Feasibility of Funding Construction-Related Projects with Cryptocurrencies

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The current method of acquiring funds for construction projects consists of loans and/or a board of investors. With the emergence of the cryptocurrency industry in the past five to ten years, an influx of cash has been inserted into the market and is simply being held captive by government regulations. With development and construction being an attractive investment for most anyone, these "crypto billionaires" are insistent on financing possible projects. The issue lies within the construction industry and the possibly outdated financial system and whether it is capable of adhering to certain requirements that come with the usage of crypto for payment. By interviewing industry leaders in the construction sector, it will become apparent whether this new form of financing is feasible in the current climate, not possible at all, or may be possible in the coming future. Regardless of the outcome, this will become a necessary tool for the future of construction financing.

Key Words: Cryptocurrency, Innovation, Financing, Currency, Construction

Introduction

Construction projects have always been financed via a standardized, traditional financial method within the United States of America. Throughout the past decade, a new form of currency has been brought into the retail market. This new currency is crypto(currencies). With the emergence of cryptocurrencies, it makes sense to embark on the feasibility and acceptance of digital currency types for the financing of construction projects.

Cryptocurrencies are a form of digital currency backed by the US dollar and traded via standard platforms for investment. Although investments were the primary use of these currencies for the longest time, the emergence of Ethereum and Bitcoin being traded for digital artwork, and smart contracts being tied back to them via the blockchain, leads the way for new forms of technology and various thinking within the industry. Currencies like Bitcoin are created in a limited supply making them anti-inflationary and by investing money into these currencies, the holder is now protecting the value of their finances throughout time.
This innovative technology could be used by construction companies to facilitate funding of their projects with the use of crypto due to the great emergence of crypto “billionaires.” These individuals who have spent the past decade learning about this new decentralized form of payment are not interested in traditional investments and the means to do so in the modern age are intricate and problematic.

Purpose

Construction is inherently conservative when it comes to the spending required to construct elaborate projects. Here lies the issue of this paper and deeming it possible or not to incorporate crypto into construction. The idea behind this research is not to make the industry leaders interviewed that crypto would be beneficial to them and their companies, but in fact to see whether it is possible or not. If it is possible, how those said industry leaders see it contributing to the sector. If not, to understand if the current standard of construction financing is inherently capable of the technologically advancing future. Along with these two sides, there will be many other ideas about how it may not be possible now, but it may be in the future.

Crypto is helpful to the commercial construction industry because of many factors. These factors include international investors, a sum of crypto wanting to be invested in real estate but not being able to, and even the seamlessness of the transactions that could take place with their over-the-air proof of receipts.

As of this current moment of authoring this paper, cryptocurrencies are experiencing a volatile trajectory with many headlines targeted toward bringing the industry down. Many individuals who have their livelihoods invested in these digital currencies are looking for ways out, but once they remove their money from the exchange to be then used, they face the burden of an immense tax payoff and further IRS regulations.

![Graph](image.png)

*Figure 1: Global Currency Ownership Data (2023)*

Goal
Throughout the past year, construction has encountered a large volume of technological advancements and it has become apparent to the members of the industry that change is coming. With the new generation of construction managers, project managers, and superintendents being inserted in the economy, fresh innovative ideas will take place and an integral group of these individuals have been involved in crypto in the past. This paper aims to understand if these individuals within the industry have had the thought of crypto being involved and if they have, how they see it occurring.

There is a magnitude of “new money” wanting to be used for real estate and development, but it is currently cut off from being able to do so because of the construction industry’s financial system. The construction industry's financial system is not much different from any other in the country. Since development is seen as a form of investment, it makes sense for industry leaders to understand how to open themselves up to a new form of payment for services. As shown (see figure 1) in the graph above, internet use is strongly correlated with crypto, and as time goes on, it is easy to conclude that crypto will continue to be widely adopted worldwide.

With this paper, the end goal is to understand if construction has any interest in being ahead of the rest of the economy in the sense of an ever-changing financial system that would be able to let an influx of money in from the crypto industry.

**Literature Review**

There is minimal research about the spread of crypto into the construction industry able to be found on the internet. The main topic available for review is the idea of smart contracts within the construction sector but that is not the topic of discussion for this paper (Plevris et al., 2022).

With minimal information available for review, thorough research had to be done on different ends of the topic. One area of research conducted was how people perceive cryptocurrencies for use in transactions across multiple industries. The idea of cryptocurrencies being able to replace cash/debit cards in the future results in 48% of individuals between the ages of 18-34 located in the US, UK, France, Italy, and Germany agreeing (Laboure and Reid 2020). Another area of research conducted to facilitate a valid list of questions was the current state of the construction industry's financial system. Donald Kohn illustrates the vivid reality of the banking industry in the current state of the economy. Bank loans given to construction companies have had low-interest rates until the current year when these rates have skyrocketed. Kohn (2021) states that “Banks appear to be in good financial shape”. The market has seen a drastic change in this previous “good financial shape” it is now apparent that with the current state of inflation and interest rates rising, taking out a larger-than-normal loan from a bank is a dangerous act (Germain 2023).

**Digital Currency Adoption**

Although digital currencies are a new venture many are getting into, the overall public trust has yet to advance to the levels necessary for the global adoption of its uses. Out of 11,000 participants tested in 76 countries, 41% stated they perceive Bitcoin to be more trustworthy than their local currency, along with 33% relating that trustworthiness to the decentralized nature of the currency (Premise 2021). According to Bitpay, an online crypto processor, over 250 companies and stores are now accepting cryptocurrencies as a form of payment for their goods/services.
Flexbase, a financial technology company, allows companies to diversify their funds across multiple banks, allowing for a more efficient means of moving funds and mitigating risk. Joey Randazzo conducted a study that went in depth about the usage of crypto within the construction industry along with its means and methods of it. Since crypto is currently still waiting on the government's status on it, there is a lot of uncertainty involved. It is a volatile investment and requires those construction companies to take in funds with a crypto wallet which forces them to hold onto the cash for a period, so they don’t have to pay a capital gains tax. With some negatives, there are also positives, in the sense that “Once the payment is sent, that information is permanently on the blockchain, and unable to be changed” (Randazzo 2022).

BIM technology was introduced in the 1950’s with Pronto being the first commercial software available (Quirk 2012), and it has been prevalent in the construction industry for the past twenty years. BIM allows users to work on a project concurrently, by performing tests for clashing systems, editing of plans, and distributing parts of a job. This has really been the only main technology of construction until VR came about and started to be used in the industry. It is now time for a new type of technology to be inserted into construction and help with the workflow of the different subcontracts, scopes, and people involved.

**Current Financing Climate**

Construction loans currently are the mass adopted financial means of most projects (Berner 2021). When it comes to private financing, the owner/company needs to pay the bill, which they will work with a reputable bank or lender to secure a construction business loan. This means and method of paying for the project is time-consuming. The bank/lender now owns a part of the land the project is based on. If the loan is taken out through a private lender, that entity will then most likely require the construction timeline, floorplans, suppliers, contractors, and more. All these stringent requirements make the financing of the project time-consuming. Along with the cash in hand from the lender, the business owner will now have to pay interest on that cash, which is normally higher than a standard mortgage loan because of the risk.

Public construction projects are different when it comes to payment methods. This financing is often secured through bonds or private bank loans. Berner (2021) states that the benefit of a municipal bond for a public project is that the interest is usually tax-exempt, and the rates can be locked in so further inflation in the market does not affect the project.

**Methodology**

The methodology for this explorative research paper was an informal interview with construction industry leaders and cryptocurrency natives. The informal interviews allowed for a fluid discussion since every individual understanding of crypto was different. These construction industry leaders consisted of CFOs, Directors of Construction, Project Executives, and Vise Presidents. A certain selection criterion was necessary when picking which individuals to interview. The individuals need to have been at their respective companies for longer than three years, be high in the chain of command to ensure they deal with the financial side of the projects, and have a minimal amount of crypto knowledge. At least one crypto-focused person needed to be interviewed to understand their respective point of view as well.
Research was conducted to select all the individuals and they were then sent an email with basic information about the project to gauge their interest, and once interest was deemed apparent, they were then scheduled for a call in the coming weeks. After understanding who exactly was in the group of people to be interviewed, a series of baseline questions was created on Google Forms to allow for a streamlined approach to documenting answers.

**Interview Structure**

The questions were prepared informally to ensure ease of conversation throughout the interview. These questions consisted of a few points to understand the speaker’s crypto knowledge, which then followed into understanding how their company goes about their financial system. If the speaker were from a general contracting firm, they would be asked how they go about payment retrieval from the owner and then pay out the subcontractors. If they were a developer, they would be asked how they pay for the jobs, whether it be from a board of investors, bank loans, or cash on hand.

The following set of questions consisted of understanding how their financial system works exactly in the sense of fraud detection, payment schedules, how they pay their employees and contractors, and the frequency of international transactions. Throughout the entire question-and-answer dialogue they were given insight as to how crypto would help them in each of those categories they were asked about.

The individuals were intrigued by the interview’s nature since it wasn’t something they were normally asked about. SC Builders was an important interview that had a diverse amount of information. Kirk Wagerman was emailed to contribute to the study, and he insisted on his colleague Lido be involved due to his amount of crypto knowledge. Tony Joyce being the director of construction at Avalon Bay was a necessary interview as well, which fed into the understanding of this new method of financing will not work for every company. Mike Thompson, the Vice President of human resources from Howard Building Corporation brought forward the point of view that this could work but it would involve a mass adoption throughout the industry and a stringent chain of regulation from the government.

An unnamed individual who has been widely associated with the cryptocurrency world was then interviewed on his understanding of the construction industry and his involvement in it. This person was brought forward by a mutual colleague who will also remain unnamed due to their anonymous nature in the crypto industry. This person's interview was informal since it only lasted ten minutes because of their busy schedule. It was brief but very productive given the nature of the information presented.

There was also a group of individuals who denied being interviewed because of the nature of the conversation and their lack of knowledge thereof.

**Results and Analysis**

Construction individuals interviewed were persistent on the idea that this introduction of crypto into their well-established “conservative” industry is rather immature in timing. Mike Thompson of HBC even related the diversity of construction personnel to a coal mine. He stated that within his company there is little openness to innovative ideas and advancements within the sector because of their older aged chairpersons and C-level executives. Kirk Wagerman of SC Builders brought forward the idea of
how within the construction industry, everything is regulated. From hard hats and the tools, they use, all the way to the fashion in which they write their contracts. Bringing forward an entirely new form of payment processing will take the industry years to understand and set in stone for future generations. This thought of construction being a conservative practice is true and it leads way to a new way of thinking being introduced by the upcoming generation of managers and executives. As Tony Joyce stated, “With more individuals retiring and succession into their positions from younger, bright-minded, individuals being an apparent reality, construction is bound to see a drastic technological change within the next few decades.” It is quite understandable that crypto will not have a home within construction in the next year or two but there is room for it to grow and mature before it is introduced globally to the industry.

The idea behind a globally recognized cryptocurrency is not far from the understanding of these individuals. Most of the companies interviewed had been involved in international transactions, and if the company itself had not been, the individual had. Crypto being used as a source of payment to skip exchange rates, and international taxes is not a new phenomenon. Tobias and Mancini-Griffoli (2023) explain how cross-border payments are seamless because of a single ledger being used to exchange currencies within different markets. When the industry leaders were asked about how crypto may or may not help them with their international payments, they were surprised. It was apparent that they had not thought of the fact that crypto does not have an exchange rate, and that there are no government sanctions on it since there is no actual receipt as to where the payment is coming from beside a long numerical address. This thought was of interest to the individuals especially because it would allow their investors and clientele to remain anonymous in the greatest capacity possible.

Anonymity is another large aspect of the conversations conducted. It was interesting to understand that there are entities that these companies work for that do not want to be known. A differing point of view given was from SC Builders’ Kirk Wagerman who stated that they will redact the name of the private individual from public documentation, but the GC themselves will always need to know where the money is coming from. This is due to their own means of protection and ensuring the project is completely legal and safe. Once crypto is involved, their balance sheets will need to be completely reconfigured to allow for the movement of crypto in and out of their accounts.

Avalon Bay was the lone developer who pays for all their projects with their liquid cash deposits. Given that they are a mass residential builder and own over eighty-eight thousand apartments, they do not need a bank or private lender to contribute to their projects (Avalon Communities 2022). Tony Joyce of Avalon Bay stated that their company is a REIT (Real Estate Investment Trust), meaning they take the money from their apartments that come in every month to then invest back into the company. This investment back into the company consists of reconstruction or doing repairs to their buildings or workplaces, putting it towards new projects, redevelopment, or paying back investors in dividends since they are a publicly traded company. Joyce made it noticeably clear that crypto has no room within the Avalon Bay company besides being used for rental payments from their tenants. In the case of tenants paying for rent with their crypto, they would roll the service out to select locations of the country to then understand the feasibility and benefits. Joyce also brought up how they have no need for investing in crypto since the company is already heavily invested in themselves and since they are so stable in that aspect, it would never make sense to further diversify their portfolio. Anyone who wants to invest in projects that Avalon builds can do so through their stock.
**Crypto Point of View**

A cryptocurrency guru living in New York, known throughout the crypto and web3 community was interviewed for this paper as well. This interview was necessary to form a conclusion on how exactly the sentiment is within the crypto world for investing in construction. This individual had wanted to invest in a quad-plex in 2020 at the worst possible time, as stated by the individual, to diversify his portfolio into real estate and create a more stable future for himself and his family. With crypto at an all-time low when COVID-19 hit the world, he removed his money from Bitcoin and deposited the funds into his J.P. Morgan Chase account. He had known he would have to pay a tax, but it was unclear of the amount due to the lack of information from the government on taxation for crypto.

After putting the money aside, he then purchased a property in Manhattan to construct a four-apartment complex which he thought would be a great idea to bring generational wealth to his family. After buying the piece of land, he hired an architect, which cost him money, then a general contractor, who also cost him money. This anonymous individual stated that once all was done, and the building was completed in January of 2023, he is planning to pay the same amount in taxes as it cost him to construct the project.

This individual was keen on the fact that he, along with a multitude of wealthy crypto individuals are excited about the possibility of investing in real estate and development given its stable market. Still, they are hesitant to do so because of the government sanctions and taxations on crypto once it is transferred to USD. He stated, “If the development or real estate industry can find a way to make it feasible for people like us to invest our ‘fake internet money’ into cold-hard real estate, they will be tapping into a profusely liquid market that has yet to be recognized globally.”

**Use-Cases**

Tony Joyce spoke on a topic that was not originally thought of and it was that of a globally recognized currency for the construction sector. The idea takes construction and crypto and combines the two in the form of a currency that is tradeable within the digital currency market. This would be a coin, not a stock as explained by Tony allowing it to be used as currency for projects along with a form of investment for anyone that wants to get involved with the real estate industry. A digital currency used and understood globally is a financial method for construction that will allow for seamless exchanges between investors and builders. This coin would be a snapshot of how the construction industry is doing worldwide. Investors could deposit funds into the currency and own however many coins and have contributed to the global construction industry while keeping their money in a stable currency.

NDAs are written up on many projects because of the high sensitivity of the client who is paying for the job. Clients like Amazon, Netflix, Google, and Apple are not too keen on having the public know what projects they are building. As explained by SC Builder’s Kirk Wagerman, this is in part due to the public perception of their stock and premature information getting out. With the use of crypto, these projects would be even more hidden since there is no name associated with the payment. SC Builders spoke on the fact that this would not be beneficial since the anonymous individual is already paying through a subsidiary created for that project. After speaking to other GCs, it is apparent that anonymity is not one of the benefits of crypto for their intended use.

The first use of crypto in the construction industry that the public will see is through the form of a paycheck to employees who opt in for that type of payment. Multiple individuals interviewed brought up how they would have to validate the importance of this new form of payment in some way and the
initial approach would be through paychecks to their employees. This is partly because of crypto uncertainty and because they would want to gauge the public sentiment behind it.

Construction is a business of investment as seen through companies like BlackRock, one of the largest real estate investment trusts in the world. Industry professionals spoke on the volatility of cryptocurrency and the lack of trust the conservative construction industry has in it. Due to this lack of trust, it is unlikely that companies would want to hold their money for a long time within the crypto market to skip out on the high taxes associated with it.

**Conclusion and Further Research**

Based on the intensive interviews conducted and the research done to further understand the feasibility of cryptocurrencies within the construction industry, it is simple to say that there is no room for an innovative new currency for the time being. Construction for the longest time was and still is an industry used to doing things the “old-fashioned” way. Introducing a new currency, especially one seen as “fake internet money” will be breathtaking for many higher-up individuals within companies.

There are many forms that crypto can take within the construction industry, whether that be through paychecks, subcontract payments, rent, or investments, the current climate does not allow for that growth. As observed through the interviews and literature read, it is understood that crypto will have a future in construction a decade from now, but not today. The form it will take in the future is not understood quite yet.

For this research to be continued, there would need to be a more specific route in terms of crypto and construction. This specific route would take the form of the most innovative use case which is the globally recognized currency idea. For not, let that currency be called construct-coin. The continuation of this research would be in the form of an entrepreneurial project to combine the knowledge of someone with smart-contract knowledge, a member with construction experience, and someone with business experience.

There needs to be research conducted on how to go about a PCO (public coin offering) and the steps that would be necessary to go about this. An initial understanding of the feasibility of this coin should be understood and then taken into the two industries of construction and digital currency. Industry leaders in both sectors should be interviewed as to the feasibility of using the coin for not only investment purposes but also as a form of payment for services. An attempt would be made to create the coin and use it for a small project to further understand its usage. That data and information would then be taken to construction companies for further knowledge. Crypto community members would then be approached and asked if they would be interested in purchasing/investing in the coin. With this combination of research, creation, and data gathering, it will be easy to understand the feasibility of a global currency for the construction industry.
References


