

Analysis of GoodX Model*

Nicola Borri
LUISS University

Kirill Shakhnov
EIEF

October 18, 2018

Key Findings

1. Novel business model and exceptional growth opportunity in under-serviced market of crypto and gold investors
2. Diversified business model
 - investment, management, and transfer of gold, fiat and crypto currencies
 - credit and debit cards linked to gold, fiat and cryptocurrency accounts
 - instant loans in fiat currencies with crypto or gold as collateral
3. Launching the product early in order to gain market share
4. Conservative estimates of customer growth
5. Reasonable estimation of customer acquisition and IT costs

Overview

The objective of Good X Network OÜ (henceforth GoodX), an Estonian registered company, is to create a platform for users to invest, manage and transfer to other users fiat traditional currencies, cryptocurrencies, and gold with zero fees. In addition, GoodX allow users conversions and transfers across assets at competitive spreads, access to credit and debit cards linked to fiat, crypto and gold wallets, and instant loans in fiat currencies using crypto and gold as collateral. Specifically, at any moment, and anywhere in the world, users will be

* Borri: Department of Economics and Finance, LUISS University, Viale Romania 32, 00197 Rome, Italy; nborri@luiss.it; Tel: +39 06 85225959; <http://docenti.luiss.it/borri>. Shakhnov: EIEF, Via Sallustiana 62, 00187 Rome, Italy ; kirill.shakhnov@eief.it; Tel: +39 06 47924872; <https://sites.google.com/site/kshakhnov/>.

able to get a secured loan in fiat currencies via the PFI or GoodX Stable Coins, using their investment in gold or cryptocurrencies as collateral. The loan amounts could be up to 90% of the value of the gold collateral or 80% of the crypto collateral. The goal of GoodX is to maintain highly competitive loan-terms and interest rates. The ambition of GoodX is to eventually become the main means of payment in the world, and to offer its services to customers first in the European Union, and then in the rest of the world. GoodX is in full compliance with Swiss regulatory requirements and maintain strict standards in the customers verification process.

The State of the Financial FinTech Industry

Over the past year, so-called NeoBanks have been making headlines by attracting large venture capital investments. Most of these NeoBanks have started to operate in the U.K., and then expanded, or plan to expand, to Europe. The fact that most NeoBanks started in the U.K. depend on two main reasons. First, the U.K. has a market for financial and banking institutions that is not as concentrated as, for example, the U.S. This has created the opportunity for non-traditional financial institutions to enter the market. Second, the U.K. was an early adopter of digital banking.

The current largest players in the market for retail investors are Revolut and N26 Bank. The largest player in the e-commerce market is a joint venture of Coingate and Prestashop. Revolut is one of the main competitor for GoodX, as it now accepts cryptocurrencies. However, GoodX offers investment in gold and credit card services that are not currently offered by Revolut.

We start by describing the experience of already established banks. Table 2 presents a snapshot of the existing main NeoBanks using the latest available data. The main NeoBanks by revenues are Revolut, Fidor, Simple, N26, Monese, Atom, Starling, Monzo, Spotcap and Coingate. Most of the NeoBanks were funded after the Global Financial Crisis and focus on retail customers. Fidor and Simple were founded in 2009, and all the others after 2013. Annual revenues for Revolut and Fidor were approximately equal to 15.4 millions of U.S. dollars, while they were less than 10 millions of U.S. dollars for the remaining NeoBanks listed in the table. The only NeoBank that offers crypto services is Revolut, while Coingate offers crypto services to e-commerce only. The number of customers varies from 2 millions for Revolut to 10 thousands for Starling. Note that customers for Spotcap and Coingate are not individual users, but mostly online retailers and small/medium enterprises. We observe

growing M&A activities in this industry: while the largest NeoBank, Revolut, is independent, most of the others have been acquired by large financial groups.

Table 1: NeoBanks in 2018

Company	Business	Markets	Founded	Employees	Customers	Funding	Revenue	Current Situation
Revolut	FX services, crypto	EU, UK	2015	500	2,000,000	\$337.1M	\$15.4M	Independent, Profitable 2018
Fidor	banking services, p2p lending	EU, UK	2009	230	200,000		\$14.2M	Acquired in 2016 by BPCE
Simple	banking services	US	2009	300	100,000	\$15.3M	\$6.2M	Acquired in 2014 by BBVA for 117 mln \$
N26	banking services	EU, UK	2013	500	1,500,000	\$188.5M	\$5M	Partnered with TransferWise
Monese	remittances	EU, UK	2013	140	600,000	\$11.8M	\$4M	Independent, Losses
Atom	savings deposits	UK	2014	250	17,000	\$454M	\$4.5M	Partnered with BBVA 2017
Starling	banking services	UK	2014	< 50	10,000	\$70M	\$3M	Independent, Losses
Monzo	banking services	UK	2015	300	1,000,000	\$138.2M	\$3.5M	Independent, Losses
Spotcap	SME leanding	EU, UK	2014	< 50	5,000	\$112.5M	\$2.5M	partnered with BAWAG 2018
Coingate	e-commerce in crypto	Worldwide	2014	< 50	50,000		\$1.2M	Partnered with Prestashop

⁷Fidor is currently planning to expand also in Latin America and Africa. *Source:* craft.co; crunchbase.com; owler.com; company webpages. Data updated October 2018.

Based on the table, we make the following conclusions:

1. The most successful banks in terms of customer acquisition serve either a single segment or a single product line. Specifically, they mostly focus on credit services: either to business (SME) or to retail customers through credit cards. Choosing a niche, "under-served", market appears to be a successful first step. This allows the entire organization to focus on a singular product and avoid the complexity (both processes and technology) that slows down large organizations. For example, part of the success of Revolut, which became the first app-only bank to break even, can be partially attributed to their timely launch of their cryptocurrency services in December 2017. This service is getting them about 3,500 new customers per day. In the next section we present and discuss GoodX model.
2. While acquiring customers initially can be relatively easy, as the business grows and the number of customers increases, it might gets harder to acquired new customers within the niche market originally identified. Once companies reach this phase, it is important to grow in new markets and/or find partners. This explains why only few NeoBanks are, at the present time, independent and profitable, while most NeoBanks have been acquired or signed partnerships with larger groups. Revolut is the exception, as it is independent, profitable, with approximately 15 millions of U.S. dollars in revenues. For example, Fidor Bank, based in Germany, was launched in 2009 and has currently about 100,000 of account-holding customers, and a financial community of

over 300,000 users. In 2016, it was purchased by the second largest banking group in France, BPCE.

Another example, is Simple, located in the U.S., that was launched also in 2009. In 2014, after having acquired 100,000 customers, it was sold to Spain’s BBVA for 117 millions of U.S. dollars.

3. At the initial stage it is crucial to reach a large number of customers. For example, a threshold of 100,000 appears to guarantee the possibility of additional funding and/or private exit options to initial investors through a sale of the company. While it is important to transform initial customer’s growth into revenues, it appears that the number of customers *per se* is the most relevant indicator of success as it opens the door to additional funding from venture capitalists.

The niche market of cryptocurrencies is attracting many start-ups. In table 2 we present a list of the crypto-friendly NeoBanks that are entering this market. Several of them have already raised funds through ICOs. The remaining banks are instead in the planning phase of an ICO. As the number of entrants is increasing, it is crucial for start-ups in this market to launch their product early in order to gain market share and customer base. Most NeoBanks have announced the intention to start the application to obtain a banking license. One of the competitive advantage of GoodX is that they have a partnership agreement with a EU-licensed financial institution based in Estonia.

Table 2: Crypto-friendly NeoBanks

Name	Country	ICO	Founded	Motto/Idea	Market	License Application
Change Bank	Estonia	\$15M	2016	The future of finance	Retail	No
Narbonne	Switzerland	Plan \$10M	2017	Bank for cryptominers	Retail	No
BABB	UK	\$20M	2016	Everyone is a bank	Retail	Yes
Polybius Bank	Estonia	\$30M	2017	Regulated bank for the digital generation	Retail	Yes
Bankera	Lithuania	\$152M	2017	Digital bank for the blockchain era	Retail	Yes
Crypterium	Estonia	\$52M	2017	The JP Morgan of Cryptobanks	Retail	Yes
Fiinu	UK	Plan \$75M	2017	Blockchain-friendly British bank	Retail	Yes
2getherbank	Spain	Plan ICO	2017	The first collaborative bank	Retail	No

Source: Elaborated by the authors from material compiled by Life. SREDA venture capital, Based on Blockchain Fund, and ARIVAL. In the column "license application" we report information on whether different NeoBanks have announced the intention to apply for a banking license. Data are updated in October 2018.

One of the biggest challenge for firms dealing with cryptocurrencies is regulatory uncertainty. For example, "The negative reaction to Gibraltar’s decision to seduce the crypto sector came from the Royal Bank of Scotland. Its partner, the Gibraltar International Bank,

has received notification that RBS will no longer process transactions connected to firms dealing with cryptocurrencies. The Scottish bank has effectively closed the clearing system for companies licensed under the new Digital Ledger Technology Regulatory Framework implemented by Gibraltar” (News.Bitcoin.com). Another recent example is China, where the recent clampdown on bitcoin related activities has forced many companies to move to Japan and other countries. To diversify this risk, GoodX provides its fiat-currency financial services through an affiliated EU-licensed partner financial institution based in Estonia, and is in the process of obtaining a Electronic Money Institution license in Lithuania.

Model of Development

We distinguish three stages for a bank growth that we can apply to GoodX model:

1. Start-up stage

- Formation of management and developer teams
- Launch of webpage
- Raising initial capital (first round)
- 1st credit card issued in 2019
- first 100,000 customers acquired

2. Rapid growth stage

- Additional rounds of fund raising
- 1 milion customers acquired
- Business diversification:
 - first 1,000 small or medium enterprises (SMEs) customers
 - premium accounts offered
- Reaching break even point

3. Evolution phase

Start-up Stage

At this stage, it is crucial to reach at least 100,000 retail customers. As shown by the experience of other NeoBanks, reaching the number of 100,000 retail customers insures the availability of funds for further development through outside financing. The key to obtain customers is to identify correctly an under-served niche market. Given that the main proposed source of revenue for GoodX is cryptocurrency-to-fiat transactions, then the customer base is mostly made of retail investors in cryptocurrencies who might have the need to cash out and convert their balances into fiat currencies. The largest players in this market is Revolut, which has recently started to provide cryptocurrency-to-fiat exchange at a fee of 1.5%. However, Revolut provides its services only to residents of the European Union. This could be a limit as the growth of online banking, as well as cryptocurrency awareness,

is larger in emerging markets, such as Russia, Brazil, where the trust in the stability of the domestic financial and monetary system is lower than in developed economies. Also GoodX plans to provide cryptocurrency-to-fiat exchange services, but at competitive costs, and in particular at lower costs than Revolut, and for a customers from a broader geographical area that includes emerging and developing countries. In addition, GoodX provides a wide spectrum of cryptocurrency services and support a larger number of cryptocurrencies and assets (e.g., gold) than most competitors; as well as will enable users to get a secured loan in fiat currencies using their investment in gold or cryptocurrencies as collateral, and use overdrafts on their credit cards.

Identifying Customers and Market Size

As discussed in the introduction of table 2, successful NeoBanks are those which correctly identify their niche market. A market is not simply a geographical location, but also a target group of customers. The customer target group for GoodX is investors in cryptocurrencies. It is hard to precisely estimate the potential number of interested investors, but we can set a reasonable range. On the one hand, according to the survey by ING International Survey Mobile Banking, 8% of European citizens have invested in bitcoin. This represents around 40 million potential customers. We consider this as the upper bound for the range of potential customers as GoodX will more likely focus on customers in the European Union in the first stage. Note that the upper bound could be increased if either the number of Europeans investing in bitcoins increases, or GoodX expands significantly its activities beyond the European Union borders. For example, according to coinatmradar.com, in the European Union there are currently 726 bitcoin ATMs and the mean monthly aggregate withdrawal is equal to 23 bitcoins, despite large fees of approximately 8.27%. GoodX plans to capture this market applying significantly lower costs. In addition, by offering the service of instantaneous conversion of cryptocurrency-to-fiat and free of charge ATM withdrawal of fiat currencies, GoodX essentially makes any existing ATM, including traditional ones, a bitcoin ATM. Therefore, it is likely that the numbers of bitcoin investors in the European Union would consequently increase. At the current bitcoin price of 6,500 U.S. dollars, the average monthly revenue is equal to $23 \times 8.27\% \times \$US6,500 = \$US12,000$. With respect to geographical location of the market, we note that the U.K. market is already crowded, with start-ups pitching some form of cards tied to mobile apps. GoodX focus should be on continental Europe and in particular Central and Eastern Europe, where the presence of NeoBanks is not so widespread. Furthermore, the use of cryptocurrency as a every day

payment method is substantially more common in Eastern Europe, than elsewhere in Europe. GoodX will also reach customers who are interested in obtaining loans in fiat currencies using their investments in gold or cryptocurrencies as collateral.

Channels to Acquire Customers

The age groups with the largest fraction of cryptocurrency adoption is 19 to 44 (statista.com). This group is also the most active on social media. Hence, social media seems the natural way to reach and acquire customers. Due to privacy concerns, particularly common in the cryptocurrency community, Facebook could be not as effective to identify and reach potential customers. Protonmail and Telegram channels should be also included, as they are, respectively, the most popular email platform and messenger with advanced privacy features.

The first category of expenses are the customer acquisition costs. Table 3 below contrasts the advertisement costs across the most popular social media platforms. GoodX model assumes a cost per install (CPI) of 1.2 U.S. dollars. However, GoodX considers the fact that only a fraction of the app installations is converted into new customers (about one-third). Therefore, the cost per acquired user in GoodX model is approximately 8 U.S. dollars (net of fixed costs). However, this cost could be higher in the first stage when GoodX will have to reach a large number of customers in the shortest amount of time. For example, Fidor in 2017 spent 30 U.S. dollars per each acquired customer. Also note that costs to acquire new customers are declining with the size of the customer base. Valentin Stalf, founder and CEO of N26 Bank, confirms this fact and states “The key driver for our growth is our customers who recommend our product. This results in significantly lower customer acquisition costs. This exponential growth validates our goal to become the leading mobile bank for digital customers throughout Europe in the coming years.”

Table 3: Cost per Install

Platform	CPI
iOS app	\$0.86
Android app	\$0.44
iOS app in US	\$2.07
Android app in US	\$1.72
Facebook Ads	\$1.80
Twitter Ads	\$2.53
Instagram Ads	\$2.23
Search Ads	\$1.00

The table reports the cost per install in U.S. dollar charged by different online platforms for each ad-click. *Source: geenapp.com*

The second category of expenses are the IT and customer support costs. Customer support costs increase proportionally to the number of customers. According to recent surveys, customers call their bank on average 0.7 times per month. Each call typically lasts 5 minutes. 75% of calls are expected to be taken care by chat-bot with AI at the monthly cost of 1,000 U.S. dollars. For the remaining part of the calls, GoodX relies on a in house callcenter. Reasonable estimates for the call center costs in the case of outsourcing this services are as follows. Consider, at the end of start-up stage, that 100,000 customers would require $0.7 \times 5 / 60 \times 0.25 \times 100,000 = 1,460$ hours per month of call-center customer support. Table 4 below provides the costs per hour of a call-center across different geographical locations. If we assume the costs for Eastern Europe, we find that the 1,460 hours per month would translate into 17,500 U.S. dollars per month.

Table 4: Call-Center Cost per Hour

Location	Min Cost
United States/Canada	\$22
Western Europe	\$40
Eastern Europe	\$12
Australia	\$35
Africa/Middle East	\$15
Latin America	\$8
Asia/Philippines	\$8
India	\$5
Pakistan	\$6

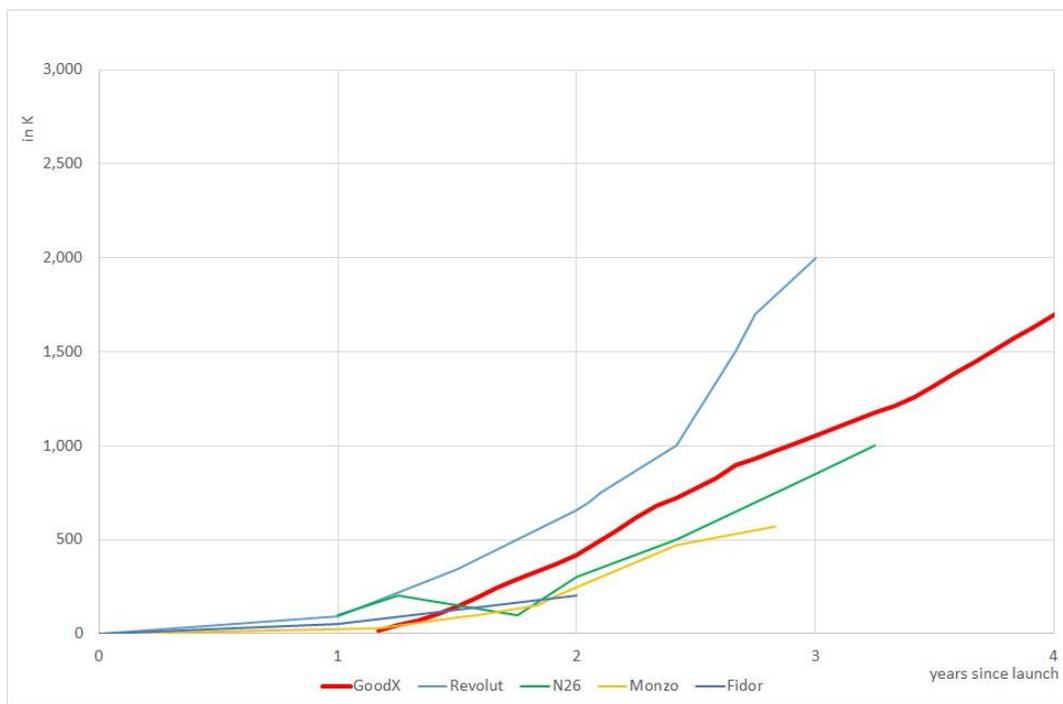
This table reports the hourly costs in dollar for call-centers in different geographical locations. *Source:* www.worldwidecallcenters.com/

In addition, as GoodX grows, the issue of scalability could arise. To address the issue, GoodX model relies on a cloud solution, specifically, Amazon Web Services (AWS). As another example in the industry, Starling Bank uses five features of AWS: 1) secure virtual server hosting through Amazon EC2; 2) fully managed, scalable database engine with Amazon RDS; 3) automated cloud services from AWS CloudFormation; 4) “Data lake” data storage and retrieval with Amazon S3; 5) Running code without provisioning or managing servers through AWS Lambda.

GoodX Model and Existing NeoBanks

One of the keys to success to most companies at the initial stage is to acquire as many customers as possible. Figure 1 reports the number of customers since launch, in thousands, for some of the largest NeoBanks. The figure contrasts these figures with the projections based on GoodX model. GoodX projections appear to be conservative and reasonable as they forecast the expansion of customer base at the lowest pace among all successful NeoBanks. In part, this is because of the projected slowdown in expenses for customer acquisitions. In addition, GoodX model might be underestimating the impact of a referral program and network externalities on customer growth.

Figure 1: Number of Customers Since Launch

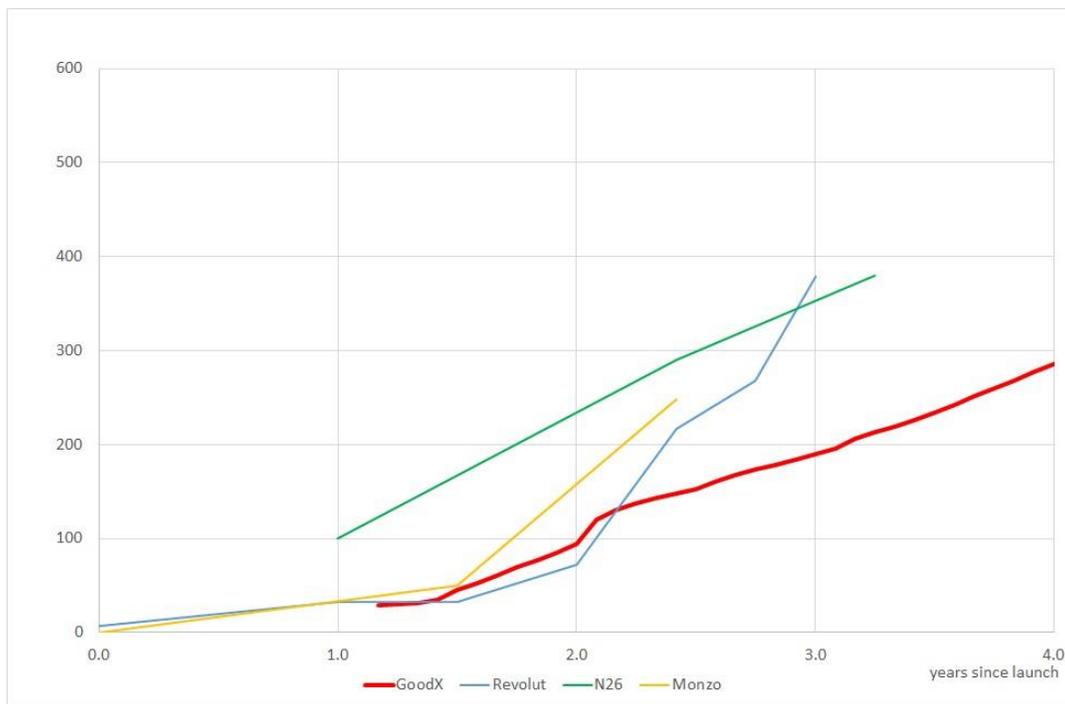


This figure plots the total number of customers in thousands since launch. The red line denotes projection based on GoodX model. Lines for Revolut, N26, Monzo, and Fidor correspond to actual data. *Source:* craft.co; crunchbase.com; owler.com; company webpages.

Figure 2 provides a similar comparison for employment growth since launch. The projection in GoodX model are in line with the data for existing main competitors like Revolut, N26, and Monzo. Specifically, GoodX assumes that it will reach 100 employees after

two years from launch, and 300 after four years. Note that GoodX has a competitive advantage in terms of lower salaries. For example, in 2017 Monzo and Revolut had a monthly salary per employee of 6,000 U.S. dollars. On the contrary, GoodX assumes a lower average monthly salary of 2,200 U.S. dollars. This means that the total wage bill for GoodX, as a fraction of total cost, is about 10%, against 31% and 19% for Revolut and Monzo respectively.

Figure 2: Number of Employees Since Launch



This figure plots the total number of employees since launch. The red line denotes projection based on GoodX model. Lines for Revolut, N26 and Monzo correspond to actual data. *Source:* craft.co; crunchbase.com; owler.com; company webpages.

Rapid Growth Phase

At this stage, GoodX has already accumulated sizeable number of customers and insured extra funding. The primary goal is to accelerate the growth in its niche market, by putting more emphasis on the referral program as an important source of customer growth. The secondary goal is to start diversifying the business. One potential avenue is to capture a fraction of fast-growing e-commerce market in cryptocurrency.

The most successful revenue model in the industry is Revolut. First, its model is now based on payments revenue and a partner strategy to offer add-on services like travel insurance and loans. Second, Revolut offers premium checking accounts, which resembles an Amazon-style checking accounts, a subscription-based checking account customer would be willing to pay for in exchange for value. Finally, cryptocurrency exchange services provide an additional boost in customer growth and revenue.

Conclusions

To conclude, GoodX offers a novel product at competitive rates to a potentially fast growing and under-served customer base. GoodX goal is to create a platform for users to invest, manage and transfer to other users fiat traditional currencies, cryptocurrencies, and gold with zero fees. In addition, GoodX allow users conversions and transfers across assets at competitive spreads, and access to credit and debit cards linked to fiat, crypto and gold accounts. In addition, at any time and anywhere in the world, GoodX customers will be able to get a secured loan in fiat currencies via the PFI or GoodX Stable Coins, using their investment in gold or cryptocurrencies as collateral. The loan amounts could be up to 90% of the value of the gold collateral or 80% of the crypto collateral. The goal of GoodX is to maintain highly competitive loan-terms and interest rates. Some of the main challenges are regulatory risk and possible competitors in a very dynamic and fast growing sector of the economy. However, GoodX model is well diversified to cope with these potential challenges.



Nicola Borri, macro-finance economist,
LUISS University, Roma



Kirill Shakhnov, Ph.D. in Economics
European University Institute, Florence, Italy.