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Edition VIII.**

Crypto Liquidity Edition



How Crypto Brokers and Funds Source Liquidity

Security Token Regulation in Switzerland

Frankly Speaking About the Crypto Swiss Franc

Demelza Kelso Hays

Mark J. Valek

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Editorial

Dear Reader,

This quarter, Facebook's Libra was met with opposition from financial institutions and governments, the same players that have been slowly laying the foundation to regulate Bitcoin and other cryptocurrencies due to its growing importance in the overall economy. Outperforming the U.S. equities this year, Bitcoin has grown upwards of 170%, from \$3300 USD in January to more than \$9,000 USD in October and is still climbing.

In this edition, we cover the two main ways that whales such as high net worth individuals, crypto brokers, and crypto funds, execute large trades in the cryptocurrency space. Agency models are risky because the exchanges and brokers can easily front run investors. In contrast, principal models shift execution risk away from investor and need to be financially compensated to do so, so the transaction costs will be higher.

We also highlight how crypto hedge funds outperformed Bitcoin in the 2018 bear market. During the last years Bitcoin normally held over 50% of the crypto market capitalization. With a market dominance of currently 66.7% it is commonly used as a benchmark for market performance. Most of the funds have a high correlation with Bitcoin but have realized fewer losses in 2018 (-46% avg for funds vs -72% for BTC). Finally, we are taking a look at the Grayscale BTC Trust which is basically "a single-asset index fund" and has been running at a premium to Bitcoin for years. The premium is often around 22.5% in addition to annual fees of two percent.

Thanks to Dr. Martin Liebi and Silvan Thoma from PwC Switzerland, in this special edition we feature a comprehensive primer on regulation and trading in Switzerland. The article highlights the key obligations under Swiss regulatory laws related to trading in cryptocurrencies, initial coin offerings, entities trading in cryptocurrencies, and anti-money laundering obligations.

To conclude this issue, we had the pleasure of interviewing Armin Schmid from Swiss Crypto Tokens (SCT) AG about the CryptoFranc (XCHF). The tokens themselves represent an underlying transferable bond, and therefore the tokens themselves are almost like bearer instruments – the way bonds and securities used to be.

We hope you enjoy reading the eighth edition of the Crypto Research Report, which marks the conclusion of our second year of publications. As always, we welcome your feedback.

**Demelza Kelso Hays and Mark Valek,
Incrementum AG**

In Case You Were Sleeping: Banking on the Blockchain

“Bitcoin will do to banks what email did to the postal industry.”

Rick Falkvinge

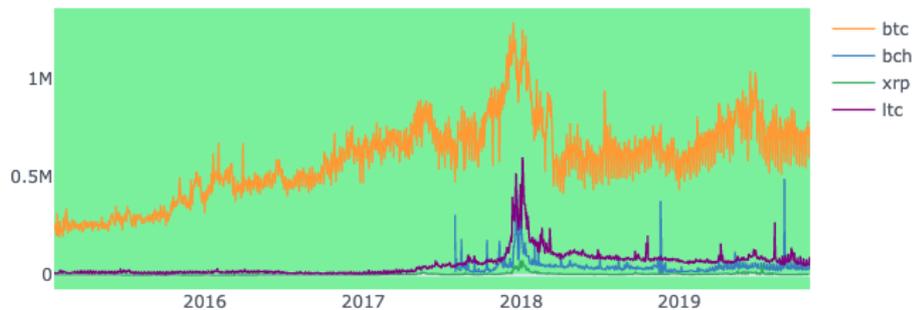
Key Takeaways

- ◆ Coinbase is estimated to control about four percent of all Bitcoins, which would amount to more than 850,000. The asset manager Grayscale, provider of the “Bitcoin Trust,” manages around three billion USD in crypto assets. At BitGo, it’s two billion USD.
- ◆ PayPal has already withdrawn from the Facebook Libra consortium. Visa and Mastercard are also shaking in their boots. Heads of the Bank of England and European Central Bank have expressed grave concerns regarding Libra. The project appears to be at a standstill for the moment.
- ◆ US authorities are investigating a German company that offered an alleged gold-backed cryptocurrency called “KaratGold Coin.” The company had previously sold gold products – and had been the subject of repeated warnings from authorities in Canada, the Netherlands, and Namibia even before entering the crypto space.
- ◆ Demand for Bitcoin is slumping. The number of addresses from which users send Bitcoin to the major stock exchanges BitFinex and Binance is falling. However, demand for Altcoins has slumped even more. Altcoins never left the 2018 crypto winter.

Facebook’s Libra coin is meeting strong resistance from governments and central banks. But there is also a lot happening in the “traditional” crypto sector. Several players are laying foundations for a regulated market that could attract institutional investors. And Bitcoin reacted to the recent rounds of easing by central banks.

The year 2019 is slowly coming to an end. What was the best place for an investor’s money this year? Prices for Bitcoin have more than doubled since January – even though they have recently fallen sharply again. From April 1 to June 24, they rose **by 250 percent – from just under \$4,000 to just under \$14,000**. At the time this report was prepared, Bitcoin was priced at around \$9,000.¹

Figure 1: Almost 1 Million Active BTC Addresses Per Day



Source: Coinmetrics.io, Incrementum AG

“Facebook’s digital currency, Libra, is a mixed blessing for Bitcoin and other digital currencies.”

Forbes

Whichever way you look at it, Bitcoin beats the second-best asset of the year, namely US technology stocks, by far. This year, they have risen by about 30 percent. Even gold, which is experiencing a quite respectable year, is just up 17 percent. The broad S&P 500 index gained 21 percent. All this fades in comparison to Bitcoin’s growth by more than 140 percent – from \$3,300 in January to about \$8,200 per coin in October.

¹ See [“Bitcoin Is 2019’s Best-Performing Asset. Even After Recent Price Downturn.”](#) Brad Keoun, *CoinDesk*, October 5, 2019.

Figure 2: Non-Monetary Demand For Gold and Silver Declining (in Tonnes, 2010 – 2019)



Source: The Silver Institute, Refinitiv GFMS, Metals Focus, World Gold Council, Incrementum AG

Still the crypto space has been rather quiet lately. The rise in prices alone was not enough to satisfy the mainstream media hunger for new stories. In addition, Altcoins look rather bad at the moment. Take Ethereum, for instance. The second most important cryptocurrency rose by “only” 80 percent between January (around \$100) and October (around \$180). The focus of politicians and the media has for some months now not been Bitcoin or Ethereum but the Libra project initiated by Facebook.²

One almost has the impression that Libra has displaced Bitcoin from the podium of the most important crypto projects. Especially in the mainstream media, where many journalists have specialized in crypto. And they don’t seem to get enough of the drama around Libra. But: Libra does not yet exist. Worse still, the alliance around the project is already beginning to crumble.³

Libra Meets Resistance Everywhere

“We believe that no private entity can claim monetary power, which is inherent to the sovereignty of Nations.”

French and German Governments

While Bitcoin is gladly dismissed and smirked at by politicians and central bankers, they immediately took Libra seriously. This is interesting because the founders of Libra were strongly inspired by Bitcoin and Ethereum and have borrowed heavily from these projects.⁴ This makes sense, too. Where else should they look for ideas and concepts for a cryptocurrency? Be that as it may, there is obviously great fear on the part of the state when it comes to private competition on the currency market.

² See “Guardians of Money Bristle at Zuckerberg’s New Financial Order,” Alastair Marsh, *Bloomberg.com*, June 23, 2019

³ See “Facebook’s Libra Cryptocurrency Is Losing Friends Fast,” Jason Aten, *Inc.*, October 8, 2019.

⁴ See “Libra White Paper Shows How Facebook Borrowed From Bitcoin and Ethereum,” Brady Dale, *CoinDesk*, June 18, 2019.

France, the USA, and China are particularly active. All for different reasons. Paris put Libra on the global agenda during its time chairing the G7 group and set up a working group on stablecoins.⁵ Central bankers from all over the world openly show their skepticism. Mark Carney, the head of the Bank of England, said that Libra would have to submit to the “highest regulatory standards.” The head of the European Central Bank ECB, Mario Draghi, who has since retired from office, expressed himself in an almost identical manner. The finance ministers of France and the USA also voiced grave concern.

The state actors have two main problems with Libra: Facebook’s market power and the impending loss of the state monopoly in the money market. Facebook can access a network of more than one billion users on its own. In addition, more than 20 partner companies are involved in the Libra consortium. A huge starting advantage. “I think that’s really what’s gotten the regulators quite in a furor about what’s happening around Libra, as opposed to bitcoin,” said Zennon Kapron, founder and director of consulting firm Kapronasia, to CNBC. Governments could gradually lose power over monetary policy if Libra ever goes live.⁶

“U.S. lawmakers are calling for Facebook to halt Libra development.”

The Block Crypto

And it’s not just about interest rates and inflation expectations but about tough power politics, says Kapron: “Right now, the U.S. dollar has a lot of power, and the U.S. government has a lot of power because oil is priced in U.S. dollars. And, the U.S. government controls which banks can interact with the U.S. dollar, so using that sphere of influence, they’re able to really control the direction of global economics and the global political situation.” Experienced crypto investors should be perplexed by these words. How come the same state actors haven’t been as nervous about Bitcoin? Was it not Satoshi Nakamoto’s stated intention to undermine the state currency monopoly?

The answer is yes. But unlike Bitcoin, Libra has an address and backers that you can subpoena in Congress. And that’s exactly what’s happening. American senators of both parties have been extremely harsh on Facebook at public hearings on the subject. The tech giant with the ambitious crypto plans also offers an excellent target for politicians because of its battered image. Facebook is like a “little child playing with fire,” it was said in July. “Do you really believe that people should trust Facebook with their hard-earned money?” asked Sherrod Brown, the democratic senator from Ohio rhetorically. His answer: “I just think that is delusional.”⁷

Facebook’s Libra manager David Marcus defended himself, assuring that Libra will not compete with government currencies and that the privacy of users will be protected. Senator Brown nevertheless urged Facebook to simply stop the

⁵ See “Paris will Facebook-Geld stoppen,” Oliver Grimm, *Die Presse*, September 12, 2019.

⁶ See “Facebook’s dream of a global cryptocurrency raises political stakes — for the regulators themselves,” Elizabeth Schulze & Saheli Roy Choudhury, *CNBC*, August 25, 2019.

⁷ See “Libra’s Biggest Challenge May Be Facebook’s Tarnished Reputation,” Kurt Wagner, *Bloomberg*, July 16, 2019.

development of Libra. Summarized in one sentence: **States don't like Libra (and Bitcoin) because they endanger the money monopoly.**⁸

There is more resistance. The banks are nervous too. Because – and this applies to Libra and Bitcoin – before cryptocurrencies can change the monetary system, they will endanger the banks' business model. At a meeting between bank representatives and the US Federal Reserve in September, the banks stated: "Facebook is potentially creating a digital monetary ecosystem outside of sanctioned financial markets – or a 'shadow banking' system. As consumers adopt Libra, more deposits could migrate onto the platform, effectively reducing liquidity, and that disintermediation may further expand into loan and investment services."⁹

"Bitcoin is still too unstable."

UBS

The bank representatives seem to have overlooked the part of the Libra white paper that describes the process of creating new coins. It is true that Bitcoin is indeed a completely independent monetary system. But not Libra, because its coins are to be covered by a basket of traditional assets. **Put simply, the more money goes into the Libra system, the more traditional securities the Libra Foundation has to buy for its reserve.** But the main message still stands: **Banks don't like Libra (and Bitcoin) because they endanger their business model.**

The Special Case of China

China goes one step further. The government also sees danger for the control over the Chinese population by the state. Bitcoin has long been targeted by China because the regime has a general fear of capital flight. The fact that the ongoing protests in Hong Kong have again boosted Bitcoin's popularity in the former British colony has certainly caused little enthusiasm in Beijing.¹⁰

But China also has another approach. It is much more open than other countries to the idea of launching its own, state-issued cryptocurrency. Cash is generally frowned upon in this vast empire anyway. Such a state-issued cryptocurrency could further accelerate the path to a cashless society. A pleasant side effect from the point of view of the communist government in Beijing is that such a digital state currency would also facilitate the total control of the population. It could even be integrated into the Orwellian "Social Credit" system of the People's Republic. In addition, China wants to curb the dominance of the dollar - but not by bringing in a new currency from American "production" like Libra. To sum up: **China really doesn't like Libra (and Bitcoin) because cryptocurrencies provide Chinese citizens with a way out for their capital.**¹¹

⁸ See "Facebook's Crypto Plan Called 'Delusional' as Senate Digs In," Robert Schmidt et al. *Bloomberg*, July 16, 2019.

⁹ See "American Banking Giants Sound Off Against Libra as Monetary Threat," David Pan, *CoinDesk*, October 3, 2019.

¹⁰ See "Hong Kong protests are accelerating bitcoin adoption," Adriana hamacher, *yahoolfinance*, September 2, 2019.

¹¹ See "China's Digital Currency Will Be Two-Tiered. Replace Cash: Binance", William Foxley, *CoinDesk*, August 2019, 2019.

The resistance against Libra is not without consequence. **PayPal has already withdrawn from the Libra consortium.** The credit card giants Visa and Mastercard are also becoming increasingly nervous in the face of political pressure. According to the Wall Street Journal, they recently refused to openly express their support for the project – even though they had already promised to invest millions in the Libra reserve.

According to the plan, Libra should start sometime in 2020. But from today’s point of view, at least delays are to be expected – if not a total derailment of the plans.

King Bitcoin Rules Over Altcoins

For Bitcoin investors, this is all a sideshow, a distraction. But from the fate of Libra some important conclusions can be drawn for the future of the crypto sector. You can’t subpoena the makers of Bitcoin, but you can subpoena those of some other crypto projects. In addition, the Bitcoin price has always responded to major Libra-related news. There is a connection – even if it is perhaps only seen on the market.

“It is clear that Bitcoin isn’t a safe haven asset today.”

CoinDesk

The crypto market cooled off considerably recently. Prices for Bitcoin fell from around \$10,000 to just \$8,000 at the end of September. The climb that began in April has been slowed down – perhaps even stopped. **The number of addresses from which users send Bitcoin to the major stock exchanges Bitfinex and Binance is falling,** according to data from London-based analyst TokenAnalyst. This signals “a lack of retail interest in general currently in crypto,” said TokenAnalyst co-founder Sid Shekhar. “If we go by the ‘Bitcoin as safe haven in times of recession’ narrative, the number of new users/buyers should actually be increasing.”¹²

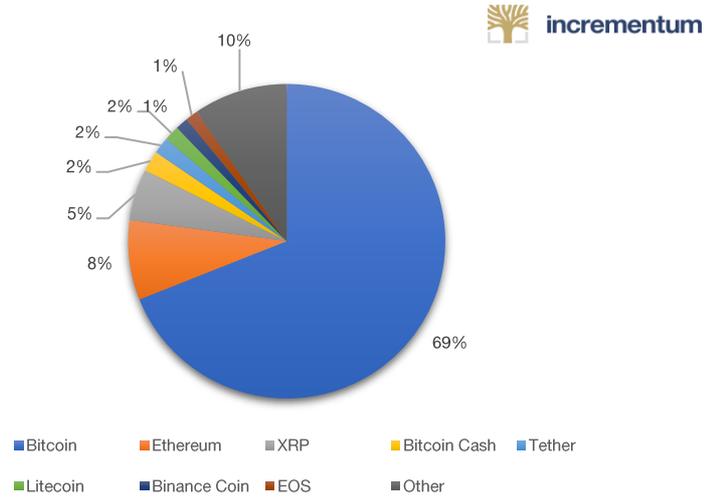
This is a sore subject for the crypto space. This year, Bitcoin has not succeeded in establishing its reputation as a “hard” asset. The story of the alleged “safe haven” may apply to individuals and families in crisis-ridden countries, such as Venezuela or Turkey. And in these countries, you can also see a strong acceptance of Bitcoin. But from a global market perspective, Bitcoin is certainly not on a par with gold today. Perhaps the asset is simply still too young and has to earn this status.

There is definitely no danger for “King Bitcoin” coming from Altcoins at the moment. Alts experience a continuous bloodbath in 2019. **The vast majority have already been unable to benefit from the Bitcoin rise – and now that the king is going downhill, the peasants have to suffer even more.** Bitcoin’s market dominance in October was 66 percent – and thus at the level of March 2017. Anyone who looks at the market capitalization of Altcoins in isolation (i. e. without Bitcoin) will notice that the bear market was probably never abandoned here. There is no other way to put it: If this trend continues, a (partial) destruction of the Altcoin sector is to be expected. This would probably be a

¹² See “Fewer People Are Sending Bitcoin to Largest Crypto Exchanges,” Olga Kharif, *Bloomberg*, September 5, 2019.

positive cleansing process for the market, as many scams and fraudulent projects are still running – disguised as Altcoins. But it can't be good for crypto's image.

Figure 3: Eight Coins Make Up 90% of Cryptocurrency Market



Source: Coinmarketcap.com, Incrementum AG

Figure 4: Bitcoin Dominance



Source: Coin.dance, Incrementum AG

In any case, further reports on scams and warnings to investors are expected. In recent months, we have seen the implosion of the PlusToken pyramid scheme, which started in Asia (probably China). US authorities are meanwhile investigating a German company that offered an alleged gold-backed crypto currency called “KaratGold Coin.” The company had previously sold gold products – and had been

the subject of repeated warnings from authorities in Canada, the Netherlands and Namibia even before entering the crypto space.¹³

In the USA, three men are on trial who are said to have sold drugs such as MDMA, Ketamine, and Xanax for Bitcoin on the DarkWeb. That alone is certainly not newsworthy. But in the run-up to the trial, the court decided to release only two of the three men on bail. The alleged leader must wait behind bars for his trial. Why? He has considerable Bitcoin assets at his disposal – and that leads to a flight risk, the court says. In this context, the authors at The Block are asking: “When will criminals learn that Bitcoin is an open payment system that can be traced by anyone?” The answer to this question would also be of interest to us.¹⁴

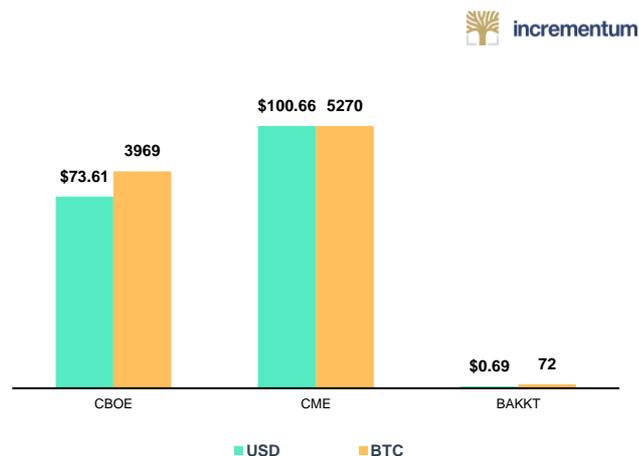
What Will BAKKT Bring to the Table?

“Facebook’s alliance crumbles as the controversial digital currency loses important partners.”

Manager-Magazine

But it’s not all bad news. The professionalization of the Bitcoin market, which we have documented in detail in previous reports, continues to progress. In addition to players such as Coinbase and Fidelity, Bakkt plays a major role here. Bakkt is the crypto project of Intercontinental Exchange (ICE), the parent company of the New York Stock Exchange (NYSE). Apart from Fidelity’s entry into the crypto sector, there is probably no other project with more significance. The Bitcoin futures promised by Bakkt, which, unlike those of CME, are ‘physically’ settled, were eagerly awaited by the market. But the start at the end of September was disappointing. **On the first day, Bakkt traded only 72 Bitcoin via futures. For comparison: On the first day of CME futures at the end of 2017, the figure was 5,298.**¹⁵

Figure 5: BAKKT vs. CME vs. CBOE (Trading Volume on First Trading Day in Million USD)



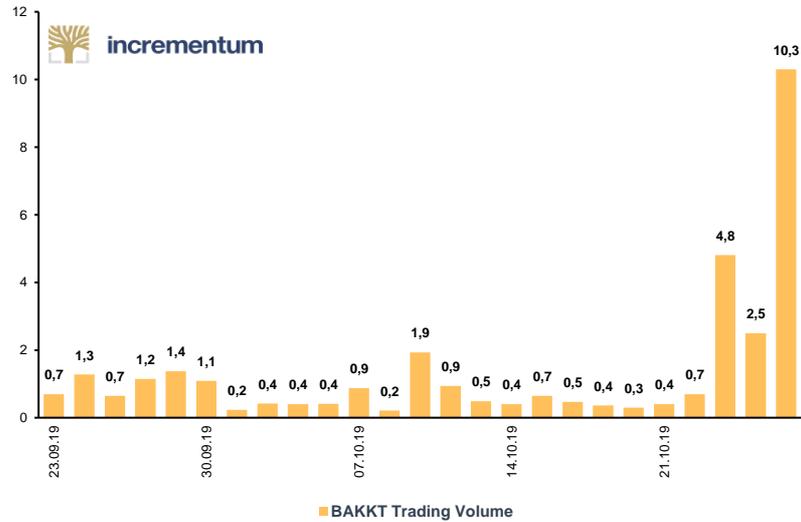
Source: BAKKT, CBOE, CME, The Block, Incrementum AG

¹³ See “‘Gold-Backed’ Crypto Token’s Promoter Investigated by Florida Regulators”, Leigh Cuen, *CoinDesk*, October 4, 2019.

¹⁴ See “Defendant’s sizable bitcoin transactions cited in drug defendant’s bail denial order.” Nelson Rosario, *theblockcrypto.com*, October 6, 2019.

¹⁵ See “Bakkt Exchange’s Bitcoin Futures See Slow Start on First Day of Trading,” Sebastian Sinclair, *CoinDesk*, September 23, 2019.

Figure 6: BAKKT Trading Volume Over One Month (In Million USD)



Source: BAKKT, CBOE, CME, The Block, Incrementum AG

Some observers, including JP Morgan analysts, even blame the weak start of Bakkt on the fall in Bitcoin prices in the preceding weeks. **The reason: Miners and other owners of physical Bitcoin may have taken shorts to hedge against falling prices.** Seen like this, the launch of Bakkt futures was indeed a self-fulfilling prophecy – but from the point of view of the shorter and not that of the broad market. We know that the expectations of the broad masses are rarely fulfilled in the markets in general and in the crypto markets in particular. The continuing dominance of the “dumb money” of retail investors plays an important role here.¹⁶

“It’s too soon to write off Bakkt.”

Wall Street analyst

We therefore consider it appropriate to think beyond short-term headlines and price movements. Bakkt is by no means just introducing futures or another crypto exchange. Instead, ICE is working on a complete solution for the professionalization of the Bitcoin markets. Put simply: They try to prepare the crypto market in such a way that institutional investors can also get involved. The futures are an important step, as **Bitcoin’s pricing still takes place on the spot markets today, which is unusual for other assets or commodities.** “What Bakkt fundamentally believes is that price discovery is going to happen in an end-to-end regulated market,” said Bakkt COO Adam White, “Most of that price discovery is happening in the spot market, but it is going to switch to the futures markets.”¹⁷ But there is a second step that is at least as important from Bakkt’s point of view: Custodianship.

The question of professional storage of Bitcoin and other crypto assets on behalf of institutional investors remains unanswered. We have described this problem several times in previous reports. Actors such as BitGo, Coinbase Custody, and

¹⁶ See “JP Morgan Chase Pins Bitcoin Price Plunge on Bakkt and BTC Futures,” Daily Hodl Staff, *THE DAILY HODL*, September 29, 2019.

¹⁷ See “Calling Bakkt a ‘crypto exchange’ misses the mark on what they’re actually doing,” Frank Chaparro, *theblockcrypto.com*, August 19, 2019.

Fidelity are working on their own solutions. At Bakkt, the custody question is at the center. The main focus here is on the New York location, the connection to the NYSE and the experience in working with regulators. On Bakkt’s website, they say that they want to set a new standard in the custody of digital assets by using the tools that are also responsible for NYSE cyber security.¹⁸

If you look at the history of the Intercontinental Exchange and its surprising acquisition of the iconic New York Stock Exchange, you immediately see that an innovative and highly ambitious team is at work here. Bakkt is apparently intended to secure the dominance of the NYSE in traditional markets for the future. “You can’t ignore ICE,” writes Frank Chaparro on “The Block” – and he’s certainly right about that.¹⁹

But in one crucial area, Bakkt is far behind other actors. The popularity of futures has increased significantly in recent weeks and the rather embarrassing first day has been forgotten. But companies such as Coinbase and BitGo have long had large amounts of physical Bitcoin in their “safes.” Bakkt’s still lagging behind.

Chaparro suspects that Coinbase controls about four percent of all Bitcoins, which would amount to more than 850,000. The asset manager Grayscale, provider of the “Bitcoin Trust,” manages around three billion USD in crypto assets. At BitGo, it’s two billion USD.

No ETF Yet, but the Central Banks Are Printing Again

With its “Trust,” Grayscale offers one of the few products that enable traditional investors to profit from Bitcoins price movements. Recently there has been a strong increase in interest from institutional investors, Grayscale said recently. For the first time in months, money did also flow into Altcoins again.

What is still not available is a Bitcoin ETF. The reasons for this do not shed a good light on the current crypto markets and also explain why Bakkt is aiming at the establishment of a fully regulated futures market. The ETF is like the Holy Grail for some Bitcoin investors. These exchange-traded funds allow investors to invest in virtually any market. **For example, the launch of the largest gold ETF to date in the 2000s is often associated with the rise in the gold price since then.** The logic is simple and also applies to Bitcoin: Whoever buys an ETF does not have to worry about the custody and security of his/her assets.

But the US Securities and Exchange Commission (SEC) rejected another ETF application in mid-October, that of Bitwise Asset Management. A month earlier, the SEC had done the same with an ETF application from VanEck. The SEC’s justification is a slap in the face for every Bitcoin fan: The applicants have stated that “95 percent” of the Bitcoin spot market could possibly be fake, according to the SEC: Moreover, it has not been possible for Bitwise to identify the “real”

¹⁸ See “Bakkt.com – About”, *Bakkt Staff*, October 11, 2019.

¹⁹ See “Calling Bakkt a ‘crypto exchange’ misses the mark on what they’re actually doing,” Frank Chaparro, *theblockcrypto.com*, August 19, 2019.

Bitcoin market or to prove that it can be distinguished from fraudulent or manipulative activities, the regulator stated. The application must therefore be rejected, according to the SEC.²⁰

It is therefore in the interest of all professional players in the Bitcoin sector to create a regulated crypto market as quickly as possible. What Bakkt and others are working on seems to be a basic prerequisite for the further development of Bitcoin and Co. Only when there is a transparent and legitimate market, which has also taken over pricing, will the authorities approve a Bitcoin ETF. It could be years before we see something like this. This would also explain why major players in the ETF market, such as Blackrock or Vanguard, have so far shown no interest in the Bitcoin sector. And this despite the fact that there is a permanent race for first place in the ETF market.

Investors who have already invested should also know that an ETF decision by the SEC is headline news but currently has no fundamental significance. The prices of Bitcoin, Ethereum, and other cryptoassets shot up after the negative decision in mid-October.

Easy Money is Good for Bitcoin

Many analysts and investors are now looking primarily at the development of the global economy and monetary policy to determine where Bitcoin might go next. The recent easing by central banks in Europe and the USA is generally interpreted as positive for Bitcoin prices. **“We know that loose monetary policy has always historically helped Bitcoin,”** said Joe DiPasquale, head of BitBull Capital, to Coindesk.²¹ Analysts of Deutsche Bank also see this trend continuing.²²

“There are only 3 million Bitcoin left to be mined.”

Anthony Pompliano

It seems that Bitcoin returned to its roots in October. The cryptocurrency was introduced more than a decade ago as an alternative to government money when central banks announced the biggest easing in history to date. After a brief period of normalization over the past two years, fears of an economic downturn have led to a new round of easing. **This inflation of the economy drives money into various asset classes: Stocks, real estate, gold and even Bitcoin.**

It is, if you like, the global version of a trend that can be observed on a small scale in crisis countries. When their own currency weakens, people look for alternatives. Unlike Facebook’s Libra, Bitcoin has long since established itself as such an alternative. And even if the fundamental professionalization of the sector is likely to continue for a long time to come, many investors have long regarded Bitcoin as a serious asset that can flourish and prosper at least in an environment of cheap money – an environment that could be with us for many years to come.

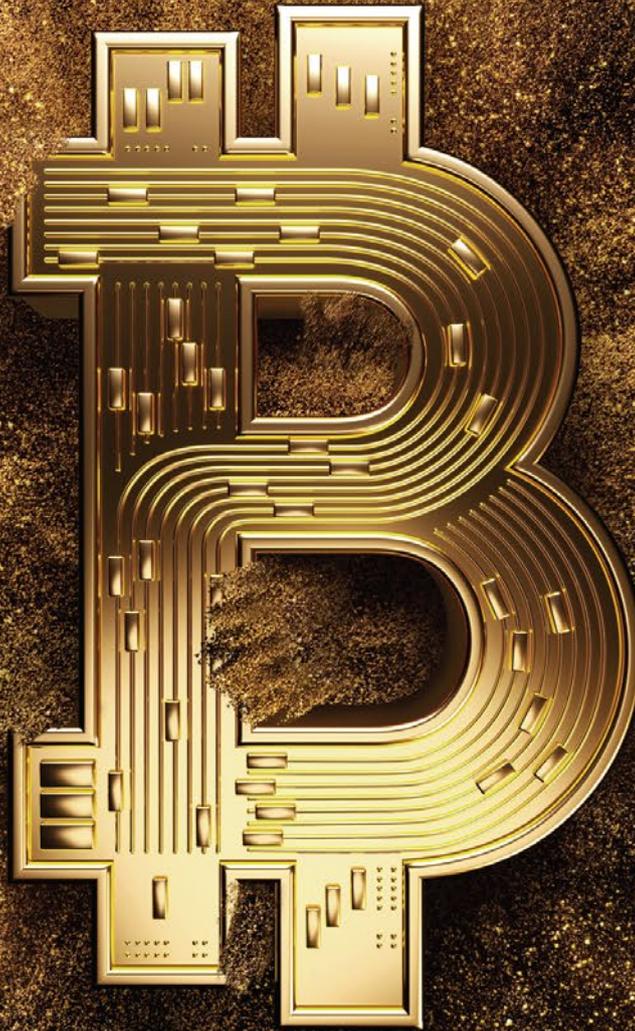
²⁰ See [“SEC not convinced a ‘real’ Bitcoin market exists, denies Bitwise Bitcoin ETF,”](#) Rakesh Sharma, Decrypt, October 10, 2019.

²¹ See [“Bitcoin Jumps to 3-Week High Near \\$8,600 as Fed Plans New Round of Reserve Increases,”](#) Brad Keoun, CoinDesk, October 9, 2019.

²² See [“Bitcoin could be rising due to central bank easing, Deutsche Bank says | Street Signs Europe,”](#) Jim Reid, CNBC International TV, June 26, 2019.

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How Crypto Brokers and Funds Source Liquidity

“If you contact multiple desks to source your trade, you are leaking a lot of information to the market, and desks will often ‘pre-hedge’ ahead of consummating the trade. That is very expensive as it amounts to legal ‘frontrunning’ that will move the price against you.”

David Weisberger, CoinRoutes

Key Takeaways

- ◆ There are two main ways that large-scale investors such as high net worth individuals, crypto brokers, and digital currency funds execute large trades in the cryptocurrency space. Agency models attempt to get the best price via smart-order-routing, but are prone to slippage from the benchmark price, generally charge a commission and usually pass on exchange fees and other transaction costs.. In contrast, principal models shift execution risk away from the investor, but need to be financially compensated in order to do so, meaning that transaction costs will be incorporated into a spread between what is obtained in the market and then shown to the client.
- ◆ Crypto hedge funds are outperforming Bitcoin in bear markets. Since BTC normally holds over 50 % of the crypto market capitalization, 66.7 % currently, it is commonly used as a benchmark for market performance. Most of the funds have a high beta with Bitcoin (~0.75 or higher) but have realized fewer losses in 2018 (-46 % average for funds vs. -72 % for BTC).
- ◆ Grayscale BTC Trust is basically “a single-asset index fund” which runs at a premium (around 22.5 %), in addition to annual fees of two percent. The price of Bitcoin is up 123 % year-to-date, and the Grayscale Bitcoin Trust (OTC: GBTC) is up 143.3 %. Currently, Grayscale Bitcoin Trust is up over 2,700 % since its inception in 2015.

When an investor wants to buy \$100 million worth of Bitcoin, how do they actually do it? What are the steps that they follow and the risks that they need to keep in mind? This article covers what crypto funds are and how they source liquidity, who the players are, including Grayscale, Galaxy Digital, FalconX, Tagomi, SFOX, CoinRoutes, Omniex, Caspian, and Koine, what their strategies are, and how much they manage.

Four Models for Sourcing Liquidity

“Statistical arbitrage has been a widely adopted trading strategy among traditional asset classes for quite some time.”

Gabriel Wang, Aite

Large investors want to make sure that their own orders do not move the price. This price of Bitcoin fluctuates based on the global market of supply and demand for Bitcoin on exchanges on over-the-counter markets. Imagine an exchange such as Kraken is quoting at a bid-ask spread of \$10,000 on the bid side and \$10,010 on the ask side. Let’s say that the bid side has a buy wall of \$10 billion at various strike prices and the ask side has a sell wall of 1 million Bitcoin at various strike prices. If an investor comes in and wants to buy \$1 million worth of Bitcoin, what is the best to execute their trade so that they do not lose out to slippage, the spread, and transaction fees?

There are two main ways that whales, such as high-net-worth individuals, crypto brokers, and crypto funds, execute large trades in the cryptocurrency space. Agency models are risky because the exchanges and brokers can easily front-run investors. In contrast, principal models shift execution risk away from investors and need to be financially compensated to do so, so the transaction costs will be higher.

1.) Account with Exchanges and/or OEMS (Order & Execution Management System) platforms

The most common method that retail investors use is the agency model with multiple accounts at several exchanges. This is called an agency model because the investor is the principal and they are relying on an agency to execute their trade for them. For example, when the investor wants to buy, they simply send their money to an exchange and buy at the spot price.

First, the investor will lose money because of slippage, which is the price that the investor saw the ask at and the price that the trade was actually executed at. For example, they might have clicked “buy” when the asking price was \$10,010, but in their account, they notice that the price they actually got was \$10,012 because the price changed slightly in between the time he clicked and the time the trade was received and executed. This occurs often with highly volatile assets like Bitcoin and can result in significant losses in the aggregate for high frequency traders. There are two main causes of slippage:

- ▶ **Technical Architecture of the Exchange:** The website should optimize the number of page loads per millisecond and have servers that have stable and rapid response to site traffic. This enables transactions to occur at

high speeds, which enables traders to mitigate the risk of significant price changes.

- ▶ **Liquidity on the Exchange:** Low liquidity means that orders will not be filled for a single price. Instead, large orders will be distributed over several smaller orders, with an increased price for each tranche of the order.

In addition to currency risk from slippage, this model also has counterparty risk because they must trust the exchange. As long as their assets are on the exchange, either fiat or crypto, they risk losing their 100 % of their wealth if the exchange goes bankrupt.

In this model, how do investors know which exchange is offering the best price?

There are three main companies in this space that help investors determine which exchange has the best price using routing protocols that consolidate liquidity.

- ▶ **CASPIAN.** Backed by Novogratz’s Galaxy Digital Capital and offshoot of Tora Trading Services from the traditional equity space, Caspian provides a single user interface software that allows investors to see the order books on 30 spot crypto exchanges and seven crypto derivative exchanges.²³ A large order, called the parent order, is broken down into child orders, or slices of the order, that can be executed within the software at various exchanges in order to try to get the best price. The company raised \$16 million in fall of 2018 in a pre-sale of their token called CSP. The coin’s all-time high was on its first day of exchange trading on April 8, 2019 at \$0.019 and its all-time low is set newly almost every day with the latest prior to publication of this report being on October 24, 2019 at \$0.005. **The year-to-date return is -73.68 %.**
- ▶ **OMNIEX.** Founded by ex-State Street senior VP for emerging tech, Hu Liang, Omniex is an order- and execution-management system for trading. Although they are very similar to Caspian, they have one difference – which is, they are crypto native.²⁴
- ▶ **COINROUTES.** Recently invested in by Bitcoin Suisse for an amount of \$3 million, CoinRoutes plugs into the APIs of 35 exchanges, aggregates the information, and then allows

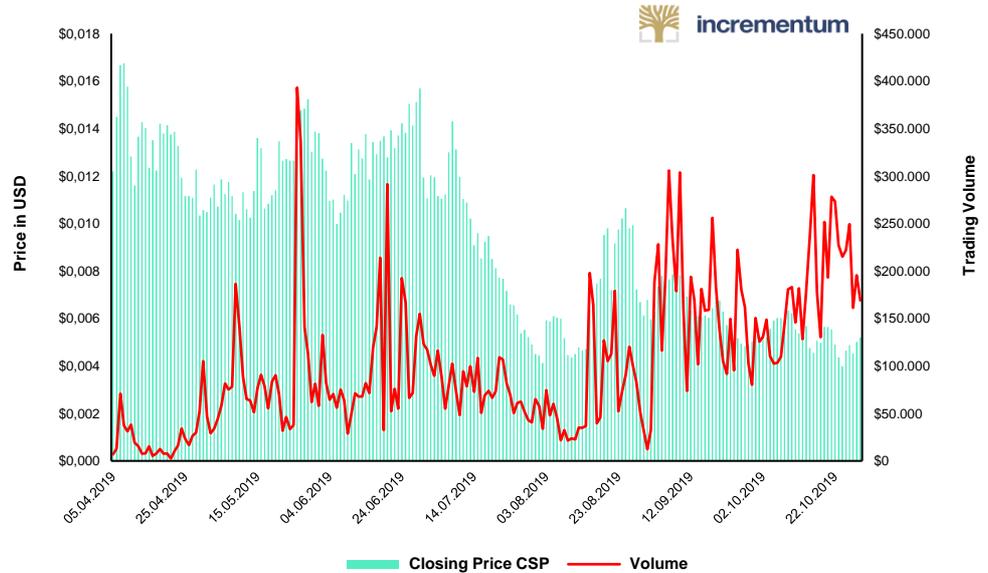
“With \$130 trillion of assets under management worldwide, institutional investors could have a huge positive impact if they moved even a tiny fraction of those funds into crypto, whose market cap remains under \$300 billion.”

Gerrit van Wingerden, Caspian

²³ Information retrieved in October 2019, from Caspian’s website.
²⁴ See “Omniex Adds Additional Top-Tier Institutional Crypto Clients And Launches Executable Streaming Prices To Fuel Growth Of Institutional Crypto Trading,” Omniex, July 16, 2019.

investors to access these 35 exchanges by simply accessing just one software. CoinRoutes has a patent pending called Smart Order Router that allows clients to retain complete control over their exchange keys and wallets.²⁵

Figure 7: Caspian Return on Investment Since Launch



Source: Coinmarketcap.com, Incrementum AG

The main problem with non-custodial cryptocurrency trade optimization routing software is that investors will have to open up several accounts on several exchanges because routing software do not take custody of the coins. They simply allow traders to trade where the traders have already done KYC/AML and made deposits of collateral. Not only is it a hassle to KYC/AML on 30+ exchanges, but there is the opportunity cost of keeping liquidity on many exchanges. By avoiding custody of assets, this software also avoids having to apply for money services business (MSB) licenses at the federal level and money transmitter licenses (MTLs) at the state level in each state where the software company sells their product.

2.) Agency Model – Account with Broker

The second type of agency model is where investors only open up one account with a broker instead of 30 accounts with various exchanges. Brokers such as Bitcoin Suisse in Switzerland or BitPanda in Austria would typically take custody of the coins and execute the investor’s order by sourcing liquidity from their network of counterparties and their own internal order book. This is considered an agency model because the broker is acting on the behalf of the fund or high-net-worth individual (HNWI).

²⁵ Information retrieved in October 2019, from [CoinRoutes’ website](#).

Do Selfish Brokers Increase the Overall Credit Risk?

Although reducing the broker’s counterparty risk by paying after receiving sounds appealing, this arrangement actually increases the overall systematic risk of the entire market. For example, imagine that Tagomi wants to buy \$100,000 from Kraken and Tagomi has an agreement with Kraken that Kraken will send the 10 Bitcoin to Tagomi first and then Tagomi will send the money. Now imagine that Tagomi receives the 10 Bitcoin but then goes bankrupt before sending the \$100,000. This leaves the exchange empty handed with losses of \$100,000 that they may try to socialize over all of their clients’ accounts, leading to a downward pressure on the price of Bitcoin overall.

Now imagine the opposite, Tagomi buys \$100,000 worth of Bitcoin from Kraken and Kraken makes Tagomi send the funds upfront by posting collateral. Now, if Tagomi goes bankrupt, the exchange is fine because they have the funds already. The only clients that will suffer are the clients of the broker that went bankrupt. The impact is localized to the investors that took on the risk in the first place in this model and is the more common model used in foreign exchange markets. However, since cryptocurrency exchanges are often not regulated, brokers and banks often use the first model before the credit risk of the exchange is larger than the credit risk of the broker or bank.

Credit risk determines who will have to post collateral first. The reason some brokers have this privilege is because their trading volume and credit worthiness makes them an important client for the exchange. Therefore, this option is not available to retail traders. Retail traders must first post collateral on the exchange, and then the exchange will deliver cryptocurrencies.

Another option that is quickly becoming a standard is delayed settlement with 1–2 basis points charged per extra day of settlement.

The largest firms in this space are Tagomi and SFOX. SFOX even has Federal Deposit Insurance on fiat deposits with them up to \$250K. Since brokers take custody of client funds, they normally need to be licensed. For example, in the US the common licenses required for this activity include MSBs and MTLs.

There are two main ways that brokers and exchanges handle the counterparty risk of cryptocurrency trades:

- ▶ Exchanges send the cryptocurrency to the broker prior to the broker paying the exchange for the cryptocurrency.
- ▶ Brokers post collateral or pay for the cryptocurrency prior to the exchange sending the cryptocurrency.

Brokers can have contractual agreements with exchanges that state that the exchange must send the cryptocurrency first to the broker before the broker sends the fiat to the exchange in order to pay for the cryptocurrency they bought. Essentially, the broker wants to ensure that they have received the cryptocurrency in their wallet before they settle the trade with the exchange by sending the money.

Some firms are trying to become institutional brokers, such as B2c2 and BCG in the United Kingdom and Falcon X in the US. The idea is to offer the lowest spread possible on trades without slippage. The model heavily relies on the network effect and is a race to connecting the disparate exchanges and OTC desks. By selling at cost, these companies hope to build a network that they can later sell peripheral services to, such as derivatives,

margin trading, and lending. Currently, many startups are entering into this market.

Entrance from a traditional institutional broker such as State Street Corporation or Northern Trust would bring much needed legitimacy to the entire cryptocurrency market. However, clarity on the insurance of custodied assets would need to come first. Insurance firms such as Lloyds, Aon, and Zurich are dabbling in cryptocurrency products; however, the market is immature. For example, BitGo’s

\$100 million insurance policy with Lloyds only covers cold storage meanwhile, other insurance policies only cover hot storage insurance.

3.) Principal Model – Client-Facing Market Maker

Some market makers face clients directly and use their own principal to take the other side of the client’s trade. However, market makers are in business to make money and may have directional bias (wanting to either go long or short) based on their view of the crypto market. This means that quotes shown to the client can be attractive if they line up with the market maker’s positioning, but might not be of great quality otherwise. For example, if an investor is buying Bitcoin and the market maker is also wanting to be long, the sell quote from the market maker will likely not be advantageous for the investor

4.) Principal Model – Trading Desk or Bank

A bank acting as a principal means that they execute a trade with their client directly, taking the execution risk on their books. In turn, they would hope to warehouse or lay off that risk via another trade.

Future Outlook of Principal-Agent Models in Liquidity Sourcing

The way financial intermediaries source cryptocurrency liquidity is rapidly evolving, but the market increasingly resembles the historical development of foreign exchange and equity markets. The European Securities and Markets Authority (ESMA) has already regulated the agency and principal model in foreign exchange markets and is likely to do so with cryptocurrencies as well.

“The spot FX trading industry is rapidly heading toward an agency-only trading model, but for the time being principal spot FX trading models are still widely utilized.”

Solomon Teague, Euromoney

In traditional foreign exchange markets, large trades occur in over-the-counter markets instead of on exchanges. This is because the largest foreign exchange traders on exchanges, such as the world’s largest banks, have access to information regarding the depth of order books, and they can make well-informed trades against small banks, brokers, and trading desks.

Agent models are not a bad option for investors, as long as the aggregate order book that the broker has access to is deep and the bid-ask spread is low. For example, the US equities market averages spreads of 20 basis points. However, cryptocurrency markets have high spreads and order books with fake liquidity created by wash trades in order to manipulate investor perceptions.

Insights from seasoned foreign exchange traders can help startups in the cryptocurrency space professionalize their services and prepare the market for institutionals. **We greatly [thank Glenn Barber from FalconX](#), [Dan Fruhman from BCB Group](#), and [Simon Heinrich from B2C2](#) for sharing how crypto brokers source liquidity in this edition of the **Crypto Research Report**.**

Who Needs to Source Liquidity?

Agents that execute trades on the behalf of their clients need to source liquidity, so that is primarily cryptocurrency funds and brokers.

Cryptocurrency Funds

Crypto Funds is a catch-all term to refer to a type of investment fund which pools capital from multiple investors with the goal of investing in a variety of crypto assets. There are several types of legal investment vehicles that fall under this category and several legal investment vehicles that do not follow under this category but are still labeled as cryptofunds by misinformed media outlets.

Crypto Hedge Funds

For regulatory reasons, the main category of cryptocurrency funds are still cryptocurrency hedge funds. The main goal of these funds is to outperform the cryptocurrency market as a whole in the long run. It is worth noting that traditional hedge funds (e. g., ones not invested in crypto) have generally failed to consistently outperform traditional index funds. They are often based in Cayman, British Virgin Islands, or Switzerland.

PricewaterhouseCoopers (PwC) reports²⁶ that the median fees collected by crypto hedge funds are a 2 % management fee (annually, based on the total investment) and 20 % performance fee (annually based on the profit realized). At the same time, the average with the traditional hedge funds is 1.3 %/15.5 %.²⁷ Despite the higher average fees and the recent crypto bear market, PwC reports that the crypto hedge funds grew over three times in assets under management (AUM) in 2018.

PwC further reports that on average crypto hedge funds outperformed Bitcoin in 2018. Since BTC normally holds over 50 % of the crypto market capitalization, 66.7 % currently, it is commonly used as a benchmark for market performance. **Most of the funds have a high beta with Bitcoin (~0.75 or higher) but realized fewer losses in 2018 (-46 % avg. for funds vs. -72 % for BTC).** The exception seems to be quant funds, which have both a positive return (+8% and a negative beta -2.33); however, this is explained in the report with the fact that the majority of those funds had early investment in initial coin offerings (ICOs) and managed to exit some of those positions in the first half of 2018.

Here are some of the largest players in the cryptocurrency hedge fund arena:

- ▶ **Pantera Capital** is one of the largest crypto investment firms with investments across five cryptocurrency funds (Venture Fund, Digital Asset Fund, ICO Fund, Bitcoin Fund, Long-Term ICO Fund). Current assets under management (AUM) are around \$450 million, due to the

²⁶ See *2019 Crypto Fund Hedge Report*, PwC & Elwood, 2019.

²⁷ See "[Hedge funds see fee increases in 2018](#)," Charles McGrath, *Pensions&Investments*, January 30, 2019.

recent crypto winter, although they previously had \$700 million. The investments range from VC investments in blockchain companies, including some big ones (like Ripple, Zcash, Civic, Harbor, Bitstamp) to investments in ICOs (like Wax, OmiseGo, ox, Funfair, FileCoin). There is a minimal investment requirement of \$100,000. **According to NewsBTC, the fund has recorded a 40 % loss since its inception and a 72 % loss year-to-date.**²⁸

- ▶ **CoinCapital** is even more restrictive, looking for individuals with a net worth over \$2.1 million. Similar to Pantera Capital, this fund invests in a combination of blockchain startups, ICOs, and cryptocurrencies. It holds a portfolio of over 40 cryptocurrencies, including the major ones – Ethereum, Litecoin, Bitcoin, Ripple, and Dash. The fund does not report AUM and fees; however, third-party sources report that they are currently raising \$25 million from accredited investors under a 2/20 fee structure.²⁹
- ▶ **BitcoinsReserve** was a specialized crypto hedge fund in the field of arbitrage. Like many cryptocurrency hedge funds, they have already gone out of business. Essentially, they looked for inefficiencies (price discrepancy) on the price of cryptocurrencies across different exchanges and leverages this to realize profit.
- ▶ **General Crypto** is a smaller crypto hedge fund with \$25 million in assets. The firm takes a venture capital approach to investing. Its main focus is coins that offer solutions to real-world problems. For instance, General Crypto is invested in Golem due to its decentralized computing capabilities and Ripple because of its international wire transfer technology.
- ▶ **Bitbull** is a cryptocurrency hedge fund that invests in crypto assets and startups. In essence, this is an umbrella fund which offers various options, including BitBull Fund, a crypto fund of funds, and BitBull Opportunistic Fund, which directly invests in crypto assets. The fund of funds operates under a 1/10 structure with \$100,000 minimum investment and a 10 % hurdle. The standard fund is a classic 2/20 with \$25,000 minimum investment. The strategy employed in the standard fund is described as “Opportunistic; current focus is market-neutral volatility strategy.” Both funds are only open to accredited investors.
- ▶ **Brian Kelly Capital Management** currently manages over \$50 million in assets and provides its investors with a three-pronged approach: buy-and-hold with 50 %, ICOs for 20 %, and actively manage the remaining 30 %. Investments in the BKCM consists primarily of

²⁸ See “Pantera Capital’s Crypto Fund Reports 40.8% Loss Since Launch,” David Babayan, News BTC, 2018.

²⁹ Information retrieved in October 2019 from [Security Token Network’s website](#).

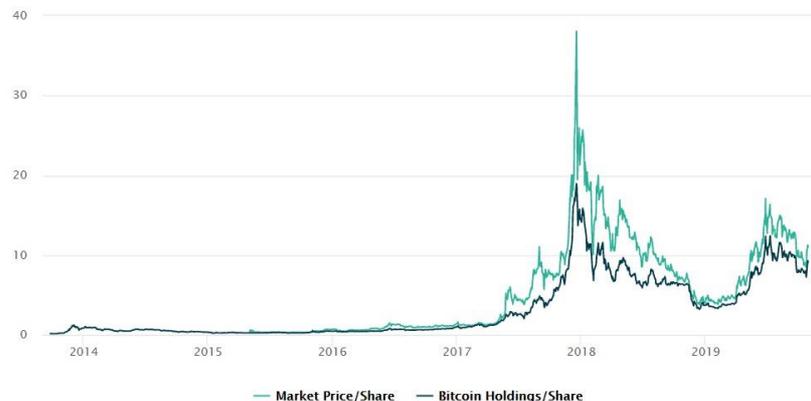
cryptocurrencies like Bitcoin, Ethereum, Litecoin, Ripple, Zcash, and Stellar. Additionally, the fund invests in more risky tokens like Golem, Siacoin, and Augur.³⁰

- ▶ **Ember Fund** can be thought as more of an advisory service rather than a traditional hedge fund. The fund offers portfolio rebalancing and optimization strategies which are not carried out by the fund itself but supplied as tips to its customers. There are both pre-defined portfolios and customer-defined ones. Currently supported currencies are BAT, BCH, BTC, DENT, ENJ, LTC, TUSD, and XRP. A customer can have up to three portfolios. The fund charges a fixed fee of 1.5 % on every trade.
- ▶ **Prime Factor Capital** was the first crypto hedge fund approved as a full-scope alternative investment fund manager by the Financial Conduct Authority, according to Bloomberg. There is no information publicly available regarding the firm's investment strategy. The team is comprised of former employees from Blackrock, Legal & General, Goldman Sachs, and Deutsche Bank.

Index Funds

- ▶ **Grayscale Bitcoin Trust (GBTC)** is a publicly listed company, holding its assets in Bitcoin and thus allowing traditional investors to have exposure to BTC without buying it directly. **GBTC is basically “a single-asset index fund” which runs at a premium (around 22.5 %), in addition to annual fees of two percent.** The price of Bitcoin is up 123 % year-to-date, and the Grayscale Bitcoin Trust (OTC: GBTC) is up 143.3 %. Currently, Grayscale Bitcoin Trust is up over 2,700 % since its inception in 2015.

Figure: 8 Grayscale Premium Roughly Constant Over Time



Source: Grayscale, Incrementum AG

³⁰ See “Top 10 Crypto Hedge Funds: Investment Guide,” Tom Alford, *Total Crypto*, October 9, 2018.

AIF- and UCITS-Regulated Cryptocurrency Funds

- ▶ **Postera's Fund** is regulated in Liechtenstein and based in Germany. The fund invests in a wide range of cryptocurrencies and for professional investor's only.
- ▶ **Crypto Finance's Fund** is regulated in Liechtenstein and based in Germany. The strategy is long-short on a single asset, Bitcoin, with a cash buffer. This fund is for professional investors only and is the one of the best performing funds of the year that are based in Liechtenstein.

Products that are not funds but are often called funds are exchange-traded products, such as Amun tracker certificate that is actually a bond and not a fund. Other products that are not legally fund structures include all of the cryptocurrency-based certificates issued by companies, such as Bank Vontobel and GenTwo Digital. Although cryptocurrency certificates have similar fees and trading strategies compared to cryptocurrency funds, the legal distinction mostly refers to whether the assets are held on a balance sheet of a bank and who is liable if the assets get stolen or hacked.

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Image: Renaissance cassette, courtesy of Schell Collection

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A Primer on Regulation & Trading in Switzerland

“This shows once again how the traditional Swiss approach of having principle-based laws that give a lot of discretion to citizens and regulatory agencies are much more innovation-friendly than overly detailed European-style laws.”

Luzius Meisser

Key Takeaways

- ◆ Traditional banks require \$10 million in equity. Crypto banks can apply for FinTech Bank License as of January 1, 2020. This license only requires \$300,000 in equity. Startups that want to be licensed to trade security tokens require \$1.5 million in equity.
- ◆ Switzerland has already introduced the standards on Virtual Asset Service Providers (VASP), and it has done it more restrictively than the recommendations set forth.

We want to sincerely thank Dr. Martin Liebi and Silvan Thoma from PwC Switzerland for contributing this chapter.



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Cryptocurrencies, which are based on distributed ledger technology, have gained importance in financial services in the recent past. This primer seeks to give an overview of the key obligations under Swiss regulatory laws related to:

- Trading in cryptocurrencies
- Initial coin offerings (ICOs)
- Entities trading in cryptocurrencies
- Anti-money laundering obligations

When Regulation Applies

Trading in cryptocurrencies is increasingly subject to regulation on multiple levels, namely:

- ▶ Trading
- ▶ ICOs
- ▶ Entities trading in cryptocurrencies
- ▶ Asset management related to cryptocurrencies

Table 1: Requirements for Swiss Licenses

	Equity Capital	Months to Receive License
Bank	10 million CHF minimum	10–15 months on average but 18 months for current crypto banks because they were first in line
FinTech Bank	300,000 CHF minimum; or 3 % of public deposits	6–9 months
Securities Dealer	1.5 million CHF minimum	n/a
Stock Exchange	1 million CHF	n/a
Asset Manager Managing Less Than 100 Million CHF	No requirement currently. As of January 1 st , a Swiss version of MiFID II will be in place that requires 100,000 CHF in equity capital for an external asset manager that is external from the custodian bank license.	2 months
Organized Trading Facility	Depends on who is providing the OTF service. Three entities are able to provide this service: banks, securities dealer (broker, investment firm), or stock exchange.	2 months

Source: Martin Liebi, PwC

Payment tokens, exchange of cryptocurrencies into fiat money, custody wallets, banks, securities dealers, and asset managers are generally **subject to anti-money laundering requirements, such as registration, supervision, and identification of counterparty requirements**. Anti-money laundering obligations are the basic regulatory requirements that apply to most entities trading in cryptocurrency markets. Depending on their additional activities, they might require a license as a bank, securities dealer (Swiss version of an investment firm), bilateral organized trading facility (OTF) or asset manager, or a combination of these licenses. Switzerland is also planning to introduce a new license category in the near future, called fintech bank. Licenses are required in the cases listed below.

“FINMA - supervised institutions are thus not permitted to receive tokens from customers of other institutions or to send tokens to such customers.”

FINMA



Critical Point: A bilateral systematic internalization is when brokers take clients' trades on their own book. Brokers that engage in this type of activity are subject to higher regulation regarding transparency including the need to show the clients the quote prior to the trade. More information on the regulation of BSI can be found on FINMA website.

- ▶ Accepting client deposits, in particular when issuing OTC derivatives which are not securities, generally requires a **banking license**. The banking license is the highest regulated category of financial market participation. **Cryptocurrencies and their associated private keys may be deposits under the Swiss Banking Act.**

- ▶ Trading in cryptocurrencies which are securities, either on behalf of clients or on one's own account (if certain turnover thresholds are being exceeded), generally requires a **securities dealer license**. The licensing requirements also apply to the entity's public issuing of derivatives.

Bilateral systematic internalization of cryptocurrencies and related derivatives or financial instruments is subject to additional regulatory requirements under the Swiss Financial Market Infrastructure Act (FMIA).

- ▶ **Asset management activities** related to Swiss and foreign collective investment schemes regarding cryptocurrencies and related financial instruments generally **require a license**. The distribution of collective investment schemes and the representation of foreign collective investment schemes also require a license. Individual portfolio management and advisory activities are, under the current regulatory

regime, not subject to a licensing requirement (except for AML registration). However, this is likely to change under the new regulatory regime planned to enter into force soon.



Critical Point: When a manager has the power of attorney to manage a client's account at a bank, they do not need a license currently. This changes in the beginning of 2020. The new regulatory regime is called the Swiss Financial Services Act and Swiss Financial Institutions Act. The acts come into force on January 1, 2020; however, existing asset managers have up to three years to comply.

- ▶ **Trading in derivatives based on cryptocurrencies that can be considered derivatives** may be subject to multiple obligations depending upon the status of the counterparties involved, such as

reporting and risk mitigation. For example, GenTwo's structured products based on cryptocurrencies or Lykke's platform that has coins that are linked to a colored coin, which is a small fraction of the underlying coin.



Critical Point: If a broker, such as Bitcoin Suisse, or a Crypto Fund, such as Incrementum's Crypto Fund, wants to trade a Bitcoin call or put an option with a counterparty through an over-the-counter trade, they would agree on a price for the option, and then they would need to report this to FINMA and also show their collateral that they can use over time to prove their ability to sell or buy the coins, depending on what side of the option they are on. Natural persons do not need to report options trading positions.

The Regulation of Cryptocurrency Trading

Categories of Cryptocurrencies

There is a rich variety of cryptocurrencies available. There is no generally recognized classification of ICOs and the tokens that result from them, neither in

“In Switzerland, according to FINMA’s characteristic, an asset token represents assets such as participation in real physical underlings, companies, or earnings streams, or an entitlement to dividends or interest payments. In terms of their economic function, these tokens are analogous to equities, bonds, or derivatives.”

Marcel Hostettler, Partner at MME
 Legal AG

Switzerland or internationally. Switzerland does not yet have an established legal doctrine or case law on cryptocurrencies.

As we discussed in the [January 2019 Edition of the Crypto Research Report](#), the Swiss Financial Market Supervisory Authority (FINMA) differentiates between three types of tokens. These are utility tokens, payment tokens, and asset tokens. This classification uses an economic approach, applying the concept of “**substance over form**,” meaning it is all about what the real purpose of the token is, after you scratch on its surface. That is why a token may have characteristics of multiple types of tokens and the classifications of tokens is not mutually exclusive. Asset and utility tokens could also be classified as payment tokens, which will then be referred to as hybrid tokens. In such cases, the requirements are cumulative and therefore more complex.

1.) Trading in Utility Tokens

Utility tokens are tokens which are intended to **provide digital access to an application or service** by means of a blockchain-based infrastructure. For example, Timicoin is a utility token which enables access to a shared database for the exchange of health information. Utility tokens are currently **not treated as securities by FINMA** if their sole purpose is to confer digital access rights to an application or service when issued. There is **no connection with capital markets**, which is a typical feature of securities. Utility tokens will, however, also be treated as asset tokens if they also have an investment purpose when issued.

2.) Trading in Payment Tokens

Payment tokens, commonly known as **cryptocurrencies** are tokens which are intended to be used, now or in the future, as a **means of payment** for acquiring goods or services or as a **means of money or value**

transfer. Cryptocurrencies give rise to no claims on their issuer. Payment tokens are most similar to currencies. Given that payment tokens are designed to act as a means of payment and are not analogous in their function to traditional securities, FINMA currently does **not treat payment tokens as securities**.

3.) Trading in Asset Tokens

Asset tokens **represent assets such as a debt or equity claim** on the issuer. Asset tokens promise, for example, a share in future company earnings or future capital flows. In terms of their economic function, therefore, these tokens are analogous to equities, bonds, or derivatives. FINMA generally **treats asset tokens as securities**. Tokens which enable physical assets to be traded on the blockchain also fall into this category, meaning that, for example, real estate companies which use tokens on a blockchain would have to deal with asset token regulations.



Critical Point: Some scholars argue that asset-backed stablecoins are securities similar to ETFs; however, other scholars argue that asset-backed coins, like the metal-backed Tiberius Coin, are not securities. Similar to physical ownership of a precious metal, a token is a representation of physical ownership that gives the owners the right to the underlying.

Table 2: FINMA Token Categorization System

	Access Rights to Application	Useable for Payments	Debt/Equity Claim on the Issuer
Utility Token	✓	✗	✗
Payment Token	✗	✓	✗
Asset Token	✗	✗	✓
Hybrid Token*	✓	✓	✓

Source: Martin Liebi, PwC, * Hybrids consist of at least two categories of token-categories.

Asset tokens constitute securities if:

- a) they represent an uncertificated security (meaning that the security has no physical representation, either in the form of being printed on paper or being stored on a memory stick),
- b) they represent a derivative (i. e. the value of the conferred claim depends on an underlying asset),
- c) there was a pre-financing or pre-sale phase of an ICO which confers claims to acquire tokens in the future.



Critical Point: The Lykke model and structured products from Vontobel, Leontec, GenTwo, and Amun represent derivatives on cryptocurrencies.

All of the above require the token to be standardized and suitable for **mass**

standardized trading. Being suitable for standardized trading means they are publicly offered for sale in the same structure and denomination **or are placed with more than 20 clients** insofar as they have not been created especially for individual counterparties.

“It’s crucial for an ICO issuer to write a formal request to FINMA including the information required according to the ICO Guidelines and await the ‘no-action letter’ from FINMA before proceeding with the ICO.”

Pascal Sprenger, KPMG

In addition to regulatory requirements and obligations (see below), securities are subject to **prospectus requirements** under the Swiss Code of Obligations if they are analogous to equities or bonds.

4.) Trading in Tokens That Are Derivatives

Trading in asset tokens that are derivatives is generally subject to the regulatory **obligations applicable to conventional derivatives.** These are the

reporting obligation, risk mitigation obligations, and, at least in theory, the clearing obligation and the platform trading obligation under the Swiss Financial Market Infrastructure Act

(FMIA). All of these obligations under the FMIA have been developed tailored to a bilateral relationship between two counterparties trading in derivatives.



Critical Point: It is, however, difficult to clearly identify the counterparties to tokens that are derivatives due to the decentralized nature of blockchain-based tokens and the anonymity of the holders of the tokens. Fulfilment of regulatory obligations applicable to derivatives can, thus, be cumbersome.

5.) Initial Coin Offerings

There are currently no specific financial market regulations in Switzerland that cover initial coin offerings (ICOs) explicitly. ICOs are, hence, currently treated in accordance with the generic categorization of tokens into payment, utility, and asset tokens. Thus, **only asset tokens qualifying as securities are subject to treatment under financial market regulations and** are, in particular, **subject to the prospectus requirement** if they are economically equivalent to a share or bond. The placement of securities and the issuance of securities in the form of derivatives, along with trading in securities, may be subject to

licensing requirements (see below). Securities are also tokens that are put into circulation at the point of fundraising. Pre-financing is a situation in which the investors have the prospect of receiving tokens at some point in the future, while the tokens or the underlying blockchain remain to be developed. Tokens that are issued pre-ICO and which entitle investors to acquire different tokens at a later date are called pre-sales.

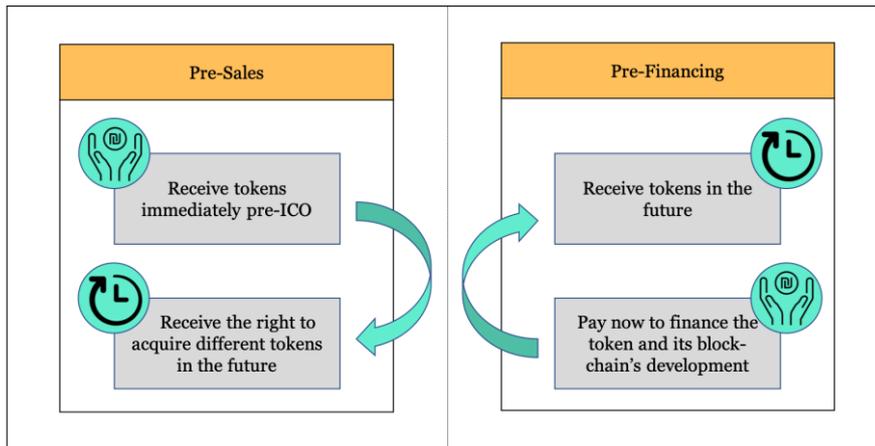
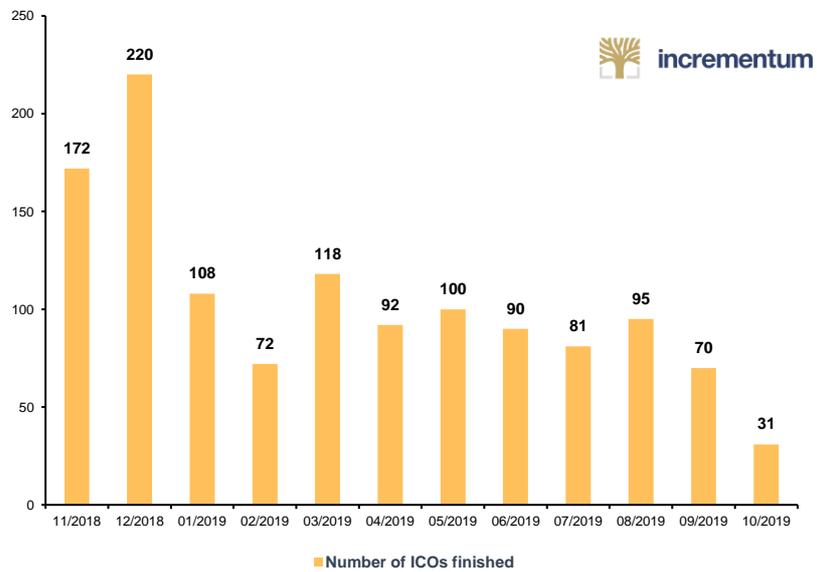


Figure 9: Number of ICOs per Month



The Licensing of Entities Trading in Cryptocurrencies

a) Cryptocurrencies Which Are Not Asset Tokens

“Just like other financial industry service providers, crypto businesses can also apply for a membership with a self-regulatory organization (SRO). The idea is simple: Instead of getting a FINMA license themselves, crypto businesses become a member of FINMA-regulated SRO to prove compliance with Anti-Money-Laundering regulations and Swiss financial law.”

Lucas Hofer, Writer at ICO.li

1.) Registration with Self-Regulatory Organization

Payment tokens and utility tokens **can be traded on a bilateral and multilateral basis** just on the basis of a registration for AML (anti-money laundering) purposes with a self-regulatory organization. As long as the operator of such activities will be fully compliant with the applicable AML obligations, no other obligations will apply to such trading activities. The registration with a self-regulatory organization for AML purposes is for many operators the first step in the build-up process of their trading activities and can be done with little effort and costs.

2.) Registration as a Swiss Bank

(1) Banking License

The professional acceptance of public deposits generally requires a banking license, unless an exemption applies. Generally, all liabilities qualify as deposits. This is also true for derivatives that do not qualify as securities, for example, because they are tailor-made and not appropriate for mass trading. Professional acceptance of public deposits generally means more than 20 depositors or public promotion of the willingness to accept deposits.

There are currently **different scholarly opinions on whether cryptocurrencies and the transfer of the private key qualify as a deposit**. Even if considered a deposit, there might be multiple exemptions applicable, and thus no banking license would be necessary. Typical exemptions are:



Critical Point: Unlike most other regulatory sandboxes globally, Switzerland has a static sandbox where companies can try and test new business ideas without triggering a licensing requirement. However, you cannot pay interest or invest these assets on the deposit of under 1 million CHF.

► **Not qualifying as professional activity:** Swiss sandboxes accepting deposits of up to 1 million CHF is not considered to be professional activity if these are not invested and not subject to interest payments and if the clients are pre-informed about the lack of FINMA supervision and deposit insurance.



Critical Point: If there is an investor deposit with a crypto broker and the money is only there for 60 days, then this does not trigger a licensing requirement for the crypto broker. This exemption also applies to brokers that take public deposits for security transactions, such as buying or selling stocks.

► **Deposits with precious metals dealers, asset managers, or**

similar enterprises that are not subject to interest payments and made for the sole intention of settling transactions, as long as the settlement occurs within 60 days. Securities dealers benefit from a longer settlement period determined on a case-by-case basis.



Critical Point: If you are a very wealthy person with a family office, you do not need a license to invest in cryptocurrencies because there is no third-party counterparty risk. The bank or family office is investing in cryptocurrencies with their own skin and not the skin of someone else.

- ▶ **Non-qualifying deposits:** Deposits are not public if deposited by banks or qualified shareholders having at least 10 % of the votes or the capital and related third parties and institutional investors having at least one person dealing full time with asset management matters (professional treasury).

FINMA treats cryptocurrency client dealers that engage in similar activities to client FX (foreign exchange) dealers as such. Client cryptocurrency dealers that accept fiat money for cryptocurrencies from clients on accounts and are themselves party to cryptocurrency transactions with their clients generally do require a **banking license**. This is not the case if an asset manager has sole power of attorney, allowing the management of cryptocurrency positions.

(2) FinTech Banking License



Critical Point: A Swiss FinTech license is similar to a Liechtenstein e-money license. A privileged deposit in Switzerland is a deposit of at least 100,000 CHF. In Liechtenstein, a privileged deposit is only 30,000 CHF.

On January 1, 2020, Switzerland will introduce a **new licensing category** called FinTech license that should put FinTechs, and in particular entities trading in cryptocurrencies, under

more adequate supervision. The FinTech license will allow holding public deposits, e. g., in the form of payment tokens or utility tokens or fiat similar to a bank up to an amount of 100 million CHF. It will, however, not be possible to do business with these deposited assets, e. g., by lending them to third parties, and no interest can be paid on these public deposits. The deposited assets are, unlike a bank, not subject to the legal privilege of privileged deposits. On the positive side, the **regulatory capital required is much lower than that required by banks** (300,000 CHF as a minimum or 3 % of the public deposits).

“The Fintech license allows institutions to accept public deposits of up to CHF 100 million, provided that these are not invested and no interest is paid on them. A further requirement is that an institution with a FinTech license must have its registered office and conduct its business activities in Switzerland.”

The FinTech license allows also for additional alleviations, such as accounting rules according to the Swiss Code of Obligations. An entity wishing to receive a FinTech license will have to undergo a **licensing process** with FINMA.

(3) Obligations of a Bank

Assume you are the new CEO of a bank and you have the idea of entering the crypto market. These are the requirements you have to fulfill to trade tokens which are **not securities**.

(1) Requesting a License

The Federal Council of Switzerland

Dealers in cryptocurrencies that require a banking license have to file an **application** to get a **banking license** with the Swiss Financial Market Supervisory Authority, FINMA.

(2) Organizational Requirements

Any bank needs to have a **board of directors** with at least three members and a **separate management team**. A bank also needs a compliance and risk management function as well as an internal audit function, along with the business function. The bank must implement an effective separation between the trading desk, credit business, settlement, and the control functions (risk and compliance). The outsourcing of internal audit, compliance, and risk management is generally possible. Any bank must also have an effective internal control system in place.

(3) Capital Requirements

Any bank must have equity of **at least 10 million CHF** and is subject to additional capital requirements depending upon its business activity and risk profile. Banks are also subject to **special regulatory accounting rules**.

(4) Notification Requirements

Banks have to inform FINMA about the fact that they are initiating operations in a foreign jurisdiction. Furthermore, the acquisition or divestment of subsidiaries, representations or branches in a foreign jurisdiction must be reported to and pre-approved by FINMA. FINMA must also be informed about qualified holders of shares in the bank and about any decrease, increase, or reaching of the related qualified holdings of 10 %, but also 20 %, 33 %, or 50 % of the capital and the votes.

(5) Pre-approval Requirements

Any foreign shareholders of a bank need pre-approval from FINMA. Any change to the organizational documents of a bank must also be pre-approved by FINMA.

(4) Asset Protection

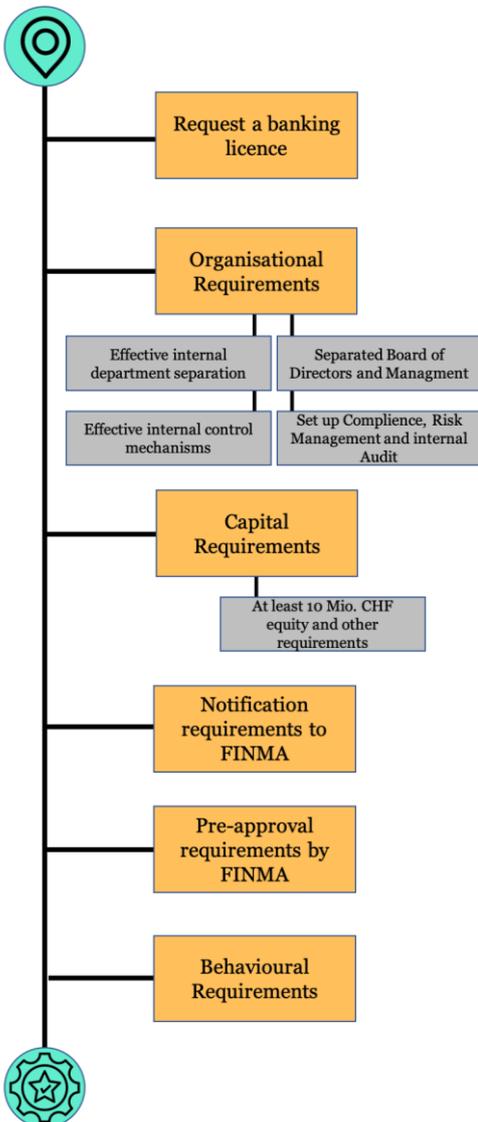
Privileged deposits of depositors are subject to special protection. Deposits in the name of the depositor up to an amount of 100,000 CHF are privileged claims subject to privileged treatment in bankruptcy. Banks must cover 125 % of their privileged deposits with Swiss and covered claims.

Critical Outlook: Securities are also subject to privileged treatment in the event of bankruptcy. Therefore, the question is how cryptocurrencies will be treated in the future in this regard.

b) Bilateral Trading in Cryptocurrencies Which Are Securities

Great, your crypto bank worked out well and you met all the requirements. But that is not enough for you. As CEO of crypto bank, you are now eager to enter the market for cryptos which are **tokenized securities**.

Trading in cryptocurrencies that are securities requires the trading entity to be licensed as a securities dealer. Securities are standardized,



certificated (existing in physical form), and uncertificated (not existing in physical form) financial instruments suitable for mass trading. They are, thus, either offered publicly in a similar structure and denomination or placed with more than 20 clients, unless they are being created specifically for individual counterparties.

Don't worry, you don't need such a license for trading in utility and payment tokens!

A security can **trigger multiple legal consequences when being traded.**

These consequences are:

- ▶ Persons professionally trading in securities will potentially have to **apply for a license as a securities dealer** (the Swiss equivalent of an investment firm or broker/dealer).
- ▶ Facilities allowing for the multilateral trading of securities require a **license as a stock exchange or multilateral trading facility (MTF) or must be reported as an organized trading facility (OTF).**
- ▶ Facilities allowing for the bilateral trading of securities must be operated by a **duly licensed operator** (the Swiss bilateral version of an OTF, which replaces the systematic internalizer in the EU).

1.) Current Regulation of Investment Firms Professionally Trading/ Executing Security Tokens (Securities Dealer Act)

Your friend Daniel is a securities dealer and you chose him as a cooperation partner for your bank. But dealing cryptos that are securities means you have to meet several requirements:

(1) Swiss-based Securities Dealers

Professional trading in securities typically requires a license as a securities dealer granted by the Swiss Financial Market Supervisory Authority, FINMA. The detailed requirements and licensing process depend heavily upon the place of domicile of the securities dealer and the business activity pursued. A Swiss domiciled securities dealer is any legal entity or partnership that professionally sells or buys securities either:

- ▶ on its own account on the secondary market with the intent of reselling them within a short period of time (own-account dealers and market makers)
- ▶ on behalf of third parties (client dealers)
- ▶ by publicly offering securities to the public on the primary market (issuing houses)
- ▶ by professionally creating derivatives and offering them publicly on the primary market (derivative house)

Table 3: Which Security Tokens Dealers Need and Additional License

	Additional License Needed
Own Account Dealers	✗
Market Makers	✓
Client Dealers	✓
Issuing Houses	✗
Derivative Houses	✓

Source: Martin Liebi, PwC,

“The true game changer is to get an OTF license from FINMA here in Switzerland.”

Richard Olsen, Founder of Lykke

“Own account dealers” (see below) and “issuing houses” (see below) have to be **primarily active** in the financial sector at an individual and group consolidated level. This means that the **main business activity of a group must be in the financial sector**. Even sizeable securities trading activities of treasury companies within a group that is pursuing a primary business purpose other than a financial activity are, thus, not subject to the licensing requirements of a securities dealer if the securities trading is closely related to the group’s business activity (e. g., treasury departments of industrial companies). This does not, however, apply to market makers and client dealers, who will have to apply for a license even if the group’s main business activity is not a financial activity.

FINMA Licensing Categorization System

(1) Trading on One’s Own Account (Proprietary Trading)

Securities dealers trading on their own account will only become subject to a licensing requirement if they pose a systematic risk to the financial system. That is why their **gross annual turnover in securities must be at least 5 billion CHF**. They typically do not have any clients. Securities dealers trading on their own account generally act in a professional capacity and on a short-term basis. Key aspects of trading on one’s own account include **trading without instructions from third parties** and **taking on risk**, which is primarily market risk. In the context of a clearing situation it can, however, lead to a counterparty risk if clients do not advance money to settle the securities. Trading on a **short-term basis** means the active management of securities to achieve gains from short-term fluctuations in prices or interest rates within a short period of time. Long-term investments in securities and, in particular, the holding of securities until maturity are not deemed to be trading on one’s own account.

(2) Trading on One’s Own Account (Market Makers)

Market makers **trade publicly in a professional capacity in securities**, on their own account and on a short-term basis. They trade publicly because they offer the securities to anybody. They set a firm bid and ask for prices on an ongoing basis or on request (request for quote).

“August 27, 2019. Sygnum and SEBA have both been granted a banking and securities dealer license from the Swiss Financial Market Supervisory Authority (FINMA). This is the first time this license has been awarded to digital asset specialists.”

Greater Zürich Area Magazine

(3) Trading on Behalf of Third Parties (Client Trading)

Client dealers **handle securities in their own name, but on behalf of clients**, in their professional capacity. A professional capacity is assumed if the securities dealer maintains accounts directly or indirectly or acts as a custodian for more than 20 clients.

Whether the securities dealer is dealing on account for the client or on his/her own account is determined based on economic considerations, namely who is bearing the risk of the transaction. If the client is bearing the economic risk, trading activities over the nostro accounts of the securities dealer are deemed transactions on behalf of the client. Client dealers maintain accounts for the settlement of the transactions for these clients or with third parties or keep these securities for themselves or for third parties in their own name.

There are exemptions when no licensing requirement is triggered, such as if all clients are Swiss. Asset managers and investment advisors are not deemed to be securities dealers if they are acting based on a power of attorney, unless they purchase or sell securities to their clients using their own account or securities deposits.

(4) Placing Cryptocurrencies as Securities (Issuing Houses)

Securities dealers in the form of issuing houses **place cryptocurrencies as securities issued by third parties on a professional basis at a fixed price or for commission and offer them to the public on the primary market**. A key criterion for whether the placement of cryptocurrencies as securities on the primary market is an activity of a securities dealer is thus whether it is “public.”

An offering is public if it is addressed to an unlimited number of people, in particular by via advertisements in the media, prospectuses, or other electronic means. Offers of securities are made exclusively to qualified investors such as domestic and foreign banks and securities dealers or other enterprises under government supervision, shareholders and partners with a significant equity interest in the borrower and parties affiliated and related to them, and institutional investors with professional treasury departments, meaning the employment of one person on a full-time basis managing the company’s assets, are not considered. An offering is deemed to be “public” even if securities have been placed with fewer than 20 people, but the offering has been addressed to an unlimited number of people who do not have to be exclusively qualified investors.

(5) Creating Cryptocurrencies as Derivatives (Derivative Houses)

Derivatives houses create cryptocurrencies in the form of derivatives, meaning **financial instruments whose value is derived from an underlying**. They handle this professionally themselves and offer them on the primary market on their own account or on account of a third party. A placement of derivatives with less than 20 clients after a public offer still qualifies as public offer. A placement of

derivatives with less than 20 clients does not trigger the requirements of a securities dealer.

Security Token Derivatives?

Many investors erroneously believe that exchange-traded funds in traditional markets like stocks and bonds are derivatives. They actually are not considered derivatives. Rather, they are a separate category of securities similar to mutual funds. Unless they use leverage to enhance the performance over the underlying asset such as the ProShares Ultra S&P 500 ETF seeks to provide investors with returns that equal twice the performance of the S&P 500 index. That is an example of an ETF that is classified as a derivative.

Also, there are investment contracts that qualify as a derivative but not as a security – at least in Switzerland. For example, a tailor-made over-the-counter call option is a derivative but not a security. In the European Union, this is normally still considered a security.

(2) Foreign securities dealers

Foreign securities dealers are entities that either

- ▶ possess an equivalent license abroad, or
- ▶ apply the expression “securities dealer” or an expression of similar meaning in their corporate name, business purpose, or documents, or
- ▶ conduct trading in securities.

Foreign securities dealers, meaning entities that are not domiciled in Switzerland, are generally **subject to the same requirements as Swiss-domiciled securities dealers**, unless the law sets forth different obligations. Securities dealers that are actually managed in Switzerland and execute their transactions mainly out of Switzerland must incorporate in Switzerland and be organized according to Swiss regulations. They will be subject to the regulatory requirements of a Swiss securities

dealer. Securities dealers organized under Swiss law are deemed to be under foreign control if a foreign person indirectly or directly holds more than 50 % of the votes or has a material influence on the securities dealer in any other way.

(3) Obligations of a Securities Dealer

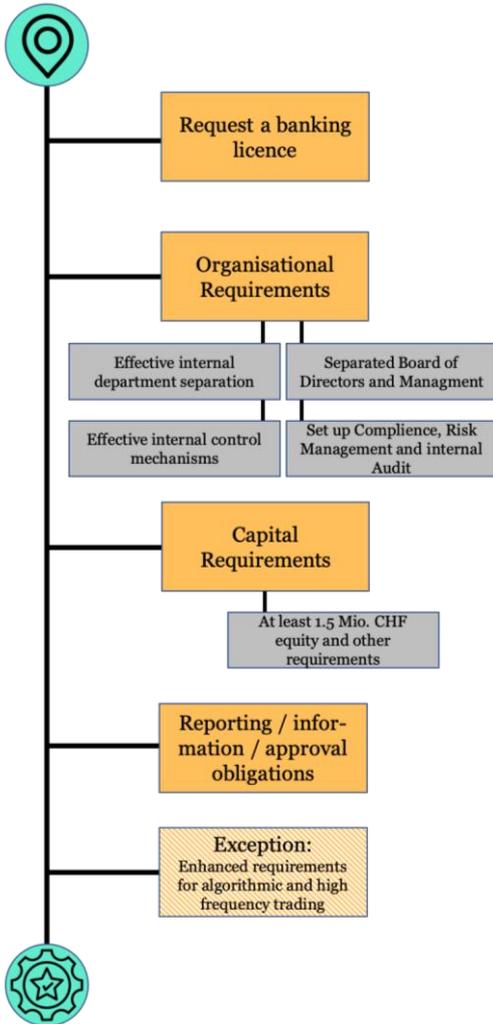
Daniel, the security dealer, now clearly knows what forms there are and he is certain about how his firm’s work is seen from a legislative point of view. But still he needs to know what exactly he must do to build up a fully compliant service. Here are the steps he must follow:

(1) Applying for a License

Anyone falling within one of the categories of a securities dealer mentioned above has to **apply for a license** with the Swiss Financial Market Supervisory Authority, FINMA.

(2) Organizational Requirements

The securities dealer must have a **board of directors and a management team**. There must be an adequate separation between trading, asset management, and administration. The securities dealer must also establish an internal control system consisting of compliance, risk management, and internal audit. An external regulatory audit firm must also be appointed. It is possible to unify some of the control functions with a specific person.



(3) Capital Requirements

Any securities dealer must have **fully paid-in minimal capital of at least 1.5 million CHF**. Any shareholder indirectly or directly holding more than 10 % of the capital or the voting rights of a securities dealer or that may in any other way influence the business activities of the securities dealer must meet FINMA’s fit and proper criteria. The provisions applicable to banks regarding their own capital and accounting generally also apply to a securities dealer. Privileged deposits of clients are subject to enhanced protection.

(4) Reporting, Information, and Approval Obligations

Any securities dealer will have to **comply with multiple reporting, information, and approval obligations** on an ongoing basis. Any change to the preconditions for granting the license, but in particular the articles of association, regulations, material change of business activity, management, board of directors, and external audit firm, as well as build-ups, investments, and divestments of foreign operations, must be pre-approved by FINMA.

Any indirect or direct acquisition or sale of a stake in a securities dealer reaching, exceeding, or falling below the thresholds of 20 %, 33 %, or 50 % of the capital or the votes must be reported to FINMA.

(5) Exception: Algorithmic and High Frequency Trading

Participants in Swiss trading venues that are engaging in algorithmic or high frequency trading activities are **subject to enhanced recording requirements** and their **systems must ensure adequate functioning** even in stress situations.

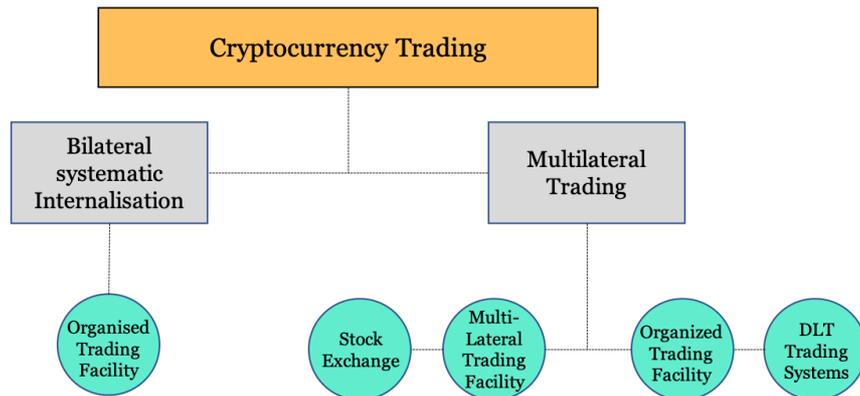
Organized Trading Facilities (OTFs) Regulated by the Swiss Financial Market Infrastructure Act

(1) Bilateral Trading in Cryptocurrencies

Trading arrangements in derivatives or financial instruments related to cryptocurrencies can be **an organized trading facility (OTF)** that is subject to special regulation. An OTF is, in Switzerland, the catch-all facility for many other trading setups encompassing bilateral and multilateral as well as discretionary and non-discretionary trading activities in both securities and financial instruments, meaning any other financial instruments used for investment purposes while not constituting securities. The Swiss OTF offers a lot of **flexibility**, which makes it a highly suitable platform for cryptocurrency trading.

An OTF is any trading facility that:

- ▶ is governed by a set of rules that is standardized and binding to participants,
- ▶ allows for the conclusion of contracts within the scope of application of these rules,
- ▶ enables the initiative to trade to come from the participants.



An OTF can only **be operated by** a bank, securities dealer, trading venue, facility recognized as a trading venue or a legal entity within a financial group that is controlled directly by a financial market infrastructure and is subject to consolidated FINMA supervision. Unlike under MiFID II/MiFIR, a systematic internalizer is not a special category of investment firm/securities dealer but is either a bilateral OTF or a securities dealer if the related requirements are met.

The operation of an OTF is also subject to **requirements** that ensure orderly trading, transparency and investor protection, such as best execution requirements in the case of discretionary trading. Any operator of an OTF must issue rules and regulations and appoint an independent control function that monitors compliance with these regulations. Pre-trade transparency is required in the case of bilateral and multilateral liquid trading, **meaning at least 100 trades on average per day over the last year**. Post-trade transparency is only required in the case of multilateral trading. Anyone operating an OTF or intending to do so in the future must report this fact or intent to the Swiss regulator FINMA.



Critical Point: Credit Suisse and UBS are examples of entities that have OTF licenses. Pre-trade transparency means that the bid and ask spread must be disclosed to the client prior to the trade. Many cryptocurrency brokers are trying to get an OTF license.

After having reviewed bilateral trading systems, in the following part different multilateral systems will be described.

(2) Multilateral Trading in Cryptocurrencies

Cryptocurrencies can be traded on a **multilateral basis** based on multiple organizational setups depending upon the legal nature of the cryptocurrencies traded and the trading mechanism.

1.) Multilateral trading in Payment and Utility Tokens on the Basis of an SRO registration

Payment tokens and utility tokens can be traded on a multilateral basis, meaning the simultaneous exchange of bids between several participants and the conclusion of contracts based on non-discretionary or discretionary rules, simply based on a registration with a self-regulatory organization (SRO) for AML purposes.

“Unlike under European law, the Swiss law OTF category serves as a rather wide catch-all category.”

2.) Multilateral Trading in Asset, Payment, and Utility Tokens

(1) Stock Exchange

The **highest regulated** entity for trading in cryptocurrencies on a multilateral basis is the **stock exchange**. A stock exchange means an institution for multilateral securities trading where securities are listed, whose purpose is the simultaneous exchange of bids between several participants and the conclusion of contracts based on non-discretionary rules. A stock exchange can admit to trading payment token and utility token.

Stock exchanges are regulated according to the principle of self-regulation in Switzerland. This means that the law gives certain guidelines and determines certain obligations that must be complied with on a mandatory basis. The operator of a multilateral trading operation has, however, the discretion to determine the organization and the rules applicable to the trading activities of the stock exchange as a default.

A stock exchange must have multiple bodies, such as the admission board, the reporting office, the disclosure office, a trade surveillance office, the regulatory board, the sanctions commission, and the appeals board. It must also have a board of directors, a management, a compliance function, a risk function, and an internal audit function. The organization must be appropriate in terms of staffing and organization to operate a multilateral trading operation. In particular, there are also certain obligations regarding the features and the resilience of the trading system and the IT system, such as pre- and post-trade transparency, algorithmic trading, and guarantees for the orderly trading.

(2) Multilateral Trading Facility

A multilateral trading facility (MTF) means an institution for multilateral securities trading whose purpose is the simultaneous exchange of bids between several participants and the conclusion of contracts based on non-discretionary rules without listing securities. An MTF **differs thus from a stock exchange only in so far that securities are not listed on an MTF**. Payment token and utility token can, next to securities, also be traded on an MTF.

The organizational **requirements** and the required staff are almost identical to the ones required for a stock exchange. The only real difference results from the fact that securities are not listed on an MTF but admitted to trading.

(3) Organized Trading Facility

An organized trading facility (OTF) is an establishment that **allows**, next to the bilateral trading in securities or financial instruments for the exchange of bids, **also for the multilateral trading in securities or other financial instruments** whose purpose is the exchange of bids and the conclusion of contracts based on discretionary rules or the multilateral trading in financial

instruments other than securities whose purpose is the exchange of bids and the conclusion of contracts based on non-discretionary rules.

An OTF must either be operated by a licensed bank, securities dealer or the authorization or recognition as a trading venue. The law requires some obligations regarding conflict of interests, transparency, and orderly trading. Within these guidelines, the operator of an OTF has, however, a vast discretion to self-regulate the OTF.

(4) DLT Trading System

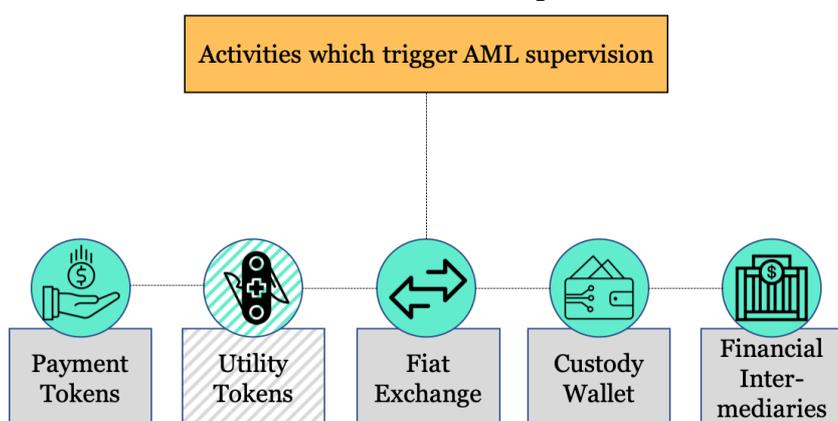
“The Swiss proposal can be seen as confirmation of the positive attitude of the Swiss government towards DLT and strikes a good balance between self-regulation, supervision, and alleviations for smaller marketplaces.”

Martin Liebi, PwC

The Swiss lawmaker is planning to introduce soon a new category of multilateral trading facility specifically made for DLT-securities amongst many other key legal changes addressing pressing needs (such as, but not limited to the bankruptcy treatment of crypto assets and a new category of securities called DLT securities etc.). The **key differentiating features** of this license category will be that **one license covers the entire trading and post-trading** (settlement and custody). Although a similar setup like a stock exchange is required, FINMA can on a case-by-case basis relieve the license holder from certain requirements depending upon the risk profile and the scope of activity. Participants can be either natural persons or licensed entities.

Anti-Money Laundering Obligations

Cryptocurrency Activities Subject to Anti-Money Laundering Supervision



1.) Payment Tokens

The issuing of payment tokens constitutes the issuing of a means of payment subject to this regulation as long as the tokens can be transferred technically on a blockchain infrastructure. This may be the case at the time of the ICO or only at a later date.

2.) Utility Tokens

In the case of utility tokens, anti-money laundering regulation is not applicable as

long as the main reason for issuing the tokens is to provide access rights to a non-financial application of blockchain technology.

3.) Exchange of Cryptocurrency into Fiat Money

The exchange of a cryptocurrency for fiat money is subject to AML requirements.

4.) Custody Wallet

The offering of services to transfer tokens if the service provider maintains the private key is a financial intermediary activity subject to AML requirements.

5.) Banks, Securities Dealers, and Asset Managers

Securities dealers and banks duly licensed by FINMA are financial intermediaries. They are subject to the requirements of Swiss anti-money laundering provisions. Any other trading activities not subject to a license as a securities dealer are not subject to the Swiss anti-money laundering regulations (unless they concern a payment token). Asset managers of individual portfolios are also subject to anti-money laundering supervision but are not subject to FINMA authorization.

Obligations of Entities Engaging in Cryptocurrency Activities Subject to Anti-Money Laundering Supervision

1.) Registration With a Self-Regulatory Organization or with FINMA if not FINMA-Supervised

Financial intermediaries not supervised by FINMA **must register** with an AML self-regulation organization or directly with FINMA. They will then become subject to the client and beneficial owner identification and transaction surveillance requirements set forth in the applicable directives of the self-regulation organization.

2.) FINMA-Supervised Entities

Banks and securities dealers have to comply with the verification of the identification requirements of contractual parties and the establishment of the identity of the controlling person and the beneficial owner according to the Agreement on the Swiss Banks' Code of Conduct with regard to the exercise of due diligence (CDB16). Compliance with these requirements is audited by the external auditor on an annual basis.

3.) General Obligations of All Financial Intermediaries Subject to AML Obligations

(1) Identification of a Contractual Party

Financial intermediaries undertake to verify the identity of the contracting partner when establishing business relationships. The execution of transactions involving trading in securities must exceed 25,000 CHF in the case of an account opening.

(2) Establishment of the Identity of Controlling Persons and Beneficial Owners

If an operating legal entity or partnership has one or more controlling persons with **voting rights or capital shares of 25 % or more**, these are to be identified in writing. Controlling persons are those natural persons who effectively have ultimate control over the company. Whether these persons exercise control

directly or indirectly via intermediate companies is irrelevant. A controlling person must generally be a natural person. The contracting partner must

“Swiss Federal Council continues to monitor developments around blockchain/DLT.”

Financefeeds.com



Critical Point: Form A is used to disclose the beneficial owner or if you go to a bank counter at LGT and you try to exchange a certain amount of euros and Swiss francs above a certain threshold, then you need Form K.

confirm the name, first names and actual domiciliary address of the controlling person in writing or by using Form K.

The financial intermediary requires from its contracting partner a statement concerning the beneficial ownership of the assets. Generally, the beneficial owners of the assets are natural persons. If the contracting partner declares that the beneficial owner is a third party, then the contracting partner has to document the latter's last name, first name, date of birth, and nationality, along with his/her actual domiciliary address, or the company name, address of registered office, and country of registered office using Form A.

(3) Business Relationships and Transactions with Increased Risk

Financial intermediaries have to determine business relationships and transactions that are subject to increased risk. The initiation of such business relationships and the execution of such transactions are subject to enhanced due diligence requirements. Such business relationships must be approved by the management.

(4) Organization

Financial intermediaries must establish an **organization that allows for efficient compliance** with the applicable anti-money laundering regulations and, in particular, has to designate a dedicated anti-money laundering function. New products must be checked by the securities dealer for their compliance with the applicable regulations. Securities dealers must establish an effective mechanism for the surveillance of transactions and business relationships based on an IT system.

4.) Regulatory Requirements Regarding Payments on the Blockchain

Switzerland has already implemented the **FATF standards on virtual asset services providers (VASP)**. These apply to crypto exchangers, wallet providers, and trading platforms. FINMA has made it clear that information regarding the person giving the payment instruction and the beneficiary must be submitted in case of a payment made on the blockchain like in any other payment made between banks (e. g., SWIFT). Any such payment must also be made between two entities registered for AML purposes (unlike the FATF recommendations that allow also for payments between non-AML-registered entities). Payments are only possible between two clients of the same AML-registered entity or between wallets of the same client held with the AML-registered entity. Payments to third parties outside of the scope of influence of the AML-registered entity making the transaction must be identified like an own client (identity, beneficial ownership, and actual transaction power) by means of adequate technical measures. In case of exchanges fiat-vs-payment tokens and the involvement of an external wallet must the exchanging entity check who has the power to transact about the wallet by means of adequate technical measures.

This more restrictive implementation of the FATF-VASP standards will force wallet providers to become registered for AML-purposes to allow

for the execution of payments. Such registration can be done on a voluntary basis with an SRO for AML purposes in Switzerland. It will also require an exchange of information between the two entities executing the payment because there is yet no system available that can transmit the data required for the identification of the contractual party and the beneficial owner.

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Bitcoin Suisse Decrypt
Our Crypto Market Report:



Tokenizing the Swiss Franc with Armin Schmid of Swiss Crypto Tokens

“Useful groundwork has already been done in all these areas in Switzerland. But the time for pioneers is over: Switzerland now has to take the next step in the development of DLT, morphing from the much-vaunted ‘Crypto Valley’ into a fully-fledged DLT nation.”

Avenir Suisse, Blockchain after the Hype Report

Key Takeaways

- ◆ Crypto Francs (XCHF) is fully backed by physical bank notes and there is no negative interest rate. Storage costs make 100 % backed circulating bearer instruments not possible unless the issuing company charges subscription and redemption fees as well.
- ◆ Swiss Crypto Tokens has issued more than 10 million XCHF on the Ethereum blockchain using the ERC-20 token smart contract.
- ◆ Swiss Crypto Tokens does not see Swiss National Bank Coin as competition, as the underlying private blockchain and purposes are fundamentally different.



Armin Schmid joined Bitcoin Suisse in April 2018 as Head Strategic Projects. In July 2018, he became CEO of the newly founded daughter company Swiss Crypto Tokens AG. Armin previously worked for eBay, PayPal, and SIX Payment Services. He holds a Master in Materials Engineering from ETH Zurich and an MBA from University of St. Gallen.
 Source: Bitcoin Suisse

Everyone Can Hold Digital Swiss Francs Now

The most common form of stablecoins are fiat-backed and fiat-pegged stablecoins. For this edition of the Crypto Research Report, we interviewed Armin Schmid from Swiss Crypto Tokens (SCT) AG that issues the Crypto Franc (XCHF) to answer a few unanswered questions from our readers. The tokens themselves represent an underlying transferable bond based on Swiss law.

Each ERC-20 token represents a zero-coupon Crypto Franc bond. Swiss Crypto Tokens is “borrowing” money for one month from investors. In exchange for borrowing the money, Swiss Crypto Tokens issues a stablecoin to them as a type of receipt. If the token is not returned before maturity, the token rolls over to the next bond period free of charge. When the XCHF ERC-20 is sent back to Swiss Crypto Tokens and the customer is fully onboarded with KYC & AML documentation, the Swiss francs are redeemed. Swiss Crypto Tokens burns the XCHF ERC-20 token and does not further trade it.

- ▶ Are all Crypto Franc (XCHF) ERC-20 tokens fully backed with reserves?

Armin: All holdings (currently more than 10 million CHF) are backed 100 % in physical banknotes, that’s right.

- ▶ If you stored this cash in a bank, would you have to pay negative interest rates on this money?

Armin: Most probably yes. Banks usually have a certain threshold, where they don’t charge, but at this level, they would charge negative rates for business customers. This might be different for private customers. But especially with this volume in cash, no investments = full -0.75 % interest would apply.

- ▶ **Current setup: XCHF > Swiss Crypto Tokens AG > banknotes in bunker**
- ▶ **If stored on bank account: XCHF > Swiss Crypto Tokens AG > bank XYZ**

We would announce any changes to the interest rate 3 months in advance. So token holders have the chance to redeem them, so they do not have to pay negative interest. This is just a nice feature that we announce early. The goal is to keep the interest rate at 0 %.

“Volatility has become an obstacle to the wider adoption of cryptocurrencies. In general, an effective currency should at least function as a medium of exchange and a store of value.”

Armin Schmid,
CEO Swiss Crypto
Tokens AG

- ▶ Is this why you write “The interest rate for the next 3 months of the bond issuance is set at 0 %.” Why would Swiss Crypto Tokens need to charge a negative interest rate on the bond if the money is stored in a vault outside of the banking system?

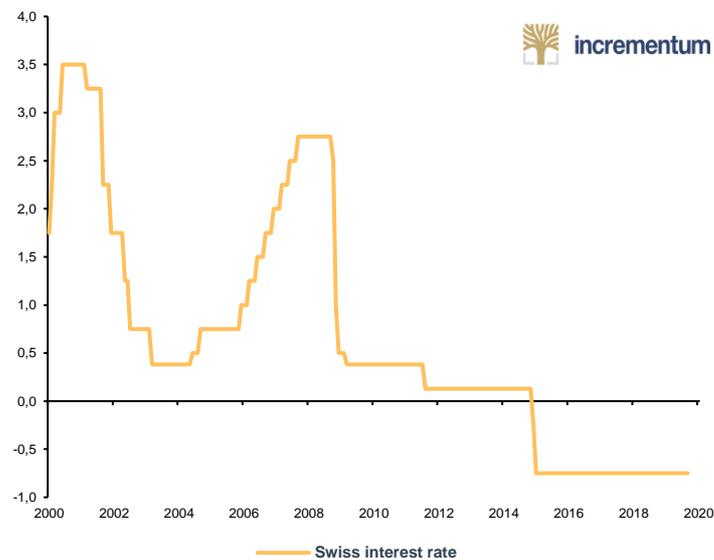
Armin: Storing banknotes is not free: Vault, insurance, cash handling, monthly auditing by Grant Thornton of SCT have running costs. The idea is to make up for losses with issuance & redemption fees.

The bank notes belong to Swiss Crypto Tokens and the XCHF product. XCHF token holders know that we have the assets stored in a bunker and have this audited on a monthly basis by Grant Thornton.

- ▶ If interest rates go up, will SCT pay a positive interest rate or will this be a profit margin for BS in the future?

Armin: Based on the prospectus, we would not pay positive interest rates. And yes, this would be our margin.

Figure 10: Swiss Interest Rate Since 2000

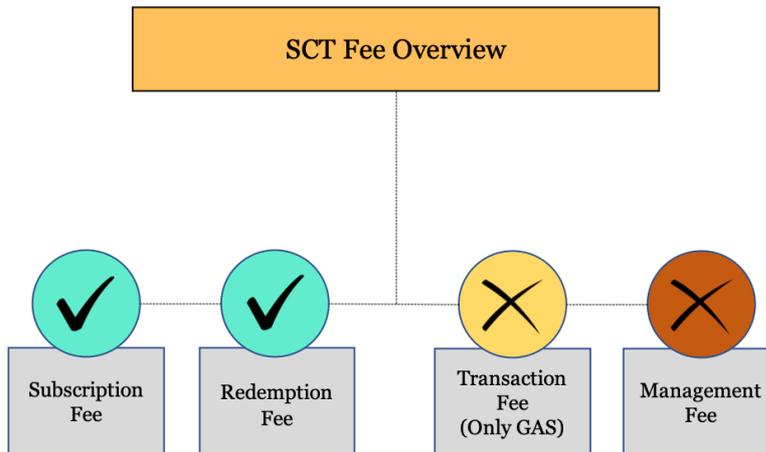


Source: OENB, Incrementum AG

- ▶ Why did you need to make this into a bond?

Armin: If you're not a bank and you'd like to accept money from customers, there are only a handful of exemptions based on Swiss law. Bond with prospectus is one of them.³¹

³¹ <https://www.admin.ch/opc/de/classified-compilation/20131795/index.html#a5>.



▶ Is there a subscription fee?

Armin: Yes.

▶ Is there are redemption fee?

Armin: Yes.

▶ Is there a transaction fee?

Armin: (No – only GAS Fee from Ethereum Network.)

▶ Is there a management fee?

Armin: No.

▶ How many redemptions have you had?

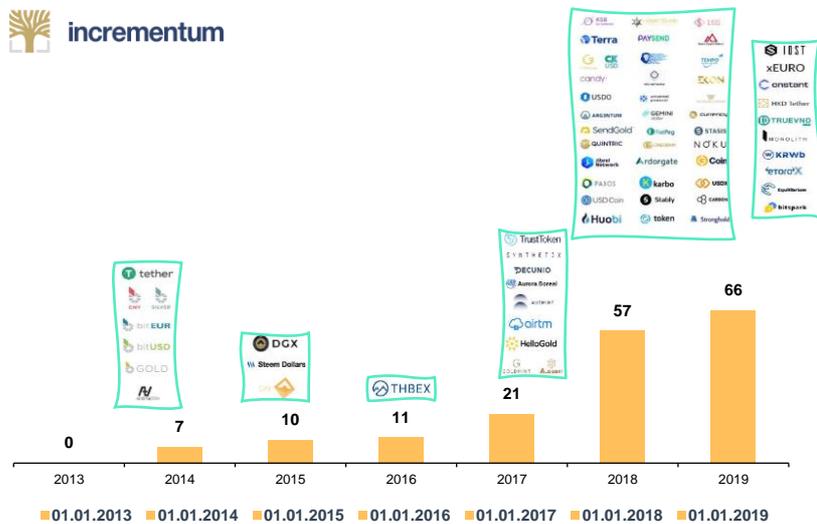
Armin: 2 major redemptions with 5 million CHF volume in total.

▶ Is it open to retail investors? What is the minimum investment?

Armin: Any customer segment is welcome. We have lowered the threshold for issuance from Swiss Crypto Tokens to 1,000 CHF. For lower volumes, we recommend using exchanges like Bitfinex, Ethfinex, IDEX or Uniswap, where XCHF can be traded against Bitcoin, Ether, Dai or USD.

▶ The ERC-20 tokens can be traded freely as any Swiss-based bond can be traded peer-to-peer with anyone. The target customers are Swiss investors. If a customer outside Switzerland wants to invest, Swiss Crypto Tokens must look at each case one-by-one and each investor needs to do KYC/AML with Swiss Crypto Tokens in order to invest. Is this correct?

Figure 11: Number of Stablecoins Launched Per Year



Source: Blockdata.tech, Incrementum AG

“It is very difficult to determine which is a better mechanism to achieve stability but what we do know is this — the race for a truly decentralized, stable and transparent cryptocurrency is alive and well, and this will be a welcome solution to many of the problems inherent in the market currently.”

Armin Schmid,
 CEO Swiss Crypto Tokens AG

Armin: Swiss bond = Swiss customers, any other customer is welcome, and we would check individually. We would like keep the website setup simple, not to request from each visitor to identify themselves: Where are you from? What are the legal requirements for country XYZ? Are you a qualified investor? ...

- ▶ Do you have a whitelist of people who can hold the coins?

Armin: No.

- ▶ What happens if someone loses the private key to their tokens?

Armin: No recovery, the token is 100 % linked with customer wallet.

- ▶ Does **Swiss Crypto Tokens** have a backup of the private keys?

Armin: No, no backdoors, no freezing of funds.

- ▶ Is the ERC-20 token considered a security in Switzerland?

Armin: Based on Swiss law (FINMA), the underlying bond is clearly seen as an asset token, a security.

- ▶ If the SNB launches a private ledger token that represents Swiss francs, what will this mean for the **Swiss Crypto Tokens’** Crypto Franc (XCHF)?

Armin: Crypto Franc is a token issued on the public blockchain Ethereum. If SNB would launch a CHF stablecoin on a private blockchain, it is not different from a centralized ledger. Only limited participants would be able to use it. E. g., banks. SIX Digital Exchange (SDX) have announced to work with SNB but only for settlement of SDX internal transactions. So, I see it as a completely different product from the current Crypto Franc (XCHF).



Swiss **ISIN** for Crypto



www.g2d.io



Incrementum Recommended Books

Today, thousands of cryptocurrencies exist and even more books on the topic of cryptocurrencies exist. Determining which books are worth the read is almost as difficult as determining which cryptocurrencies to invest in. A book that we recently read called *Ignorieren auf eigene Gefahr* was published in German this quarter. The English version, *Ignore at your own risk – the new decentralized world of Bitcoin and Blockchain* will be out in November.

The book guides one through the history of money, cryptography, and game theory, and gives thoughts on institutional economics and deals with philosophical aspects of contract theory. Acknowledging many of the thoughts by Bitcoin maximalists, this book also empathically deals with other concepts such as Ethereum, stablecoins, libra, tokenization, blockchain, smart contracts, or privacy coins. In this sense, the work is equally suitable for Bitcoiners, Altcoiners, crypto sceptics and blockchain newbies.

The book provides insight into a number of relevant questions: How can an economic good function as money when that economic good is limited in its offer and, therefore, is deflationary? Can non-state private money exist at all? Why should trustworthy institutions pose a security risk? Can the birth defects of today's Internet be corrected? Are we witnessing the rise of the sovereign individual? What if our current financial system is not socially scalable? And can an economic good which is not tangible, which is not used in any industrial application, have any real value at all? Reading the book does not provide you with ready-made answers but inspiring thoughts and perspectives that broaden your horizon.



The comics tell the fictional story of the journalist Kali and developer Jay who dive into the decentralized crypto world with the help of the digital oracle Eva. On their journey they meet well-known personalities of the crypto scene. These people explain the new technology, its advantages and pitfalls. The longer Kali and Jay deal with Bitcoin, Ethereum, and the blockchain, the more enthusiastic they become. Much to the annoyance of Lord IB of Kratz and Herbert, who fight the up-and-coming crypto movement with all means. Until it comes to the ultimate showdown...

So why shouldn't this book be ignored under any circumstances? As the authors convincingly show, the new decentralized world is a serious development. Thus, when reading the book, the impression arises that those who have not paid any attention to the subject of Bitcoin, blockchain, and crypto assets so far and continue to ignore them run the risk of missing the most exciting developments of our time.

Ignorieren Auf Eigene Gefahr (German) can be purchased on [Amazon](#).

The English book can be pre-ordered (cryptocurrencies accepted) [here](#).



Upcoming Conferences

DECENTRALIZED

When: October 30th – November 1st, 2019

Where: Athens, Greece

What: Decentralized is the third annual conference hosted by the University of Nicosia and is one of Europe's premier conferences on blockchain and digital currencies. The conference connects some of the world's biggest executives with academic experts to engage in discussion on current trends and future developments within the space. The conference features 3 unique tracks to best tailor the experience to each attendee:



1. A pre-conference track with a workshop put on by Hyperledger and a bootcamp course by Corda.
2. An Academic track addressing the design & engineering improvements to blockchains, the business & legal implications, and the emergence of new technologies.
3. A business and technology track featuring a series of keynote speakers and networking opportunities.

Who: Organized by the University of Nicosia, Decentralized features 100+ speakers including Dr. Adam Beck (CEO of Blockstream), Bill Barhydt (CEO of Abra), Perianne Boring (Founder and President of The Chamber of Digital Commerce), Ryan R. Fox (Development Coordinator of Bitshares).

CRYPTO FINANCE CONFERENCE

When: January 15th – 17th 2020

Where: Saint Moritz, Switzerland

What: An exclusive investor conference on cryptocurrencies and most exclusive investor conference about cryptocurrencies and blockchain investments, with events in Switzerland the US and Japan. The CFC is connecting private investors, institutional investors, and family offices with leaders in the blockchain industry. The three-day conference offers expert education, investment opportunities, and excellent networking. The list of participants of each conference is strictly limited, application-based, and curated by the board to enable the participating experts to build a unique network.



Who: Dr. Guenther Dobrauz Saldapenna (Leader and Partner of PwC Switzerland Legal) will be speaker for the fourth consecutive time. Further speakers are to be announced later this year.



UNIVERSITY OF LIECHTENSTEIN & INCREMENTUM AWARD CEREMONY

When: November 26th, 2019, 16:30–19:00

Where: University of Liechtenstein

What: Official Launch of First Research Partnership Between University of Liechtenstein and Incrementum AG Awarded by Swiss Government

An innovative fund Strategy of Incrementum AG will be the first regulated cryptocurrency fund to be awarded a research grant by the Swiss government. In cooperation with the University of Liechtenstein, Incrementum will benefit from an exclusive research collaboration funded by the Swiss Innovation Agency.

The grant will fund academic research on optimization of our cryptocurrency investment strategy, including seasonal patterns in cryptocurrency prices, price formation on exchanges, and risk management of cryptocurrency options and derivatives, amongst other topics. The 360,000 CHF award will span several years, and the results of the proprietary research will be for the sole benefit of Incrementum AG. This award signals a significant step forward for us.

Speeches by Asst. Prof. Dr. Martin Angerer, and Mark Valek will be held. The event will be attended by government officials, distinguished academics from the field of finance, investors, and media representatives from the DACH Region. The ribbon cutting will be followed by a networking apero.

We are convinced that this strong partnership will support the long-term success of our fund by helping us stay ahead of the curve. This grant will enhance Liechtenstein's position as the world's leading blockchain nation, and the University's position as a center for cutting edge research on financial technology and innovation.

The event is in German and it is free, but seats are limited to 120 and registration is on a first come, first serve basis. Please register at this link: www.uni.li/finance-events

OFFICIAL RESEARCH GRANT HANDOVER

University of Liechtenstein & Incrementum AG



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Richard Knirschnig

Chart Guru

The Report

As a sister report to the internationally acclaimed [In Gold We Trust report](#), the Crypto Research Report brings the same quality and rigor to understanding the cryptocurrency market. The Crypto Research Report is a report produced by Incrementum AG.

The Company

Incrementum AG is an owner-managed and fully licensed asset manager & wealth manager based in the Principality of Liechtenstein.

What makes us stand out in the asset management space? We evaluate all our investments not only from a global economic perspective but also by taking into account global monetary dynamics. This analysis produces what we consider a truly holistic view of the state of financial markets. We believe our profound understanding of monetary history, out-of-the-box reasoning and prudent research allows our clients to prosper in this challenging market environment.



Advisors

In order to provide accurate information on the most important and recent updates in the crypto space, a diverse team of thought-leaders, academics, and finance experts form our board of advisors. The mission of our board is to stimulate discussion on the most pressing risks and opportunities in the cryptocurrency market. Our advisors come from different countries, different education paths, and different careers. However, they all have one trait in common: their avid interest in the blockchain technology and cryptocurrencies. To stay up-to-date, the advisory board meets on a regular basis to discuss current affairs and the next quarter's outlook. All meeting minutes are posted as a transcript and released for free on our website at www.CryptoResearch.Report. Our board members include:

Max Tertinegg

Max Tertinegg is the CEO and co-founder of Coinfinity in Graz. Since 2014, Mr. Tertinegg has worked with merchants, investors, and regulators in Austria to build a cryptocurrency community. Currently, he is working on cryptocurrency storage solutions that are affordable and easy to use. In cooperation with the State Printing House of Austria, Coinfinity has designed a "[Card Wallet](#)" that is a bearer paper wallet for Bitcoin.



Oliver Völkel

Based in Vienna, Oliver Völkel is a partner at [Stadler Völkel Attorneys at Law](#). He assists corporations and banks in all stages of capital market issuings and private placements (national and international). His focus is on new means of financing vehicles (initial coin offerings, initial token offerings) and drafting and negotiation of cross-border facility agreements and security-documentation, also in connection with cryptocurrencies and tokens. Mr. Völkel also advises on other cryptocurrency related banking matters, regulatory matters, capital markets regulation, general corporate, and corporate criminal matters.



In case you have missed our last Crypto Research Report and you would like to have a pleasant reading, please follow the links below.



[Crypto Research Report – December 2017 Edition](#)

- Introduction to the Blockchain Technology and Cryptocurrencies
- U.S. Regulated Bitcoin Derivatives: Blessing or Curse?
- Constructing a Cryptocurrency Index
- Taxation of Cryptocurrencies in Europe
- Farewell 2017: Year of ICOs, Hard Forks, and Upward Trends



[Crypto Research Report – March 2018 Edition](#)

- In Case You Were Sleeping: Ikarus Edition
- Bubble or Hyperdeflation?
- Coin Corner: War Within Bitcoin
- Technical Analysis: Is a Crypto Winter About to Start?
- Crypto Concept: Fork
- 10 Facts About Max Tertinegg, the CEO of Coinfinity
- Incrementum Insights: How Will Cryptocurrencies Change Finance



[Crypto Research Report – June 2018 Edition](#)

- In Case You Were Sleeping: Wall Street Is Getting Ready
- Crypto Concept: Consensus Mechanisms
- Competing Currencies and Digital Money: How Hayekian are Cryptocurrencies?
- Coin Corner – Blockchain 3.0 The Future of DLT?



[Crypto Research Report – October 2018 Edition](#)

- In Case You Were Sleeping: Cell Phone Theft Edition
- Crypto Concept: Smart Contracts
- Liechtenstein's Blockchain Strategy
- Coin Corner: ETH, NEO, ADA, & EOS
- The Network Effect as a Valuation Methodology



Crypto Research Report – January 2019 Edition

- In Case You Were Sleeping: Crypto Winter Edition
- Crypto Concepts: Custody Solutions for Crypto Currencies
- A Bitcoin Standard? Saifedean Ammous Musing with the Crypto Research Report
- Institutional Requirements for an Investible Crypto Index
- Equity Tokens
- Legal Challenges for Blockchain-Based Capital Markets



Crypto Research Report – April 2019 Edition

- In Case You Were Sleeping: When the Tide Goes Out...
- Gold & Bitcoin: A Crypto Strategy, also for Institutional Investors
- Technical Analysis: Spring Awakening?
- Crypto Concepts: Cryptocurrency Mining in Theory and Practice
- John Tromp: Making Computer Science Great Again



Crypto Research Report – July 2019 Edition

- In Case You Were Sleeping: Facebook Edition
- Libra: The End of the State Money Monopoly
- Coin Corner: XRP and Ripple
- Gold Stablecoins
- Partner Insights: Lucas Erath on Transforming Finance
- Fireside with Nick Szabo on Scaling Bitcoin

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