in hand.

Integrations

As we've seen, data security is more important than ever in this ever-changing payment landscape. Sometimes, however, clients feel less secure entering their card details when they are forwarded to pay on an external payment page. This could lead to an abandoned shopping cart, as they mistakenly think the external payment page is less secure than the merchant page on which they are making their purchase. Pop-up blockers also play a role here, potentially blocking the external page and leading to lost sales.

Of course, solutions exist for every situation. But we need to know what to look for.

Often, the payment service provider allows the merchant website to have an embedded payment page, which although appearing to be part of the merchant site, is controlled by the payment service provider's secure and regulated data handling page, which complies with data security standards. Alternatively, the merchant obtains a PCI DSS compliance certificate, which might incur extra cost, but can provide a more seamless customer experience, where the payment provider allows the business to gather and forward the data to them for further processing.

In any case, integration plays a very important role in how payment data is handled here. The different technologies and methods must be carefully evaluated by any business, before making the final decision.

API

API stands for Application Programming Interface, a code which serves as a bridge or technology translator to enable different software applications to communicate with each other. APIs can serve various purposes and provide a wide range of functionalities. For example, social media APIs allow developers to integrate social features, such as sharing, posting and authentication into their applications. Geolocation APIs provide location-based services and data, including mapping, geocoding, and route planning. Payment gateway APIs enable online businesses to accept payments securely via their website.

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The most common integration method of a payment provider into a website is usually via API. Upon approval, companies usually receive an API key and documentation from their provider. This code then has to be programmed into the website, to make API requests via the payment forms or buttons from their payers. The API connection then transfers this data to the provider securely, to proceed further with the payment process.

Hosted payment page

Hosted payment pages operate externally and independently from the merchant's website. The business needs to redirect its customers to a third-party platform with the payment information (how much, what currency, etc) where the payment is processed. Once the transaction is complete, the customer is then guided back to the original website, typically to a confirmation page signalling the success of their purchase. Although the customer experience is worse, and the number of abandoned payments due to confusion or fear is higher with this setup, the hosted gateway model has several benefits. Often, companies may not have the resources or technical expertise to develop a secure, integrated payment system on their own. In this case, the full payment responsibility falls on the gateway provider, relieving the merchant from the complexities of safeguarding sensitive data.

iFrame integration

iFrame stands for inline frame, which is a form of HTML element embedded within a webpage. This HTML element allows for the secure input of sensitive information, such as credit card details, within the borders of another website. In plain English, it's a window within a webpage which displays content from another site.

By leveraging this technique, the merchant can avoid the responsibilities of the payment, yet facilitate secure transactions without requiring the customer to leave their webpage. The advantages of using iFrames are mainly security-related, however, they also offer a degree of customization which allows merchants to maintain a consistent look and feel across their website.

Server-to-server integration

In this setup, the merchant's server communicates directly with the payment gateway's server for the processing of transactions. Unlike redirection methods such as iFrames, server-to-server integration places the responsibility of handling sensitive payment data completely on the merchant's servers.

One of the key advantages of this setup is the high level of control it provides to the merchant. However, the compliance and security requirements, due to the handling of sensitive data, not to mention the financial and development investment needed, can make it a complex and resource-intensive process best suited for larger businesses or those with specialized needs.

Chapter 7 - How to Set Up a Payment Strategy

Intro

It often seems like we never hear about failure. All motivational quotes say, “Follow your dreams” and we clap for the brave who succeed and share their story with the rest of the world. We usually only hear about winning stories but hardly talk about bad decisions, lost funds, or failed businesses. For me, however, failure is more interesting than success, as this is what we can learn from.

While working at an accounting firm, the most important skill I gained was the ability to look at different companies’ financial information and understand why they failed or succeeded. Since the accountants manage all the company records, we have full oversight on all the data, even that which might not reach other departments in a company. We see all cash flow and asset management decisions, results, and long-term outcomes. I think I never learned more about real-life business and the results of various financial decisions than during my time in accounting. I was genuinely surprised to witness how many companies end up going bankrupt, and just how quickly it can happen: more than 80% of business failures are due to a lack of cash, 20% of small businesses fail within a year, and half fail within five years.²⁶

²⁶ <https://www.entrepreneur.com/money-finance/4-reasons-your-business-needs-cash-flow-forecasting/442426>

I wanted to understand the reasons behind the failure of all these companies. Having done hundreds of companies' records, I started to notice a pattern which highlighted significant problems around payment and banking: there was always a miscalculation of risk, the underbudgeting of costs or other hiccups in treasury functions. The most common errors were always around the lack of financial planning. Management so often only paid attention to the obvious: setting up the marketing plan, creating a shiny website or investing heavily in product design. It seemed like no one cared about setting up an actual payment plan, even though this is common sense (to me at least!). Seeing these real-life examples of how badly poor payment decisions could affect, or even ruin an otherwise successful operation was a real eye-opener for me and taught me a valuable lesson.

Today, I honestly believe that way too many businesses fail for ridiculous reasons, which can be easily planned for, and avoided completely. Following up on each step of the money flow is a relatively quick and free exercise, and if a business takes just a few hours to understand the flow and draft a plan, it would have already done more than most of its competition.

Every cloud has a silver lining

The good news is that lately, payment planning is becoming less of a choice, but rather a must. The strict compliance requirements around the business' third-party financial providers are pushing every business to pay closer attention to their financial flows. Thankfully, these increasing levels of banking restrictions and new

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legislations are some of the main reasons why many companies have started to revise their treasury functions, payment and banking operations, cash flow management and asset keeping, regularly. By checking on basic information such as the source of funds and customer records, and then understanding how these funds entered the business, a lot of important information can be revealed that may have been overlooked before.

Even the worst-case scenarios can provide valuable insights: frozen or blocked accounts prove that we can never be sure that our bank (and therefore the merchant or bank account) will still be working tomorrow. Not to mention dealing with increased costs, as due to the negative interest, the more money we have in the bank, the more we pay them!

Everything therefore leads to one conclusion: payment strategy is more important than ever. But where do we start? I say: with the basics – **good planning**.

Without a plan, success is just a wish. Often, we only realise a payment strategy's importance when we need an explanation as to why the company is not being accepted by the best providers. A good payment plan will not only help businesses to efficiently manage their cash flow but can also highlight certain areas of the company structure which might be hindering growth, or perhaps divert our attention to new developments which we might not have even thought of.

The Strategy

Over the years, I have developed a solid method, which I want to share here. Whenever we start a new client engagement, I always follow this procedure. This Strategy summarises and implements all the payment and banking knowledge which I shared earlier in this book and answers the final questions of how the 'money moves'. The Strategy has no new or surprising elements but rather acts as a summarised step-by-step guide, all based on common sense. I have divided this Strategy into sections for easier understanding, but each part can be used as a valuable exercise on its own. Needless to say, I believe the best results can be achieved if all steps are considered and followed.

Collecting the information

First thing, I ask the client to provide all their due diligence (KYC and KYB) documentation, not only because we have to conclude our own internal due diligence, but also to determine the company's overall setup and structure. As we often work with larger groups, this step can be particularly helpful to oversee who owns what, where we have the same directors or interests, and how complex the overall configuration is. As a rule of thumb, the more complicated the group's structure is, the more headache the due diligence will become, which directly results in higher risk scores during evaluation. Simplifying the setup and making the operation leaner as a step on its own, can already make a business more successful and effective because it might eliminate unnecessary costs and risks.

The Payment Plan

Once the full group chart is known, and all documents are received and found to be in order, I set up a visualisation tool which helps us to track how the money flows. I call this layout the 'Payment Plan'. This exercise is extremely useful for understanding how the money moves, where flows are channelled, how to identify the risks and costs, and overall, how to monitor the entire process in the long term.

Company setup

As a start, I draw up separate boxes for each company in the group. Every box represents a unique entity, so we can understand their current status, activities, and connections to each other, as well as to the outside world. We then write all the known information on the company in each box, including the company name, jurisdiction, activity, director's locality, licence type (if any), and any other valuable data. This gives us a general, visual understanding of the companies which we will be working with.

When I'm working with a larger group which has several companies, sometimes I even treat the companies as if they were 'key employees' - their administrative expenses representing their salaries, and their profits being their value to the group. This approach helps me to evaluate the different entities at group level and make better decisions when it comes to closing, replacing, or

opening a new company, much like we would decide to hire or fire certain personnel for a project.

Relationships

Next, we need to show how these companies all relate to each other. This is particularly useful when we have a larger, complex structure. For example, one company can own another company partially or fully, or not at all. One shareholder may have an investment in one or more companies in the group. This technique helps me to understand clearly, who owns what in the group, exactly. I always show the shareholding and management connections by drawing distinctive lines. A straight line with a % shows the shareholding relationship, which means that eventually, profit will flow upwards from the subsidiary company to the owner, in the form of dividends. Dotted lines can show management connections, where one company or person manages various businesses in the group. This can be especially important during tax and payment planning, as in certain jurisdictions, when related companies trade or transfer funds to one another, the activity might be regulated very strictly under various laws.

This step also helps to identify the possibility of tax evasion, because if one company in the group is sending funds to another at a lower/higher than normal market price, or some funds are channelled from a higher tax jurisdiction to a lower one, the group might easily face accusations of attempting to reduce its taxes in illegal ways.

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Let's say a manufacturing company is selling their product to a related company at a heavily discounted price. In this case, the recipient company might not pay the necessary local taxes (GST or VAT) on these goods, which is a very classic but illegal tax evasion technique. Also, if a related company is providing very high-value services, such as exclusive marketing or consulting to another company in the group, this can easily increase the profits of the service-providing company and reduce the profits for the payer, as we have seen at earlier examples. If these companies are subject to different taxation responsibilities because they are based in different countries, it can also be categorized as tax evasion. This is also a commonly used, but again, illegal method if done malevolently. Generally, all companies should be aware of, and understand that the intercompany transaction values might need to follow international pricing rules and laws. Even though various companies might belong to the same group, it is often illegal to provide certain discounts to related establishments. In such cases, when in doubt, the group should always seek professional advice.

Another use case for this step is to evaluate risk within the group. As we have seen earlier 'a business is as risky as its riskiest product'. This means that if the shareholder has multiple investments in different companies, or if the management is involved in multiple business operations, the bank needs to investigate every single activity, to evaluate the risk accordingly. For example, a gambling company's management might set up a separate software company, which even though being a lower-risk operation than the gambling activity, is now connected to the gambling company by common management or shareholding relations. The risk appears, therefore,

that this company might develop software for its related gambling company, or that the operation of the software company is funded by the profits from gambling activity. These are all probabilities, but as we have seen, the payment and banking providers always consider the possibility and not the actual activity when they run a risk assessment. Since the gambling activity is significantly higher risk than a non-gambling related software operation, chances are, that the whole group is then being considered as higher risk. This, as we have seen, might result in higher fees, unfavourable terms and conditions, or place other burdens on the group's operations from a payment perspective.

The importance of an up-to-date chart

Showing the connections and relationships within a group might be necessary even when we are not planning any payment flows. Building a positive relationship with the group's payment and banking providers will not only increase the chances of a new application getting accepted, while shortening the timeline of the application process, but also keeps the existing providers informed. Since all payment providers and banks need to have a 'clear picture' of the group structure at all times, drawing up this group chart, and maintaining it, helps any compliance process greatly. Freeing up the payment provider's and bank's valuable time is always appreciated and might get awarded with better attention, or special terms.

Individuals

On the Payment Plan, I also show the key personnel, such as the ultimate beneficial shareholders or the main directors who are related to various companies, as little human figurines. Identifying their jurisdictions and connections to each company is very important for detecting the co-dependencies and their value/risk within the group.

Recognising who the ultimate owner at the top of the ladder is also very significant for tax purposes, because even though complex company structures can show multiple companies owning each other, eventually there must be an independent person, or group of persons, at the top of the pyramid who is cashing out on the overall profit (and therefore must pay the relevant taxes on these funds). Payment providers and banks always need to know who this person is, as via their tax numbers, their income is declared to the relevant tax office, which will then compare this number to the amount which was stated on the person's tax form. This technique is used globally to identify any tax evasion and ensure that even foreign dividends are declared and taxed.

Taxes

During this step, we shall also investigate the payment flows around taxes and use this information to fine tune our tax planning, too. We have dealt with several cases when the shareholder is living in Europe but has opened an offshore or a free zone trading company, following advice from their legal team, to legally reduce taxes on their global trades.

The issue arises when the shareholder wants to transfer and spend their well-earned dividends in Europe. Even though this structure might be completely legal, for all the reasons we have discussed earlier, the bank might have great difficulty in accepting funds from these offshore jurisdictions, because the funds are clearly coming from untaxed sources. This means larger spendings, such as buying a house or a car in Europe will be a great challenge and might result in significant costs, risks, and headaches for the shareholder.

It is important to know that often, it is not only the European banks which are blocking the transfers but also the sender countries creating obstacles around payment outflows. It's easy to understand why: if the foreign trading company generates a profit which cannot be sent out of the country, the shareholders are forced to spend it locally, thus boosting the country's economy and benefitting the local economy in the long run. The shareholder, having no other choice, eventually will buy real estate, spend it on domestic travel and restaurants, etc. Classic examples of these countries are the traditionally popular 'island countries', along with new and upcoming luxury Middle Eastern destinations.

Banking and payment connections

The next thing we need to do is to evaluate our existing payment and banking connections. Opening a new connection is not easy: seeking out, assessing, applying for, and finally getting accepted (or not!), testing, trust building etc can take up a lot of time and resources. Benefitting from the existing network and partnerships, which we already have in place is always cheaper and easier than

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finding a new alternative. That is why I usually want to see first, how we can make the most out of the providers we have already, before considering any other option. Old is gold, and if a financial institution, payment provider or bank has already accepted a business, there is a much higher chance of negotiating better terms, conditions, and fees than if we were to enter into a brand-new relationship.

This step usually takes the longest time though, as during the process, we collect and check every agreement and contract which has been entered, by all the companies in the group. As financial contracts usually have an expiry date, the first thing to check is if these agreements are still in force. Even if we do not use the channel, we need to identify every relationship, to maximise the effectiveness of the Plan. We should understand the fees, costs, all terms and conditions, settlement times and methods, along with any other important details, as these can all affect the payment flow. By clearly knowing what our limitations, options, terms, risks, and fees with each provider are, we can make much more accurate decisions and projections when we decide how and when to use them.

Surprisingly, this pretty straightforward exercise can reveal a lot of hidden or forgotten information, which would otherwise have been lost in the document pile. While going through this step, I've discovered forgotten bank accounts, expired or non-signed contracts (which can pose a significant risk when something goes wrong and are needed to claim owed funds), unfavourable footnotes, undocumented terms and conditions, and various other disregarded details. Excessive documentation and admin work are

a burden, and of course, no one is keen to handle them. But having written and signed agreements in place, which clearly explain responsibilities, limitations, settlement terms and various fees and costs are the bare minimum, basic risk mitigation points. Having all the paperwork in order is vital and certainly worth the effort.

During this step, we can also discover and consider what new financial products might be available for the business by our existing partners. This step is often overlooked but can greatly benefit the company because, as we've said many times, the payment industry is constantly evolving. By maintaining a good relationship with our banking and payment providers, we can easily identify better-suited, cheaper, or lower-risk products within their repertoire.

For example, Fig Limited might have an existing bank account with a provider who now offers open banking. After evaluation, open banking turns out to be a quicker and cheaper way to collect funds from Fig Limited's customers than the existing methods used. Since Fig Limited is an existing client of the bank, there is no need for a new application or integration. This company can therefore simply switch to this new method and shift large amounts of traffic from its traditional card processing channels. This results in significant benefits for Fig Limited: the collection of funds now is taking place at lower costs, and due to the immediate settlements, the switch reduces the overall risk for the operation too.

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Flow of funds

This is the step when we clearly show how the 'money moves'. I usually use different coloured lines for the various connections, such as green lines for incoming and red lines for outgoing transactions, just to help visualise things more easily. We can also use thicker lines for larger volumes, and thinner ones for the lower amounts, to give a better understanding of the flows for each of the companies in the group. This concept helps to determine what the main transactions are, which are the most used banks and payment providers, and which way the funds are channelled. These are all important details to have when making relevant risk assessments around the flows.

During this step, we need to show the incoming and outgoing funds clearly, company by company, which forces the business to highlight and consider all movements of money individually. The aim here is to show how much, how often, in what currency and where the funds are coming from – and leaving too. We also need to connect these incoming and outgoing money movements to the relevant banking and payment service providers. This step alone can reveal many inefficiencies.

If there are a lot of different incoming and outgoing funds, it is usually best to focus on the three most common or largest volume scenarios, going each way, to be able to evaluate the costs related to these main transfers and work our way down to smaller ones.

This exercise also helps us to plan for the group's taxes. Various tax costs can occur each time the money 'stops' at a company. By involving a local tax expert in this step, the group can plan better

for larger transfers, perhaps even replacing certain companies in the group completely.

Following the previously drafted lines, we also must see how the dividends flow 'upwards'. When we see a shareholding line, we can be certain that eventually, the subsidiary company will be sending funds to the shareholding entity, which is usually a less regular, but larger transfer. Planning ahead for this move can eliminate blocked, delayed, or frozen funds, simply by alerting the recipient's provider about the upcoming transfer. Since dividends are usually sent in one large bulk, significant fees and important terms around such large transfers also need to be considered.

Mid-term evaluation

Once we have this all drawn up, we already start to get a pretty good idea about how healthy and effective our flow of funds is. This is the time to ask all the questions: which banks are overused or not being taken advantage of to their full potential? Maybe a certain channel is cheaper, but there is a higher risk associated with it due to its location or reputation. Do we see any options to reduce the FX fees? Do we 'park' large amounts of funds which can be earning ROI with a good treasury? What is the flow's exposure in terms of fees and liquidity? Where do we see bottlenecks which can affect the operation if not dealt with?

This mid-term evaluation is very useful to see if we are placing too much trust in one provider and neglecting another. Keeping in mind that European banks only guarantee funds for up to €100,000 while U.S. ones are up to \$250,000, we will see straight away where the

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high-risk areas for our funds are. Also, if the flow relies too much on one provider, there might be a significant data or tech failure risk to consider.

During this step, we can see if we need to open or even close an account, and which company would benefit from having alternative channels. We can also see which relationships could be developed further: if one good payment provider or bank is only serving one company, opening another account for another company in the group would result not only in reduced application time but perhaps better fees for both accounts. We can also see here which flows need our attention the most.

For example, if one company receives its proceeds significantly later than the others in the group, it's a good idea to check if the issue is not around its banking processes. I have seen several times when the company failed to offer relevant payment methods to its clients, who then delayed or even completely pulled out of the purchase, simply because they could not pay in their preferred way. Considering the introduction of new payment options may help the income to grow.

Another thing to consider is if the group pays all their expenses from one company, but earns all their income from another, this can lead to biased financial results for each company, which is a slippery slope heading to tax evasion. Even though the income is set off with the expenses on a group level, if the group uses a certain company as its profit or cost centre, the individual companies might over or underrepresent their results, which can lead to legal risks.

Fees

The next step is to add the fees. This is where the lines and details might get messy but is well worthwhile, as this step could lead to the most savings for the group overall. As we now know, every time 'money moves' and a company receives or sends funds using a specific banking or payment provider, it's an expense. We must consider fees both in and out, as the charges are often applied both ways. By adding the fees to the chart, we can compare, calculate, and see clearly which transfer costs how much to the group, and what changes might lead to significant cost reductions.

During this step, we also need to understand what the cost is in the case where funds are 'parked' in the account. I often see large amounts of unused funds which are not only paying negative interest to the bank as storage fees but are also losing value quickly due to inflation. When the money isn't 'working' for us, it is a missed opportunity for alternative profits, as well as posing a massive operational risk due to the limited bank guarantee.

Treasurer

I believe every company trading with larger volumes would benefit from a treasurer. Unfortunately, this function is not as popular as it should be. When dealing with a higher number of various currency assets within the group, or when a company is dealing in larger bulk sums for an extended period, professional advice can be invaluable.

The treasurer can not only advise on the best possible scenarios for alternative usage of the funds, but also on exchanging foreign

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currency with the most relevant timing. The treasurer function and the Payment Plan go hand in hand, as although a lot of opportunity lies in a good treasuring function, the Plan still needs to be set up accordingly to eliminate the banking and payment risks and make sure that the treasury has the highest amount in the relevant bank account to make the necessary decisions and advise on the best-case scenarios.

Let's calculate!

We'll now go back to our earlier example, the Swedish company selling products online for €100.00 + VAT 25% = €125.00, of which the product cost to the company was €80.00 per item. As we said, they were making 10 sales a month, all for €100 each. We calculated the company received €1,062.50 in its first month from its payment provider and needed to send €250.00 VAT locally plus €800.00 globally for its suppliers. Let's say the supplier which the company needs to pay is located outside the EU.

If we assume that this company has a bank where domestic SEPA banking fees are free, but the SWIFT outgoing fee is €15.00, we immediately see that the banking fees here are adding an extra €15.00 to the previously calculated fees. If we consider that this company might have another bank account, which is charging them SEPA €2.00 on the incoming fees and SEPA €3.00 on the outgoing fees, but the SWIFT outgoing fee is only €7.00, we might have an opportunity to reduce some cost.

We can either pay €2.00 on the incoming fees from transferring the funds internally or have this account as the settlement account for

the payment service provider. We also must pay €3.00 when we pay the VAT locally. However, we spare €15.00 on the SWIFT outgoing fees! This means €15.00 - €2.00 SEPA IN - €3.00 SEPA OUT - €7.00 SWIFT OUT = we are better off by €3.00!

With this simple calculation, we can see how payment planning can significantly reduce costs. Understanding every aspect of the payment and banking costs can not only reveal the need for cheaper alternative providers but also the necessity for the better utilisation of the existing ones. Keep in mind that although higher volumes usually result in lower payment and banking fees, it usually also means higher risk due to the increased reliance on a single channel. The business' subjective financial and risk decision must determine what level of risk the group is willing to take in return for lowering the banking costs.

Timelines

This step is all about timing. We will investigate the money movements solely from a timing perspective, by adding timelines to our already well-developed chart. This is perhaps the most important point in the Payment Plan, as here we can see any risk around cash flows and identify payment bottlenecks and delays. Using the previously mentioned three most common or largest volume scenarios, we should be able to immediately see how and when the most relevant payments flow through the companies within our group.

Every time a business earns funds which remain unsettled, we are missing out on the opportunity for new supplies to convert into

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sales, discount opportunities or perhaps even the overall funds themselves in the case where the provider is facing an issue and reveals bankruptcy. Longer times usually lead to increased risks and lost opportunities for the treasury to use the available funds elsewhere.

The timeline assessment helps the group to decide what is the most beneficial balance between cost, risk, and time. If the company has a healthy cash flow to start with, maybe it is a good idea to bulk up some payments to gain some cost benefit. However, if the company has a very tight cash flow timeline, we need to decide to either involve an alternative channel, thus mitigating the timing risk or find an alternative banking or payment product which can fulfil our shorter settlement needs. This may, however, come at a higher cost.

The group also needs to consider that international transfers always take longer than domestic ones. By keeping all incoming and outgoing payments local, the group has a great advantage to benefit from the absent FX fees, domestic payment and banking costs (which are usually lower than with international transfers as the flow is going through fewer intermediaries) and also from quicker or even immediate transfers.

FX plan

This step is an alternative one but can be very useful, as it can save the group a significant amount of cost if applied correctly. When a large group is dealing with different currency movements, somehow the exchange is often left to the banks, which handle the flow. As we know, various providers offer various fees, and several

financial companies specialise in foreign exchange transactions. As larger volumes result in better fees, it might be a good idea to wait with the exchange as long as we can and accumulate it into a larger bulk which then can be exchanged at a better cost with this external FX provider. Timing is key here for finding the optimal exchange rate, resulting in serious cost savings if done well.

For example, Kiwi Group's headquarters are in Europe, but it trades globally and regularly receives large volumes of USD payments in its EUR account. Kiwi Group leaves the exchange to the bank, which is a costly mistake, as banks are well known to charge more than the specialised FX companies. Also, receiving most of the inflows in EUR but paying out the suppliers in USD might necessitate the rearrangement of the payment terms with the suppliers to avoid the hefty FX fees. Kiwi Group also faces an increased cost for the maintenance of various USD wallets and bank accounts which can handle the relevant currency streams. Kiwi Group therefore would greatly benefit from pairing the domestic (EUR to EUR and USD to USD) in and outflows, as well as trying to reduce its internal FX activities. When needed, Kiwi Group should trust specialised (and therefore more cost-effective) FX providers with larger exchange amounts, rather than leaving this to its high street banking partners.

Hedging

Timing and currency pair value fluctuations all add to our existing payment risks. If the group is international and is keeping larger volumes in various currencies, the Payment Plan has to consider the

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risks around the local political and economic imbalances too. We have seen quickly changing environments where an internal conflict, revolution or war dropped the value of a certain currency overnight. If we fail to monitor the situation of every currency, we are holding funds in, it is easy to overlook the risks which are associated with not only volatility but in the worst-case scenario may result in capital controls, blocked, or lost funds.

Hedging is a common financial strategy which is used to minimize or offset potential risks and uncertainties when a company deals with FX. It's like insurance, which balances out any FX effects. Hedging starts a counter-financial transaction in the same value with the same expiry date but in the opposite direction than the original position. If the original position results in loss, the hedging creates a profit, and vice versa, The total risk of the FX exposure is therefore nil.

For example, Mango Limited's main currency is USD, but it enters into an agreement with a European supplier confirming that they will buy 1 million worth of EUR raw materials from them for over a year, whereby the price is payable at the end of the contract. On the day when the companies sign the agreement, the EUR/USD rate is 1.10. To be able to calculate the sales price and therefore the profit in USD, Mango Limited needs to 'lock in' this price of the raw material in USD, even though they need to pay EUR in a year's time. Since the USD/ EUR FX rate can fluctuate due to various factors, Mango Limited cannot be sure if in one year the rate will be the same and the cost will stay 1.1 million USD. The company therefore must open a trade which is the opposite position of the future FX activity.

Mango Limited therefore must buy 1 million worth of EUR for 1.1 million USD when signing the agreement or enter a futures contract where they confirm they will buy 1 million worth of EUR for 1.1 million USD in a year's time. This hedging strategy provides financial predictability, as the company is protected against adverse movements in the USD/EUR exchange rate during the contract period.

Hedging can help mitigate the risk; however, it is not always free. But if we plan the payment flows to achieve the maximum amount of internal currency pair hedging, automatically, we can save a large amount of cost with this exercise alone.

Risk plan

Once we have finalised the Plan layout, we can start putting some of the elements into effect to see the risks. Incoming and outgoing volumes can be amended, providers can be deleted, or new ones added to the flow, grouping up or diversifying certain volumes through various providers. We can also play with the idea of channelling funds via alternative flows and setting up various 'Plan B's and C's'.

The real risks and best channels need to be determined for both objective and subjective reasons. The most efficient evaluation happens when we allocate a few good hours for this exercise and involve as many stakeholders as possible. Costs, timelines, and available providers are factual, however, the relationship value with certain providers, the ease of communication, and their technology

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or reputation can be very subjective but are just as important to the decision-making.

During this step, every question is a good question, and every scenario is a possible one.

We need to understand what the 'best case' and the 'worst' is. What would happen if we suddenly increased the number of our clients, and they all paid on time? Can our account handle the increased volumes? What happens if a bank suddenly freezes all our funds? How quickly can we replace a payment provider or bank to save the funds overnight?

It's also interesting to test the waters and see how far we can go with our partners, asking all our providers for better fees and terms. If we don't ask, we might never realise that there could be room for negotiation.

Risks around access rights should also be considered. Who has what rights to which accounts? What happens if the CFO wins the lottery and never picks up a phone call from us again? How quickly can we access the funds?

We also need to see what happens if we face a delay due to a technical issue – how would it affect us if our top provider gets hacked and loses all the funds? Do we have alternative channels for every payment flow within the group, both incoming and outgoing, to maintain the necessary minimum operating level?

I strongly believe in having backup plans, even if it means maintaining idle accounts. Keeping the various alternative channels open isn't as expensive as the costs we face if they are not available when needed. Balancing out and diversifying basic payment and

banking risks can ensure that the business survives even under the most unexpected of conditions.

Ongoing monitoring

Even the best Payment Plan is only ever temporary and cannot predict the future. All Plans can only provide a snapshot of the best of the available opportunities, as of NOW. But whatever is the best NOW might be the worst TOMORROW. Payment Plans therefore have a short expiry time.

As technological advances and various other changes take place in political, regulatory, technical, and operational spheres, the company's own operations are also shifting. The various solutions, channels, financial, payment and banking options are only good for certain uses in certain scenarios, but since everything is on the move at all times, plans need to be revised and amended regularly.

To make sure that we have mitigated the risks and optimised the costs as much as possible, payment planning never ends and the ongoing monitoring and intervention is just as important as the first time it was set up.

Epilogue

So, how are we feeling now? Are we a little scared, a bit more confident, or maybe – like I was when I dipped my toes to this industry – hungry for more?

Although I could go on writing about this topic for a thousand more pages, I hope that after reading this book, you've come to understand just how important and essential this unique knowledge is for everyone.

This industry can seem pretty complex, unless we understand how money moves, and how banks think. But I firmly believe that knowledge is power, and now you have the tools to make smarter decisions, cut down on risks and costs, and see the broader picture.

Finishing a book is one thing, but I want to urge you to take what you've learned from these pages and put it to work in your day-to-day business dealings. By getting a sneak peek into how banks think, understanding the twists and turns of compliance, and hearing about the real-life ups and downs of this industry, you're now in a better spot to handle your money, safer and more cost-effectively.

But you know what? It doesn't stop there. Since everything is changing all the time, you will need your curiosity to stay on top of the game, and regularly revise your payment planning and execution. A well-thought-out payment strategy isn't just about saving a few bucks; it's a secret weapon in today's ultra-competitive online world.

VIKTORIA SOLTESZ

To handle all financial transactions with confidence, you will need ongoing research, and, to make your job easier, a seasoned payment professional.

Thanks for coming along on this ride with me and allowing me to show you my perspective.

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