THEWEALTHMOSAIC

WealthTech Views Report:
DLT & Blockchain 2022

A collection of industry viewpoints focused on DLT & Blockchain and how they are shaping the future of wealth & asset management

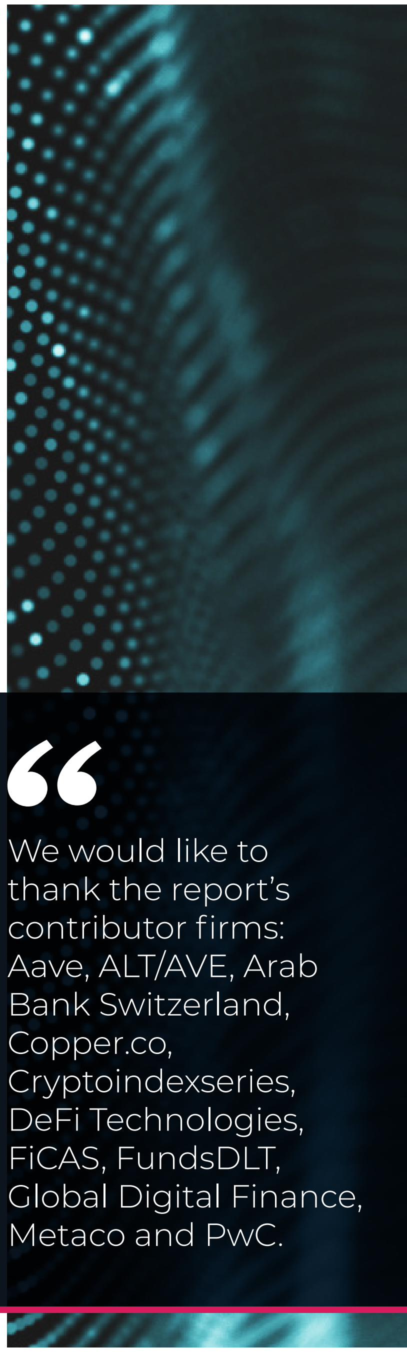
Featuring contributions from Aave, ALT-AVE, Arab Bank Switzerland, Copper.co, CryptoIndexSeries, DeFi Technologies, FiCAS, FundsDLT, Global Digital Finance (GDF), Metaco and PwC.

April 2022

In partnership with

Efi Pylarinou.
Fintech & Blockchain Advisor

Contents



> “We would like to thank the report’s contributor firms: Aave, ALT/AVE, Arab Bank Switzerland, Copper.co, Cryptoindexseries, DeFi Technologies, FiCAS, FundsDLT, Global Digital Finance, Metaco and PwC.

Welcome to DLT&Blockchain2022

The first edition of this report, How DLT & Blockchain are Shaping the Future of Asset & Wealth Management, was launched in November 2020 and, undoubtedly, the interest and activity in this area has grown significantly since. The market continues to move apace. Time, therefore, for a second edition of this report to look further into the impact of these trends on the industry.

The market capitalization of cryptocurrencies has grown by 250% even though the market is down roughly 40% from its all-time high of circa US$3 billion in November 2021. DeFi (Decentralized Finance) has not only grown 320% plus (also down circa 30% from its all-time high) but is also not any longer considered an experiment. Compliant bridges are being built between the CeFi (Centralized Finance) and DeFi. Enterprise adoption of Distributed Ledger Technology (DLT) in capital markets is on the rise and the fact that 80% of central banks globally are looking into launching CBDCs, and nine countries have already launched initiatives, is a testament to the impact today of DLT in financial markets.

Furthermore, the World Economic Forum estimates that up to 10% of global GDP will be stored and transacted via DLT by 2027. These estimates translate to a whopping US$24 trillion. A massive marketplace sits before us all.

In the fourth quarter of 2021, we saw a further set of milestone events in capital markets, investing and banking, all powered by DLT. These are all firsts and give us a clear glimpse into the future of financial services which will include the adoption of Blockchain and DLT in the daily operations of the investment marketplace across the world.

In September 2021, the stamp of approval was given for the first regulated exchange powered by DLT. FINMA, the Swiss financial markets regulator, also gave regulatory approval to the SIX Digital Exchange (SDX) to operate an exchange and central securities depository for Digital Assets in Switzerland. This means that digital securities issued natively on the Blockchain, or tokenized structures of existing financial securities, will be processed in a fully compliant and secure way.

> “Blockchain is at its core a collaborative technology with built-in transparency and can become core to the next frontier of Open Finance and Open Business.
>
> Dr. Efi Pylarinou, Global Fintech & Tech Influencer

In October 2021, the French Central Bank (Banque de France), along with a consortium of participants, successfully completed an important cross border pilot. This included both a wholesale CBDC (wCBDC) transaction but also one with the settlement of French government bonds (OATs), natively issued on a permissioned DLT ledger, in wCBDC.

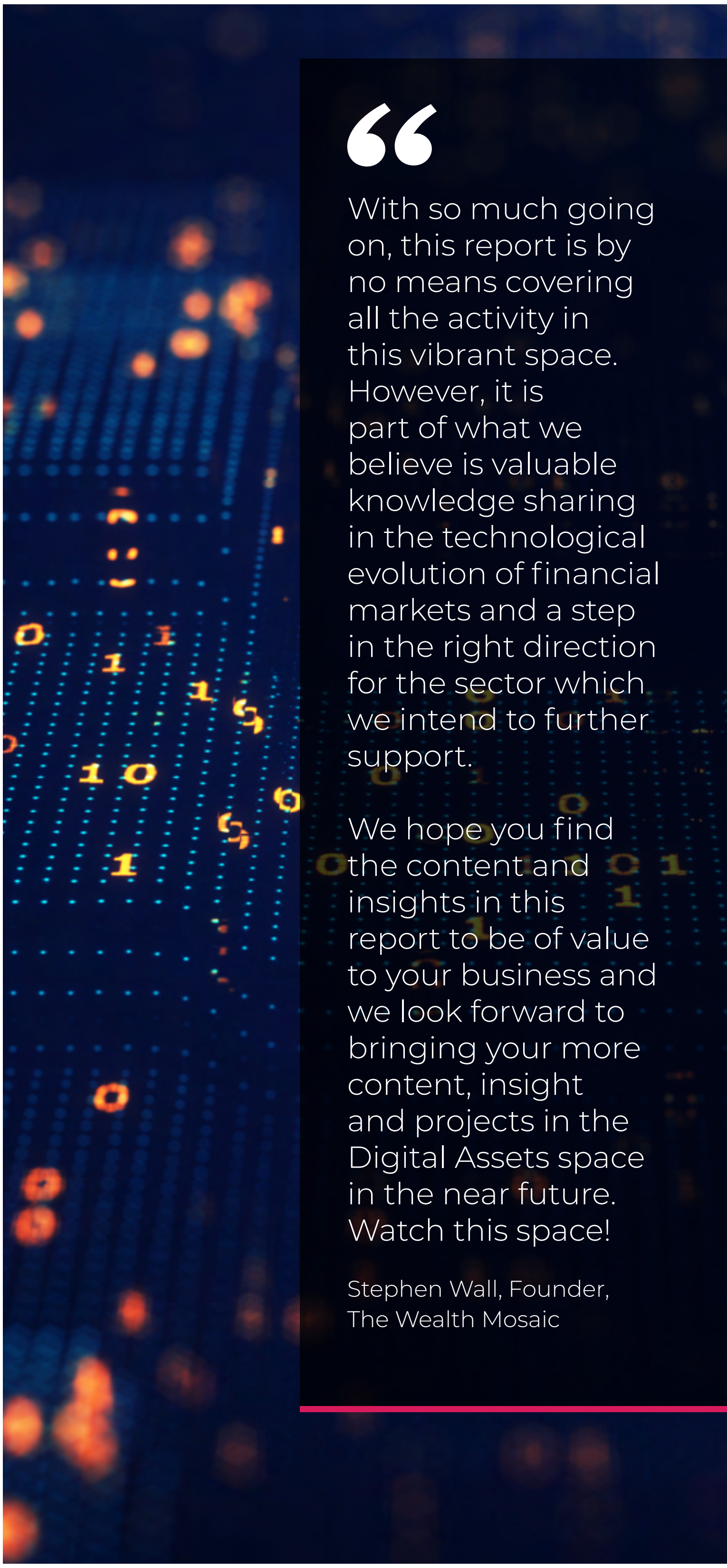
There are several similar ongoing projects globally, like Ubin III by the Monetary Authority of Singapore, Jasper III by the Bank of Canada, Helvetia by the Swiss National Bank, and Trigger by the Bundesbank.

In November 2021, the Bank for International Settlements (BIS) and the Hong Kong Monetary Authority (HKMA) completed Project Genesis which is a prototype for digital platforms enabling green bond issuance.

We are now truly sitting on the cusp of a groundbreaking change in the way financial services marketplaces function due to DLT. What we have highlighted above offers us just a small yet tantalizing taste of what is to come in the days, weeks, months and years ahead.

In this second edition of our report, we again profile a series of solution providers in this space, their offerings to the market and their thought leaders. We also include an opinion piece from Lawrence Wintermeyer, Executive Co-Chair of Global Digital Finance (GDF), a non-profit industry membership body promoting the adoption of best practices for Digital Assets and Digital Finance technologies; and from Dr. Guenther Dobrauz, Partner and Leader of PwC Legal Switzerland and a long-time proponent of `the future is decentralized`.

Thanks also to the report's contributor firms: Aave, ALT/AVE, Arab Bank Switzerland, Copper, Cryptoindexseries, DeFi Technologies, FiCAS, FundsDLT, Metaco and PwC.



> "With so much going on, this report is by no means covering all the activity in this vibrant space. However, it is part of what we believe is valuable knowledge sharing in the technological evolution of financial markets and a step in the right direction for the sector which we intend to further support.
>
> We hope you find the content and insights in this report to be of value to your business and we look forward to bringing your more content, insight and projects in the Digital Assets space in the near future. Watch this space!
>
> Stephen Wall, Founder, The Wealth Mosaic

Report Structure & Headlines

This second edition of our DLT & Blockchain focused WealthTech Views Report, DLT & Blockchain 2022, includes the views from 11 solution providers/thought leaders from across the globe. We also highlight the first participation of a publicly traded company, Defi. Tech (DEFI.NE), a testament to the maturity of the space. Diverse participants present their views on their focus area of the market and highlight how their solutions can be deployed by asset and wealth management firms. Areas included in this edition are custody technologies, fund distribution technologies, investment management technologies, investment products, RegTech solutions, DeFi technologies and technologies that bridge Defi with Cefi.

This report is structured based on the following two areas of questioning:

1. Market: What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

2. Solution: What solutions does your company offer that asset and wealth management firms should consider?

This report has been compiled in partnership by:

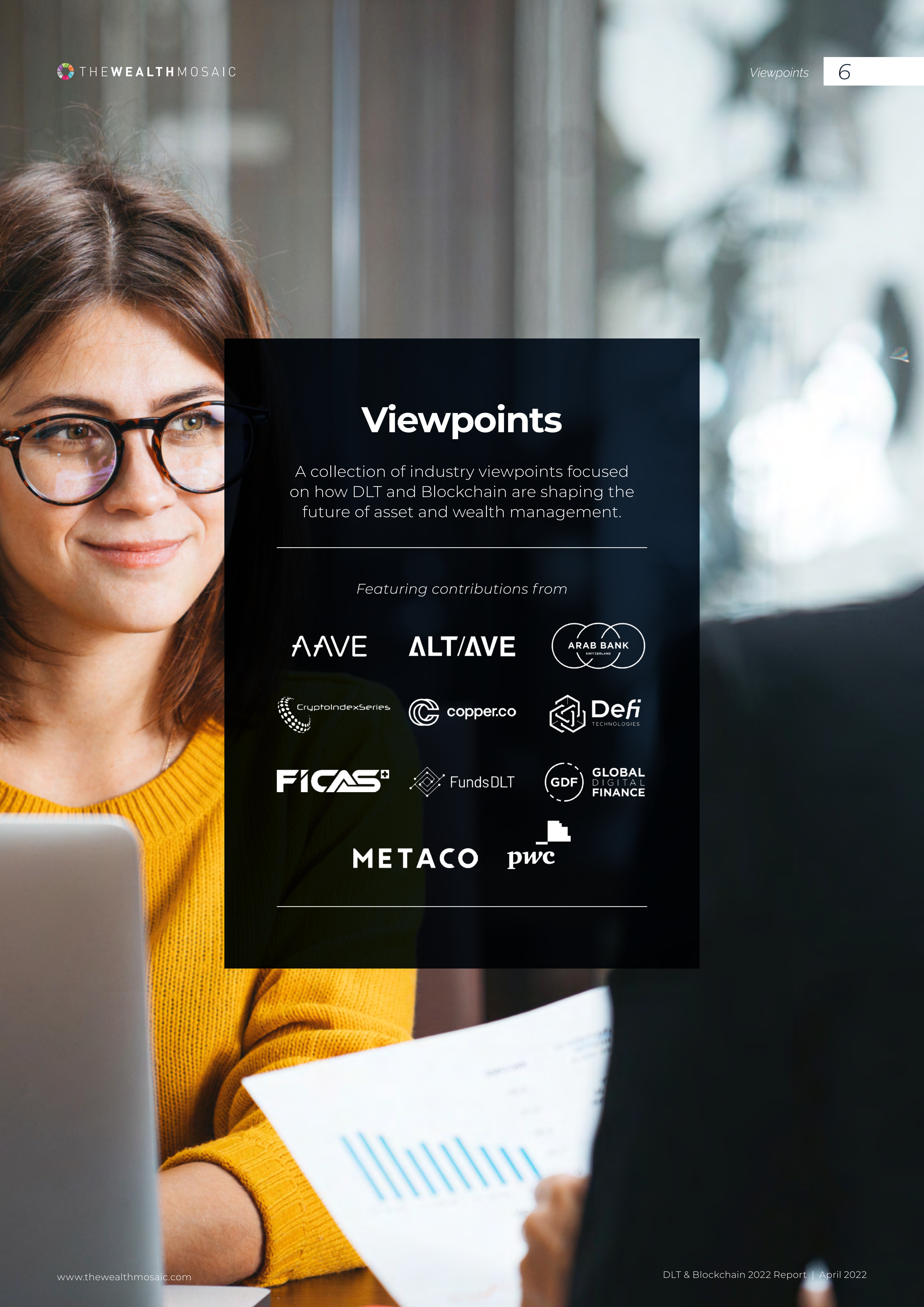
Dr. Efi Pylarinou - a Global Fintech & Tech Influencer and an ex-Wall Street professional focused on building bridges between the traditional and the new economy.

The Wealth Mosaic - a digital solution provider directory and knowledge resource built for a changing and technology-enabled wealth management marketplace.

In addition, this report will be co-distributed by Global Digital Finance (GDF), a non-profit association advocating and accelerating the adoption of best practices for Digital Assets.

The main trends

- **Institutional-grade custody of Digital Assets** is one of the more mature subsectors with a plethora of tech solutions, far superior to those available for retail.
- Similarly, there are **increasingly more tech stack offerings for traditional institutions** (banks, brokers, asset managers, etc.) to create new businesses with the digital asset class.
- **Retail banks and private banks are steadily adding digital asset related services**, typically starting with custody services for their clients and moving into asset management.
- The **growth of the investment product range of traditional wrappers** (ETP, ETNs, and AMCs with ISINs) providing exposure to cryptocurrencies, continues. The difference is that we are seeing more actively managed strategies, more competitive offerings in the passive ones, and more customized structured products.
- The institutional demand for DeFi has led to the **launch of the first permissioned compliant Defi Protocol** that operates by white-listing users.
- The deployment of **DLT as an infrastructure to issue and distribute financial securities** (fixed income, fund structures, private securities, etc.) has started happening.



Viewpoints

A collection of industry viewpoints focused on how DLT and Blockchain are shaping the future of asset and wealth management.

Featuring contributions from

AAVE
ALT/AVE
ARAB BANK SWITZERLAND
CryptoIndexSeries
copper.co
Defi TECHNOLOGIES
FICAS
FundsDLT
GDF GLOBAL DIGITAL FINANCE
METACO
pwc

Introducing
Global Digital Finance (GDF)

London,
United kingdom

Global Digital Finance is an industry body driving the acceleration and adoption of digital finance to support the next era of digitized commerce, dedicated to the advancement of next-generation technologies in finance.

Mission Statement

The global formation and distribution of capital has value to both new market entrants and incumbents in financial services. Global Digital Finance endeavours to drive efficient, fair and transparent crypto-asset markets by building a knowledge base and best practice for "Truly Digital" finance and the benefits tokens can bring all market participants. We promote an inclusive vision for financial services in which crypto assets and token markets can evolve and grow in complement within traditional financial services.

Consultation

Global Digital Finance is open and inclusive, bringing together market participants from the public and private sectors to collaborate within forums and working groups to leverage the benefits of industry participation and continually seeks feedback from the wider community.

Founded
2018

HQ Address
160 City Road
London
EC1V 2NX
United Kingdom

Company Size
1-10 employees

Website
www.gdf.io

Presence
Asia, Eastern Europe, North America,
South America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers,
Broker / Broker-Dealers, Digital Wealth Managers,
Financial Advisors

> "Bitcoin remains the best-performing asset class over the past ten years, across all other asset classes on the planet, with an annualized compound return rate of more than 200%

Featured Thought Leader

Lawrence Wintermeyer
Exec Co-Chair
lawrence@gdf.io

Lawrence is a globally recognised digital finance advocate with a track record as an advisor, executive, and board member, working with startups to institutions. He is the Executive Chair of Global Digital Finance, a not for-profit promoting fair and transparent markets for crypto and Digital Assets, and is the former CEO of Innovate Finance, the UK FinTech Members Association.

He is the Principal of Elipses, a digital investment management firm focused on sustainable investments, systematic investment management strategies, big data analytics, machine learning, and DLT technologies. Lawrence has an MBA, is a regular Forbes and FinTech. TV contributor, and promotes ethical and sustainable finance policies for a transparent, secure, and quality digital future for everyone.

Investors allocate to Digital Assets amidst global volatility

GDF GLOBAL DIGITAL FINANCE

London, United kingdom

We started working on the Global Digital Finance (GDF) project in mid-2017 when indications were the Initial Coin Offering (ICO) market was getting very hot. As a community of digital pluralists with experience in retail and capital markets, FinTech, regulation and Blockchain, the community is what I call "long on Digital Assets", and we were concerned about the quality of many of the tokens, and the negative impact for investors.

Our goal was to write a token taxonomy and a code of conduct by convening an open global community of willing professional contributors, the "power of the crowd". Following a rigorous process of development, peer review, open public consultation, and regulator purview, we offered the taxonomy and code to global industry players and means of demonstrating they were abiding by jurisdictional and global laws and meeting a high standard in their crypto and digital asset endeavours.

Fast forward to today, GDF has 10 codes of conduct and over 150 members in our Code Programme, including firms like Coinbase, Bitmex, Huobi, R3, ConsenSys, ING, London Stock Exchange Group, Standard Chartered and EY, and hundreds of community members who contribute to working groups, opens standards, and reports. This progress the community has made is a powerful indicator of how mature the crypto and Digital Assets sector has become.

GDF's main priority in 2022, as ranked by our members, is to deliver advocacy and outreach. We host a GDF Regulator (ONLY) Forum with over 35 jurisdictional regulators and agencies in attendance quarterly and deliver industry responses to key industry and public consultations. We are also focused on outreach programs with policymakers and regulators on DeFi, Stablecoins, and RegTech / SupTech, and with central bankers on CBDCs.

2022 has already seen an unprecedented level of activity from global policymakers and regulators around crypto, and the Ukraine crisis has sharpened the focus on sanctions. War has again come to Europe and along with it, a greater degree of uncertainty for investors. The Ukraine crisis has seen an immediate impact on markets, with the West's enforcement of sanctions against Russia including its Central Bank, and individuals associated with the regime.

Safe harbor assets such as gold are back in demand with the prices crossing the US$2,000 barriers, not crossed since 2020. Goldman Sachs analysis indicates that Bitcoin has 20 percent of the store of value market, which it shares with gold, and that a US$100,000 price per Bitcoin is hypothetically achievable over the next five years with rising prices.

Bitcoin remains the best-performing asset class over the past ten years, across all other asset classes on the planet, with an annualized compound return rate of more than 200%, with only two draw down years over the period where 2018 saw most major asset classes in the red. The crypto markets swelled to over US$3 trillion in late 2021, aided by institutions of all types getting into the market, before January markets pulled back leaving crypto markets at US$2 trillion.

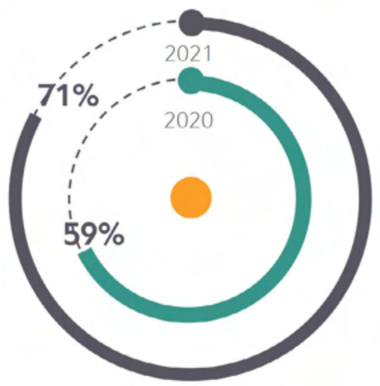
Figure 1: Charlie Billello 10 asset class performance

@CharlieBilello		Asset Class Total Returns over Last 10 Years (as of 3/13/21)											Data Source: YCharts	
ETF	Asset Class	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 YTD	2011-21 Cumulative	2011-21 Annualized
N/A	Bitcoin ($BTC)	1473%	186%	5507%	-58%	35%	125%	1331%	-73%	95%	301%	109%	20037142%	230.6%
QQQ	US Nasdaq 100	3.4%	18.1%	36.6%	19.2%	9.5%	7.1%	32.7%	-0.1%	39.0%	48.6%	0.5%	541.3%	20.0%
SPY	US Large Caps	1.9%	16.0%	32.2%	13.5%	1.2%	12.0%	21.7%	-4.5%	31.2%	18%	5.4%	282.4%	14.0%
IWM	US Small Caps	-4.4%	16.7%	38.7%	5.0%	-4.5%	21.6%	14.6%	-11.1%	25.4%	20.0%	19.1%	244.7%	12.9%
VNQ	US REITs	8.6%	17.6%	2.3%	30.4%	2.4%	8.6%	4.9%	-6.0%	28.9%	-4.7%	7.9%	147.7%	9.3%
TLT	Long Duration Treasuries	34.0%	2.6%	-13.4%	27.3%	-1.8%	1.2%	9.2%	-1.6%	14.1%	18.2%	-13.5%	88.7%	6.4%
PFF	Preferred Stocks	-2.0%	17.8%	-1.0%	14.1%	4.3%	1.3%	8.1%	-4.7%	15.9%	7.9%	-0.6%	76.3%	5.7%
EFA	EAFE Stocks	-12.2%	18.8%	21.4%	-6.2%	-1.0%	1.4%	25.1%	-13.8%	22.0%	7.6%	4.6%	76.3%	5.7%
HYG	High Yield Bonds	6.8%	11.7%	5.8%	1.9%	-5.0%	13.4%	6.1%	-2.0%	14.1%	4.5%	-0.2%	71.0%	5.4%
LQD	Investment Grade Bonds	9.7%	10.6%	-2.0%	8.2%	-1.3%	6.2%	7.1%	-3.8%	17.4%	11.0%	-6.4%	69.4%	5.3%
EMB	EM Bonds (USD)	7.7%	16.9%	-7.8%	6.1%	1.0%	9.3%	10.3%	-5.5%	15.5%	5.4%	-5.8%	62.4%	4.9%
TIP	TIPS	13.3%	6.4%	-8.5%	3.6%	-1.8%	4.7%	2.9%	-1.4%	8.3%	10.8%	-2.1%	40.3%	3.4%
EEM	EM Stocks	-18.8%	19.1%	-3.7%	-3.9%	-16.2%	10.9%	37.3%	-15.3%	18.2%	17.0%	4.5%	39.8%	3.3%
BND	US Total Bond Market	7.7%	3.9%	-2.1%	5.8%	0.6%	2.5%	3.6%	-0.1%	8.8%	7.7%	-3.7%	39.5%	3.3%
GLD	Gold	9.6%	6.6%	-28.3%	-2.2%	-10.7%	8.0%	12.8%	-1.9%	17.9%	24.8%	-9.5%	16.4%	1.5%
BIL	US Cash	0.0%	0.0%	-0.1%	-0.1%	-0.1%	0.1%	0.7%	1.7%	2.2%	0.4%	0.0%	4.8%	0.5%
DBC	Commodities	-2.6%	3.5%	-7.6%	-28.1%	-27.6%	18.6%	4.9%	-11.6%	11.8%	-7.8%	18.5%	-34.9%	-4.1%
Highest Return		BTC	BTC	BTC	VNQ	BTC	BTC	BTC	BIL	BTC	BTC	BTC	BTC	BTC
Lowest Return		EEM	BIL	GLD	BTC	DBC	BIL	BIL	BTC	BIL	DBC	TLT	DBC	DBC
% of Asset Classes Positive		65%	94%	41%	65%	41%	100%	100%	6%	100%	88%	47%	94%	94%

A 2021 Fidelity survey of institutional investors found that 70% were already invested in crypto. Diversified portfolios have been popular with investors over the past 20 years with allocations to alternatives such as commodities, and allocations to cryptocurrencies with their outstanding performance and low historic correlation to other asset classes is understandable.

Institutions are using a range of vehicles to access the cryptocurrency markets from funds like the Grayscale Bitcoin Trust fund (GBTC) which trades directly on the U.S. stock market to NYDIG, the crypto fund manager. Exposure to crypto through publicly traded companies like Coinbase is proving popular, as is accessing the many ETFs available, including specialist areas like the crypto exchanges or bitcoin miners through ETFs offered by Valkyerie.

Figure 2: Future purchase intent of Digital Assets (US & Europe) (source)



A healthy indicator of the demand that is driving traditional financial institutions to offer crypto products and services is the number of institutional investors offering crypto services. Custodians lead the way here with Fidelity, State Street, ING, Standard Chartered, and BNY Mellon all offering crypto custody solutions.

U.S. pension fund the Houston Firefighters' Relief and Retirement Fund (HFRRF) announced in 2021 that it was investing US$25 million in bitcoin, the first time a U.S. pension fund is reported to have directly in cryptocurrencies. Fairfax County's Virginia's Police Officers Retirement System have taken exposures in cryptocurrency, and PIMCO announced in October that several of its fund portfolios are already trading crypto-linked securities.

In November 2021, Swiss Digital Exchange (SDX) issued its first native digital bond with Credit Suisse and UBS Investment Bank on R3 infrastructure and has announced that digital security tokens are not far behind. With over 100 central bank projects looking at central bank digital currencies (CBDCs) including the U.S. Fed, the Bank of England and the European Central Bank, we can expect to see major Western bank issues CBDCs sometime over the next five years, with the Swiss National Bank Project Helvetia releasing its wholesale CBDC project findings shortly.

Digital security tokens, technology that moves private market securities onto smart contracts onto the Blockchain, will open up an estimated US$1 trillion market for primary and secondary funding to all investment segments and bring the access and transparency of public markets to private markets. FinP2P, a decentralized private market digital securities network is leading the way here following a pilot with many of the world's top financial institutions and is launching this spring.

Following the U.S. Senate Agriculture hearings in February, there was bipartisan support, including cross-industry support, for the Commodity Future Trading Commission (CFTC) to have purview of regulation of the crypto spot market. President Biden's Executive recent Order (EO) for Digital Assets focuses on ensuring the U.S. is at the forefront of Digital Assets innovation.

The EO has given agencies up to 180 days to develop their strategies and policies for crypto, Digital Assets, Blockchain technology, and U.S. dollar CBDCs, with the mandate to coordinate across agencies. At the heart of the EO is allowing the Digital Assets sector to flourish, while ensuring that the appropriate consumer, market and fraud protections are built into the policy and legal framework.

The European Parliament's ECON Committee recently voted on the Markets in Crypto Assets Regulation (MiCA), voting down references to phasing out consensus mechanisms that did not meet a new criteria of minimum environmental sustainability standards and instead approving the rapporteur's compromise and giving him a mandate to go straight through to trilogues. The proof-of-work consensus mechanism underpins many distributed ledger technologies (DLT) including the Bitcoin network on the public Blockchain that mines Bitcoins.

Outstanding crypto-asset performance is one thing, however, the many signs that institutions are adopting crypto and Digital Assets are also a strong indicator of future demand. When major governments start to champion agencies to encourage the innovation of Digital Assets that are safe for consumers and markets, prepare for greater longer-term mass adoption of this asset class.

Introducing
PricewaterhouseCoopers

Zürich, Switzerland

PricewaterhouseCoopers (PwC) is the leading audit advisory company in Switzerland. As an independent member of the international PwC network, we help organizations and individuals create the value they are looking for. PwC's purpose is to build trust in society and solve important problems. We're a network of firms in 156 countries with over 295,000 people who are committed to delivering quality in assurance, advisory and tax services.

Founded
1998

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Company Size
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www.pwc.ch

Presence
Africa, Asia, Caribbean, Central America, Eastern Europe, Middle East, North America, Oceania, South America, Western Europe

Featured Thought Leader

Dr. Günther Dobrauz
Partner, Leader PwC Legal Switzerland
guenther.dobrauz@pwc.ch

Guenther is a Partner with PwC in Zurich and Leader of PwC Legal Switzerland where he also heads the Legal FS Regulatory & Compliance Services practice. He is a member of PwC's Global Legal Leadership Team directing the firm's global legal practice in 90+ countries. He believes that Circular Economy and decentralization are key for our future!

Guenther specializes in structuring, authorization and ongoing lifecycle management of financial intermediaries and their products. His passion as a practicing tech-enthusiast since 2002 is innovation linked to exponential technologies with a particular focus on achieving decentralization and he has also been working to promote real sustainability since 2010 where he advocates a systemwide change towards a circular economy.

He is the author of several books on innovation and disruption and also ones on European, Swiss and Liechtenstein regulation. He also authored and co-authored 100+ publications in international expert magazines and has to date been speaking at more than 200 conferences worldwide.

Next to being a lawyer, Guenther is an entrepreneur and innovator in the legal field fully embracing technology. He believes that his job first and foremost is to provide an inspiring and rewarding environment that allows talent to grow on the basis of what he considers to be the future of legal services: interdisciplinary and diverse teams of passionate specialists working together on the basis of trust and respect and as part of a truly global legal network but also closely connected to all the other areas of expertise within PwC.

Guenther fundamentally believes that regulation has become a strategic dimension and he is passionate about translating legal into business with his team of great Swiss and EU attorneys and lawyers.

He is also passionate about rock music, vinyl records and custom motorcycles. Always interested in innovative ideas, exchange on innovation, legal and regulatory subjects as well as legal talent to join his team.

In conversation with

Dr. Günther Dobrauz, Leader PwC Legal Switzerland

pwc
Zürich, Switzerland

What important regulations are in the process of being finalized that provide clarity for investing in Digital Assets and for Blockchain & DLT as an infrastructure in private and public markets (issuance, trading)?

The Swiss DLT framework (the Federal Act on the adaptation of Federal law to developments in distributed ledger technology) which was adopted by the Swiss Parliament in September 2020.

What progress have you seen in 2021 and foresee for 2022?

At the infrastructure level, new institutional-grade service providers will enter the market and provide DLT based infrastructure for the trading of Digital Assets. This will foster the adoption of DLT as the underlying technology for the issuance of financial instruments.

In the traditional investment world, prospectuses are connected with most financial securities and even derivatives have clear industry standards documentation (ISDA). What is the analogous in the new world?

Applying the substance over form principle, Digital Assets should not be treated any differently if they qualify as a financial instrument, thus the ISDA and prospectuses applies in the same fashion depending on the regulatory qualification of the Digital Assets. For Digital Assets that do not qualify as financial instruments, their selling does not trigger any specific contractual documentation other than regular purchase agreements and general terms and conditions.

“

From a regulatory standpoint, the long-term challenge is to find a dominant regulatory framework which will serve as a reference for the top financial center across the world. It is only once this dominant framework is found that the Digital Assets industry will be able to flourish and scale.

You have been involved in the design of new regulated digital exchanges (e.g. SDX) and many other Blockchain-based projects in different stages of the investment cycle (primary or secondary markets). Can you share with us a few BIG wins-progress and a few long-term challenges?

The granting of a banking license to the two world’s first crypto banks contributed extensively to the development of the Digital Assets industry in Switzerland. Thanks to our leading position in the world as a crypto-friendly regulatory environment, FINMA, the Swiss financial market regulator has gained substantial knowledge and expertise in assessing DLT based business models, ranging from the issuance of Digital Assets, trading activities to more decentralized type of business models such as DeFi and DAOs. The Digital Assets industry is still in its infancy and some key infrastructures are still missing to unlock the full potential of the industry. Amongst them are institutional grade DLT trading facilities and market data providers.

From a regulatory standpoint, the long-term challenge is to find a dominant regulatory framework which will serve as a reference for the top financial center across the world. It is only once this dominant framework is found that the Digital Assets industry will be able to flourish and scale.

What innovative projects has PwC been involved in that use Blockchain & DLT technology in capital markets and asset management, and what are some learnings?

We have been advising a vast range of financial institutions, from the well-established to the emerging ones in setting up their Digital Assets strategy and service offering. Finding compliant ways to offer Digital Assets related services in a highly regulated environment is very challenging. Our multidisciplinary approach was instrumental in bringing innovative solutions to our clients.

The decentralized nature of smart contract-based finance (such as DeFi), and to a larger extent the WEB 3.0 nascent economy continues to present challenges to the regulators across the globe, thus contributing in turn to the need for a dominant regulatory framework.

TWM Digital Assets Series

In partnership with Efi Pylarinou Advisory, The Wealth Mosaic is launching a new content focus around Digital Assets.

TWM is also pleased to announce that, in partnership with Dr. Efi Pylarinou, we are launching an ongoing solution provider directory, content and knowledge program called the **TWM Digital Assets Series**.

The TWM Digital Assets Series will see a mix of activities available on the new TWM website (launch coming soon!) and amplified elsewhere via TWM's social media channels, Dr. Efi Pylarinou's website and social media channels and, where relevant, by partners such as GDF. The Digital Asset Series program will feature a mix of ongoing and one-time efforts including:

Solution Provider Directory

A dedicated Digital Assets Solution Provider Directory within TWM which will host Business and Solution Profiles on either a free or paid, feature-level basis, for relevant firms. This already exists but will be further developed in terms of depth and taxonomy.

Content Hosting & Amplification

Ongoing content hosting across TWM for those firms that engage on a feature-level basis (this is known as TWM Membership), where TWM also shares that content through its social media channels and newsletters. TWM Membership is where TWM becomes a true marketing partner.

TWM Theme

Within the new TWM website will be a Themes section where we will host a dedicated Theme called Digital Assets. This will feature a wide range of content from relevant TWM Members as well as quick links to their business profiles on TWM.

Webinar Series

Hosted by Dr. Efi Pylarinou, we will run a live webinar series with participants to talk all things market trends and developments, products and solutions, and other discussion topics around Digital Assets. THis will dig deep into all things Digital Assets and allow firms to position and educate against core topics.

TWM Reports

In addition to future editions of this WTVR, we also plan further reports focused on the Digital Assets market, including our first Digital Assets WealthTech Landscape Report which will host our extensive directory of solution providers in this area.

In partnership with

Efi Pylarinou.
Fintech & Blockchain Advisor

This new Digital Assets Series fits well into the mission of The Wealth Mosaic to host and create not just the ultimate solution provider directory for the wealth management industry but also a deep knowledge resource for the market. Working together with Dr. Efi Pylarinou, we look forward to growing TWM as a go-to knowledge hub for the fast-moving Digital Assets sector.

Find out more

Introducing
The Aave Companies

AAVE
London,
United Kingdom

The Aave Companies are a group of software development companies that build open-source, Blockchain-based software. The Aave Companies create accessible gateways into the Web3 ecosystem which allow users to control their own financial independence and also innovate ways to change all of the paradigms with which we interact with the Internet. Founded in 2017, the Aave Companies are currently best known for the development of the Aave Protocol, a decentralized and non-custodial liquidity protocol, but are continuing to develop and deploy software that will change all paradigms in today's current society, including but not limited to a decentralized social media protocol – the Lens Protocol, with information available at lens.dev.

Founded
2017

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Company Size
51-200 employees

Website
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Presence
Africa, Asia, Caribbean, Central America, Eastern Europe, Middle East, North America, Oceania, South America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Broker / Broker-Dealers, Digital Wealth Managers, End Private Clients, Endowments, Foundations & Trusts, Financial Advisors

Featured Thought Leader

Stani Kulechov
Chief Executive Officer
wecare@aave.com

Stani Kulechov, Founder and CEO of the Aave Companies, was studying law at the University of Helsinki when he first began learning about smart contracts and thus, about the Ethereum Blockchain network. This led to an exploration of how Blockchain technology could impact the traditional financial system. In 2017, Stani released ETHLend, one of the first DeFi DApps which allowed for peer-to-peer digital asset transactions. Stani has made it his mission to create tools for an open, transparent, and equitable financial ecosystem through various decentralized financials software protocols—most notably, the Aave Protocol.

“

DLT and Blockchain have inspired an entirely new era in finance and it's just the beginning. The rails that are being built today will act to serve as the liquidity layer that enables the open, transparent, and user-owned web. During this transition, there will be plenty more use cases introduced to the market.

In conversation with

Stani Kulechov, CEO

AAVE
London,
United Kingdom

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

As demand for decentralized finance ("DeFi") infrastructure has grown, so too has the profile of users of DeFi protocols—including but not limited to the Aave Protocol. As the protocol built a reputation of security and reliability through 2020, several high net-worth individuals, family offices and certain crypto-aware hedge funds started to utilize the Aave Protocol.

Throughout 2021, other institutional market participants have expressed interest in using the Aave Protocol or related source code. The DeFi market will continue to adapt and evolve in response to this institutional demand.

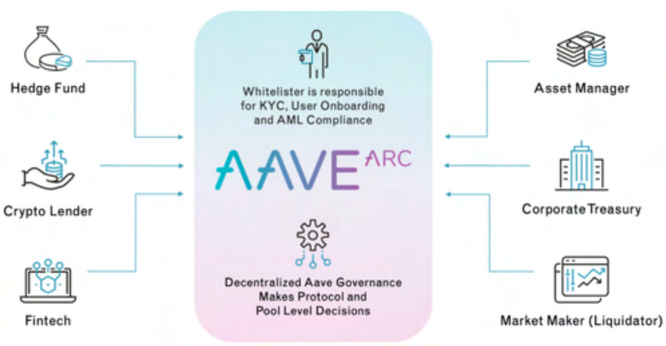
What solutions does your company offer that asset and wealth management firms should consider?

In 2021, a permissioned version of the Aave Protocol, Aave Arc, was launched to help institutions participation in DeFi in line with these institutions' internal compliance policies and guidance.

Aave Arc— a version of the software underlying the Aave Protocol with additional smart contracts that allow for the "whitelisting" of users— was introduced to meet institutional market participant demand for DeFi.

It allows for the same transactions as the Aave Protocol, but only with and among "whitelisted" users— i.e., those users that have undergone uniform know your customer ("KYC") or know your business ("KYB") onboarding procedures. This whitelisting process, subject to the processes and procedures employed by the whitelisters themselves, allows for a uniform AML/CFT (anti-money laundering and countering the financing of terrorism) compliance as well as transaction monitoring employed by those whitelisters.

Figure 1: Aave ARC Ecosystem



Aave Arc is a separate and independent deployment of the Aave Protocol smart contracts in which each user must be onboarded by a whitelister— a regulated entity that is authorized to conduct the requisite level of KYC/ KYB for users.

Fireblocks successfully submitted and launched as the first whitelister for the initial deployment of the Aave Arc smart contracts. As a whitelisting agent, Fireblocks has already approved "40 licensed financial institutions to participate on Aave Arc as suppliers, borrowers and liquidators."

As with all DeFi protocols, Aave Arc will continue to progress and grow and whitelisters will be in the unique position to address and shepherd this new evolution of the DeFi ecosystem.

Introducing
ALT/AVE

ALT/AVE
London,
United Kingdom

Headquartered in London, ALT/AVE is a London-based RegTech company using Distributed Ledger Technology to help financial institutions and adjacent sectors send regulated or mandatory documents digitally to customers through their secure and sustainable digital solution docStribute.

The financial services sector is currently estimated to produce 5.2 billion pieces of paper equivalent to 2.4 million trees annually. ALT/AVE's docStribute is a more environmentally sustainable, digitally secure and cost-effective communication solution for financial services companies, allowing them to better share documents with their customers.

ALT/AVE's solution, docStribute, helps financial institutions and adjacent sectors to streamline the digital distribution of regulated documents in a way that reduces the industry's reliance on paper, therefore significantly reducing environmental emissions. docStribute streamlines digital processes and mitigates the risk of non-compliance, helping meet the strict regulatory requirements set out by the Financial Conduct Authority on how these documents must be distributed, without relying on paper.

Featured Thought Leader

Chris Ansara
CEO & Founder
chris@altave.co.uk

Chris is both Founder and CEO of ALT/AVE, and a digital transformation guru. Prior to founding ALT/AVE, Chris led digital transformation programmes at major financial institutions, where he revolutionized customer communication infrastructure for retail banking customers across branch, call centre and online channels. Chris has worked with many senior product and regulatory stakeholders in various financial institutions to develop content and software solutions that facilitate e-correspondence with customers. Alongside many financial institutions, Chris has also previously worked with some of the world's leading brands including Castrol, Coca-Cola, Adidas and McDonald's.

Founded
2019

HQ Address
3 Queen St
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United Kingdom

Company Size
1-10 employees

Website
www.altave.co.uk

Presence
Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Digital Wealth Managers, Financial Advisors

> The possibilities for what DLT and Blockchain will ultimately bring to the wealth management sector are seemingly only limited by our imagination. The twin obstacles of time and security are both practically eradicated by the technology, with improvements in transparency, compliance, and auditability beneficial to wealth managers, regulators and watchdogs alike.

In conversation with

Chris Ansara, CEO & Founder

ALT/AVE

London, United Kingdom

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

Despite all the media noise surrounding DLT and Blockchain, it is clear that the wealth management industry is in the early stages when it comes to truly realizing the undoubtedly gargantuan benefits the technology is able to deliver.

Thus far much of the hype has been focussed on the retail ownership of crypto assets like Bitcoin and Ether, which is understandable given how this new breed of commodity has so captured public imagination, to the point where ownership of such assets is now almost 5% of the adult population in the UK, and with some institutions and endowments already taking steps to incorporate these products, correctly packaged, into their broader asset allocations. Truth is the philosophical groundwork for the broader acceptance and utilization of DLT and Blockchain has been done; in the retail market people may not fully understand crypto currencies and non-fungible tokens (NFTs) but they, and the technology that underpins them, have been embraced and accepted as a commonplace.

And while the public acceptance of these 'shop window' DLT and Blockchain-based products as trusted and tradable stores of value, in a similar way as shares and even gold have been in the past, is a noteworthy development, what is really exciting is the potential the technology holds for the wider wealth management space. The value chain of custody, exchange, settlement, and digital wallet has been built, tested and is now being used by major industry players. It is also being used for reporting, take NASDAQ Linq as an example, where they leverage a [private] Blockchain to facilitate the insurance, cataloguing and recording of shares of privately-held companies on the NASDAQ Private Market.

More than a single solution or technology, DLT and Blockchain is becoming the underlying approach for global system infrastructure, sitting on top of and integrating into existing systems, and in doing so, is rapidly changing the way regulators, investors, managers and firms communicate and share data. ALT/AVE's flagship product docStribute sits at the forefront of this data transfer and communication revolution.

In the next five to ten years, I would expect the use of DLT and Blockchain to become all but universal thanks to its ability to improve confidence between communicating parties, reduce friction in the value chain and speed up complicated multiple-party processes. There would also seem to be a likelihood that as the new technology takes hold some incumbent players in the value chain may need to be reimagined as the migration to a new model becomes ubiquitous.

As I have already said, the possibilities for what DLT and Blockchain will ultimately bring to the wealth management sector are seemingly only limited by our imagination. The twin obstacles of time and security are both practically eradicated by the technology, with improvements in transparency, compliance, and auditability beneficial to wealth managers, regulators and watchdogs alike.

Moving forward, applications based on DLT and Blockchain need to continue to be adopted by wealth managers, banks and financial institutions of all remits. RegTech is a broad and growing industry, and regulation is important, but must not be a burden to a business, nor hamper growth. Innovative companies like ourselves are the answer. At ALT/AVE, we are using DLT to make client and customer communication digitally smoother, quicker and safer, as well as helping the City curb its environmental impact.

In conversation with
Chris Ansara, CEO & Founder

ALT/AVE
London,
United Kingdom

Q&A

What solutions does your company offer that asset and wealth management firms should consider?

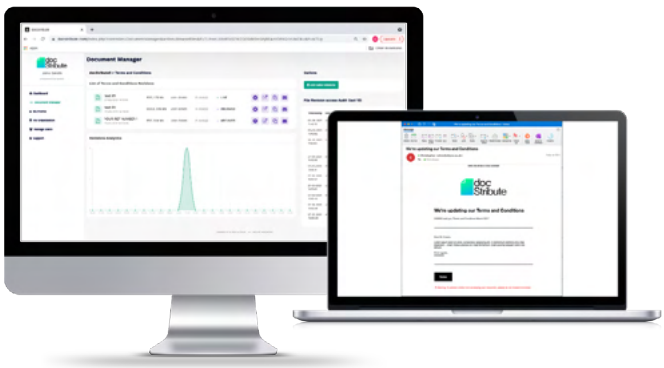
The digital delivery of certain documents such as terms and conditions and customer statements is heavily regulated, complex, and expensive; often resulting in financial institutions reverting to the distribution of printed documents instead, so as to ensure compliance. Not only is this costly, but results in masses of paper waste with the associated significant environmental impact. According to a 2018 EY report, in 2017, financial services companies sent 5.2 billion paper documents to their customers in the post, representing an extremely significant and underreported environmental issue.

ALT/AVE's solution, docStribute, enables financial institutions to distribute mandatory and highly regulated documents and digital signatures to customers, offering a secure and sustainable digital alternative to the post, a practice costing the industry around GB£1.7 billion a year, and using the paper equivalent of 2.4 million trees.

Historically, a major stumbling block for digital distribution solutions was the legal requirement set out by the Financial Conduct Authority (FCA) in 2009 that when communicating with customers certain documents need to be (1) directed to them personally; (2) in a way that is accessible for as long as it's required; and (3) the content must remain unchanged.

Sending documents as attachments via email, while not prohibited, has never been favoured by financial institutions as it can lead to corruption of data; increases the likelihood of 'bounce backs,' or having an email being marked as 'spam,' not to mention the possibility of creating a vector through which malware or ransomware can be propagated. Supplying documents as attachments can also allow the receiver to alter the text.

Figure 3: Using DLT, docStribute allows you to deliver confidential and regulated documents to your customers digitally, via immutable hyperlinks.



However, first of its kind within the financial services sector, docStribute uses DLT to help institutions meet the legal requirements set out by the regulators, without having to resort to unsatisfactory digital methods or sending printed documents via post.

In the past, the industry has leaned towards portals and secure websites for this type of communication, but with adoption rates low and engagement often dropping off, it is difficult to rely solely on portals when there is a duty of care to ensure customers receive their relevant information.

Although there have been numerous advancements in financial technology in recent decades, many facets remain outdated and inefficient. Our core product docStribute is a distributed ledger solution that uses the Hedera Hashgraph network, a decentralized enterprise-grade public network on which anyone can build secure, fair applications with real-time finality.

Leveraging the Hedera network also provides the highest standard of security to prevent malicious attacks. The platform is owned and governed by a council of the world's leading organizations including Boeing, Google, IBM and DLA Piper, just to name a few.

In conversation with

Chris Ansara, CEO & Founder

ALT/AVE
London, United Kingdom

Q&A

When a financial institution sends a document to a customer using docStribute, the asset is run through an advanced algorithm which then generates an immutable hyperlink that can be embedded in an email to the customer with a call to action. Once checks are completed within the client application, the document 'unlocks' and customers are then able to view the document.

Figure 4: docStribute - regulated documents to your customers in just one click

docStribute

Utilizing the Hedera network Consensus Service enables ALT/AVE to prove the integrity of every copy of a given document, ensuring it originated from a trusted source.

Positively too, for the environment, is that once running, docStribute will result in a large reduction in paper usage and a substantial decrease in CO2e per document compared to postal delivery and other digital alternatives. Hedera Hashgraph is also extremely energy efficient when compared to other Blockchains and public ledgers due to the 'proof of stake' consensus mechanism it uses.

Onboarding is an efficient process, and can take as little as a few hours, as docStribute coexists alongside portal technology that is commonplace across the financial sector.

With the current digital alternatives proving insecure or not fit-for-purpose, ALT/AVE's distributed ledger technology solution solves the issues mentioned above and enables wealth managers and other financial institutions to safely and securely deliver these regulated documents to customers via email, providing a cost-effective and sustainable alternative to paper communication.

Above all, in the context of regulation, distributed ledger technology ensures the immutability of important and confidential documents, meaning they cannot be altered or tampered with in any way, therefore, sending documents that are compliant with regulation, as well as highly secure and private for the company and the individual via ALT/AVE's DLT application docStribute, is the best option.

What we are bringing to the table is trust, minus tons and tons of paper, and the associated carbon footprint that comes with it. When I say trust, I mean we're delivering it on multiple levels. For our customers, who need the trust of knowing they are securely meeting all their regulatory obligations, as well as for their customers who can trust us to maintain the integrity of their documents at all times. And finally, for both groups there is the trust that their everyday business is helping the UK, one document at a time, to meet its net zero decarbonization targets, while also scoring high on taxonomy alignment; addressing greenwashing once and for all.

Introducing
Arab Bank Switzerland

Geneva,
Switzerland

Founded in Zug in 1962, Arab Bank Switzerland is a recognized and solid Swiss bank. For 60 years, the bank has become a trusted partner for high-net-worth individuals, including business leaders and family entrepreneurs. It is the sister company of Arab Bank Plc, one of the biggest banks in the Middle East. With a particularly solid balance sheet and a history of stable earnings, even in times of economic turbulence, we are proud of our bank's resilience and financial record.

Arab Bank Switzerland is a bridge between the Arab and Western world, between tradition and modernity. Arab Bank Switzerland is unique because it offers the full spectrum of wealth management, commodity trade finance and, since 2019, Digital Assets.

Indeed, starting from September 2019, Arab Bank Switzerland offers institutional-grade Digital Assets custody and trading solutions to both high-net-worth individuals and institutional clients. Clients now benefit from the security and the safety of a well-capitalized, regulated Swiss bank with more than 60 years of history.

Founded
1962

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Company Size
51-200 employees

Website
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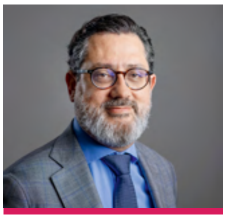
Presence
Eastern Europe, Middle East, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Digital Wealth Managers, End Private Clients, Foundations & Trusts, Financial Advisors

Featured Thought Leader



Rani Jabban
Managing Director
rjabban@arabbank.ch

Rani Jabban is a member of the Executive Committee in charge of Treasury, Trading, Financial Institutions and Digital Assets Services. His 27-year experience in Banking and in particular, Treasury and Trading was essential in one of the most exciting projects the bank has ever known: Digital Assets Services. The project was initiated in 2019 starting with a solid institutional-grade custody solution and completing the offering continuously with new services and products. Even though not a Bitcoin enthusiast at the beginning, he quickly saw the potential of the DLT and its disruption capabilities.

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Success is a Journey is our motto, and what a journey it was since 2019. Being a pioneer in Digital Assets is a relentless drive to innovate and be on top of all major changes in the Digital Assets world.

In conversation with

Rani Jabban, MD

ARAB BANK SWITZERLAND
Geneva, Switzerland

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

It is a major change that cannot be ignored, and it will affect every segment of the financial industry and our everyday lives. It will affect payments, decentralized finance, tokenization of real assets, archiving, real estate transactions, international trade, copyright management, etc.

For wealth management in particular it will enable democratization of illiquid products that were difficult to access e.g.: private equity, real estate, luxury collectables, art, etc.

Indeed, cryptocurrencies are a mere tip of the iceberg if you consider the potential of tokenization of real estate and the capital of SMEs. Therefore, we need to see national laws being adapted to recognize the validity of a token as a proof of property, institutional custody solutions and marketplaces where the tokens can be sold and bought. In Switzerland, the legal framework already exists, tokenization is converging towards standardization (CMTA) and regulated marketplaces have been created.

Thanks to our strategic partnership with Taurus, we have developed this value chain from tokenization to custody to marketplace.

Another major disruptor is Decentralized Finance, where the democratization of financial products in terms of access and costs is taken to another level. However, for institutionals and HNWI, a major block is the lack of regulations (mainly AML). We are exploring permissioned pools, but we can imagine in the future an AI-driven AML tool incorporated in the protocol.

Our vision is that digital and legacy finance will converge strongly, and we will have strong interconnection between real and Digital Assets. An accelerator would be a regulated stablecoin or a major central bank digital currency, that would allow seamless transactions on the Blockchain, bridging the two worlds.

What solutions does your company offer that asset and wealth management firms should consider?

The cornerstone of our offering is in the custodial service we provide, as a bank this is the normal place for us to start with. We have created a seamless experience for our clients. They don't need to worry about the intrinsic complexities behind the Blockchain technology being used as all their investments are consolidated into the core banking system. Once we started with custody we were able to get into the brokerage and trading, and now an asset management offering.

Today we offer the following services:

- Custody of BTC, ETH and all ERC20 tokens, Tezos, Polkadot.
- Trading of BTC, ETH, Link, Matic, Aave, Uniswap, Curve, Compound, GRT, Synthetix, Yearn Finance, Tezos, Polkadot, Fantom.
- Staking: Tezos.
- Lending against BTC and ETH.
- Tokenization and access to TDX (marketplace).
- Bespoke discretionary management mandate.
- Active blog and newsletter combining on-chain analytics and technical analysis and education material.

Work in progress:

- OTC BTC secured lending of USD or USDC.
- Permissioned pool DeFi.
- Custody Fantom (native token), Solana.
- Staking of Polkadot, Fantom, Solana, some ERC20 tokens.
- AMC on cryptos including staking and yield products.

Introducing **Copper.co**

copper.co
London, United Kingdom

Copper.co is transforming how institutional investors engage with Digital Assets, providing market-leading infrastructure in addition to custody, trading and prime brokerage solutions. Our award-winning custody application leverages the genius of multi-party computation (MPC) encryption and can be configured to support cold, warm, and hot wallet solutions.

Asset managers are further protected by our pioneering ClearLoop network, which enables off-exchange trading and settlement at tier-1 Digital Asset exchanges. An offering enhanced by the availability of uncollateralized lending.

Copper's secure wallet architecture is available as a standalone application, a mobile app, and a browser extension for smart contract signing. With an easy to navigate interface, market-making liquidity, and a team always ready to assist you, Copper will change the way you look at crypto.

Founded
2018

HQ Address
64 North Row
3rd Floor
London
W1K 7DA
United Kingdom

Company Size
51-200 employees

Website
www.copper.co

Presence
Asia, North America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Broker / Broker-Dealers, Digital Wealth Managers, End Private Clients, Endowments, Foundations & Trusts, Financial Advisors

Featured Thought Leader

Fadi Aboualfa
Head of Research
fadi.aboualfa@copper.co

Fadi Aboualfa heads up the research team at Copper. After a decade in institutional publishing on oil and gas, Fadi ported his expertise into the cryptocurrency world in 2017. Since joining Copper, he is responsible for many different data analytical series that help investors navigate a space that has plenty of opportunities, but also fraught with many pitfalls. You can subscribe to all the research by signing up here.

> Blockchain data helps understand the potential risks and opportunity costs posed when relying on the Blockchain. Even on the least volatile of days, confirmation times can be painful. On volatile days, they're decapitating.

Bitcoin and settlement finality: What institutional players aren't prepared for

copper.co
London, United Kingdom

Often said is how revolutionary Blockchain technology is. Seldom heard, however, is how it affects traders' performance targets and objectives. Now, granted, 10 minutes, the average time for Bitcoin to be transferred from one entity to another is vastly superior to traditional flow methods. For traders, however, the reality is starkly different.

Leaving Bitcoin and cryptocurrency on an exchange is fraught with pitfalls that most readers will know well by now. It's become commonplace to hear of exchange hacks on an annual basis. Some exchanges have a better track record than others. But all are targets as cryptocurrency is one of the largest financially hackable bounties in the world.

Traditional asset managers have rules to play by. There is good reason why regulations require third-party custodians. But for institutional traders looking to trade Bitcoin at high velocity this proves to be challenging at best.

Basic math

Hardcoded into Bitcoin's network is the mathematical goal that transactions are confirmed and settled within a 'Block', on average, every 10 minutes. But a great deal can happen in that time frame in crypto. Price swings can be so volatile that the network faces multiple jams with people sending their Bitcoin to exchanges for sale. This bottleneck results in much longer times for blocks to be solved and trader accounts to be credited accordingly.

Compounding this delay is the fact that most spot market exchanges require at least three block confirmations before account funds are released and free to trade. That means, on average, a minimum of 30 minutes before traders can actually execute. This poses a serious problem for traders looking to go in and out of a trade as fast as possible.

The options for traders aren't plenty. The first option is to take on considerable counter-party risk by leaving their cryptocurrency on exchanges with the hopes and trust they will not be hacked – a solution unlikely to bode well with regulators in the future. The other option is to accept potential time delays that would lead to either steep losses, missed buying opportunities or worse, margin calls that would be too late to be met resulting in liquidations even with small amounts of leverage considering the volatility Bitcoin has become so accustomed too.

Always waiting

Blockchain data helps understand the potential risks and opportunity costs posed when relying on the Blockchain. Even on the least volatile of days, confirmation times can be painful. On volatile days, they're decapitating (see charts below).

Figure 5: Time taken to confirm 3 blocks on 19th May 2021 (Spot market conf. req)

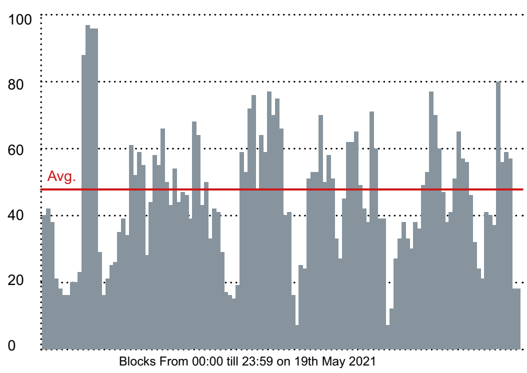


Figure 6: 2 Oct 2021: Bitcoin's least volatile day in 2021 - 3 Confirmations time (min)

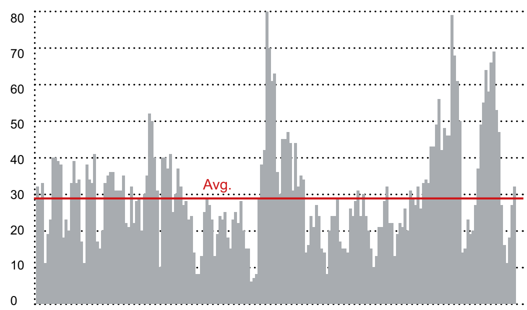
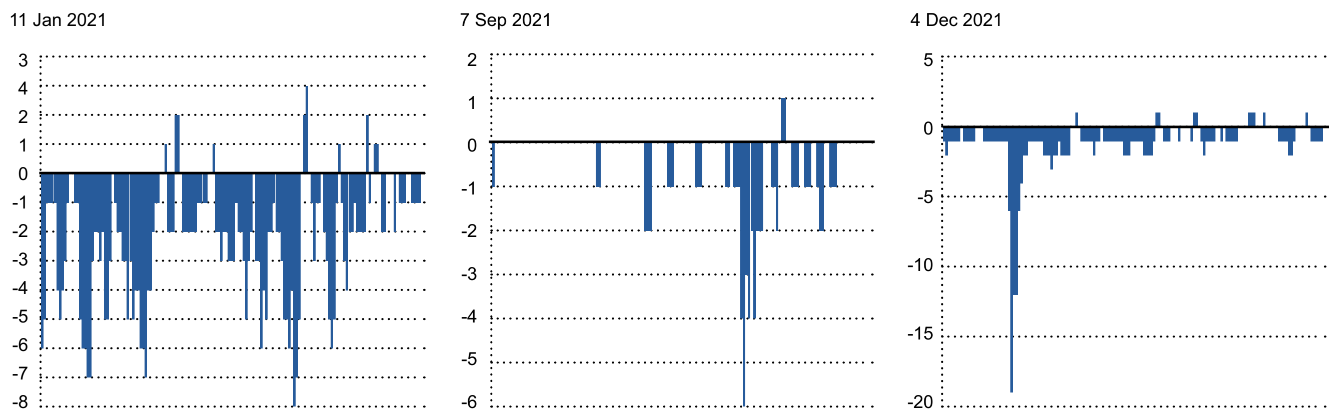


Figure 7: Bitcoin % Loss/Gain from time of decision to sell to being able to after three confirmations (Based on actual block time confirmations)



To put this in financial perspective, the time between the decision to sell, for example, and the time when a trader would be able to actually sell post-confirmations can be steep and upwards of 15%. And even with price rebounds, the likelihood of achieving intended sell targets is only a little higher than zero (see charts above).

Tools, not returns

A recent survey highlighted that institutions are most concerned with custody of Digital Assets. The irony is that institutions have more robust tools in their arsenal than the retail crowd. Solutions have been built and continuously evolve not only for safe storage, but for the active participation in an ecosystem that provides high yields in various financial products that have developed over the past few years in the decentralized arena.

What will accelerate the adoption of the space isn't actually the promise of high returns alone, but the understanding and application of the right set of tools.

The reality is that institutions will in all likelihood maintain a traditional mindset when entering the ecosystem that still suffers from loose regulatory guidelines. In essence, the rules will remain the same trickling their way into the digital asset space.

Clearer skies ahead

As more institutions enter the space, so do their requirements when looking at solutions. And contrary to the aforementioned survey, institutions have options on the table that would both eliminate counter-party risk and bypass Blockchain limitations by accessing vetted exchange networks such as ClearLoop.

Such networks allow large traders to instantly access exchanges at the same time without prefunding requirements. This effectively shifts volatility into an opportunity rather than a risk as traders would have an unfair advantage of accessing cross-market liquidity at times when the Blockchain network is jammed.

Such off-chain real-time settlement networks are a benchmark standard within traditional finance and it's only reasonable that institutions have the same level of capability within the digital asset world. This is why such networks continue to grow and onboard both investors and exchanges. It's a mutually beneficial relationship.

Obligations

Beyond the considerations that regulations or even self-imposed institutional restrictions would require custodians as seen in the traditional asset marketplace, there are other tick boxes that need to be met.

'Best Execution' practices require brokers to act in the best interest of the investor. Unfortunately, with the Blockchain being so unreliable in settlement finality and fees adding up during volatile periods, institutions will have a hard time meeting the regulatory obligation.

Ready when you are

The Blockchain has certainly changed the perception of what might be considered valuable. New opportunities pop up at a fast pace within the crypto ecosystem. Central banks have taken notice. Hedge funds have taken notice. Family offices have taken notice. But institutions need a set of tools that allows them to participate within a well-defined traditional ruleset, and these tools are now here.

Introducing CryptoIndexSeries

London,
United Kingdom

CryptoIndexSeries provides institutions with the necessary tools for data analysis, trading and portfolio analytics to power their in-house solutions for their crypto offering.

The CryptoIndexSeries solutions enable:

- Multi source data collection and normalization
- Classification of data and quantitative analysis
- Digital Asset, Market and Sector Indices
- Trading and tracking of crypto assets across multiple liquidity venues
- Managing of multiple portfolios on multiple venues
- Advanced portfolio analytics for consolidated accounts

Founded
2019

HQ Address
85 Great Portland Street
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United Kingdom

Company Size
11-50 employees

Website
www.cryptoindexseries.com

Presence
Asia, Middle East, North America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Digital Wealth Managers, End Private Clients, Financial Advisors

Featured Thought Leader

Dr. Gökçe Phillips
Co-Founder & CEO
gokce.phillips@cryptoindexseries.com

Dr. Gökçe Phillips is the CEO and Co-Founder of CryptoIndexSeries. With an MSc and a PhD in Computer Science from the University of York (UK), Gökçe started her career as an e-Business Specialist with access to 24+ FinTech products at Thomson Reuters in Geneva. She has worked globally in the IT and Finance industry as a Software Engineer, Project Manager and Team Leader. She co-founded CryptoIndexSeries to address the standardization and aggregation needs across data, trading and portfolio space for institutions in crypto markets. To contribute towards community development, Dr.Phillips held numerous posts in IEEE, including committee chairmanships in the UK, in EMEA region, and at IEEE Global level. She is the recipient of the UK EPSRC Grant, the Gibbs Award, the IEEE UKRI Outstanding Achievement Award and the IEEE Larry K. Wilson Outstanding Achievement Award.

> “In an extremely competitive market, effective crypto solutions may enable wealth managers and asset managers to gain a significant competitive advantage that may not only result in increased assets under management from existing clients, but also from the onboarding of new HNWIs.

In conversation with

Dr. Gökçe Phillips, Co-Founder & CEO

CryptoIndexSeries
London, United Kingdom

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

Despite the volatility of crypto markets in 2021, the crypto industry as a whole has been performing positively. Every year, we observe an increase in the number of private investment funds looking to capitalize on the rising market returns of the crypto industry. According to Kraken Intelligence, the assets under management (AUM) of private crypto investment funds increased from US$36.25 billion in January 2021 to US$59.6 billion in October 2021, an increase of 64.4%. It is also noted that much of this jump from AUM year-to-year was due to legacy financial institutions and investors investing directly in crypto assets and crypto funds.

According to Nickel Digital Asset Management research, 91% of institutional investors think that the prevalence of crypto assets is increasing day by day. Similarly, Fidelity Digital Assets Study of 2021 states that 84% of High Net Worth Individuals (HNWIs) in Europe and 86% in Asia currently buy / invest in Digital Assets. This demand from HNWIs and market developments are steering players in the wealth management space to consider and adopt crypto asset solutions to their offerings. Investment professionals now have a more positive view on Digital Assets, with a vast majority indicating that they are becoming more mainstream. Despite holding a small percentage of asset allocation, crypto investments not only provide strong returns and diversification benefits, but also enable protection from inflationary pressures and resulting monetary policy implications.

However, anxiety still remains, especially due to the risky and volatile nature of cryptos, pending government regulations, and security concerns. Anticipated regulations are also keeping wealth managers on edge, as prohibitive measures would have a serious impact on their clients' holdings. And yet, the recent rejection by the EU Committee of the proposal to ban PoW Networks is a strong indication that the EU Parliament will not impose prohibitive measures on the growth of Digital Assets in the region.

Even with current uncertainties about crypto markets, it would be safe to say that Digital Assets are here to stay, and institutions need to cater to these developments in order to stay ahead of the game. There is a current need to integrate wealth managers' platforms such that it runs as a unified engine for a seamless experience. In this regard, it is critical that wealth managers integrate crypto solutions in such a way that it results in a comprehensive platform delivering real-time data and advanced portfolio analytics.

As the crypto markets are still young, and yet developing at lightning speed, there also seems to be confusion and indecisiveness amongst wealth managers in terms of how these developments can be addressed, and how a crypto offering can be incorporated. Institutions, most commonly the larger ones, are either committing considerable resources to develop their own platforms or opting to collaborate with solution providers. The pace with which wealth managers and asset managers move is important, as a considerable number of HNWIs already have or plan to have holdings of crypto assets. It is therefore necessary that their holdings are incorporated into their current traditional asset portfolios, so that the wealth manager and client have a more comprehensive idea of overall investments, and the associated levels of risk.

Furthermore, in order to retain their clients and better serve them, wealth managers need to be proactive in their crypto offering and provide innovative solutions, where the client is better informed about crypto markets and opportunities are detected. In an extremely competitive market, effective crypto solutions may enable wealth managers and asset managers to gain a significant competitive advantage that may not only result in increased assets under management from existing clients, but also from the onboarding of new HNWIs.

In conversation with
Dr. Gökçe Phillips, Co-Founder & CEO

CryptoIndexSeries
London,
United Kingdom

Q&A

What solutions does your company offer that asset and wealth management firms should consider?

CryptoIndexSeries offers wealth and asset management firms simple to integrate solutions that allow the effective incorporation of crypto market data, trading venues and portfolio analytics tools. This provides institutions a timely and encompassing solution for the crypto markets, without having to commit considerable time and resources themselves.

There are mainly three offerings: the CIS API, the CIS Portfolio Analytics and the CIS Trader.

The **CIS API** product delivers institutional-grade, AI-driven data, as well as trading and portfolio API for Crypto Markets. The CIS API is unique in that it enables a bundled access for data, trading and portfolio analytics.

CIS API provides access to our Unified Web API and websocket services through these components:

- CIS RealTime API
  Provides access to normalised exchange, aggregated and index data over our real time websocket service.
- CIS Data API
  Provides access to news, reference data, timeseries data and searchable content.
- CIS Trading API
  Enables wealth and asset managers to control access / connectivity to clients' exchange accounts or prime broker accounts. They can also submit and manage orders across multiple exchanges and partnered prime brokers through a single, unified API.
- CIS Portfolios API
  Allows to automatically collect transactions for all connected client accounts and create, manage and monitor portfolios using offline and connected exchange accounts.

Figure 8: CryptoIndexSeries Portfolio Analytics Engine

The CIS API also enables asset managers to access low-latency financial data, time-series data, a rich news feed, sector and market indices that are invaluable tools in their decision-making process. Access to various trading exchanges and prime brokers from just one platform is also possible, which enables fast and timely trades for those HNW clients that make larger investments or prefer to churn their crypto portfolio often.

The **CIS Portfolio Analytics** product provides institutions with a simple, easy-to-integrate and customizable service for Advanced Portfolio Analytics.

This product takes transaction data or balance snapshots as an input and carries out the following tasks and more:

- Cross-references asset and instrument information
- Aggregates raw transaction data and balance snapshots
- Values given portfolios across 24+ fiat and crypto currencies
- Calculates balance histories
- Generates performance calculations, analytics and asset allocation data and analysis.

In conversation with
Dr. Gökçe Phillips, Co-Founder & CEO

CryptoIndexSeries
London,
United Kingdom

Q&A

This product is extremely customizable in that institutions can:

- Configure for assets and instruments their platform supports
- Configure for 3rd party pricing / valuation sources,
- Use their own pricing feed or leverage CryptoIndexSeries' vast Digital Asset Valuation & Pricing service
- Utilize white label views that can be easily integrated

Both **CIS API** and **CIS Portfolio Analytics** can be integrated into the wealth manager's or asset manager's platform to retrieve their clients' crypto holdings, value portfolios, carry out advanced portfolio analytics or help create virtual crypto portfolios for those clients that are interested but not yet invested. This allows a more holistic view of the clients' total investments.

Finally, the **CIS Trader** product is a web application providing data analytics, access to multiple exchanges and prime brokers to send buy/sell orders as well as basic portfolio views for the connected accounts. This front-end tool is specifically useful for asset managers as a unified platform for data analysis, trading and portfolio management.

In addition to our product range for wealth and asset managers, we provide data and index calculation services to index issuers and crypto funds.

Finally, CryptoIndexSeries has well-established partners in the Crypto ecosystem such as:

- Custodians
- Prime Brokers
- Exchanges
- Crypto Tax Reporting providers

Some of our partners provide us preferred rates for their services which institutions can benefit by working with us.

Figure 9: CryptoIndexSeries' business lines

The Wealth Mosaic is a global sales and marketing partner that supports solution provider's positioning, exposure and business development needs in a more complex world.

Find out more about The Wealth Mosaic

Introducing
DeFi Technologies

Toronto, Canada

DeFi Technologies is a technology company bridging the gap between traditional capital markets and decentralized finance and Web3. Spearheaded by experts and pioneers in the Digital Assets and capital markets space, our mission is to expand investor access to industry-leading decentralized technologies, allowing investors to access the future of finance via regulated equity exchanges. As the first and only publicly-traded company of its kind, DeFi Technologies offers diversified and trusted exposure to decentralized technologies that lie at the heart of financial innovation. This is achieved through three pillars: digital asset Exchange Traded Products (ETPs), issued through our subsidiary Valour Inc. (Valour), venture investments and network infrastructure participation. On behalf of our shareholders and investors, we identify opportunities and areas of innovation and build and invest in new technologies and ventures to provide diversified exposure across decentralized finance opportunities. As a trusted partner, we provide industry-leading products and top-quality education in this fast-growing space.

Founded
2020

HQ Address
198 Davenport Road
Toronto
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Canada

Company Size
11-50 employees

Website
www.defi.tech

Presence
Asia, Eastern Europe, Middle East, North America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Brokers, Digital Wealth Managers, End Private Clients, Endowments, Foundations & Trusts, Financial Advisors

Featured Thought Leader

Diana Biggs
Chief Strategy Officer
diana@defi.tech

Diana Biggs serves as Chief Strategy Officer for DeFi Technologies. Previously CEO of DeFi Technologies' subsidiary, Valour, Diana has been working with investors, technologists and researchers in the decentralized finance (DeFi) sector since 2013. In addition to her role, Diana is an Associate Fellow at the University of Oxford Saïd Business School and a Board Member of HIVE Blockchain Switzerland. As CEO, Diana led Valour's launch and expansion of its ETPs and its growth in AUM to over US$375 million. Diana has over 20 years of experience working across technology and finance, with prior roles including Global Head of Innovation for HSBC Private Banking, Chief Strategy Officer of Soko, VP Growth & Partnerships for Uphold and Manager with Oliver Wyman Financial Services.

“

Blockchain technology presents an immense opportunity for wealth management. While we're still in the early stages, we're seeing a surge of interest from traditional players and investors as Digital Assets and DeFi become better understood. At DeFi Technologies, we predict that the future of financial services will be built by disruptive technology, with Digital Assets and decentralized protocols at the heart of this.

In conversation with

Diana Biggs, Chief Strategy Officer

Defi Technologies
Toronto, Canada

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

The advent of Bitcoin and its underlying Blockchain technology has already led to a paradigm shift across the financial spectrum – and we believe there is much more to come. Having highlighted the inefficiencies within centralized legacy institutions, it has challenged traditional finance with its radically innovative, trustless and programmable nature. Whereas Bitcoin has established itself as a monetary good whose scarcity presents a valid thesis for its long-term store of value, its adoption has led to the emergence of an entirely novel asset class. This advent of crypto assets, combined with the accelerated development and application of decentralized finance, has undoubtedly led to the rethinking of the financial services landscape, from capital markets onwards.

We're at a critical inflection point as the evolution of Blockchain technology advances from exploration to commercialization. This has been facilitated by several factors. Market developments, such as growing retail and institutional demand for crypto assets, have transformed traditional hedging strategies whilst presenting new opportunities for portfolio diversification, particularly during times of global economic and geopolitical uncertainty. Policy changes including increased regulatory clarity have contributed towards an overall reduction in uncertainty, with market infrastructure developments and increased interoperability of Blockchain offerings supporting its dissemination and utility.

Wealth management has been ripe for disruption, the tail end of an industry that was already late to the digital game. Covid-19 was undoubtedly a driving force in helping to kick-start the change, as was the increasing need for cost efficiencies and the push for self-service capabilities and digital-first experiences from the younger generations who will be on the receiving end of a massive transfer of wealth over the coming decades. These shifting needs, expectations and preferences of future generations - from how they source information around investments to where they choose to put their money – lends itself to digital-first platforms and providers.

Trusted advisory has always been at the heart of wealth management and will remain so. The key will be blending the digital with the human to create enhanced services, capabilities and experiences. These emerging technologies will play a much-needed role in streamlining inefficiencies in wealth management and align with the changing needs and expectations of clients. For wealth managers, there are two aspects to consider with regards to the changes that these new technologies bring to the space – and I would encourage them, as I encourage everyone, to view these with curiosity and optimism, because technology is ultimately a tool and it's up to us to shape it to build the future we want to see.

First, there are the new asset classes that Blockchain technology underpins and has enabled. This includes crypto assets, NFTs, metaverse assets such as real estate and others that have yet to emerge. In today's market environment, with low to negative interest rates and current social and economic change, we expect more investors to look for ways to diversify their assets into emerging and alternative asset classes. Given the early stage of the development of the native interfaces for these assets and the technical comfort level and know-how currently required, this is where products such as our Valour Exchange Traded Products provide a secure and accessible path for investors, bridging the gap between the financial systems of the future and today's infrastructure.

In conversation with
Diana Biggs, Chief Strategy Officer

DeFi Technologies
Toronto, Canada

Q&A

Second, this technology has unleashed a major financial and technological movement, one that is powering the creation of the infrastructure for an entirely new financial system. DeFi, this emerging ecosystem of financial applications and protocols built on Blockchain technology with programmable capabilities, is free from the constraints of the legacy architecture weighing down the existing financial landscape and is powered by real-time innovation which is inherently global and 24/7. This not only opens up the possibility for the development of new and novel types of platforms, products and services, but also for existing organizations that are willing to engage outside of their comfort zone, the opportunity for exciting new partnerships and integrations.

Overall, Blockchain technology presents an immense opportunity for wealth management. While we're still in the early stages, we're seeing a surge of interest from traditional players and investors as Digital Assets and DeFi become better understood. At DeFi Technologies, we predict that the future of financial services will be built by disruptive technology, with Digital Assets and decentralized protocols at the heart of this. Ultimately, we have the opportunity to move from siloed, opaque, and, for many, inaccessible models and systems to the possibility for new paradigms enabling financial services which are more efficient, transparent and inclusive. What could be more exciting!

What solutions does your company offer that asset and wealth management firms should consider?

DeFi Technologies bridges the gap between traditional finance and the digital economy, offering simplified access to decentralized finance, which we believe are core to the future of the financial services industry globally. One of the primary ways we do this is through Valour, a wholly-owned subsidiary of DeFi Technologies, which creates the most accessible way to gain exposure to innovations such as Digital Assets and DeFi, via mainstream investment channels.

Blockchain technology has highlighted the inefficiencies of legacy finance and its integration therein is being used to capitulate on its loss of market share to decentralized finance. Digital assets and decentralized technologies, more broadly, are a rapidly evolving space: most institutions are still getting comfortable with the overall concepts and are hesitant to invest in the infrastructure needed to offer them to clients. Accessing Digital Assets or DeFi directly can involve high barriers to entry for investors: technical know-how, counterparty risk, the use of unregulated platforms and wallets, and overall comfort in dealing with complexities around nascent, decentralized technologies. Moreover, while the integration of DLT and Blockchain technology in TradFi may support its sustained relevance, it does little to align the industry with the radically innovative DeFi offerings - and opportunities - that are putting the power back in the hands of users and investors.

As the first and only publicly-traded company of its kind, DeFi Technologies represents a diversified opportunity into the nascent and constantly evolving landscape of decentralized finance. Through our three areas of work – the issuance of digital asset exchange-traded products, venture investments, and participation in network infrastructure, DeFi Technologies provides investors with trusted access to the emerging world of Digital Assets and Web3 whilst simultaneously contributing towards the overall growth of the ecosystem.

Through Valour, an issuer of digital asset ETPs on regulated stock exchanges, we facilitate retail and institutional access to a growing suite of Digital Assets and decentralized finance investment products. As recent headlines showcase, there is strong and increasing demand from investors to access Digital Assets, but limited options for retail investors to gain access to this emerging asset class. Wrapping them into ETPs is an ideal way to do that, offering an efficient and secure way to gain diversification in an investment portfolio by gaining exposure to a benchmark or asset class.

In conversation with

Diana Biggs, Chief Strategy Officer

DeFi TECHNOLOGIES
Toronto, Canada

Q&A

Valour's flagship products, Bitcoin Zero and Ethereum Zero, tracking Bitcoin and Ether respectively, are the first ETPs of their kind globally to be offered with zero management fees. With listings across leading European stock exchanges including Euronext, Borse Frankfurt and Nordic Growth Market, Valour's products are continuously pioneering the market with innovative, transparent and accessible offerings. We have a range of forthcoming unique products in the pipeline in the coming months that will enable investors to gain exposure to new areas of innovation that would previously have been complex or inaccessible.

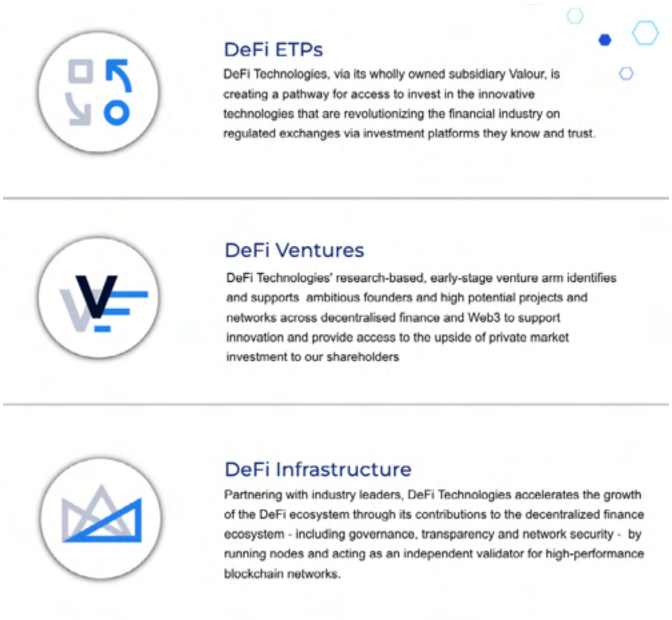
We're also thrilled to recently announce a joint venture with SEBA Bank for the creation of investment solutions in Digital Assets in Europe for both institutional and retail clients, starting with a suite of asset-backed ETPs to be launched later this year. Earlier this year, DeFi Technologies co-led SEBA's successful and oversubscribed funding round and announced our preferred partnership agreement with SEBA Bank. As a fully integrated, FINMA licensed, Digital Assets banking platform providing a seamless, secure, and easy-to-use bridge between digital and traditional assets, we see SEBA as a natural partner for us as we look to pioneer further innovative solutions to enable investor access to emerging asset classes.

Through our early stage venture arm, DeFi Technologies is building a portfolio of high potential ventures that are accelerating the growth and development of DeFi, Web3, and the economic infrastructure of our increasingly digital lives. We back ambitious founders and innovative projects and networks building for the long-term, focusing on Pre-Seed to Series A ventures.

Our third area of work incorporates network infrastructure participation, with contributions towards overall ecosystem improvements in areas of governance, security and transparency. As an active participant engaged in the provision and maintenance of decentralized node solutions, DeFi Technologies assists in establishing secure and reliable networks through its roles of validating, voting and staking, working in partnership with industry-leading service providers across the space. In addition to nodes, we actively seek opportunities to further contribute to DeFi networks and applications, one example of this being our role as a Data Publisher with the Pyth network, a decentralized financial market data distribution platform.

DeFi Technologies, as demonstrated through these three pillars, is committed to providing accessible, trusted and diversified propositions for investors, available via secure and compliant channels, into the burgeoning ecosystems of decentralized finance and Web3. Ultimately, we are dedicated to innovating and building access for investors to an emerging asset class, to forging partnerships and to investing into the future of the ecosystem to help realize the promise of a more efficient, transparent, diverse and inclusive financial system.

Figure 10: DeFi Technologies' three pillars



Introducing FiCAS

FiCAS
Zug, Switzerland

FiCAS is a Swiss-based crypto investment management boutique. The company manages 15 FiCAS Active Crypto ETP - the world's first actively managed cryptocurrency underlying exchange traded product (ETP) issued by Bitcoin Capital and provides additional financial services for issuing actively managed white label certificates (AMC). Through its fully owned subsidiary Bitcoin Capital it also offers whitelabel solutions (actively managed ETPs) and – soon – additional innovative crypto-based ETPs. The discretionary investment strategy of FiCAS is based on fundamental and technical analysis, and quantitative signals from experienced analysts. The founder of FiCAS, Ali Mizani Oskui, has a proven track record of outperforming crypto market trends. The portfolio he managed from October 2015 to January 2018 outperformed bitcoin holding strategy returns by 110% over the same period, as audited by a "Big Four" advisory firm. FiCAS was founded in 2019 and is led by a team of professionals with in-depth knowledge of both crypto finance and traditional finance.

Founded
2019

HQ Address
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6300 Zug
Switzerland

Company Size
11-50 employees

Website
www.ficas.com

Presence
Eastern Europe, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Digital Wealth Managers, Endowments, Foundations & Trusts, Financial Advisors, Broker / Broker-Dealers, End Private Clients

Featured Thought Leader

Dr. Mattia L. Rattaggi
Chairman
info@ficas.com

“FiCAS places a high value on its relationship with its clients. We take the time to fully understand your ambitions and needs so you can focus on your core business.

Dr. Mattia L. Rattaggi is Chairman of FiCAS, the Swiss-based crypto investment management boutique. A seasoned investment professional, with over 25 years of experience in senior management roles in the financial industry, Mattia brings a wealth of experience in finance and crypto finance corporate strategy and development. Mattia is a Co-Founder of SEBA Crypto, the first regulated universal crypto bank, and is the Founder and CEO of crypto advisory and consulting firm METI Advisory. Prior to his current board positions, Mattia worked in senior risk, compliance, audit, treasury, regulatory, and governance positions at some of Europe's top financial institutions, including UBS. Mattia holds a PhD. in Economics from the University of Fribourg and is a regular speaker at international conferences.

In conversation with

Dr. Mattia L. Rattaggi, Chairman

FICAS
Zug, Switzerland

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

Status & challenges

The crypto asset products available to wealth managers have seen an important development over the past 12 months. Investors can now get exposure through a plethora of comfortable, traditional, venues, without having to deal with the technicalities associated with acquiring exposures over the crypto markets directly.

Products include in particular exchange traded products, certificates, notes, trust or funds as well as officially traded futures. Bankable products with an ISIN number have been a door opener for many larger investors who like and most of the time need to operate within the traditional regulated financial sector. The expanding bridge between crypto finance and traditional finance has also gone hand in hand with a multiplication of trading strategies offered by professional cryptocurrencies managers. Global estimates range from 400 to 800 funds that invest in Digital Assets. Strategies include long-short, market-neutral, high-yield, thematic portfolios, and discretionary trading.

The current challenges include the adoption rate by banks and brokers, which still adopt a conservative suitability risk stance, and, more for the longer term, the development of user-friendly direct access to cryptocurrencies listed on regulated venues. crypto-currencies trading platforms are still to date unregulated.

Opportunity

The chief reasons were and remain portfolio diversification and enhanced risk-adjusted returns. The crypto assets have developed to a market valuation and popularity that are simply too big to ignore. In parallel, the adoption has been accompanied and to a great extent supported by constructive stances taken by the regulators as a majority worldwide.

The expansion of the crypto assets class has also been in terms of the number of assets (over 9,000 crypto assets exist by now) and ecosystems (Decentralized Finance, Non-fungible Tokens, Staking Economy). crypto assets appear to be well-performing and low correlated to other asset classes. Bitcoin is in 2021 one of the top-performing assets and it has shown over its lifetime a generally consistently low correlation to other asset classes. Its volatility has lowered too over time to the point that it is less volatile than some fiat currencies and is seen as a valid inflation hedge. Crypto assets and the ecosystem they carry are increasingly seen as disrupting mature industries such as the financial industry. The major cryptocurrencies have already found their way into the corporate treasuries.

Trends

Blockchain and DLT is a technology. The application of this technology to finance allows to realize the economy of costs and execution time (for instance in the payments), create new financing instruments and processes (for instance ICOs and STOs), introduce additional liquidity and investment vehicles (for instance tokenization of assets), new financial ecosystems and markets (for instance Decentralized Finance) and much more. Against this backdrop and clear empirical evidence of market growth, there is little doubt that crypto assets will establish themselves as a new asset class. This will transform the financial landscape in a deep way, from payments to lending, stock trading, trade finance, and back-office processes.

In conversation with
Dr. Mattia L. Rattaggi, Chairman

FiCAS
Zug, Switzerland

Q&A

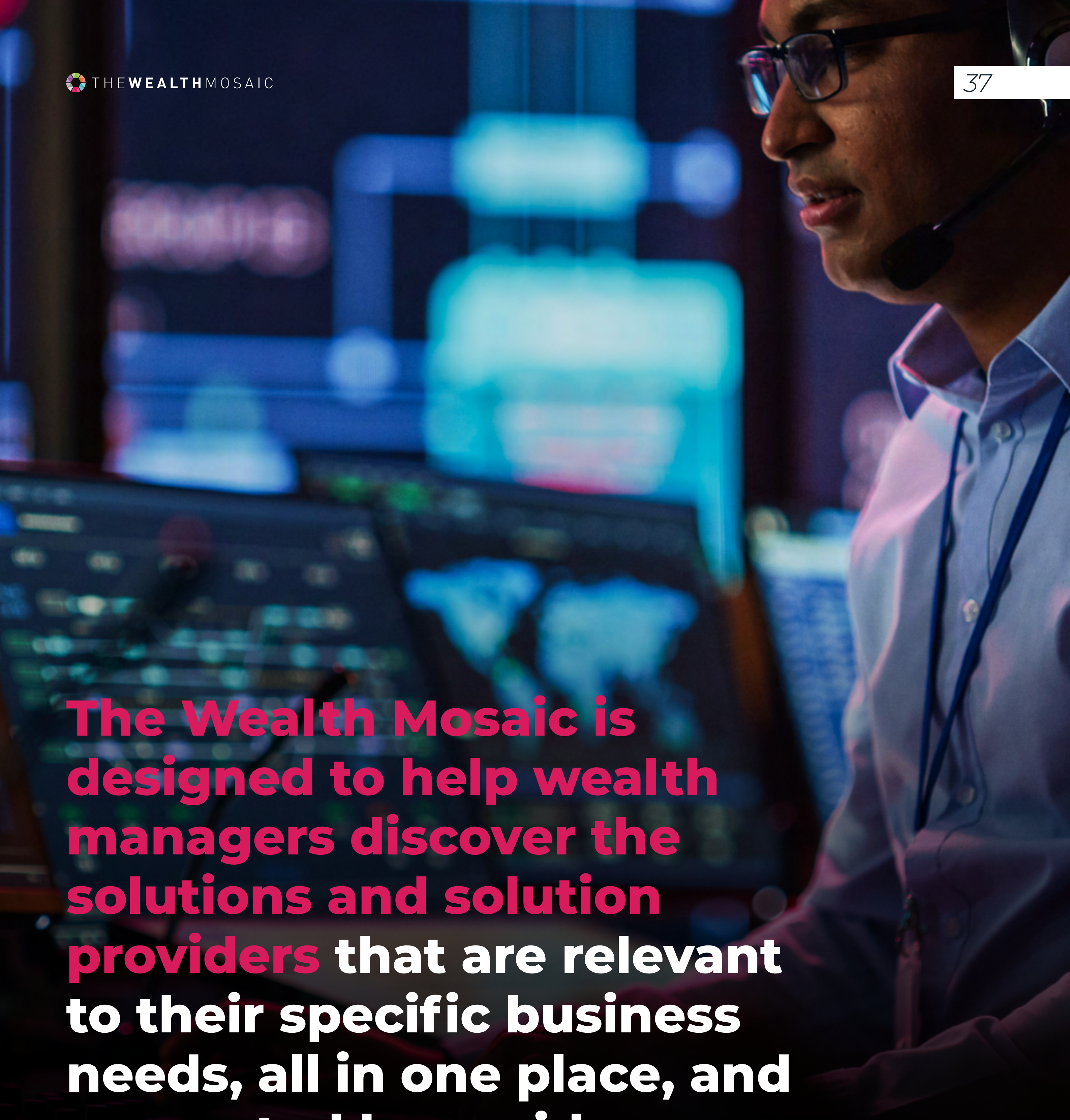
What solutions does your company offer that asset and wealth management firms should consider?

FiCAS offers investors diversification in the crypto-asset class through a unique investment strategy and an institutional-grade company. FiCAS trades Bitcoin, top altcoins, and CHF, EUR, and USD in a discretionary way, with no leverage, based on technical and fundamental analyses, and house view. The trading strategy was developed over 7 years, audited over 4 years, and has yielded exceptional returns. FiCAS manages the assets collected through the sale of the product “15 FiCAS Active Crypto ETP” (ISIN CH0548689600). The product is listed on SIX Swiss Exchange, Börse Stuttgart and Vienna Stock Exchange, custodied at Swiss banks, easily accessible through banks/brokers, and available in the EU and Switzerland to all investors.

In contrast to the cryptocurrency-based ETP issued so far, which tracks passively a crypto underlying, the 15 FiCAS Active Crypto ETP manages up to 15 top cryptocurrencies in a discretionary way. The first business benefit comes therefore in terms of active 24/7 management of the investment akin to a traditional mandate. The second business benefit is the accessibility of the investment vehicle. It is listed on SIX Swiss Exchange, Börse Stuttgart and Vienna Stock Exchange and is easily tradable through banks and brokers by retail, professional and institutional investors in Switzerland, Liechtenstein, and the European Union. A key benefit is the high liquidity of the vehicle, thanks to the possibility to create and redeem the securities at any time and in any quantity for the given Net Asset Value. Lastly, the product stands out by a fully managed issuer risk: The product’s ecosystem includes a collateral agent independent from the issuer that will sell the securities and reimburse the investors in case of default of the issuer.

Figure 11: FiCAS – Providing actively management crypto services

FiCAS AG and its fully owned issuer Bitcoin Capital provide whitelabel services (AMC, actively-managed ETPs) to third parties (B2B) and also issue additional innovative crypto-based ETPs. Regarding whitelabel offering, asset managers that have a crypto trading strategy but miss an ideal vehicle to bridge to traditional investors are welcome to contact Bitcoin Capital and cutomize together an exchange traded product. Asset managers that face demands from investors for actively managed crypto investments are welcome to contact FiCAS and implement a mandate-based asset management solution.



The Wealth Mosaic is designed to help wealth managers discover the solutions and solution providers that are relevant to their specific business needs, all in one place, and supported by a wide range of knowledge resources.

Find out more about The Wealth Mosaic

Introducing
FundsDLT

FundsDLT
Luxembourg

FundsDLT is a decentralized technology platform based on distributed ledger technology (DLT) that enables the reengineering of the investment fund distribution value chain, from front to back, covering the entire fund lifecycle. Our fully integrated model significantly reduces administration costs and the time to process transactions.

FundsDLT is shifting the technological paradigm in the wealth and asset management industry using a decentralized network and APIs. We streamline a range of fund administration and order-routing tasks by using Blockchain to automate several processes in a secure manner. The platform enables a cooperative ecosystem between all actors in the investment fund distribution chain to exchange data in real-time and remove redundant activities.

FundsDLT is owned by Clearstream, Credit Suisse Asset Management, the Luxembourg Stock Exchange and Natixis Investment Managers. The shareholding composition reflects the strategic objective to deliver a new generation of decentralized infrastructure to the investment fund industry. By enabling the re-engineering of the investment fund distribution chain, it makes fund distribution easier, cheaper and more transparent.

Founded
2020

HQ Address
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Luxembourg

Company Size
11-50 employees

Website
www.fundsdlt.net

Presence
Eastern Europe, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Financial Advisors

Featured Thought Leader

Paolo Brignardello
Chief Commercial Officer
paolo.brignardello@fundsdlt.net

Paolo Brignardello is the Chief Commercial Officer of FundsDLT, a FundTech company created in 2020 by Credit Suisse Asset Management, Natixis Investment Management, Cleastream Bank and the Luxembourg Stock Exchange. FundsDLT is a cross-boundary, decentralized, Blockchain-based platform offering next-generation services that make investment fund distribution easier, cheaper and transparent.

Prior to joining FundsDLT, Paolo spent seven years in the role of Head of Product Management and Marketing at Fundsquare, a leading investment fund information and regulatory services company, subsidiary of the Luxembourg Stock Exchange. During his time there, from as early as 2016, he was part of a core team involved in the inception of the ground-breaking FundsDLT project and its subsequent incubation by the Luxembourg Stock Exchange and Fundsquare.

Paolo has wide-ranging expertise in cross border fund distribution and the investment fund supply chain, having covered roles of operational responsibility and commercial support during more than twenty years of professional activity in companies such as RBC Investor & Treasury Services, KPMG, and FastNet (acquired by Caceis).

In conversation with
Paolo Brignardello, CCO

FundsDLT
Luxembourg

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

Solutions based on distributed ledger technology and Blockchain have taken great strides in the past year. Real-world offerings are online and available and companies in the financial sector are taking the first steps in the process of adoption. The focus at these companies is now less on the technology itself and more how they can digitally transform for maximum benefit.

For wealth management, there are two principal areas where DLT makes a significant difference. The first is the ability to radically re-engineer operations while the second is the opportunity to create new business models.

Operations become simpler, faster and more efficient

On the operations side, DLT brings to wealth and asset managers process automation and efficiency as well as cost-effectiveness. Running day-to-day operations via an infrastructure based on Blockchain is a truly fundamental change in wealth management.

Front, middle and back offices, across organizations and entire value chains, can be transformed to enable data and information to flow seamlessly between all actors. The complete process from investor onboarding, including KYC and AML tasks, to transactions and settlement to reporting is greatly simplified and made much faster. This is particularly important in an industry that is beset with manual administrative processes that have not changed for many years.

Business is transformed

Distributed ledger technology is an effective way to create new business opportunities and to grow or maintain a competitive edge. This is because the sharing of data and information, in real-time, will create value for the entire value chain. The capacity of all those in the wealth and asset management chain to have a complete view of what is happening is greatly enhanced.

Wealth and asset managers employing DLT solutions have the ability to move to expanded D2C models and thus grow and, importantly, diversify their client base. At a basic level, Blockchain enables alternative assets, such as private equity, real estate, art and many others, to be fractionalized via tokenization, but there is a greater change in this.

In a digitally transformed industry that makes use of DLT infrastructures, wealth and asset managers can deliver hyper-personalized services to more channels and more underserved affluent bands than is feasible today. Investors now expect high levels of customization, transparency and information on demand; a managers' capacity to grow at scale while still providing made-to-measure services is inherent in this new world.

Overall, DLT reshapes wealth management to be a more innovative and responsive industry via a data-based and client-centric business model.

Lawmakers support innovation

The move to DLT is well underway and it is being helped by the various regulatory moves that have occurred in the past year.

On the EU level the European Commission's proposed digital finance package – covering markets in crypto-assets (MiCA), digital operational resilience (DORA) and a pilot regime for DLT market infrastructures – has as its objective "to support innovation and the uptake of new financial technologies while providing for an appropriate level of consumer and investor protection." In November, this moved closer to ratification with the European Council adopting its position on MiCA and DORA, thus starting the trilogue negotiation process.

In conversation with

Paolo Brignardello, CCO

FundsDLT

Luxembourg

Q&A

Countries throughout Europe have introduced various laws on distributed ledger technology and this past year has seen important legislation from Switzerland and Germany.

August saw the coming into force of the Swiss act on the "Adaptation of Federal Law to Developments in Distributed Electronic Register Technology". The legislation improves the conditions for Blockchain and DLT companies in Switzerland, with one of the key changes being a license for DLT trading facilities. In Germany, the "Electronic Securities Act" entered into force in June, thus implementing the main components of the Blockchain strategy of the German government.

The time is now

Maturity of DLT solutions is certainly some years away but there are already clear business opportunities present. The wealth and asset management industry is leaving the pioneering phase and is moving inexorably to the early majority phase.

Now is the time to begin the process and it is indeed a process, there is no big bang. Such a change as one created by DLT and Blockchain requires organization-wide transformation, both in terms of systems and mindset, but the advantages are clear.

This will enable wealth mangers to future-proof their businesses and be active players in the evolution of financial services.

What solutions does your company offer that asset and wealth management firms should consider?

FundsDLT provides a shared platform built on distributed ledger technology that aims to generate efficiencies, transparency and better client experience all along the investment fund distribution chain.

Wealth managers can streamline a range of tasks by using the FundsDLT Blockchain to automate processes in a secure manner. The platform facilitates data exchange in real-time and eliminates redundant activities.

Overview

The FundsDLT Platform Solution for wealth managers delivers:

- Digital account opening and position maintenance
- Real-time transaction and order processing
- Automated cash settlement and reconciliation
- Reporting
- Investor accounts maintenance
- An API portal and a cloud-native solution.

The solution also integrates:

- A KYC solution with digital investor onboarding
- A fund data hub delivering all information for investors and asset and wealth managers
- User interfaces.

Benefits

At the heart of the FundsDLT Platform Solution for wealth managers lies real-time interoperability between all actors involved in investment fund distribution. This cross-boundary integration has many benefits and produces much operational efficiency.

Wealth managers have access to improved information and data flows and collaboration throughout the distribution chain.

The digital transformation of the investment process allows wealth and asset managers to:

- Develop a customer-centric business model
- Simplify business and operating models
- Obtain data insight and information advantage
- Build the technological capabilities for a real-time, 360° view of investors.

Introducing METACO

METACO
Lausanne, Switzerland

Founded in 2015 in Switzerland, METACO is a technology company whose mission is to enable financial and non-financial institutions to securely manage their digital asset business and capitalize on the burgeoning digital asset economy.

METACO's main product, called Harmonize, is an orchestration system for Digital Assets. From cryptocurrency custody and trading to tokenization, staking and smart contract management, the platform seamlessly connects institutions to the new world of decentralized finance (DeFi).

METACO has established itself as the Tier 1 banking standard, trusted by and in live production with global custodians, exchanges and private and universal banks. Its software, technology and infrastructure solutions are enabling financial institutions to store, trade, issue and manage Digital Assets, with the highest possible security and maximum agility.

Founded
2015

HQ Address
Avenue de Tivoli 2
1007 Lausanne
Switzerland

Company Size
51-200 employees

Website
www.metaco.com

Presence
Africa, Asia, Caribbean, Central America, Eastern Europe, Middle East, North America, Oceania, South America, Western Europe

Target Wealth Management Firms
Asset Managers, Bank Wealth Managers, Broker / Broker-Dealers, Digital Wealth Managers, Foundations & Trusts, Private Banks

Featured Thought Leader

Adrien Treccani
Chief Executive Officer
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> "While the investment for crypto custody technology pays for itself, what it ultimately offers is a foundation for all future DeFi opportunities.

Adrien Treccani is a software engineer specialized in high-performance computing and financial engineering. A PhD graduate of the Swiss Finance Institute, his doctoral thesis conducted a High-Frequency Jump Analysis of the Bitcoin Market.

He has been an active member of the FinTech community since 2012, advising banks and hedge funds on distributed ledger technology. He lectures at the École Polytechnique de Fédérale de Lausanne and University of Lausanne in cryptography and the financial applications of Blockchain and has been published in leading international peer-reviewed finance journals.

Adrien has co-authored 'Blockchain and Distributed Ledgers: Mathematics, Technology, and Economics', a detailed and self-contained introduction to the founding principles behind Blockchain, DLTs and cryptocurrencies, for professionals operating in quantitatively oriented fields such as mathematics, computer science and banking.

In conversation with

Adrien Treccani, CEO

METACO
Lausanne, Switzerland

Q&A

What is your view on the impact that DLT and Blockchain is having in reshaping asset and wealth management? What is the current state of the space and how do you foresee it moving forward?

Distributed ledger technology has created the opportunity for both real-world and Digital Assets to become tokenized, re-shaping how market participants exchange value and claim ownership. We're in the middle of a big shift, and the past two years have seen an acceleration towards a reality where crypto and Digital Assets become mainstream.

In 2021, crypto was once again the best-performing asset class of the year, with the market cap of cryptocurrencies growing from under US$1 trillion to exceeding US$3 trillion, and finally settling at under US$2.5 trillion at year-end. Adoption of stablecoins increased, particularly with corporate treasuries, while tokenization of assets finally picked up ground, driven by interest in NFTs.

The heavyweights of the financial services and wealth management industry understand that it is now imperative to invest in offerings around crypto and Digital Assets. And they are well placed to capture the opportunity: they have the trust that comes from decades of taking safe custody of assets for clients and institutions; they are regulated and therefore can get to market faster with digital asset services; they have the significant expertise accumulated from making markets around structured products and complex assets; and they have the customers, so they don't have to incur the time and expense of acquiring them.

Pioneering banks are already responding to the opportunity

BBVA Switzerland has recently gone to market with a crypto custody and trading offering, initially aimed at HNWIs in Switzerland, but later expanded to a global scale across EU, LatAm, APAC, to mass-affluent segments. In Singapore, DBS Bank has launched DBS Digital Exchange, offering institutional custody and trading services for various Digital Assets, including security tokens and cryptocurrencies, with more than 600 institutional investors already onboarded in the first year of operations. We've also seen the rise of digital asset banks, such as Sygnum which, operating across Europe and Asia Pacific, now holds more than US$2 billion worth of Digital Assets under custody, and is already pioneering various use cases of tokenizing luxury goods and art NFTs (e.g. Crypto Punk NFT).

The market opportunity is massive

What we observe, from our interactions with banks and financial institutions worldwide, is that they build the internal business case to invest in the technology and processes that will enable them to interact with Blockchains, on crypto custody and trading alone. With custody, brokerage and trading fees for crypto assets being 4x-6x higher than traditional assets, and with up to 20% of existing clients of incumbent financial organizations adopting crypto services in the first 12 months after launch, we're already looking at some great returns on investment.

But while the investment for crypto custody technology pays for itself, what it ultimately offers is a foundation for all future opportunities. Unpriced upside potential.

The World Economic Forum estimates that the potential value of assets to be tokenized by 2027 is US$24 trillion. Stablecoins, while currently at US$150 billion market cap, have the potential to disrupt and replace a big part of cross-border payments market worth between US$150 and US$250 trillion by 2027. We at METACO believe that eventually, everything will be tokenized, so we're looking at the starting point of the market opportunity as being the current size of the capital markets, +US$350 trillion.

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This is the moment to invest

For a financial institution, however, knowing that their firm needs to invest in digital asset infrastructure is not the same as knowing what their value proposition or business model should be. Like any nascent market, the digital asset market is evolving and investment cases are changing quickly. Value propositions will also inevitably evolve. Financial institutions are likely to change strategy over time - about, say, whether to tokenize assets directly or whether to create secondary markets for tokenized assets. Whether to do exclusively self-custody or diversify risks across multiple vaults and sub-custodians.

Digital assets give banks and wealth managers the chance to start afresh; to rebuild the future of their businesses without legacy processes and technology. By working closely with some of the largest banks around the globe, we've observed that the challenge they face is how to avoid binary technological decisions leading to a closing down of future business options. If this is a problem now, it will grow exponentially in the near future where every asset class is tokenized and CeFi and DeFi are bridged.

So the key for any institution will be to be keep its options open, which to a great extent will be synonymous with not creating legacy technology.

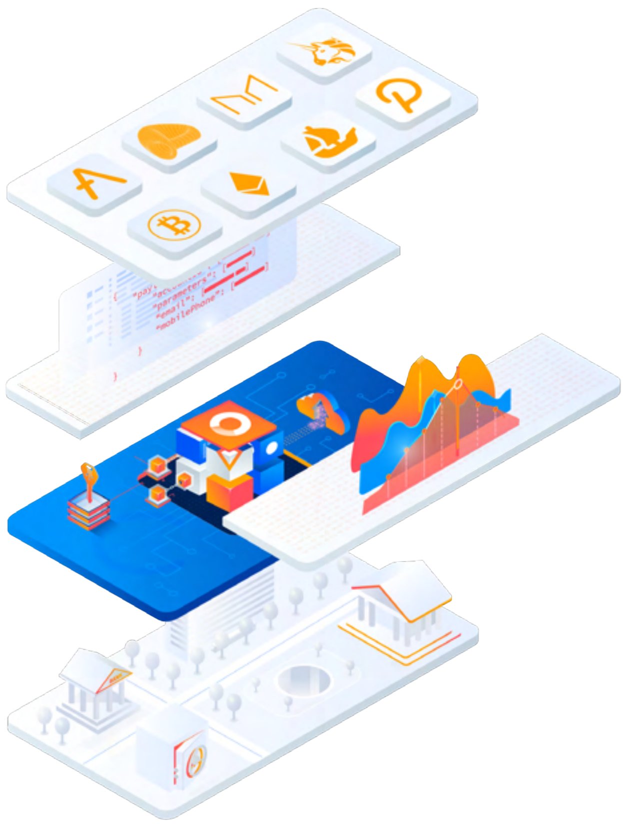
Orchestration is the answer

The solution lies in financial institutions building their stack on top versatile orchestration systems. An orchestration system is like a computer operating system in that it manages many-to-many interactions. In the same way as an operating system sits between hardware and software applications, an orchestration system sits as the heart of an ecosystem consisting of customer channels, trading venues, custodians, settlement networks and other constituents.

It buys a financial institution massive optionality at a low premium cost. Any decision a firm takes now about technology or business model does not bind it permanently (or expensively) to that path. New business models will emerge and the only thing we know for sure is that they will be based on facilitating the interaction of value between an ecosystem that – for the foreseeable future – will have to bridge between the old world of centralized finance (CeFi) and the rapidly emerging one of decentralized finance (DeFi).

We're moving into a virtuous cycle where, with institutional backing, individual investors and their banks feel increasingly comfortable with investing in this market. If, until now, no banking professional got fired for ignoring crypto, soon that won't be the case.

Figure 13: METACO Harmonize platform, securely bridging financial institutions to DeFi



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Adrien Treccani, CEO

METACO
Lausanne, Switzerland

Q&A

What solutions does your company offer that asset and wealth management firms should consider?

METACO is the leading provider of security-critical, foundational technology and infrastructure enabling complex financial and non-financial institutions, to store, trade, issue and manage Digital Assets. Its digital asset custody and orchestration platform enables institutions of all sizes to create, scale and harmonize their digital asset business model.

METACO delivers the most flexible and secure digital asset custody solution in the market in combination with the secure orchestration of workflows across the entire digital asset stack.

Its technology is live and tested, in production with significant Tier 1 and Tier 2 private, custodian and universal banks across the globe, including FINMA, BaFin, FCA, Banco de España, and MAS regulated institutions.

METACO's main product is called Harmonize, an end-to-end orchestration system acting as a single point of integration and unified and scalable governance for various digital asset backends, third-party systems and market participants, such as self-custody vaults, sub-custodians, trading venues, post-trade settlement networks, tokenization engines etc.

Enterprise-grade, security-first, future-proof technology

Component-based and microservices architecture allows for local variations of stack and deployment to meet regulatory requirements. Multi-layered architecture allows for trusted vs untrusted component segregation.

Fully extensible, open and ecosystem enabled

Feature-complete APIs and SDKs with extensive documentation allowing ease-of-integration and freedom to build. Pre-integrated with the broadest array of third-party technology providers.

Secure governance, automation and operations at scale

Highly flexible policy engine designed specifically for digital asset use cases and with a security architecture. Full automation services, billions of segregated wallets, high availability, horizontal and vertical scalability.

METACO also offers a product called Vaults, which enables institutional self-custody, by securing the cryptographic keys and the digital asset transaction execution process for a wide range of DL protocols, with one or multiple key repositories operating in parallel: hardware security modules (HSM) and multi-party computation (MPC), in the cloud or on-premise, from hot to fully air-gapped temperatures.

For banks and financial services providers

Integrate digital asset use cases into your business model, irrespective if you're a large retail, corporate, private bank or a fast-growing challenger bank.

For asset managers

Get exposure to new asset classes and diversify custody risks across a network of trusted custodians in all major jurisdictions.

For custodians

Use your traditional custody expertise to provide an infrastructure enabling institutional investors and companies worldwide to operate in the emerging digital asset space.

High-level benefits

- Speed to market - meeting your client demands, now.
- Orchestration - across multiple self-custody vaults and custodians.
- Secure automation, at scale – efficient governance.
- A single point of integration - no more legacy spaghetti.
- Scalability with full flexibility - today and into the future.
- A platform to grow - move beyond custody, whenever.

Directory-first, research-led, wealth management-focused

About The Wealth Mosaic

Built for a changing wealth management sector, The Wealth Mosaic (TWM) is a curated online marketplace directory of thousands of solution provider and solution profiles, all serving, seeking to serve or relevant to the business needs of the many forms of wealth management firm across the globe. Directory-first, research-led and built for the wealth management sector, TWM features a growing directory of over 3,300 business profiles, 5,000 solution profiles and over 2,500 different types of content including News & PR, Articles & Blogs, Research & Insights, Solution Information, Podcasts & Webinars, Videos & Video Interviews, and more. Each of these resources is tagged and categorized to an evolving taxonomy to support discovery and positioning.

We are creating a unique and focused resource for the changing business needs of the wealth management sector across the world.

Five core principles

TWM has been built and will evolve with five core principles in mind.

- **Directory-first** – The wealth management market needed a directory-first knowledge resource. The marketplace in one place. TWM is built out from a core focus on its solution provider database.
- **Online-first** – TWM is online first, especially considering our directory-first approach. A directory needs flexibility to support a growing and evolving taxonomy to position by business need, geography, client type, themes and more. We can move quicker by being online first.
- **Research-led** – In a market that is moving fast, we cannot remain static. Also, with so much still to be uncovered, one of our five core principles is to be research-led. Our solution provider directory is the result of this approach, and its evolution will also be driven by research.
- **Wealth management-focused** - while there are other great directory and knowledge resources available, few are wealth management focused and none are directory-first and wealth management-focused.
- **Accessible** - finally, we have built TWM with the view that are directories and knowledge resources need to be accessible to the market, not just the largest firms.

The publishing team

This report was compiled by TWM's Founder, Stephen Wall. You can contact him directly at stephen@thewealthmosaic.com to learn more about this report, other reports and more of what TWM is doing. Working with Stephen to compile and manage this report were Mungo Hamlet, Jason Ballard and Alison Ebbage.

Get in touch

Add or update a profile on TWM

For any relevant solution providers serving or seeking to serve the wealth management sector, wherever you are in the world, if you want to update your existing Business and Solution Profiles on TWM or want to add your Business and Solution Profiles to our site and directory, please reach out to Thomas Timmerman at thomas@thewealthmosaic.com. For all other enquiries about TWM, please contact Stephen (see email listed above).

Request or update your profile

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