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Research Report

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IW-Kurzbericht 8/2021

A Growing Niche: German Blockchain Companies

Markus Demary / Vera Demary, 15. Februar 2021

A growing, but still small number of companies in Germany are supplying products and services based on the blockchain technology. Most of these are start-up companies and are headquartered in Berlin. Although a lot of them are focused on providing financial services, an increasing number of blockchain companies has started developing other blockchain-based services.

Since the initial development of the cryptocurrency Bitcoin in 2008, cryptocurrencies and the underlying blockchain technology are widely regarded as major technology trends. Although there seem to be numerous applications for blockchains in particular and distributed ledger technologies in general, ranging from payments via registry to identity management, the blockchain technology has not yet reached a widespread dissemination in the corporate world. One reason for this is that the technology is not complementary to existing database systems, but renders existing systems redundant. If there is a trustworthy intermediary administering a central data base, switching to a blockchain system of distributed ledgers is neither necessary nor worth the cost. The other reason that this technology has not yet been widely adopted is that rules and regulation need to be adjusted first, so that the blockchain technology can be applied legally watertight.

An analysis of blockchain companies

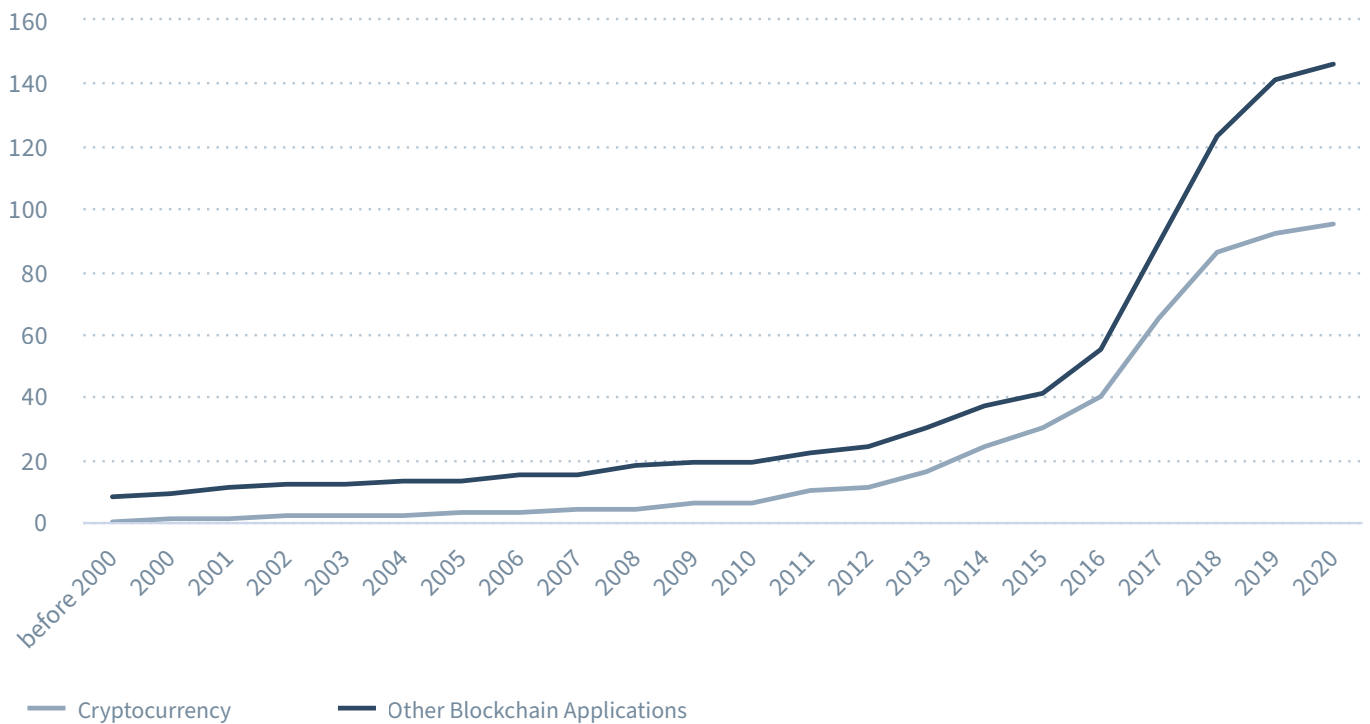
The described legal impediments and substitution effects of the technology with respect to existing systems lead to the question whether there is a lack of start-up activity in the field of blockchain. To address this, we take a look at a dataset on blockchain start-up companies in Germany.

Identifying blockchain start-ups for a statistical analysis is demanding because there is no economic sector that comprises blockchain companies. One way of identification is to collect those companies in databases that mention the technology in the information they have supplied about themselves and about their business model. Applying this strategy to the Crunchbase database, we identified 275 companies that we define as blockchain companies.

Crunchbase is a company database that contains information about public and private companies, initially with a focus on start-ups and tech companies. Within Crunchbase's dataset, we searched for companies headquartered in Germany that used one or more of the following words in their company description: blockchain, cryptocurrency, bitcoin, ethereum, ripple, distributed ledger. This search strategy dives deeper

The German Blockchain Companies

Number of companies, founded in the current year or before



Source: own calculations based on Crunchbase data

than to use the industry groups associated with the technology which Crunchbase provides. Our company sample is larger because in addition to pure blockchain companies, it also contains businesses that focus on other products or services and conduct blockchain activities additionally. While our sample is not representative for German companies working with blockchains, it allows a more detailed analysis of these companies.

Many blockchain companies are active in cryptocurrencies

The blockchain companies in our sample operate in different sectors. First, we take a specific look at those companies that deal with cryptocurrencies, measured by analyzing their business model descriptions. This applies to nearly 40 percent of the companies, respective 107 companies in the sample. Cryptocurrencies, such as the most known Bitcoin, but also Ethereum, Ripple or others, are digital currencies based on distributed ledger technologies that allow financial transactions between participants of the network. Therefore, it is not surprising that most of the companies that work with

cryptocurrencies are also in financial services (as in the industry group assigned by Crunchbase). 37 percent of the companies in the sample are associated with both cryptocurrencies and financial services. In fact, only four companies work with cryptocurrencies without being assigned to financial services as well. The same correlation holds for the industry group software and cryptocurrency companies. Only three cryptocurrency companies do not also operate in the software sector. The same is the case for only five companies that belong to the industry group payments without being assigned to cryptocurrency.

Second, we focus on all the companies in the sample and analyze the industry groups that have been assigned to them in the Crunchbase database. Most companies from the blockchain ecosystem, around 64 percent, have been assigned the software group, followed by financial services (52 percent), payments (38 percent) and information technology (36 percent). While these industry groups are to be expected due to the technical nature of the blockchain technology, some companies also operate in other, less straightforward

sectors of the economy: Nearly 7 percent of blockchain companies are also active in commerce and shopping, for example, close to 5 percent in real estate and about 3 percent in energy. These companies seem to expand the technology to other areas of the economy than software and information technology.

Third, we are looking at pure blockchain companies versus companies that are working on blockchains among other things. The former is defined as companies from our sample that belong to one of the blockchain-related industry groups in Crunchbase (Bitcoin, Blockchain, Ethereum, Cryptocurrency and Virtual Currency). Close to 75 percent of the blockchain companies in our sample explicitly focus on this technology in their business model. A quarter is not associated with any blockchain-related industry group. These companies are mostly information technology or software companies offering blockchain-related services among other IT services.

Most blockchain companies are start-ups

Most blockchain companies are younger and smaller companies, i.e. they are start-up companies. Around 59 percent of the companies have less than 10 employees and 32 percent of the companies employ between 11 and 50 employees. Only 6 percent of the companies are mid-sized companies with between 51 and 250 employees, while 3 percent of the companies are larger companies with more than 250 employees. The size of the companies is related to their age. Around 70 percent of the companies are less or equal to 5 years old.

Thereby, the differences between companies that use cryptocurrencies and those that do not are negligible. In the segment of companies between 6 and 10 years of age, some differences emerge, however. A quarter of the crypto companies fall in that age interval, but only 15 percent of the non-crypto companies. A similar divide can be found between the companies supplying financial services and the rest of the blockchain companies.

The number of blockchain start-ups is currently increasing against the trend – a general decline in the business starts – in Germany. In addition, start-up activity is fo-

cused mainly on Berlin and Blockchain companies seem to be part of this Berlin-based start-up scene, followed by Frankfurt and Munich, known for their financial districts. However, it is surprising how blockchain companies often seem to prefer Berlin over Frankfurt even if they are operating in financial services. While those blockchain companies are located in one of the big cities Berlin, Frankfurt, Munich or Cologne, many blockchain companies not operating in financial services are headquartered in smaller cities.

What is the future of blockchain companies?

Given that the blockchain ecosystem is rather small but dynamic, our analysis can only show work in progress. There might be blockchain companies not listed in the Crunchbase database. If a small number of these companies were added to the small number of blockchain companies in our sample, huge growth rates would result, which we experienced by comparing our company analysis based on last year's sample with the current sample. Moreover, large companies might be underrepresented in our sample because they might be less likely to display their blockchain applications in the description of their business model, as blockchains represent a niche in comparison to their main business lines.

From today's viewpoint, we cannot predict how many of the observed blockchain companies will be successful in the future. This depends on two main factors: First, the demand for blockchain-related products and services. The big question is still whether the blockchain technology can be more efficient than existing databases from the viewpoint of the companies. Second, access to finance and acquisitions. Since most of the blockchain companies are start-ups not all of them will be able to grow their business model to compete in the market because of a restricted access to finance. Other blockchain companies will be acquired by larger companies which are interested in their technologies. Getting acquired by a larger company is a frequently applied strategy by serial entrepreneurs, since larger companies have more (financial) possibilities to bring products and services to market.