Finance in the age of Web3

On the field or sideline

EY

Building a better working world

Content

01 Introduction

Web3[1] represents the next evolutionary step of the internet, emphasizing decentralization, blockchain technology, and user empowerment through increased control over data and digital assets. While the debate over its status as a hype or a real trend continues, its applications have already seamlessly integrated into the lives of the younger generation. Numerous companies have already capitalized on this development to create new revenue streams. But what impact does this new revenue model have on your finance department's operations? What are the potential risks and unexpected challenges associated with the integration of the new technology and its Web3 applications? And how should finance be engaged – on the field or on the sideline?

The following paper will explore these questions, among others, focusing on the Web3 adoption in chapter 2 and creates the link to the finance function in chapter 3. The explorations will be accompanied by a short survey with real-world data.

SURVEY

In cooperation with the Lucerne University of Applied Sciences and Arts (HSLU) EY conducted a survey with the target to gather insights from primarily finance professionals (88%) and outside views by non-finance professionals (12%) in Switzerland. Composing nine questions, its primary focus was to assess the current state of readiness for Web3 innovations and current involvement of finance departments in Web3 initiatives within their organizations. The questions are rated on a scale from 1 to 10, with 10 representing the highest level of agreement. The survey was conducted via an online survey tool and generated around 100 responses during the two-month release period, whereas 67 responses contained consistent and valid answers forming the results[2]. It's important to note that the results reflect more of an indication of the status quo in Switzerland rather than serving as a representative sample.

Authors

Sven Göggel | Darko Stefanoski | Benjamin Banusch | Thomas Birrer | Orkan Sahin | Tobias Schaffner | Mascha Steenblock

[1] Further related EY publications (Metaverse | EY – Switzerland)
[2] 33% of the survey responses were incomplete and did not meet the criteria for inclusion

Web3

The launch of this new web generation started more than a decade ago and the overall premise of this technology can be summarized as "Read-Write-Own-Participate", which fosters decentralization and peer-to-peer interactions, without reliance on centralized authorities (Graphic 1). Notable examples of Web3 applications range from cryptocurrencies over decentralized finance applications to NFTs (Non-Fungible Tokens) and DAOs (Decentralized Autonomous Organizations). These applications are sometimes associated and combined with immersive technologies, including virtual and augmented reality, gaming platforms and virtual worlds in the context of the recent Metaverse boom in 2023.

METAVERSE

Definition:
The Metaverse is a hypothetical concept, which consists of various interconnected, user-owned 3D virtual worlds, where individuals and organizations across the globe can interact in a decentralized, scalable internet economy in real time.

Key characteristics:
Functioning Economy, Persistent, Synchronous & Live, Interoperable, Unlimited and Open, Social Experiences, Immersive, Decentralized, Interconnected & Diverse, Hardware Independent

Currently, multiple Metaverse-like platforms exist, which partially fulfill some of the mentioned criteria. Nevertheless, we could not identify a single platform, which fulfills all criteria at the moment, to be classified as the Metaverse.

Reference: EY analysis

	Web2 *2003-now*	Web3 *2015-now+*
Premise	Read – Write *(content sharing)*	Read – Write – Own – Participate *(experience/value)*
Construct	Centralized by platforms	Decentralized by networks
Trust model	Platform provider	Underlying technology and smart contracts
Monetization model	Advertising & Centralized commerce	Decentralized e-commerce
Examples	Snap, X, Instagram, Reddit, TikTok	Decentraland, BTC, ETH, Aave, Uniswap

Graphic 1

02 Web3 & The Corporate World

2.1 Web3 Adoption

2.2 Readiness of Swiss Corporates

2.1 Web3 Adoption

In recent years the entire ecosystem around decentralized applications has made significant development and the community of decentral enthusiasts has grown and a much broader adoption of Web3 solutions has been achieved. We see a noticeable development from a passive curiosity to an active participation. Many market stakeholders are not only exploring the theoretical possibilities of Web3 but are developing and implementing concrete strategies to take advantage of decentralized technologies. This proactive attitude is reflected in the increasing trend of companies allocating parts of their financial reserves to investments related to Web3, indicating a broader acceptance of the value proposition of the Web3 ecosystem[3].

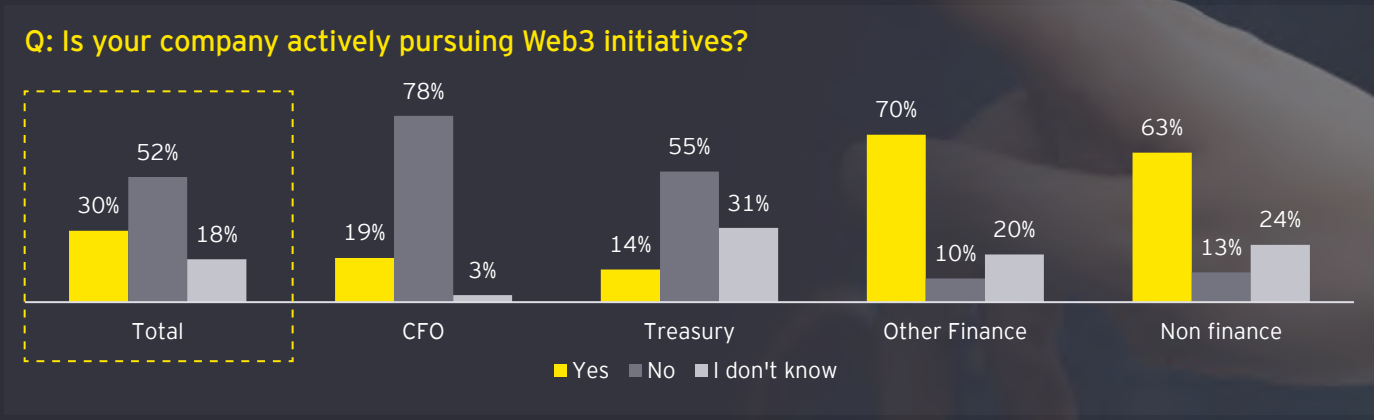
While "FinTechs" are at the forefront of the developments, we also see activities of financial institutions significantly increasing. For example, the EY Banking Barometer, which was conducted with 104 banks in Switzerland - indicates that 62% of Swiss banks are interested in investing in new digital asset business models in the next three years[4]. Focusing on Swiss corporates we see that based on our survey data only 30% of the participants are aware of Web3 initiatives ongoing in their companies (Graphic 2), which indicates a lower adoption level compared to banks.

We had anticipated a higher adoption rate among Swiss corporates, given the general perception of Switzerland as a highly advanced market in Web3 initiatives, comparable, for example, to the US market. In the US, 80% of the Fortune 500 companies are exploring or already implementing Web3 initiatives,[3] which indicates significant higher adoption rates than in Switzerland.

But why does it appear that Switzerland has a low(er) adoption of Web3? Two primary reasons for this could be:

- Larger, global companies, listed in the Fortune 500, are driving this adoption forward, while our study data also includes small to medium-sized national companies, which usually pursue a follower approach.
- Our survey was addressed to finance professionals, which might not be aware of initiatives within their companies (18% of participants do not know if their company is actively pursuing a Web3 initiative (Graphic 2)).

Banks are becoming more active in Web3 and expand their offerings. This advancement is set to further fuel corporate initiatives. As the primary financial counterpart for corporations, banks serve as trustworthy and fully regulated points of contact. This adds credibility and confidence in investing in such technologies. Nevertheless, this approach strongly contradicts the essence of Web3, which calls for increased decentralization and elimination of intermediaries.



Graphic 2

[3] Coinbase Report: 52% of Fortune 100 In Crypto and Web3 Since 2020 (cybavo.com)
[4] Banking Barometer 2024 – turning points | EY - Switzerland

2.2 Readiness of Swiss Corporates

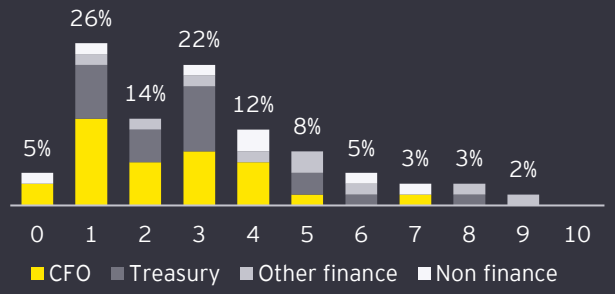
These initial results inevitably lead to the question whether Swiss corporates are ready for Web3 adoption. Our survey results show a mixed picture:

A mere 8.5% of all participants, and only about 4% of CFOs, rate the Web3 readiness of their Finance function above 7. The overall average Web3 readiness of organizations, rated by their own employees, is thereby very low with a rating of 3 (Graphic 3).

There can be multiple explanations for this observation:

- The survey indicates that the know-how of Finance professionals is relatively low. Only 16% of the surveyed Finance professionals rate their knowledge as 7 or above but 44% think that education in this area is necessary (Graphic 4 & Graphic 5). Non-finance professionals rank the necessity of the Finance organization to be educated higher than the Finance professionals themselves. This indicates that Finance might underestimate their importance in the field of Web3.
- The awareness of the existence of suitable use cases is not yet at sufficient levels of Finance organizations. Examples of suitable use cases are presented in chapter 3.1.
- Web3 initiatives often go with significant investments with unclear certainty of realized additional revenues or cost savings making it a less attractive investment for corporations.
- Regulatory uncertainties and security concerns are proving to be considerable obstacles and challenges corporates face. This uncertainty about regulations is also in line with the EY Banking Barometer were 12% of all participants mentioned that the legal risk is one of the greatest challenges for their organization with respect to introducing a digital asset business model.

Q: What is the current readiness for Web3 of your Finance organization?

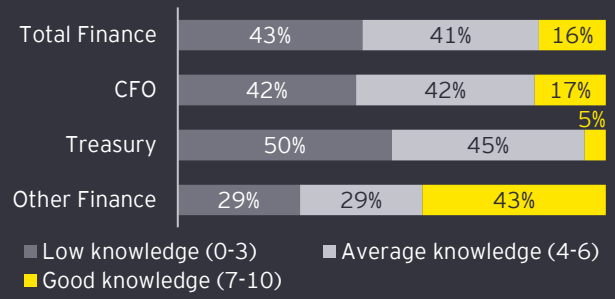


Less than 10% of all participants rate the Web3 readiness of their organization as good*

*rating above 7

Graphic 3

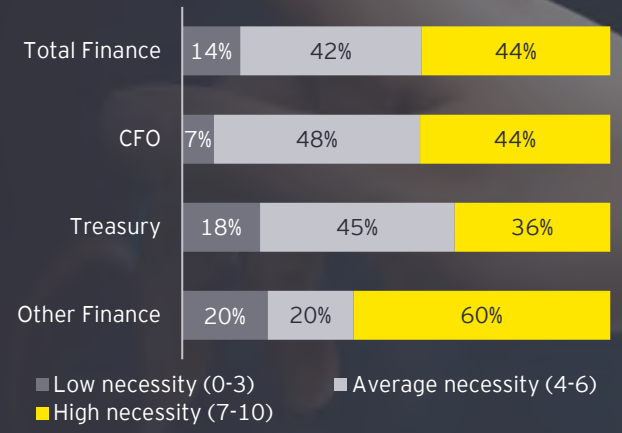
Q: How would you rate your general understanding of Web3 and its related applications?



The average (self-proclaimed) understanding of Web3 among Treasurers is the lowest with a rating of 3.3.

Graphic 4

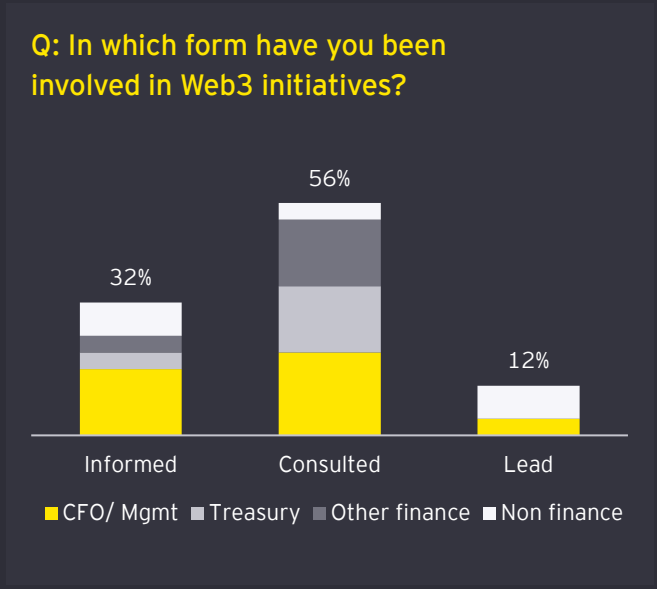
Q: How would you rate the general necessity for finance experts to be educated on Web3 topics and related applications?



Graphic 5

Furthermore, our Swiss market survey discloses, that Web3 initiatives are usually not driven by Finance departments. Out of the 25 survey participants having initiatives ongoing within their organization only one is driven by Finance. Finance is typically only consulted or informed (Graphic 6).

However, the early inclusion of Finance in such initiatives might create a significant added value for the organization and might ensure that the solution is also fit for business as usual. Asked for the necessity to involve Finance, roughly a third of the participants believe there is a relatively high need for that.

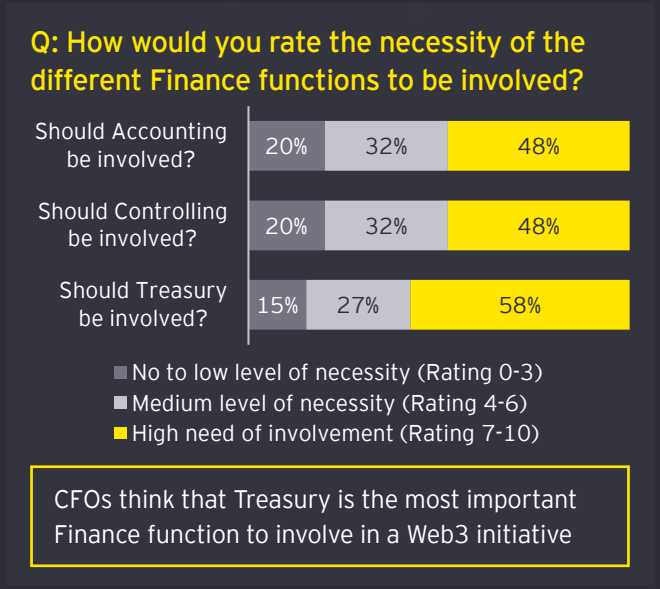


Graphic 6

In particular, of the three Finance functions Accounting, Controlling and Treasury, Treasury is identified as the most important Finance function to be involved in Web3 initiatives (Graphic 7).

Overall, we conclude within our study that the attitude towards Web3 is still quite divided and 40% of the participants see the developments as a hype in comparison to the 60% who assess it as a real trend (Graphic 8).

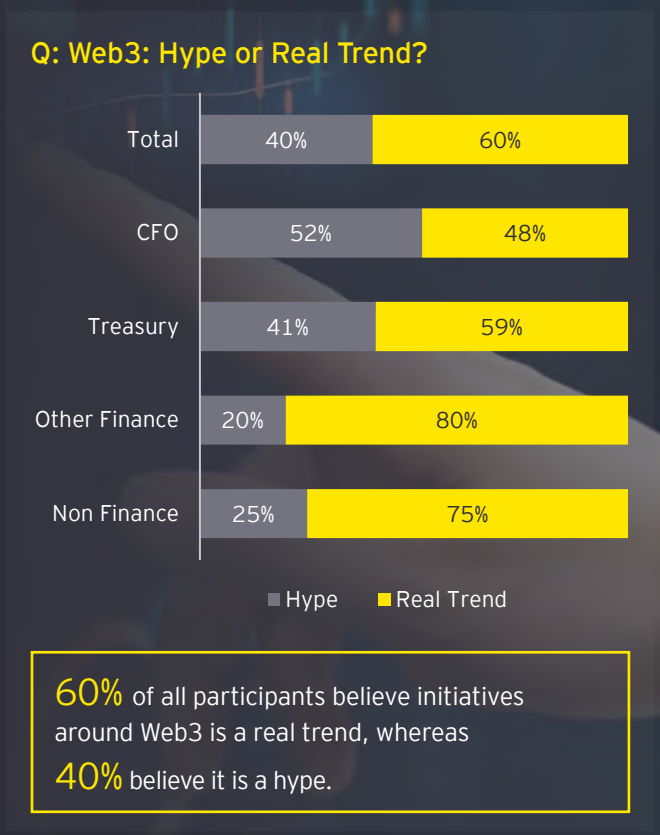
These results underscore the dynamic and evolving nature of Web3 applications and require sustained efforts to create a comprehensive and improved understanding



Graphic 7

within Finance functions and the entire organization in order to enable employees to discuss and understand potential Web3 use cases.

Some of these use cases will be explored in the following paragraph.



Graphic 8

03 Web3 & Finance

3.1 How Web3 use cases affect Finance

3.2 Focus on Treasury

3.3 Focus on Accounting

3.4 Crypto Asset Storage Solutions

3.5 Legal aspects

3.1 How Web3 use cases affect Finance

In the following section we would like to describe and highlight some relevant use cases and how finance departments will be impacted:

CATEGORY

Handling of Crypto Assets

Category Description

Handling crypto assets refers to the willingness and more importantly the ability of corporates to receive, store and transfer crypto assets as a form of payment for goods or services. This involves embracing digital assets as a legitimate exchange medium, which can expand transaction options and potentially foster global reach.

USE CASE

Acceptance of Crypto Assets

Description

What appears to be one of the most basic Web3 tasks, turns out to be more challenging and complex for corporates and institutions. In the context of Web3, we usually talk about Bitcoin acceptance for goods in the real world, e.g. buying a car with Bitcoins. What usually gets overlooked are Web3 use cases like launching NFT collectibles or any other interaction based on a smart contract for example. In these cases, the form of value exchange is the native currency of the Blockchain used, thus also requires the company to handle crypto assets.

Finance considerations

- Accounting of crypto assets (see chapter 3.3)
- Understand exposures in crypto currencies, the valuations and the corresponding realized/ unrealized gains and losses. Custody of crypto asset wallet (see chapter 3.4)
- Governance structure for authorization of crypto asset payments
- Advanced Risk Management (e.g., exchange risk and liquidity risk) for crypto assets
- Conversion of crypto assets into Fiat currencies
- Integration of crypto assets into cash and liquidity management

SMART CONTRACTS

Simply put, smart contracts are self-executing digital contracts with the terms of the agreement directly written into lines of code utilizing blockchain technology. They automatically enforce and execute obligations when agreed conditions are met, enhancing efficiency, transparency, and trust.

CATEGORY

Tokenization of Real-world Assets

Category Description

Tokenization of real-world assets involves converting rights to a real-world asset into a digital token on a blockchain. This process enhances liquidity, transparency, and accessibility while potentially broadening the investor base. Often the created digital tokens are non-fungible tokens (NFTs) that are unique and linked to a specific asset. NFTs have distinct values and attributes, enabling proof-of-ownership and authenticity for singular items.

USE CASE

Watch Certificates

Description

A new luxury watch includes a unique digital watch certificate based on a non-fungible token. This certificate acts as a proof-of-ownership and ensures the authenticity of the watch. Thus, such a digital certificate helps to preserve value of a watch over time and stores its history. In addition, this has the benefit for the watch brand that they can participate in the secondary market, as they could be paid in royalties whenever this NFT gets sold to a new owner.

Finance considerations

- Accounting of crypto assets (see chapter 3.3)
- Understand exposures in crypto currencies, the valuations and the corresponding realized/ unrealized gains and losses. Custody of crypto asset wallet (see chapter 3.4)
- Governance structure for authorization of crypto asset payments
- Advanced Risk Management (e.g., exchange risk and liquidity risk) for crypto assets
- Conversion of crypto assets into Fiat currencies
- Integration of crypto assets into cash and liquidity management
- Consider tokenization in budgeting process
- Establish financial infrastructure and processes around tokenization of assets

CATEGORY

Tokenization of Virtual Assets

Category Description

Tokenization of virtual assets converts digital assets into blockchain-based tokens (NFTs) that represent ownership or value in a sharable and tradable form. Through this process, assets such as digital art or in-game items can be represented by unique tokens on the blockchain, enabling true ownership in the digital space. In addition, it also allows fractional ownership, efficient transferability, and increased liquidity in a digital ecosystem.

USE CASE

Virtual fashion for in-game avatars

Description

Virtual fashion enables new revenue streams as a growing amount of people are willing to buy virtual assets for in-game avatars. To emphasize the emergence of those revenue streams, there is a famous example of a digital Gucci Dionysus handbag that sold as an NFT for around 4,100 USD[5]. This is a markup of almost 800 USD compared to the price of a real Gucci Dionysus handbag. Multiple other fashion brands, including Nike, Adidas and Dolce & Gabbana also sell digital fashion for digital avatars and launch own NFT collections and collectibles. Especially the latter enables a new form of customer engagement for companies as it primarily builds a community around the brand that offers additional benefits for the respective NFT holders.

Finance considerations

- Accounting of crypto assets (see chapter 3.3)
- Understand exposures in crypto currencies, the valuations and the corresponding realized/unrealized gains and losses. Custody of crypto asset wallet (see chapter 3.4)
- Governance structure for authorization of crypto asset payments
- Advanced Risk Management (e.g., exchange risk and liquidity risk) for crypto assets
- Conversion of crypto assets into Fiat currencies
- Integration of crypto assets into cash and liquidity management
- Consider tokenization in budgeting process
- Establish financial infrastructure around tokenization of assets

CATEGORY

Decentralized Finance (DeFi)

Category Description

Decentralized Finance (DeFi) is a financial ecosystem based on blockchain technology that aims to make traditional financial services decentralized and open source. In DeFi, various financial activities such as lending, borrowing, or exchanging crypto assets are handled via smart contracts on blockchain platforms, eliminating the need for traditional intermediaries such as financial institutions, with the intention to reduce costs.

USE CASE

Decentralized lending and borrowing

Description

One example of decentralized lending and borrowing is a platform called Aave, where Lenders earn interest by depositing their crypto assets into lending pools, from where the assets are automatically distributed to borrowers using smart contracts. Borrowers can borrow assets by providing collateral in the form of other crypto assets. For example, an investor could deposit Ethereum as collateral and then borrow digital assets up to a certain percentage of the value of the collateralized assets. Lending and borrowing markets rely on automated price feeds based on the relative demand and supply of the supported crypto assets. In addition, it includes specific risk parameters that mitigate the market risks of the supported crypto assets, e.g., if a collateral loses value due to a relative price decrease.

Finance considerations

- Accounting of crypto assets (see chapter 3.3)
- Understand exposures in crypto currencies, the valuations and the corresponding realized/unrealized gains and losses. Custody of crypto asset wallet (see chapter 3.4)
- Governance structure for authorization of crypto asset payments
- Advanced Risk Management (e.g., exchange risk and liquidity risk) for crypto assets
- Conversion of crypto assets into Fiat currencies
- Integration of crypto assets into cash and liquidity management
- Investment strategy for crypto assets

[5] https://hypebeast.com/2021/5/virtual-gucci-bag-roblox-resale

3.2 Focus on Treasury

As the digital landscape evolves into Web3, Treasury departments are facing the need and opportunity to extend their traditional roles in cash management, financial risk management, Corporate Finance, and payments into a new realm. Given their strategic partnership with the CFO and consulting role within the business, it's pivotal for Treasury departments to understand and facilitate these Web3 initiatives. They must act as catalysts for digital transformation, helping to navigate the challenges and opportunities presented by Web3, ensuring the organization thrives in a robust, decentralized future.

What is the need?

As described in the use cases in chapter 3.1 initiatives around Web3 might be driven out of the business to identify new revenue streams. However, in our view it will be the Treasurer's role to manage the processing of cryptocurrencies as well as other digital assets and enable the business in their use cases. With this we see amongst other the following topics landing on the Treasurer's desk:

- Enable crypto asset payments and receipts
- Manage cryptocurrency balances (wallets) as part of cash management ensuring sufficient liquidity and efficient allocation
- Assess volatility of the value of cryptocurrencies and define risk management strategies and identify hedging solutions
- Ensure timely conversion of cryptocurrencies into Fiat currency and vice versa
- Consider adding crypto assets to the Treasury Management System

What is the opportunity?

There is the opportunity for Treasury to create significant value for the organization by making use of the technology to create more efficiencies, reduce costs and create additional revenue. This could take place in the following areas:

- With so-called **Staking**, crypto assets can be locked up to improve the security and efficiency of a network. In return, compensation is paid for these assets deposited in this way. The rewards typically are distributed in the form of additional digital assets. This is similar to a deposit Treasury would place today with a bank in Fiat currency.
- **Decentralized Exchanges** («DEXs») are marketplaces where Treasurers can directly transact cryptocurrencies without intermediaries. Trades on DEXs are executed through smart contracts, automating the trading process and ensuring secure custody of assets within users' wallets. This contrasts centralized crypto exchanges, where the centralized entities such as Binance are taking custody of the cryptocurrency on behalf of their users (also refer to chapter 3.1)
- Maybe a bit more thought provoking is the concept of **continuous streaming of payments over time**. Certain DeFi projects are based on the idea that for certain business models not only one-off payments are suitable but tools for continuous payment flows in real-time could be favorable. It is technically feasible, that every second a certain amount of a pre-defined total amount in a certain time span is wired from party A to party B. Some use cases for this possibility are payments for hourly consulting services, daily contract work, or monthly rental payments. Such technological advancements could also be useful when it comes to further financial transactions such as interest or dividend payments and can help Treasurers to optimize working capital.
- Web3 solutions could be particularly beneficial by enabling Cross-border payments improving cash flow by reducing delays and fees associated with traditional banking systems. This can for example be achieved by using liquidity pools. Liquidity pools are a fundamental component of decentralized finance platforms operating on blockchain networks. Liquidity providers can earn a fee by providing certain assets to such pools, which typically consist of two or more assets. Market participants can interact with the respective smart contract to provide one of the pooled assets in exchange for another asset in the same liquidity pool. Depending on the volume and value of each asset, the exchange rate fluctuates.

As the strategic partner to the CFO Treasury professionals are therefore well advised to get to grips with the new possibilities at an early stage to participate as a competent partner in the Web3 initiatives already underway – which according to our empirical data is already ongoing often behind the scenes in many companies.

3.3 Focus on Accounting

Introducing Web3 initiatives within the company as a new revenue stream like NFTs or crypto assets also requires the correct accounting treatment of these digital assets. Until today there is no explicit accounting guidance for digital assets in IFRS and companies need to rely on existing guidance, which often does not address the various challenges arising from transactions with digital assets. This means that accountants therefore need to make case by case decisions analyzing the specific characteristics of the digital assets and considering the company's business model as well. However, it can be said that under IFRS in most cases digital assets will be accounted for as intangible assets but there are exceptions possible where digital assets can also be accounted for as a financial asset or a derivative. Under US GAAP, crypto assets are accounted for in accordance with ASC 350-60 as intangible assets. Further guidance can be found in the following publications for IFRS and US GAAP.

IFRS

US GAAP

3.4 Crypto Asset Storage Solutions

As Finance organizations navigate the landscape of Web3 technologies, storing and managing crypto assets emerge as a critical consideration on the path to Web3-readiness of an organization.

Key questions to consider for organizations:

- Do we need an inhouse storage solution for our Web3 initiatives or is a 3rd party provider sufficient for our requirements?
- What are the implications for our organization or department with each option?
- What risks and costs are associated with the inhouse vs outsourced custody service?
- Who should have access rights e.g., computer programmer, sales, finance department or use case owner? Or all of them?
- Who has the overall responsibility and accountability for security?

In this section we will explore the evolving landscape of institutional crypto asset storage solutions and highlight the contrasting approaches of self-custody and third-party custody.

3.4.1 Self-custody

Crypto assets and decentralized Web3 applications are usually based on asymmetric cryptography, involving a seed phrase[6] as well as a private and public key, which are essential to access and manage crypto assets in blockchain networks. Self-custody means that organizations retain direct control over their seed phase and private keys and thus maintain autonomy and independence over their assets. This approach promotes a trustless and transparent ecosystem and minimizes dependencies on external provider and thus counterparty risks. In addition, it necessitates a thorough understanding of how Web3 technologies work and can therefore spark new ideas from within the company. However, this autonomy also comes with greater efforts and responsibility – for example demanding an implementation of robust internal governance structures, adoption of (new) internal processes and controls as well as stringent cybersecurity measures.

3.4.2 Third party custody

In this model, organizations outsource the whole responsibility around the handling and protection of private keys and crypto wallets, resulting in an as-a-service model. Third party custody offers convenience and brings in expertise from specialized providers.

Usually, organizations can delegate complex tasks like secure asset management, token issuance and distribution as well as the facilitation of DeFi business models to those custodians, who have extensive experience in cybersecurity and regulatory compliance, reducing the operational burden on organizations.

While third party custody offers operational benefits and convenience, it also comes with risks and associated costs as an external service provider introduces inherent counterparty risks. Organizations must carefully assess custodians to ensure credibility and adherence to strict security practices. In addition, this also introduces some operational dependency and will inevitably lead to less amount of inhouse Web3 experts that could spark new ideas around those topics. Organizations must weigh these risks, and opportunity costs against the benefits and potential operational efficiencies that result from outsourcing these tasks.

In summary, third-party custody solutions represent a pragmatic approach for organizations looking to manage certain parts in their Web3 journey. The decision between self-custody and third-party custody involves a granular assessment of the counterparty risks, operational dependencies and associated costs that shape the organization's Web3 integration strategy.

[6] A seed phrase is a set of words used to generate cryptographic keys in a deterministic manner, commonly used in cryptocurrency wallets to secure and recover access to digital assets.

3.5 Legal aspects

In navigating the complex terrain of Web3, it is critical for Finance and Treasury departments to closely monitor the evolving regulatory landscape, which spans across multiple jurisdictions worldwide. However, the legal and regulatory requirements in this swiftly changing domain extend beyond the purview of Finance and Treasury departments alone. There is a pressing need for a close alignment with Legal and Compliance departments and/or specialized external legal advisors. This collaborative approach ensures a holistic understanding and adherence to the regulatory standards, incorporating insights and guidance not just from a financial management perspective but also considering the legal nuances and compliance mandates that are equally critical. This section aims to provide an overview of selected legal considerations in Web3, adopting a jurisdiction-neutral perspective to account for the varied legal nuances each region presents. Departments are advised to establish robust procedures for ongoing tracking of regulatory updates, paying keen attention to guidance from leading regulators such as the SEC in the United States, ESMA in Europe, or FINMA in Switzerland. This approach should not only focus on supervisory laws but also extend to encompass a broader spectrum of legal areas, including, for example, local public laws, criminal laws, or civil laws. Adopting such a comprehensive and proactive stance, facilitated by the collaboration between Finance, Treasury, Legal, and Compliance departments, is crucial for maintaining compliance, minimizing legal risks, and ensuring the seamless operation of organizations within the dynamic Web3 ecosystem.

Financial crime compliance

In the dynamic realm of Web3 and the broader spectrum of crypto assets, financial crime compliance confronts nuanced challenges. The inherent traceability of crypto assets through blockchain analytics represents a significant leap forward in monitoring transactions for potential illegal activities. However, complexities arise, particularly with NFTs, which are not as straightforwardly captured by conventional monitoring tools and in many jurisdictions not fully regulated.

Given these challenges, Finance departments together with Compliance teams must refine their approach to financial crime compliance within the Web3 ecosystem. This involves:

- Adopting specialized blockchain analytics tools: Leveraging emerging technologies and platforms specifically designed for the nuanced nature of NFTs and other complex crypto assets.
- Enhanced due diligence processes: Applying more rigorous scrutiny to transactions and parties involved in the NFT space, recognizing the higher risk of money laundering and other financial crimes.

Intellectual property rights and ownership

In the Web3 landscape, marked by the introduction of innovative assets like NFTs, intellectual property (IP) rights emerge as a critical area for careful navigation. The complexity arises from distinguishing between the digital token's ownership and the IP rights of the content it represents. This structured approach aims to clarify these nuances, providing stakeholders with essential guidance for managing IP rights effectively in the Web3 space.

Ownership of a digital token, such as an NFT, does not inherently grant the owner comprehensive rights to the underlying digital content. It is essential to clearly differentiate between holding a digital token, which is a record on the blockchain, and possessing the intellectual property rights of the associated content. Understanding this distinction is foundational for engaging in legally sound transactions within the Web3 environment.

Each transaction involving NFTs must be supported by detailed contracts. These documents should outline the rights being transferred, including any limitations. By specifying whether rights such as reproduction, distribution, or display are included in the transaction, parties can avoid future disputes and align on the asset's value and permitted uses. A potential elegant solution is to embed the legal conditions into the smart contract.

Engaging in due diligence before transactions is crucial. This process involves verifying the asset's origin, ensuring the seller has the legal right to transfer ownership, and clarifying any associated IP rights. Such diligence helps prevent disputes related to copyright infringement or contested ownership, safeguarding all parties involved.

Smart contract enforceability

For Finance departments engaging with smart contracts, verifying their legal soundness and enforceability is crucial. This includes ensuring that smart contracts are not only technically robust but also legally compliant across jurisdictions. Incorporating mechanisms for arbitration and dispute resolution specific to the Web3 ecosystem can provide clear pathways for addressing any disputes that might arise, with real-world cases offering valuable insights into navigating these challenges.

Data privacy and security

In the evolving landscape of Web3, characterized by financial transaction in the context of blockchain technology and the proliferation of NFTs, the challenge of maintaining data privacy becomes increasingly complex. This complexity is heightened under the stringent requirements of e.g., the General Data Protection Regulation (GDPR) but also local laws, which emphasizes the protection of personal data and the individual's right to control it, including the right to have it erased.

A pivotal technology in addressing these privacy challenges is zero-knowledge proofs (ZKPs). ZKPs allow for the verification of transactions on the blockchain without revealing any underlying personal information, thereby preserving user anonymity. This feature is particularly beneficial in meeting e.g., GDPR's privacy requirements, as it enables organizations to process transactions without directly accessing or storing sensitive user data that could potentially fall under e.g., GDPR scrutiny.

Beyond privacy, the security of blockchain transactions, especially those executed through smart contracts, is critical. Vulnerabilities in smart contracts can expose users to financial risks and data breaches. To mitigate these risks, conducting thorough audits of smart contracts is crucial. Implementing best practices in smart contract development enhances the security of these digital agreements, ensuring that they are both tamper-proof and compliant with privacy regulations.

The adoption of zero-knowledge systems represents a potential solution to minimizing e.g., GDPR compliance risks. By leveraging technologies that inherently protect user data by design—such as ZKPs—organizations can significantly reduce their exposure to data privacy penalties. However, these systems must ensure that personal data is neither stored in non-compliant ways nor accessible by unauthorized parties, thus streamlining data privacy compliance efforts.

Consumer and asset protection

The surge in scams and fraudulent schemes in the Web3 realm underscores a critical demand for strengthening consumer protection. To increase confidence in Web3, it is imperative to establish legal structures that not only shield consumers from potential harm but also foster an environment of openness and responsibility. This involves not just reactive measures but proactive strategies that educate and empower users to navigate the Web3 space safely. Additionally, regulated frameworks are currently being developed to safeguard crypto assets offer valuable blueprints. These models advocate for comprehensive consumer protection, clear disclosure requirements, and effective recourse mechanisms, laying the foundation for a secure and trustworthy Web3 ecosystem.

Additionally, adhering to financial markets laws, such as the regulation of custody of crypto-assets and custody standards, is essential. These laws are pertinent because they ensure the safekeeping of assets, which is a significant concern in the crypto-asset space.

Navigating jurisdictional challenges in cross-border transactions

The borderless nature of Web3 poses significant jurisdictional challenges for Finance departments, especially in dispute resolution and legal enforcement. A thorough understanding of international laws, treaties, and the legal frameworks of all involved jurisdictions is necessary to navigate these complexities effectively. Preparing for the legal nuances of cross-border transactions will ensure smoother operations and compliance in the global Web3 environment.

Understanding tax implications

The tax treatment of crypto assets is a critical consideration for Finance departments. Navigating the tax landscape requires an understanding of valuation, reporting obligations, and the tax implications of cross-border transactions. Staying informed of local and international tax laws will enable departments to manage tax liabilities effectively and avoid potential pitfalls.

04 Closing

Where does Finance currently stand in the Web3 environment - on the field or on the sideline? Our survey reveals that the opinion among Swiss Finance professionals remains ambiguous. While some recognize the necessity for Finance to be actively involved and educated in Web3 initiatives, others do not see the need at all. Presently, Web3 initiatives are predominantly driven by business, with Finance rarely taking the lead in these projects. Our study underscores various use cases and outlines how Finance is impacted.

We believe that tasks such as facilitating crypto asset payments, devising storage concepts, and managing the financial risks associated with crypto assets fall under the scope of Treasury departments. Alongside the imperative for Finance professionals' involvement, our study also identifies opportunities for Treasury departments, including staking, decentralized exchanges (DEXs), and continuous payment streaming.

Nevertheless, it's undeniable that alongside these opportunities, numerous challenges persist, such as the accounting treatment of digital assets, legal considerations, storage solutions, and the scarcity of technical expertise. Nonetheless, the potential for substantial revenue generation is evident, with new streams poised to significantly impact companies' future growth and success. Considering the substantial spending by younger generations in digital and virtual realms today, coupled with the likelihood that this affinity for Web3 will endure, companies must prepare early to adapt to these new realities. Early adopters and swift followers stand to gain a strategic advantage in capturing these revenues. We encourage Finance professionals to broaden the strategic scope and enhance the overall efficiency of their roles. By doing so, they will solidify their position as strategic partners within their businesses, leading the successful implementation of Web3 initiatives that support future growth and align with corporate strategies. This proactive stance is crucial for thriving in an increasingly digital era, positioning Finance departments as pivotal enablers for company-wide adaptation to Web3 technologies, thereby transitioning from the sideline to the field.

05 Your Experts in Switzerland

Finance & Treasury

Technology Strategy

Digital Law

HSLU

Sven Göggel
Partner
sven.goeggel@ch.ey.com
+41 79 7119137

Roger Disch
Partner
roger.disch@ch.ey.com
+41 79 9307835

Mascha Steenblock
Senior
mascha.steenblock@ch.ey.com
+41 79 3978718

Wolter Jalink
Partner
wolter.jalink@ch.ey.com
+41 79 6483951

Benjamin Banusch
Senior Manager
benjamin.banusch@ch.ey.com
+41 79 5797262

Tobias Schaffner
Senior
tobias.schaffner@ch.ey.com
+41 79 2886974

Darko Stefanoski
Partner
darko.stefanoski@ch.ey.com
+41 79 9387645

Orkan Sahin
Senior Manager
orkan.sahin@ch.ey.com
+41 79 9237415

Maxime Ochrymowicz
Consultant
maxime.ochrymowicz@ch.ey.com
+41 79 7487256

Thomas K. Birrer
Professor
thomas.birrer@hslu.ch
+41 41 7576767

Thomas Ankenbrand
Professor
thomas.ankenbrand@hslu.ch
+41 41 7576723

Denis Bieri
Lecturer
denis.bieri@hslu.ch
+41 41 7576749

06 Literature/Sources

Bank for International Settlement (2024). Project mBridge: connecting economies through CBDC. https://www.bis.org/publ/othp59.htm

Bank for International Settlement (2024). Project mBridge: experimenting with a multi-CBDC platform for cross-border payments. https://www.bis.org/about/bisih/topics/cbdc/mcbdc_bridge.htm

Birrer, T. K., Amstutz, D. & Wenger, P. (2023) Decentralized Finance. From Core Concepts to DeFi Protocols for Financial Transactions. Springer Nature.

Birrer, T., et al. (2022). Digitalisierung des Corporate Treasury Managements. Analyse anhand eines innovativen Reifegradmodells. Rotkreuz: Verlag IFZ - Hochschule Luzern.

Buterin, V. (2013). A next generation smart contract & decentralized application platform. https://blockchainlab.com/pdf/Ethereum_white_paper-a_next_generation_smart_contract_and_decentralized_application_platform- vitalik- buterin.pdf

Coinbase. (2023) The State of Crypto - Corporate Adoption.

Coinbase (2024). What is Dex? https://www.coinbase.com/learn/crypto-basics/what-is-a-dex

Coinbase (2024). What is staking? https://www.coinbase.com/learn/crypto-basics/what-is-staking

Cryptopedia (2023). What Is a DEX (Decentralized Exchange)? https://www.gemini.com/cryptopedia/decentralized-exchange-crypto-dex

DefiLlama (2024), Categories. https://defillama.com/categories

Defiprime (2024). Decentralized exchanges. https://defiprime.com/exchanges

EY (2021). Applying IFRS – Accounting by holders of crypto assets. https://www.ey.com/en_gl/ifrs-technical-resources/accounting-by-holders-of-crypto-assets-updated-october-2021

Grigo, J. (2020). Decentralized Finance (DeFi) - A new fintech revolution? www.bitkom.org

Harvey, C., Ramachandran, A., Santoro, J. (2021) DeFi and the Future of Finance. Wiley.

Hedera (2024). The Rise of DeFi Lending and How to Get Involved. https://hedera.com/learning/decentralized-finance/defi-lending

John, J., & Lundy-Bryan, L. (2019). Mapping Decentralized Finance (DeFi). https://outlierventures.io/wp-content/uploads/2019/06/Mapping-Decentralised-Finance-DeFi-report.pdf

Kaur, G., Corner, K. (2024). What are decentralized exchanges, and how do DEXs work? https://cointelegraph.com/learn/what-are-decentralized-exchanges-and-how-do-dexs-work

Kelly, D. (2021). A Virtual Gucci Bag Sold For More Money on Roblox Than The Actual Bag. A Virtual Gucci Bag Sold For More Money on Roblox Than IRL | Hypebeast

Kumar, A., et al (2024) Central Bank Digital Currency Tracker. Central Bank Digital Currency Tracker - Atlantic Council

Lau, D., et al. (2021). How to DeFi: Beginner. 2nd ed., May 2021. CoinGecko.

Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016) Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. Princeton University Press.

Robertson, D. (2024) Future Finance. Future Finance: Transforming Skill Sets With Emerging Technology (forbes.com)

Rodeck, D., Adams, M. (2024). Crypto Staking Basics. https://www.forbes.com/advisor/investing/cryptocurrency/crypto-staking-basics/

Sablier (2024). On-chain token distribution. https://sablier.finance

Schär, F. (2020). Decentralized finance: On blockchain- and smart contract-based financial markets. SSRN Electronic Journal.

Superfluid (2024). https://app.superfluid.finance

Stellar (2024). LENDING AND BORROWING MARKETS. https://stellar.org/learn/lending-and-borrowing-markets

Szabo, N. (1994). Smart contracts. https://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart.contracts.html

Szabo, N. (1996). Smart contracts: Building blocks for digital markets. https://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_2.html

Takyr, A. (2024). How does Defi landing work? https://www.leewayhertz.com/how-defi-lending-works/

Tapscott, D., & Tapscott, A. (2016) Blockchain revolution: how the technology behind bitcoin is changing money, business, and the world. Penguin.

EY | Building a better working world

EY exists to build a better working world, helping to create long-term value for clients, people and society and build trust in the capital markets.

Enabled by data and technology, diverse EY teams in over 150 countries provide trust through assurance and help clients grow, transform and operate.

Working across assurance, consulting, law, strategy, tax and transactions, EY teams ask better questions to find new answers for the complex issues facing our world today.

ey.com/ch