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Sustainability Advertisement and other Drivers for the Success of a Real Estate Crowdfunding Campaign

Master Thesis in Management Engineering

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Abstract

Real Estate Crowdfunding (RECF) is one of the most recent forms of crowdfunding. The first platforms were born in the US less than 10 years ago. Nowadays, the Real Estate Crowdfunding has collected more than $ 35 B all over the world and it is growing at a surprisingly fast pace. Nevertheless, there is not much literature on the RECF as for other less recent forms of crowdfunding. This master thesis has the purpose of exploring the drivers for the success of the RECF campaigns. The study is conducted on a sample of 232 projects launched by the Italian platform Trusters, which only operates in Italy. The analysis was run through a multivariate linear regression model and was aimed at finding the relationship among the success of the RECF campaigns and five macro-factors as the sustainability advertisement, the project characteristics, the location of the properties, the information asymmetry and the Real Estate market conditions. Empirical findings confirm that all the five factors impact the success of a RECF campaign. Specifically, the projects with more success are those financed in more populated areas, which provide more information, make advertisement on sustainability and are promoted in positive Real Estate market conditions.

Abstract in italiano

Il Real Estate Crowdfunding (RECF) è una delle forme più recenti di crowdfunding. Le prime piattaforme sono nate negli Stati Uniti meno di 10 anni fa. Ad oggi, il Real Estate Crowdfunding ha raccolto più di 35 miliardi di dollari in tutto il mondo e continua a crescere ad un ritmo sorprendente. Tuttavia, non c'è molta letteratura sul RECF come per altre meno recenti forme di crowdfunding. Questa tesi sperimentale ha lo scopo di esplorare i fattori di successo delle campagne RECF. Lo studio è condotto su un campione di 232 progetti lanciati dalla piattaforma italiana Trusters, che opera solo in Italia. L'analisi è stata condotta attraverso un modello di regressione lineare multivariata e mirava a trovare la relazione tra il successo delle campagne RECF e cinque macro-fattori: la pubblicità di sostenibilità, le caratteristiche del progetto, la posizione delle proprietà, l'asimmetria informativa e le condizioni del mercato immobiliare. I risultati empirici confermano che tutti e cinque i fattori influiscono sul successo di una campagna RECF. Nello specifico, i progetti con maggiore successo sono quelli finanziati in aree più popolate, che forniscono maggiori informazioni, fanno pubblicità sulla sostenibilità e vengono promossi in condizioni di mercato immobiliare positive.

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Executive Summary

Crowdfunding is an alternative financing solution. It is a process by which people (crowd) invest sums of money (funding) financing a business project or other initiatives through a website (platform), sometimes receiving a reward in return.

The first examples of crowdfunding emerged during the second half of the 90s, which is the time when online fundraisers for charitable projects started their activities. Later, in the early 2000s, web portals arose as intermediaries through which it was possible to make small loans. However, towards the end of the first decade of the new millennium, crowdfunding began to spread significantly, also thanks to the appearance of leading platforms such as the American Indiegogo (founded in January 2008) and Kickstarter (founded in April 2009).

The phenomenon has developed into more complicated forms such as equity and debt securities over the years. Nowadays the crowdfunding market represents a multibillion-dollar industry.

The success of such a rapid evolution can be attributed to the main essence of Crowdfunding, which is the "democratization" of investments that were once accessible only by institutional or wealthy private investors. Crowdfunding allows the "crowd" to participate even with small amounts of money to finance projects that otherwise would have been difficult to consider.

The real estate crowdfunding (RECF) is a form of financing that has made more "democratic" and "accessible" the investment in real estate. Indeed, it allows investors to access assets traditionally reserved for the wealthy. The RECF platforms pair real estate developers with individual investors who want exposure to real estate investments without the inconvenience of owning, financing, and managing properties.

Whereas a direct real estate investment is inherently risky, real estate crowdfunding can help diversify investor's portfolio and provide competitive returns.

The real estate crowdfunding can assume mainly two forms:

• Lending-based: the investors finance a loan requested by the real estate sponsor becoming its creditors. The financial remuneration consists of the gradual or single repayment of the invested capital plus the payment of an ex-ante defined interest.

• Equity-based: the investors finance real estate projects by acquiring ownership shares and becoming holders of the right to receive any profits generated. The

investment can be "direct" or "indirect". In the first case, the investors buy the shares of the real estate company or of the financed property. In the second case, they indirectly participate in the financing of the project, subscribing shares of a vehicle (Special Purpose Vehicle, SPV) especially designed for the specific project.

At 31/12/2021 the RECF market exceeded the € 35 B capital raised. According to many scholars the real estate crowdfunding phenomenon has the potential to disrupt the real estate industry (Vogel & Moll, 2014; Cohen, 2016; Montgomery et Al., 2018).

In the first part of this master thesis, insights about the RECF worldwide market were provided. The analysis conducted first studied the industry as a whole, describing the different organizational structures of the platforms, their business models and the market trends. It then focused specifically on each of the main geographical market areas of the world, reporting some economic data.

The study was based on a hand collected database of 178 platforms worldwide selected among those ones with at least one project financed and € 1 million raised capital during 2021 (except the Italian portals for which the limit was postponed until 30/6/2022). The 3 main market areas analyzed were:

• USA: Here is where crowdfunding was born. The active platforms in this market are 36 with a cumulative collected capital of $ 21 B. The leading RECF platform is Cadre, with $ 5 B collected. The second and third platforms are PeerStreet and Sharestates, with an overall amount collected of $ 4.2 B and $ 2.75 B respectively.

• Europe: This market is growing fast and will soon reach the US one. Overall, the European active platforms are 100 and have collected € 6.5 B. To deepen the analysis of the European market a database composed of data about 2514 projects of the 20 main platforms in Europe was built. The leading country is France in terms of capital raised whereas the largest platforms are the German Exporo and the Estonian Estateguru which have collected € 639 M and € 496 M, so far. By the end of 2023 the new law ECSP will come into force and will guarantee the growth of the process of internalization of the platforms, standardizing the European market.

• ROW: This is represented by 42 platforms that collected cumulatively € 8.3 B. It is divided into 4 macro areas: European countries that do not belong to the EU (such as Norway the United Kingdom and Switzerland), Asia-Pacific, Middle East and Latin America.

Moreover, the analysis focused separately on the Italian market that is very recent with respect to the other European ones. This market is composed of 23 portals that have launched 713 projects collecting € 287 M. The 5 main players in this market are the equity-based platforms Concrete Investing and Walliance and the lending-based portals Rendimento Etico, Recrowd and Trusters.

In the second part of this master thesis, an empirical study was carried out.

The purpose of this study was to find out the drivers for success of the Real Estate Crowdfunding campaigns. In order to accomplish the task, the campaigns published by the Italian platform Trusters were chosen as sample. The reason why only one platform was selected is that the data provided by each platform are quite heterogeneous. The sample used was made by 232 observations which correspond to the projects published on the platform from 2018 until October 2022. The projects involve all properties constructed or renovated in Italy, especially in the metropolitan city of Milan. Every project provides sufficient data to build a meaningful dataset, including the exact starting and closing collection dates and hours. This information is registered on a blockchain which can be found in a dedicated section of each project. Another important feature of the campaigns is the degree of detail of their descriptions, which allowed to use textual variables to use in the models.

The information obtained from the research on the literature and the suggestions provided by some representatives of the main Italian RECF platforms (Trusters and Build Lenders) helped in choosing the right success drivers. Indeed, 5 main macro-factors were elected as predictors of a RECF campaign: (i) the sustainability advertisement, (ii) the projects characteristics, (iii) the location of the properties, (iv) the information asymmetry and (v) the Real Estate market conditions. From these factors 27 variables were obtained: (i.a) the level of the energy class, (i.b) the usage of renewable resources, (i.c) the presence of autonomous systems, (i.d) the presence of a heat pump, (i.e) the presence of a heating floor, (i.f) the presence of a condensing boiler, (i.g) the presence of a system for thermal insulation, (i.h) the possess of a seismic certification, (i.i) the purpose to make a social impact, (i.j) the presence of a system for sound isolation, (ii.a) the target return, (ii.b) the duration of the investment, (ii.c) the destination of use of the property, (ii.d) the number of financing rounds, (ii.e) the contribution of the platform's investors, (ii.f) the number of properties of the building, (ii.g) the square metres of the properties, (iii.a) the population of the area in which the project is financed, (iii.b) the price per square metre of the neighbourhood, (iii.c) the revaluation of the area in which the project is financed, (iii.d), (iv.a) the number of pages of the specification, (iv.b) the number of photos showing the project, (iv.c) the presence of an explainer video, (iv.d) the number of documents available to the investors, (iv.e) the past projects of the company promoting the initiative, (v.a) the percentage change of the Italian Real Estate market index with respect to the year before the starting date of the project.

For representing the success of a project, 4 variables were chosen: (1) the Raising_Time of a project, (2) the Raising_Per_Hour (obtained as the ratio between the Target_Capital and the Raising_Time), (3) the Number_Of_Investors, (4) the Average_Investment (obtained as the ratio between the Target_Capital and the Number_Of_Investors). The Raising_Time is the time needed to close the fundraising and it is computed in hours because many projects are financed in less than one day (sometimes even in less than one hour). The lower is the Raising_Time, the more

successful is the project, because it means that the initiative was well welcomed from the investors. As for the Raising_Per_Hour, it was chosen to distinguish those projects which have the same raising time, but different capital to collect. This variable expresses the speed of the fundraising, differently from The_Raising_Time which is a time measure. The Number_Of_Investors is considered another indicator for the success of a campaign. However, it does not have a unilateral correlation with the success because a project can be successful even when the number of investors is low, but the average investment is high. Finally, the fourth variable, the Average_Investment, is the last measure of success of a campaign.

In order to run the analysis, a Multivariate Ordinary Least Square regression model (OLS) was used. Specifically, four different models were run, one for each dependent variable. Furthermore, a stepwise method with a backward elimination approach was applied. The stepwise is a method of fitting regression models in which the choice of the predictive variables is carried out by an automatic iterative procedure. In each step, a variable is considered for addition to or subtraction from the set of explanatory variables based on a prespecified criterion. After each iteration a testing for statistical significance (usually checking the R squared of the model) is conducted. The backward elimination starts with all the 27 variables, testing the deletion of each variable, deleting the variable whose loss gives the most statistically insignificant deterioration of the model fit, and repeating this process until no further variables can be deleted. Before executing this procedure, a test for multicollinearity based of the Variance Inflation Factor (VIF) of each variable was made. Each variable showed a low VIF meaning the absence of multicollinearity.

The results obtained with the regression models showed that all the five macro-factors significantly contribute to the success of a campaign. Specifically, The_Raising_Time tends to decrease if a project provides a high number of documents, involves a building which is in a populated area, has a seismic certification or is acoustically isolated. On the contrary, The_Raising_Time increases if the project is divided into different tranches, provides a long specification, involves a building with a high number of properties or located in a neighborhood with a high price per square meter. Surprisingly, even the projects promoting buildings with a better energy label and provided with a heat pump presented longer times of fundraising. The_Raising_Per_Hour, the second indicator of the success of a campaign, showed to have a relation with the same variables that affected the The_Raising_Time, with similar coefficients, but opposite signs, and the same degree of significance for each of them.

Regarding the Number_Of_Investors, less variables emerged from the stepwise procedure but all with a high level of significance. In particular, projects promoting buildings which are thermically isolated or provided with an explainer video, obtain more success. Conversely, the projects for which the contribution from the platform's

investors is higher or that are sponsored by real estate companies with a high track record of past projects, tend to attract less investors.

Finally, the same factors impacting the Number_Of_Investors are those which turned out to be significant for the Average_Investment. The only one difference layed in the presence of the variable Revaluation_Area: the projects promoting buildings in an area which has been revaluated tend to have a higher average investment.

Overall, the empirical study confirmed the relationship between the success of a RECF campaign and the 5 macro-factors. Some independent variables resulted in having a statistically significant relationship with the success indicators as previously described. However, regarding the remaining variables that did not emerge from the stepwise regression, it was not possible to reject the possibility of their impact on the dependent variables. The reasons lay in the limitation of the econometric model and of the dataset used in this study. The purpose of the whole analysis was to be a starting point for future research which could enrich the dataset and adopt a more suitable model.

The reminder is organized as follows: Chapter 1 is an introduction to the Real Estate Crowdfunding and makes comparison with other forms of investment in the Real Estate sector. Chapter 2 is a market analysis of the Real Estate Crowdfunding. Chapter 3 illustrates the European market. Chapter 4 shows the US market. Chapter 5 gives a brief overview of the market in the rest of the world. Chapter 6 focuses on the Italian market. Chapter 7 presents the possible future scenarios of the Real Estate Crowdfunding. Chapter 8 introduces the literature review used to state the hypotheses and to find the variables. Chapter 9 is an empirical study on the determinants of success in the Real Estate Crowdfunding. Chapter 10 shows the conclusions of the empirical study.

1 Introduction to Real Estate Crowdfunding

The Crowdfunding can be defined as a collection of money through the internet, with the aim of promoting projects of different types. One key element is the presence of an intermediary platform. The platform must be able to connect the company promoting the project and the investors, and to conclude the project in a defined span of time. 5 types of crowdfunding can be found:

Donation-based

Donation-based crowdfunding is a way to source money for a project by asking many contributors to individually donate a small amount to it. In return, the backers may receive token rewards that increase in prestige as the size of the donation increases. For the smallest sums, however, the funder may receive nothing at all.

Reward-based

Rewards-based crowdfunding consists of individuals donating to a project or business with the expectation of receiving a non-financial reward in return, such as goods or services at a later stage. A common example is a project or business offering a unique service (rewards) or a new product (pre-selling) in return for investment. This form of crowdfunding allows companies to launch with orders already on the books and cash-flow secured and gathers an audience before a product launch.

Equity-based

The investor underwrites shares of the company promoting the project, in exchange for the invested capital. The financial reimbursement can be through the distribution of periodic dividends or a capital gain after the property's sale. The shares can be either ordinary shares or shares with voting rights.

Lending-based

In the lending-based crowdfunding the investor becomes a creditor of the fundraisers and it has the right to a financial renumeration that consists of the initial invested capital plus the interest. The financing takes place with the subscription of a direct loan in the form of an interest-bearing standardized loan.

Debt-based

As for lending, in the debt-based crowdfunding the investor becomes a creditor of the issuing company but through the subscription of a security such as an obligation. The subscription of the security entitles the investor to a remuneration in the form of coupons and the future repayment of capital, on expiry (bullet) or over time (amortizing).

The Real Estate Crowdfunding (RECF) is a specific category of crowdfunding, dedicated to the financing of projects in the real estate business and can be lending, equity or debt-based.

In the first case, the investors finance a loan requested by the promoter (through a mortgage contract or certain types of securities, as an obligation), becoming its creditors. The financial remuneration therefore consists of the gradual or single repayment of the invested capital plus the payment of an ex-ante defined interest, based on the risk of insolvency perceived and the maturity of the loan.

In the second case, the investors finance real estate projects by acquiring ownership shares (risk capital) and becoming holders of the right to receive any profits generated. More precisely, two ways of investing can be distinguished: "direct" or "indirect". Through the first one, investors buy the shares of the real estate company or of the financed property. Through the second one they indirectly participate in the financing of the project, subscribing shares of a vehicle (Special Purpose Vehicle, SPV) especially designed for the specific project.

As all the financial investments, RECF is subject to the typical risks linked to the variability of the gain and to possible insolvencies of the promoter. Furthermore, other additional RECF risks are:

- The risk due to information asymmetries and the fact that the documentation provided to the subscribers is not certified by any market authority, as it instead happens in the informative prospectuses of the Public Offers; Moreover, often neither the budgets of the company being financed is audited;

- The risk of opportunistic behavior by the financed company;

- The high illiquidity since the credits granted are not easily liquidated on the market and the subscribed shares are typically not listed on stock markets. For this reason, sometimes the portals organize internal marketplace for the reselling of the assets;

- The lack, most of the time, of a warranty on which investors may eventually retaliate.

The platforms are responsible for the selection of the projects and the sponsors which must be performed ensuring the reduction of conflicts of interest and safeguarding the quality of the offer. It is not by chance that they rely on external analysts for the validation of the project, chosen from rating agencies or real estate analysts.

The RECF keeps growing fast all over the world. Thanks also to a better understanding of the projects from investors, this asset class is perceived as less risky than other forms of crowdfunding that involve the lending of capital to start-ups or individuals.

The RECF has made more "democratic" and "accessible" the investment in real estate. Indeed, it allows investors to invest in more projects, guaranteeing a higher degree of diversification and therefore a lower degree of specific risk in comparison to a direct investment in a single property, which also requires a higher minimum investment.

1.1 Comparison with other Real Estate Investment Models

The most traditional option to invest in real estate is direct investment: the investor buys a property, with the aim of reselling it or, alternatively, to rent it in order to obtain a periodic income. This method leaves the control of the process entirely to the investor but presents a series of disadvantages: as mentioned, real estate investment typically requires large sums and this represents a barrier to many small savers. In addition to this, it is difficult for investors to build a diversified real estate investment portfolio. Lastly, the real estate is an illiquid investment class that entails a number of additional charges and dedicated time for investors (ordinary and extraordinary maintenance, taxation, management). In addition to crowdfunding - that will be analyzed in more details below - other alternatives for investing in real estate properties are represented by the real estate funds or the Real Estate Investment Trusts (REITs). The REITs are mutual funds which professionally manage real estate investment portfolios over a limited time horizon. They are supervised by the market authorities and are often listed on the Stock Exchange. Being collective funds, the REITs allow to reduce the minimum investment threshold, making possible a diversification of the investment portfolio. Nevertheless, they guarantee poor autonomy for the investor in building its own portfolio. Indeed, the investment choices are made by the fund managers, who also deal with fulfilling administrative and operational obligations. The REITs are also quite expensive because of the organizational requirements to be maintained and the personnel costs. As a result, these costs affect the final yield.

Another type of real estate funds is represented by the Listed Real Estate Companies (SIIQ) or real estate investment vehicles that are listed on the Stock Exchange and benefit from tax breaks.

In summary, the main benefits offered by the REITs are the following:

- Greater liquidity of the investment;

- Accessible minimum investment threshold;

- Opportunities for the diversification of the investment portfolio;

- Exemption from administrative and operational obligations, which are in charge to the management company;

- More transparency, thanks to the supervision of the market;

- Possibility to build gradual accumulation plans with any annual dividends over time.

Compared to the REITs, the Real Estate Crowdfunding presents some very significant additional advantages:

- Usually even lower minimum investment required;

- Personalized choice of the investor, who directly deals with the creation of its portfolio of investments, choosing the projects to invest in;

- Transaction costs managed by the sponsors;

- More direct contact with the project promoters, mediated by the platform.

The table below summarizes the results of the comparison between the aforementioned 3 real estate investment models.

Table 1: Comparison of different forms of investment in real estate

Features	Direct Investment	REITS/Funds	RECF
Minimum Investment	High	Medium-Low	Low
Liquidity	Low	Medium	Varies by platform
Portfolio Control	Yes	No	Yes
Diversification	No	Yes	Yes
Transaction Costs	High	In charge to the fund	in charge to the sponsor
Transparency	Yes	Yes, ex-post	Yes

2 RECF Market Analysis

2.1 Methodological Premise

The total number of the worldwide platforms analyzed is 178. Depending on the geographical area, different criteria have been applied for the selection of platforms:

- Italy: all platforms with at least one project published until 30/06/2022;

- European Union: all platforms with at least one project financed and € 1 million raised capital during 2021;

- USA and the rest of the world: all platforms with at least one project financed and $ 1 million raised capital during 2021;

As shown in Figure 1, 100 European platforms, 36 US and 42 from the rest of the world were selected. It is important to point out that the platforms of European countries such as the UK, Switzerland and Norway, which do not belong to the European Union, are considered in the Rest of the World category.

As seen, the number of active platforms in Europe is much higher than the one in the United States. The lack for many years of a standard and unique regulation regarding internationalization is a factor that favored the fragmentation of the European market. There are still few platforms operating cross-borders activities, due to information and language barriers. Indeed, the platforms that are already expanded to several countries have lost market share in those markets where the number of domestic players has increased. The "Regulation on European Crowdfunding Service Providers" (ECSP) will change the future scenario for sure, allowing easier international projects development. However, in many countries (as Italy), many platforms have accelerated their entry in the market before the deadline of the application of the ESCP in November 2021 (which has been then postponed until November 2023) to avoid the new authorization procedures.

The analyzed platforms (36) in the US are less than those considered last year, because some have closed activities (such as RealtyShares and Prodigy Network).

The platforms excluded during the analysis are:

- The ones that are open only to professional investors;

- The ones that offer investment in loans or securities backed by real estate properties, without directly financing real estate projects. For example, the British platforms Kuflink, Octopus Choice and Proplend;

- The ones that do not focus only on real estate but publish real estate projects besides other types of investments.

Considering the reasons explained above, it is likely that the real estate business is larger than what has emerged from this study.

The data on which this analysis is based on are those made available by the platforms. These data were gathered and processed by monitoring the projects published on all the platforms' web sites.

The following chapters aim to present a qualitative and quantitative analysis of the RECF market. Firstly, a global vision of the sector will be provided. Subsequently, the main platforms, their performances, and the characteristics of the funded projects for each geographical area, will be reported. Finally, some successful cases will be presented.

Figure 1: The analyzed platforms in EU, USA and rest of the World (ROW)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
ROW	1	3	9	18	22	24	27	34	35	42
USA	4	13	28	33	37	38	38	38	39	36
EU	3	4	13	34	52	56	58	72	96	100
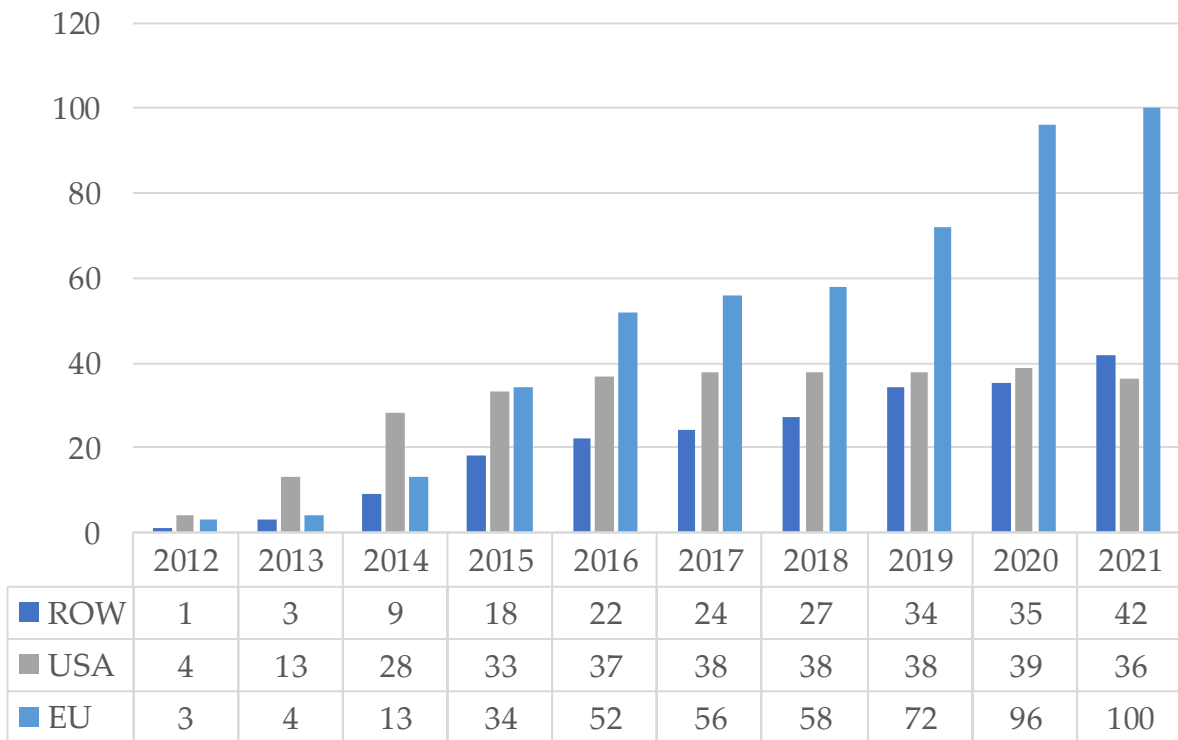
2.2 Market Overview

As shown by Figure 2, the RECF collected a total global and cumulative capital until 31/12/2021 that exceeds € 35 billion, an increase in growth of 15% compared to 31/12/2020.

The European Union market raised an amount of € 1.5 billion in the last 12 months, growing up by 8%. The cumulative raised capital so far is € 6.5 billion. Further information about this market will be provided in the next chapter.

The most developed market in the world, in terms of capital raised, is the US where the Real Estate Crowdfunding was born. In 2021 the US market grew up to $ 21 billion raising $ 2 billion (+11%). The campaigns identified during the year were 2,886 compared to the one obtained in the previous year, which is 3,790. One of the peculiarities of this market, compared to the European one, is the fact that many of the platforms allow only "accredited investors" to invest. The "accredited investor", as specifically defined by the Securities and Exchange Commission, is a person either with an annual income above $ 200,000 and a net worth above $ 1 million, or that has an important role in the real estate sector. Even if this regulation is against the concept of inclusiveness, that characterizes the RECF industry, it is an important risk mitigation factor. The European Commission is also proposing a series of measures aimed at reducing the number of potential investors and the possibility of extracting statistical data.

The cumulative total raised capital outside the European Union and the USA at the end of 2021 has been € 8.3 billion. The ROW was divided in four different market areas with different characteristics:

- European countries that do not belong to the European Union (such as the United Kingdom, Switzerland, Norway): They are very important markets for RECF. In fact, they have collected up to € 1.6 billion until 31/12/2021, with a contribution of € 0.5 billion in the last 12 months (+45%);

- Asia-Pacific: The RECF has developed since 2014-2015. Many platforms have opened their activities, raising significant capital. In China, however, in recent years, public authorities have issued ordinances to limit the activity of platforms, with the aim of avoiding formation of speculative bubbles;

- Middle East: In this geographical area we include only 2 platforms. One of these is the Israeli Hagshama which each year collects a significant amount of money. However, due to the difficulty in gathering precise data, it is not possible to define the growth margin of this area in 2021;

- Latin America: The research considers 13 portals that during last year have collected about € 30 million.

Figure 2: The capital collected by the analyzed worldwide platforms up to 2021

+15%   in
2021

$ 21 billion

USA

€ 6.5 billion

EU

€ 8.3 billion

Rest of the World
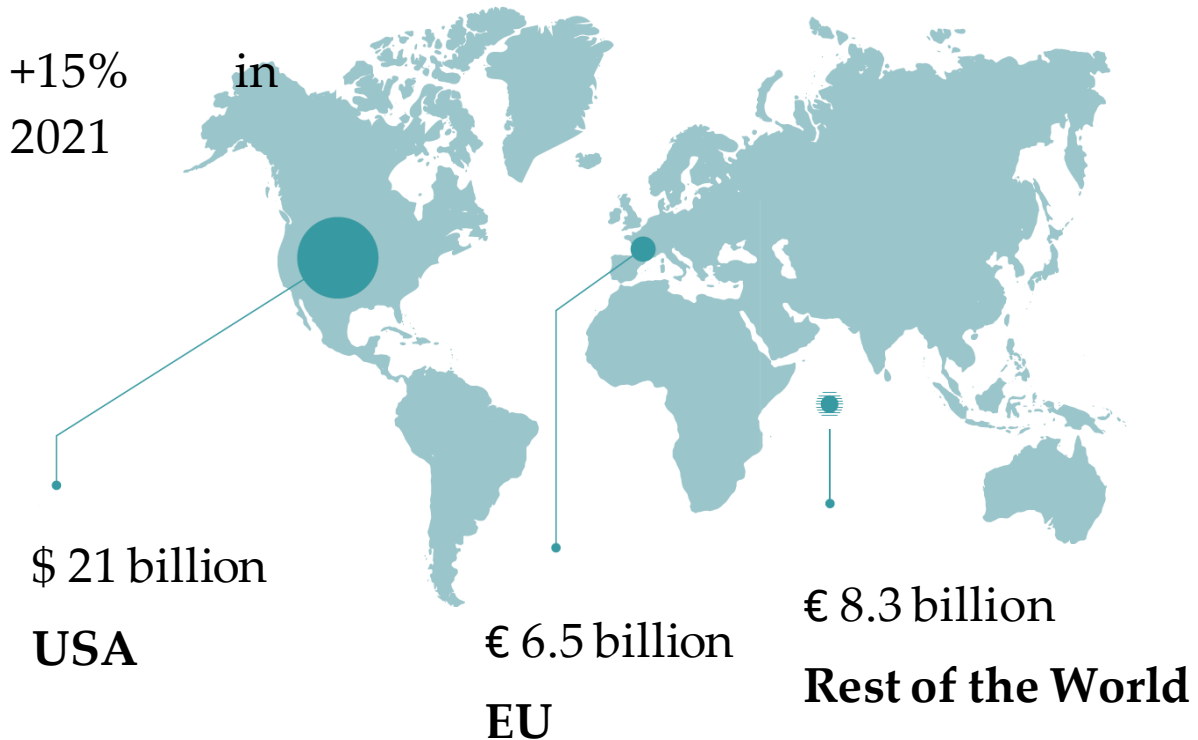
2.3 Business models

In general, platforms differ according to the type of investment they offer (equity or lending), the level of liquidity of the proposed investment (presence of a secondary market), the presence of automated investment features and the commissions applied.

2.3.1 Equity - Lending - Hybrid

The RECF platforms can be distinguished as:

- Equity-based platforms: These platforms allow both direct and indirect equity investments. In the first case, investors can directly subscribe shares of the company that owns the property or shares of the property itself. In the second case, the investors can subscribe shares of a Special Purpose Vehicle (SPV) created specifically to finance the real estate project. The SPV will then sign a loan agreement with the sponsor of the project which will specify the remuneration that will then be returned to the investors, net of structural costs and any management fee or carried interest. The financial return is proportional to the ownership percentage. It can be represented by periodic dividends, generated from rents, or more frequently by the capital gain generated by the

property after the sale. Indirect investments are more complex, but also more common, because of the fiscal and regulatory advantages they provide;

- Lending-based platforms: These platforms match lenders and real estate operators. The lenders invest in mortgage loans or securities such as obligations associated with a property and get in return a fixed interest. Returns in this model do not depend on the value of the final sale of the property unless there are reward mechanisms. The risk incurred is lower than in equity crowdfunding and lies in the ability of promoters to repay debt in a timely manner.

- Hybrid platforms: These platforms offer both equity and lending investments.

There is also another type of investment which has characteristics of both equity and lending projects. It is the case of the mezzanine investment, a type of subordinated loan, typical of Baltic and German platforms. The return for the investor depends on the profit of the project and is riskier than a traditional loan. At the same time, in the event of default, the holders of these investments have priority in the return of capital over the shareholders. As a result, mezzanine debt represents an attractive opportunity for investors, as returns are higher than traditional lending and at the same time the degree of risk is lower than equity. Mezzanine is appealing to borrowers, as it involves the leverage. Indeed, this kind of investment often appears as equity on the balance sheet. Since the level of debt is lower, the borrowers seem to be under a lower amount of risk, and hence, they may obtain better interest rates from other lenders as banks.

As shown in the Figure 3, the 178 analyzed platforms are 99 lending, more than half of the total, 50 equity and 23 hybrid. The 6 China platforms model could not be clearly identified.

Figure 3: The analyzed worldwide platforms grouped per typology

■ 50 Equity ■ 23 Hybrid ■ 99 Lending ■ 6 Not Identified
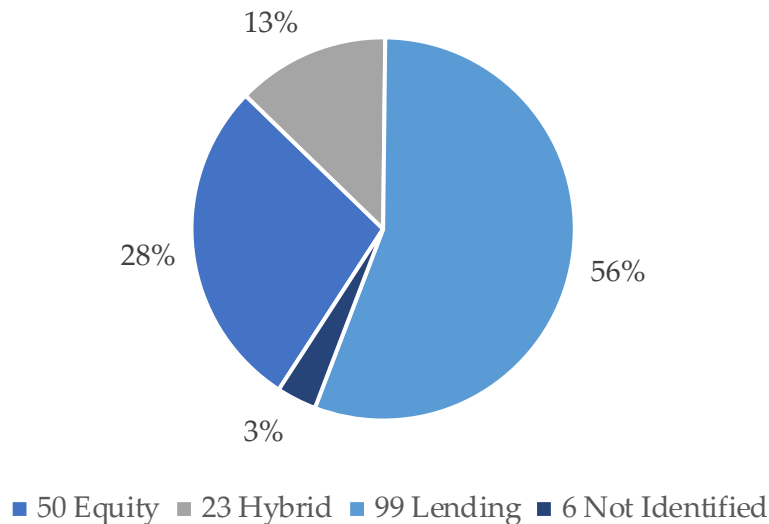
2.3.2 Secondary Market and Auto-Invest Tools

Some platforms, depending on also the national regulations, expanded their traditional offering, developing a secondary market. Thanks to their own marketplaces, platforms can offer their investors the possibility to trade shares and bonds purchased during a campaign, increasing the liquidity of the investments. When investors are willing to sell their securities, all they need to do is to decide a reasonable price and bid on the platform's secondary price list. Sometimes platforms intervene to verify the adequacy of supply and match demand and offer.

The new ECSP legislation allows European Union platforms to publish a 'bulletin board' of ads for sale or purchase.

As regards the auto investing tool, some platforms (typically the ones with larger portfolio) offer the opportunity to automate the investment process. The automated investment tool allows investors to select some constraints related to the projects to be financed, such as the expected risk and return profile or expected duration of investment. After that, the tool will build the portfolio automatically based on the preset criteria, reinvesting any revenue.

This technology has many advantages:

- From an investor's perspective, it helps less experienced individuals in creating balanced and diversified investment portfolios based on their needs. Moreover, it saves time in analyzing documentation and gives timely access to the offer as soon as it becomes accessible, winning competition from other participants.

- For promoters and for the platform, this tool can speed up the funding of campaigns. At the same time, it allows to forecast the amount of money that

will be automatically invested in the new project, providing fundraisers with an early proxy of success.

2.3.3 Fees and Commission Charged

The types of fees and commission charged by the platforms are the following:

- Promoter fees: Normally, platforms apply fees to entrepreneurs only if the funding campaign is successful. Rates may vary between platforms, but are still within a range between 2% and 10%;

- Investor fees: Although this happens more rarely, platforms can also charge fees to lenders. The fees may concern: the intermediation expenses, usually equal to 2% of the total invested; the management expenses of the property (more typical in the world of equity RECF), between 2% and 5%; success fees applied in the case of particularly profitable projects for the investor. The latter are generally quite high and can reach rates of 20% of the total yield;

- Secondary market commissions: in this case, the fees concern only the investors who use the service. The average rate is 2% on the value traded.

The fees applied to investors and project promoters represent the main revenue stream for RECF platforms. It is difficult to find transparent data on fees charged, as platforms do not like to release this information.

3   The European Market

3.1   Market Landscape in 2021

Figures 4 and 5 are visual descriptions of the European market in terms of capital raised and number of projects launched in 2021.

2,818 new real estate projects were financed in 2021 (compared to 3,230 in 2020). Almost half of these were launched in Estonia that leads the ranking with 1338 projects, followed by France with 738 projects and Italy with 261 projects.

Figure 4: Distribution of the funded projects launched by the 100 European platforms in 2021
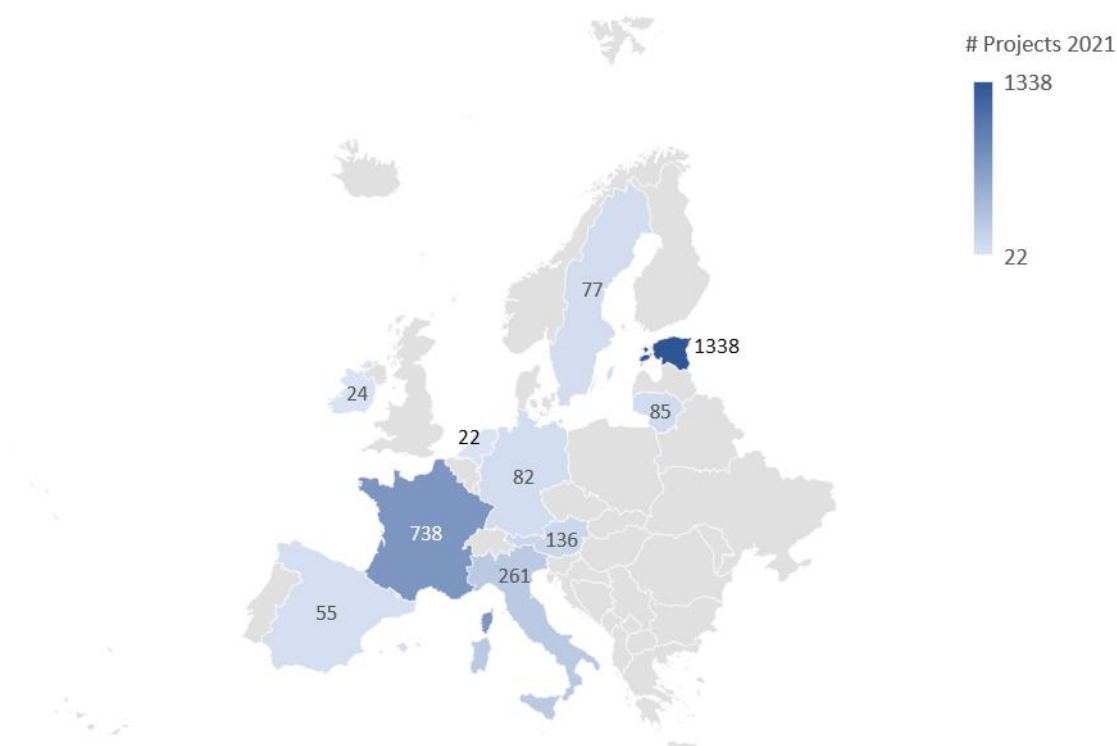
The largest markets in the European Union, in terms of capital collection, have been France (which is confirmed as the leader for the European RECF market with about € 684 million collected), Estonia with € 247 million and Germany with € 166 million. Italy is in fourth place with about € 100 million.

Figure 5: Distribution of the capital collected by the 100 European platforms in 2021
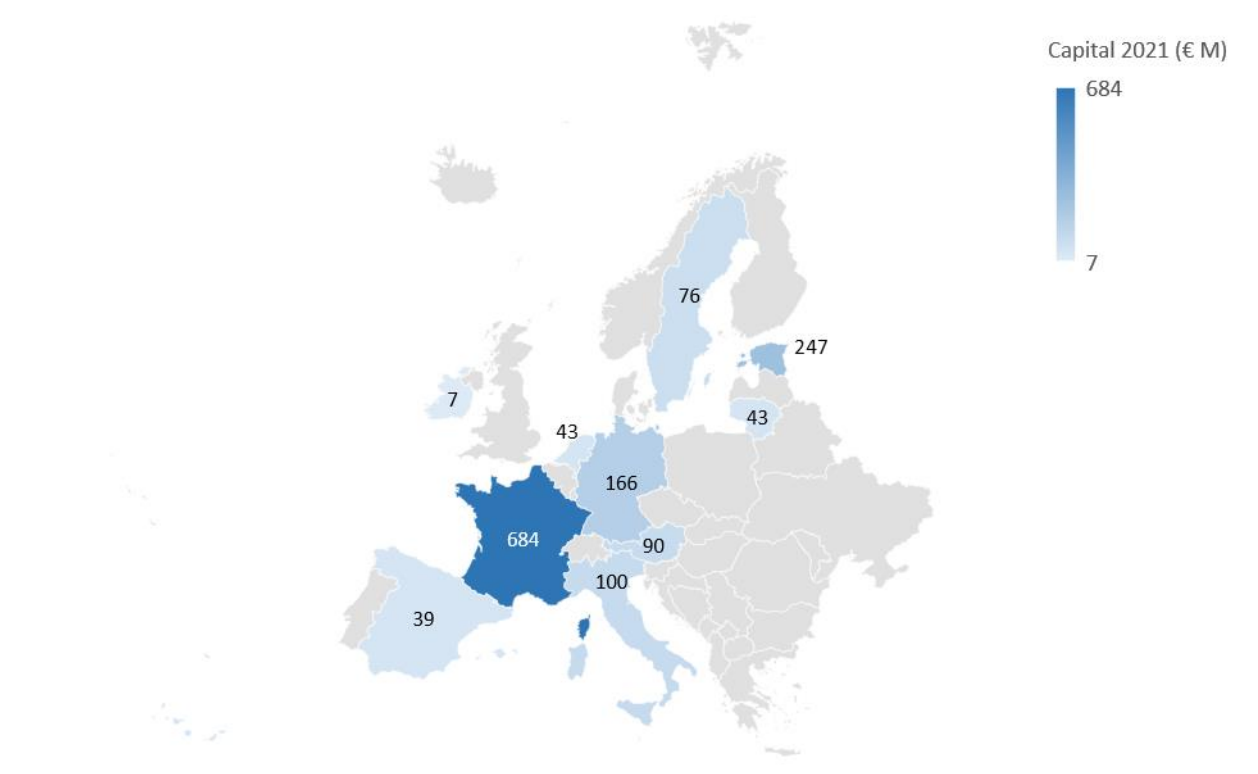
Table 2 shows the average project size by country. Estonia has focused on small real estate projects (on average less than € 200,000) while Germany and Netherlands have financed the biggest ones (on average around € 2 million). Italy is at the bottom of the ranking with an average project size that accounts for € 0.38 million.

Table 2: The average project size of the 100 platforms per EU country in 2021

Country	Average project size (€ M)
Germany	2.02
Netherlands	1.95
Sweden	0.98
France	0.93
Spain	0.71
Austria	0.66
Lithuania	0.50
Italy	0.38
Ireland	0.28
Estonia	0.18

In Table 3 a report of the 2021 performance of the European market, divided according to the platform's type, is provided.

The lending type represents the 98% of the market in terms of capital raised while the other two types share the remaining 2%. This huge gap is due to the fact that many platforms, such as Homerocket and Tessin in 2021, abandoned the equity sector focusing only on lending projects.

As can be seen in the table, the equity projects are on average greater than lending ones (more than double the amount).

Table 3: The European RECF market divided according to the platform's typology

Type	Capital raised in 2021 (M€)	# Projects in 2021	Avg Investment Per Project (M€)
Equity	52.41	47	1.12
Hybrid	60.2	169	0.36
Lending	1382.6	2602	0.53

The next paragraphs include a more detailed analysis that was carried out on a lower number of platforms.

3.2 Leading Platforms

The main protagonist of the European RECF market are 20 platforms that have collected more than € 50 million up to 2021. These platforms, since their foundation, have financed 7,021 projects and collected € 3.98 billion which represents more than 60% of the total European market. The level of the market concentration is growing, in fact the cumulative capital raised of the top 5 platforms corresponds to 32% of the market. This can be a sign that some players are consolidating their positions.

The list of the main platforms is shown in Table 4 together with some fundamental data. The ranking has changed slightly compared to 2020. Exporo, bought Zinsland in 2019, and Estateguru maintain the first and second position respectively. Hommunity gained the third position overtaking Tessin and Anaxago. Compared to last year there are 4 new platforms (the last ones on the list) that have exceeded the threshold of € 50 million cumulative capital raised. As it can be seen from the table, most of the platforms are lending type except Walliance that is an equity platform and Raizers and Housers that have a hybrid business model.

More than half of the platforms are French and German that have 8 and 3 platforms respectively. Italy is represented only by Walliance which is growing strongly. It must

be stressed that the Italian platforms started more slowly than the other European platforms because until 2017, RECF was not authorized in Italy.

Table 4: List of the main EU platforms

Platform	Country	Year	Type	Capital Raised (M€)	Financed projects	Min Invest.
Exporo	Germany	2014	Lending	639.0	332	500 €
EstateGuru	Estonia	2014	Lending	495.8	3,081	50 €
Homunity	France	2016	Lending	339.3	328	1,000 €
Tessin	Sweden	2015	Lending	325.8	329	50,000 SEK
Anaxago Immobilier	France	2014	Lending	308.0	199	1,000 €
WiSEED (*)	France	2011	Lending	271.0	502	100 €
Fundimmo	France	2016	Lending	183.2	284	1,000 €
Raizers	France	2015	Hybrid	180.2	196	1,000 €
Bergfürst	Germany	2014	Lending	162.2	101	10 €
Koregraf	France	2014	Lending	154.0	209	2,000 €
Housers	Spain	2015	Hybrid	129.0	356	50 €
Zinsbaustein	Germany	2016	Lending	128.8	65	500 €
Home Rocket	Austria	2015	Lending	124.2	266	250 €
Crowdestate	Estonia	2015	Lending	112.7	411	100 €
Dagobertinvest	Austria	2016	Lending	100.0	228	250 €
Rendity	Austria	2015	Lending	95.0	134	500 €
Crowdrealestate	Netherlands	2015	Lending	67.0	39	200 €
Walliance	Italy	2017	Equity	59.3	37	500 €
WeShareBonds (*)	France	2015	Lending	56.3	112	N/A

| Finple (*) | France | 2015 | Lending | 53.0 | 79 | N/A |

(*) statistics referring only to real estate projects

3.3 Characteristics of the Leading Platforms

3.3.1 Minimum Investment

As shown in Table 4 the minimum investment required is on behalf of each platform. This sum may vary depending on the individual project. The values shown in the table refer to the minimum amount required for the deposit in the investment account.

The minimum investment is between a symbolic figure of € 10 of Bergfürst and SEK 50,000 (which is equivalent to € 4,860) requested by Tessin. Most of the platforms ask no more than € 500 to invest, 4 platforms require € 1000, one platform (Koregraf) sets € 2000 as threshold.

3.3.2 Secondary Market and Auto-Invest Tools

Because of their complexity, these features are still not developed in the market. Indeed, few platforms have a marketplace or offer the service of auto-invest. More in details:

- 6 platforms out of 20 have a secondary market: Crowdestate, Housers, Estateguru, Bergfürst, Exporo, Dagobertinvest;

- 5 platforms out of 20 offer auto-invest tools: Crowdestate, Estateguru, Bergfürst, Bulkestate, Wesharebonds.

3.3.3 Fees and Commission Charged

In Table 5 the policies of the main European platforms about the required fees are summarized. Unfortunately, these data are incomplete because not all the platforms are clear neither in the amount nor in the scope of the commissions they charge.

For a better understanding of the table, when a cell is empty, except the ones of the secondary market column, it means that the required fee is zero, while when N/A is written it means that the fee is different from zero, but the platform does not provide any figure.

As it can be understood from the table, platforms always charge fees on fundraisers, while fees on investors are equal to zero in many cases. Sometimes investors are charged with other types of fees like deal origination, management and success ones.

Table 5: Fees charged by the main EU platforms

Platform	Fees on fundraiser	Fees on investor	Deal origin. fee	Manag. fee	Success fee	Fees secondary market
Exporo	5%			5%		N/A
EstateGuru	3%-4%			Up to 2%		2%
Homunity	5%					
Tessin	N/A			N/A		
Anaxago Immobilier	10%	0.5%-2%	N/A	1% per year		
WiSEED	4-10%	0.90%				
Fundimmo	4-8%	Up to 2%				
Raizers	N/A	Up to 3%				
Bergfürst	N/A	N/A		10%		10€ per operation
Koregraf	N/A					
Housers	N/A	€ 2.5 per month	N/A		Up to 10%	N/A
Zinsbaustein	N/A					
Home Rocket	10%					
Crowdestate	N/A		N/A	N/A	20%	2%
Dagobertinvest	12%-14%		N/A		N/A	N/A
Rendity	N/A					
Crowdrealestate	€ 950	0.90%	€ 950	0.95%	2.50% - 10%	
Walliance	5%-6.5%		N/A		N/A	
WeShareBonds	€ 1500		€ 1800	1%-2%	4%-5%	
Finple	N/A	5%			4%-7%	

3.3.4 The RECF Contribution

This analysis focuses on the importance of RECF financing, in relation to the value of the properties and the overall financing structure of the projects.

Usually, the capital raised through the RECF does not represent the majority of the project's budget, which is mainly covered by self-financing and banks. However, the crowdfunding is appreciated by operators mainly because of two reasons:

- It expands the financing capacity, supplying money in a very short time compared to the other forms of loans that require long bureaucratic process;

- It strengthens the firm's position in the market, contributing to the advertising of the company and its projects.

Investors assess the RECF contribution to determine their level of risk exposure while investing in the campaign. The higher the RECF contribution the higher the possibility for investors not to get their money back. This is because there is very low sponsors' equity within the investment in the property.

The data in Table 6 are gathered from the single campaigns' prospects or, if not possible, from the figures provided by the platforms. Since not much information is provided in this regard, the analysis is performed on a sample composed of 9 out of the 20 platforms. The range is wide and goes from 13% (Rendity) to 57% (Crowdrealestate). The average value is 35%.

Table 6: RECF contribution of 9 out of the 20 European leading platforms in 2021

Platform	RECF contribution
EstateGuru	29%
Tessin	32%
WiSEED	21%
Bergfürst	26%
Housers	51%
Crowdestate	43%
Rendity	13%
Crowdrealestate	57%
Walliance	40%

3.3.5 Internationalization

The crowdfunding market is growing fast in Europe, nevertheless the cross-border activities are struggling to be increased. Indeed, the projects published by the European platforms are mainly located in their country of origin. The two major obstacles about the internationalization process are:

- A very strong national vocation of the platforms;

- The lack of a unique European regulation on crowdfunding, with each country having to follow their national laws.

In order to facilitate cross-border operations and to make the rules between equity and lending portals more uniform, the European Council has approved the so called "Regulation on European Crowdfunding Service Providers" (ECSP) on 24th June 2019.

However, due to the Covid-19 pandemic and the huge impact that the law will give to the market, its application has been postponed many times. The new deadline, initially scheduled for November 2022, by which the European platforms must adapt to the new procedures provided by the ECSP, has been postponed to November 2023. In the last months many platforms have criticized the delay in identifying some unclear points of the law. In Italy the debate was on the division of competences between CONSOB and the Bank of Italy.

Nevertheless, there are some exceptions of platforms that have financed cross border projects in the European scenario:

- German platforms have often financed projects in Switzerland and Austria, similar countries in terms of language and regulations. The same applies on Dagobertinvest: the Austrian portal has also developed projects in Germany and Switzerland.

- EstateGuru (Estonia) is involved in projects in Estonia, Finland, Germany, Latvia, Lithuania, Portugal and Spain.

- Crowdestate (Estonia) has financed projects in Estonia, Finland, Italy, Portugal, Latvia, Romania and Slovakia;

- Housers (Spain) concluded funding campaigns in Spain, Italy and Portugal;

- In Italy, the equity platform Walliance was the first and only player that was able to finance projects in the US (one in Miami and one in New York). In 2021 it also obtained the license to operate in France and launched its first campaign "Milano Fulceri" that is open to foreigner investors. The platform has also made a capital increase of € 4 million which will be used to enter in the Spanish market and strengthen its position in France.

3.4   Characteristics of the Campaigns of 2021

3.4.1 Money raised and type

In this analysis, hybrid platforms' projects are considered according to their actual typology, either equity or lending. Considering that more than half of the 20 European leading platforms are lending type, the lending projects account for 95% of the total funds collected, whereas the equity ones represent the remaining 5%. The gap between lending and equity offer has been increasing over the years because of some players

that are abandoning the equity offer for focusing only on the lending one. For instance, the platform Housers, that has a hybrid business model, funded only lending projects in 2021.

As shown in Table 7, in terms of average size of projects, financed by the 20 main European platforms in 2021, the overall value is equal to € 571,110. The average size of equity projects (€ 1,718,473) is more than double the one associated to those of lending (€ 550,874).

Table 7: Average size of campaigns funded by the 20 main European platforms in 2021

Characteristics	Total	*Equity*	*Lending*
Money Raised	€ 1,212,466,530	€ 42,961,825	€ 1,155,733,652
Number of projects	2,123	25	2,098
Average size (€)	€ 571,110	€ 1,718,473	€ 550,874

Table 8 provides a deeper focus in showing more detailed numbers for each platform. An interesting fact emerges from the table: the three largest platforms (Estateguru, WiSEED and Crowdestate) in terms of the number of sponsored projects, collect on average small amounts (less than € 500,000). In particular, EstateGuru has collected on average € 189,177 for each campaign. The opposite applies to the platforms with low number of funded projects: for instance, Bergfürst funded only 9 campaigns raising on average € 3,444,444.

Table 8: Characteristics of projects financed on the main platforms of the European Union in 2021

Platform	Number of projects (lending)	Average size lending (€)	Number of projects (equity)	Average size equity (€)
Exporo	64	1,921,875	-	-
EstateGuru	1072	189,177	-	-
Homunity	85	1,873,588	-	-
Tessin	77	983,948	-	-
Anaxago Immobilier	31	3,225,806	-	-
WiSEED	128	476,563	-	-
Fundimmo	94	723,191	-	-
Raizers	80	N/A	12	N/A
Bergfürst	9	3,444,444	-	-
Koregraf	87	970,299	-	-

Housers	30	240,000	-	-
Zinsbaustein	3	2,700,000	-	-
Home Rocket	42	552,518	-	-
Crowdestate	122	140,680	-	-
Dagobertinvest	45	589,194	-	-
Rendity	49	822,449	-	-
Crowdrealestate	15	1,699,333	-	-
Walliance	-	-	13	2,215,512
WeShareBonds	12	500,000	-	-
Finple	53	600,755	-	-

3.4.2 Duration of campaigns

The duration of a campaign starts from the last day of the fund raising until the maturity, that is the agreed-upon date on which the investment ends, triggering the repayment of the loan.

The higher the duration, the higher the return investors would expect from the investment.

Table 9 shows the average expected duration of projects financed by each platform in months, for equity and lending.

The general average duration for all the campaigns identified in 2021 is equal to 17.2 months.

As the table indicates, among the leading platforms, EstateGuru, Tessin, Housers and Crowdestate are the ones that offer on average the lowest duration of about 15 months. The opposite applies for Wesharebond whose projects' average duration is 47 months.

Table 9: Average duration of projects financed in 2021 by the 20 leading European platforms

Platform	Average duration *lending* (months)	Average duration *equity* (months)
Exporo	30.0	-
EstateGuru	14.6	-
Homunity	28.0	-
Tessin	15.0	-
Anaxago Immobilier	30.1	-
WiSEED	20.1	-
Fundimmo	22.7	-
Raizers	21.0	21.0

Bergfürst	33.3	-
Koregraf	19.0	-
Housers	14.4	-
Zinsbaustein	29.0	-
Home Rocket	20.3	-
Crowdestate	15.0	-
Dagobertinvest	23.6	-
Rendity	31.5	-
Crowdrealestate	36.0	-
Walliance	-	19.1
WeShareBonds	47.0	-
Finple	24.0	-

In the 3 next paragraphs, a more qualitative description of the projects based on 3 characteristics is provided:

- The type of property, that is, whether the financed real estate projects are for residential or commercial purposes;

- The location of the building that can be metropolitan, rural or urban;

- The type of financed intervention which can focus on either the construction of a new property or the renovation of a new one.

3.4.3 Type of property

The type of property depends on the destination (purpose) of use of the building itself involved in the project. The Figure 6 shows four different destinations of use that are the following:

- Residential: it considers condominiums, co-ops, multi-family properties, single-family houses, townhouses, and vacation houses. The majority of the projects finance properties directed to this destination (75%);

- Commercial: it includes all those categories of real estate like offices, retail, industrial, leisure and healthcare. It represents a smaller percentage (9%) of campaigns compared to residential one;

- Mix: this category includes projects that developed both commercial and residential properties. This type of campaigns is the second biggest one (15%);

- Portfolio: the projects belonging to this category finance simultaneously many properties that could have different destinations of use and be in different

geographical positions. This category represents a small percentage (1%) of the analyzed campaigns.

Figure 6: Destination of use of the properties involved in projects financed in 2021 by the 20 leading European platforms

Destination of use

15% 1%

9%

75%

■ # Projects Residential   ■ # Projects Commercial

■ # Projects Mix   ■ # Projects Portfolio
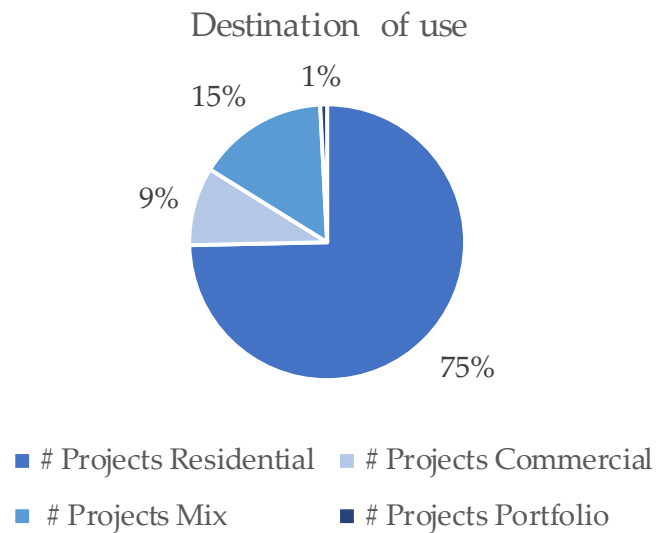
3.4.4 Location of the project

There are three types of location:

- Metropolis: metropolitan areas with more than 1 million of citizens;

- Urban: urban areas with a population less than 1 million;

- Rural: non-urban contexts such as chalets, fields, villas etc.

The Urban area (64%) is the most attractive one. It represents more than half of the RECF projects. The Metropolitan (20%) and the Rural (16%) follow the Urban.

The cities preferred by the RECF projects are London, Milan, Paris and Vienna.

Figure 7: Location of the properties involved in projects financed in 2021 by the 20 leading European platforms

Location

16%   20%

64%

■ Projects metropolis   ■ Projects urban   ■ Projects rural
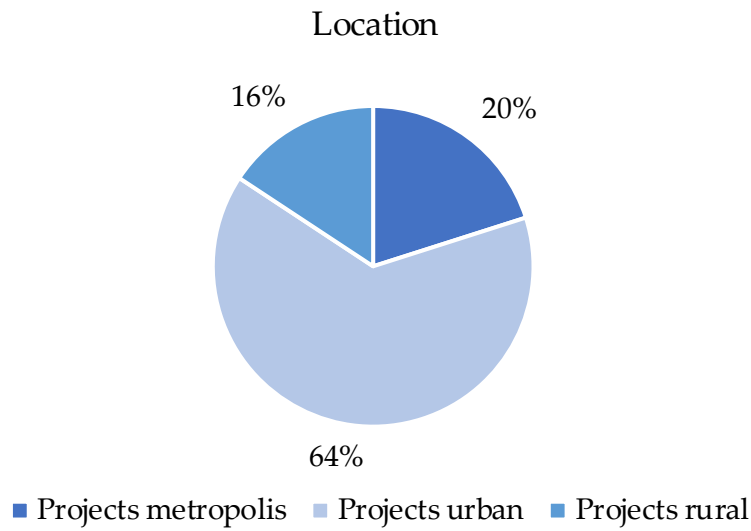
3.4.5 Type of intervention

This analysis considers two types of intervention which can be either Construction of new property or Restauration of an existing one. This year the category Construction (57%) has overtaken the Restauration one (43%).

Figure 8: Type of intervention of the properties involved in projects financed in 2021 by the 20 leading European platforms

Intervention

43%

57%

■ # Projects Construction   ■ # Projects Restauration
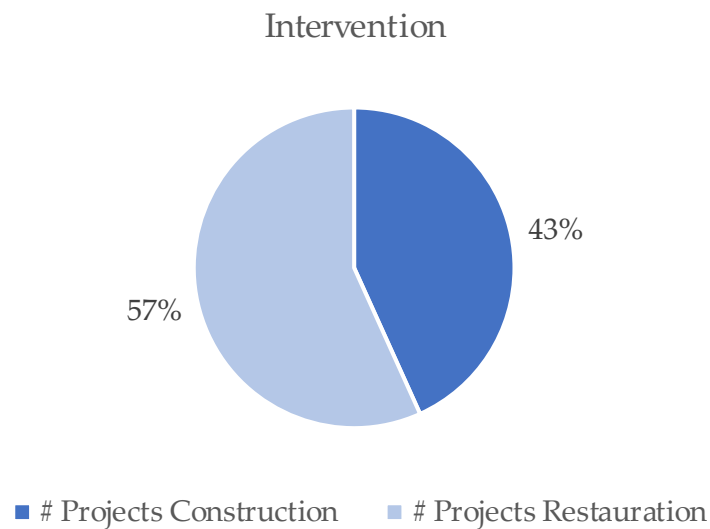
3.5 Performance Indicators

To be considered as successful a campaign must accomplish two goals:

- Raise funds until the target collection threshold is reached;

- Return the principal plus the interest to investors by the maturity date.

If the target threshold is not reached, the platform does not start the campaign and reimburses the funds collected so far to the investors. However, some platforms may decide to be less rigid about it. Sometimes a threshold of acceptance lower than the target is also indicated, or it is allowed to overfund the campaign within a limit imposed by the sponsor company.

The second goal is only partially true for equity projects for which there is no contract with fixed deadlines and payments. In these projects you can only observe the date indicating when the project ends and the generated remuneration, which is zero in the event of default. Instead, lending projects are quite different because it is possible to precisely define the delays in repayments or insolvencies.

Unfortunately, the analysis of performance indicators has some limitations mainly due to 2 factors:

- The lack of transparency about the past performance. Many platforms show on their site a 100% successful fundraising and do not publish data about projects that had difficulties in repayments;

- The absence of standard criteria in the RECF market used to assess whether a project is late with the repayments or in default.

Figure 9 shows the ratio between projects in difficulty (late payments or defaults) and projects financed at the end of 2020 and 2021. Because of the limitations explained above, the numbers are the averages calculated regarding a narrower sample of platforms, 16 of the 20 leading platforms. There has been a slight increase from 13.2% to 15.6%.

Figure 9: Delayed or Defaulted projects of 16 out of the 20 European leading platforms in 2020 and 2021
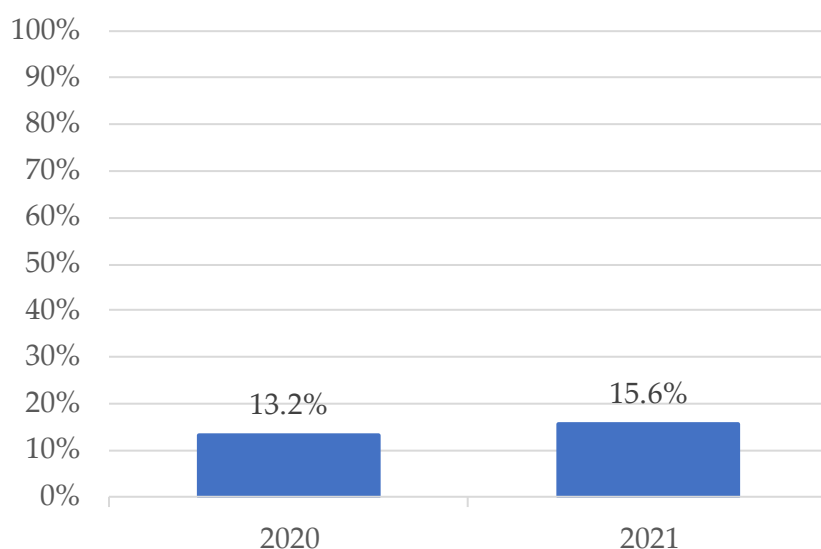
Table 10 shows the available information for the portals included in the analysis.

Looking at the reimbursement rates in the table, it is important to underline that these rates are good proxies, but they must be considered with some reserves. Indeed, many campaigns can still be in progress because either they have long duration or the platform that finances them has just started its activities a few years ago. For example, WeShareBonds only repaid 8% of its projects but at the same time this platform funds projects with the highest average duration (47 months) among the 20 leading European platforms. Walliance has a low reimbursement rate too, but it was founded in 2017.

More than half of the 20 platforms repay more than 40% of the funded projects. Crowdestate (69%) is the first one.

Regarding the projects in difficulty, French platforms are among the more transparent ones since they are legally obliged to disclose information. In general, they show no defaulted projects but many delayed ones. The highest ratios, delayed over funded projects, provided in the table are of Homunity (36 projects, 11%) and Raizers (16 projects, 8%)

EstateGuru follows a strategy based on quantity, funding lots of projects (3081 total, 2294 in the last year) of small size (average of € 189,177 per campaign in 2021). This partially justifies the high number of defaults (85) and delays (91) which both account to 3% of the funded projects.

Housers seems to be the most performant platform with zero defaulted projects and only one delayed out of 356 funded since its foundation.

Overall, all the platforms show good performances in terms of default and delay rates.

Table 10: Project performance of the 20 European leading platforms until 31/12/2021

Platform	Funded projects	Repaid projects	Rep. %	Delayed projects	Del. %	Defaulted projects	Def. %
Exporo	332	209	63%	N/A	N/A	N/A	N/A
EstateGuru	3,081	2,100	68%	91	3%	85	3%
Homunity	328	152	46%	36	11%	-	-
Tessin	329	164	50%	9	3%	7	2%
Anaxago Immobilier	199	55	28%	7	4%	1	1%
WiSEED	502	340	68%	N/A	N/A	2	0.4%
Fundimmo	284	139	49%	9	3%	-	-
Raizers	196	82	42%	16	8%	-	-
Bergfürst	101	67	66%	N/A	N/A	-	-
Koregraf	209	86	41%	4	2%	-	-
Housers	356	140	39%	1	0.3%	-	-
Zinsbaustein	65	38	58%	N/A	N/A	-	-
Home Rocket	266	46	17%	N/A	N/A	9	3%
Crowdestate	411	284	69%	27	7%	9	2%
Dagobertinvest	228	32	14%	N/A	N/A	N/A	N/A
Rendity	134	N/A	N/A	N/A	N/A	-	-
Crowdrealestate	39	N/A	N/A	N/A	N/A	N/A	N/A
Walliance	37	7	19%	1	3%	-	-
WeShareBonds	112	9	8%	N/A	N/A	N/A	N/A
Finple	79	N/A	N/A	N/A	N/A	N/A	N/A

Table 11 shows the average values of the returns of the projects launched by the 20 leading platforms. The target return is the expected one shown by the platform to the investor in the fundraising phase. The actual return is the real one generated after the conclusion of the project and paid back to the investors.

As expected, the equity platform Walliance offers high interest rates compared to many other platforms. Likewise, some lending platforms offer high profits as well. Indeed, platforms such as Crowdestate or Estateguru offer mezzanine debt loans that have higher returns since they are considered riskier.

From the table it can be seen that in most cases the actual return rates are very close to the target rates. However, there are some exceptions:

- Exporo, Rendity and Walliance reported an actual return which differs from the target return of more than 1%;

- Estateguru and Crowestate reported a higher return than expected. In particular, the second one has both the highest target (12%) and actual (14.50%) returns.

Table 11: Annualized target and actual average returns of projects financed of the 20 European leading platforms to 31/12/2021

Platform	Type	Target return	Actual return
Exporo	Lending	6.00%	5.38%
EstateGuru	Lending	9.70%	10.90%
Homunity	Lending	9.00%	9.00%
Tessin	Lending	8.50%	N/A
Anaxago Immobilier	Lending	9.70%	9.30%
WiSEED	Lending	9.10%	8.89%
Fundimmo	Lending	9.10%	9.10%
Raizers	Lending/Equity	9.90%	9.90%
Bergfürst	Lending	6.00%	6.00%
Koregraf	Lending	8.80%	8.80%
Housers	Lending/Equity	8.35%	7.32%
Zinsbaustein	Lending	5.30%	5.30%
Home Rocket	Lending	6.80%	6.60%
Crowdestate	Lending	12.00%	14.50%
Dagobertinvest	Lending	7.10%	N/A
Rendity	Lending	7.60%	6.30%
Crowdrealestate	Lending	5.30%	5.22%
Walliance	Equity	11.40%	9.70%
WeShareBonds	Lending	6.31%	N/A
Finple	Lending	N/A	N/A

3.6 Use Cases

EstateGuru

The Estonian platform completed a € 5.8 M venture capital financing round in September 2021. It is the second largest real estate crowdfunding platform in Europe, focusing mainly on residential projects, but also on the "portfolio" category that consists in the creation of a project pool with the aim of diversifying the investment.

In particular, the platform is the leader in Europe for short-term financing, with projects lasting even less than the calendar year. In addition, most projects are covered by mortgage guarantees, which is still not common among other European platforms.

Since its foundation the platform has raised more than half a billion euros. In 2021 it has funded 1,072 loans for a total of € 202 million that is 62% more than what has been raised until 2020.

On EstateGuru an investor can participate in the financing of projects from € 50 up to a maximum of € 25,000. The platform charges project applicants between 2.5% and 4%, plus 2% for management fees. However, it does not charge any investor fees.

Until 31/12/21 the platform has returned 2,100 projects for a total of € 286 million.

Koregraf

The French platform founded by Philippe Sénéchal and Vincent Sillèguenata in the context of housing crisis in France, with a lack of housing often presenting prohibitive prices in large cities. The returns offered by the projects presented on the platform range from 7% to 10%, without fees applied to investors.

In 2021 the portal has collected € 84.5 M, 279% more than it has collected in 2020. The capital raised per project rarely exceeds € 1 million, and in terms of type of property, the platform mostly promotes multi-family projects, in particular buildings with more than 10 housing units.

On Koregraf it is possible to invest a sum starting from € 2,000; the average declared yield is 9% and the average duration of a campaign is 18 months.

4   The US Market

In the following pages the analysis of the US market will be presented. It is the most developed in the world for capital raised, and the first market in which RECF started and subsequently developed, being most of the US platforms born between 2013 and 2014.

4.1.   Active Platforms in the US

Out of the 36 platforms analyzed, the first 12 with a collected capital above $ 300 M and with sufficient information provided, have been considered. Indeed, as for the single projects, it is not easy to obtain information about the collected capital and the successful campaigns. Table 12 shows how the volumes collected are more consistent than those in Europe, with $ 20 B collected from the first 12 platforms analyzed. Not surprisingly, the US market is much more concentrated than the European's, since the first 5 platforms cover 70% of the total market. The leading platform is Cadre, with $ 5 B collected. The second and third platforms are PeerStreet and Sharestates, with an overall amount collected of $ 4.2 B and $ 2.75 B respectively. As anticipated in chapter 2, the collection in US amounts to $ 2 B in 2021. The new projects in the last 12 months have been 2886 (the data is approximated by default because for several platforms it was not possible to identify them).

Table 12: The main RECF platforms in the United States as of 31/12/2021

Platform	Year	Capital Raised (US M $)	Financed Projects	Type	Min Invest.
Cadre	2014	5020	48	Equity	25000
Peer Street	2014	4020	9000+	Lending	1000
Sharestates	2014	2750	3500	Lending	5000
1031 Crowdfunding	2014	2200	1500+	Equity	25000
CrowdStreet	2013	2000	650	Hybrid	25000
Patch of Land	2012	1500	-	Lending	1000
Cardone Capital	2014	780	-	Equity	10000

Intoo	2015	670	350	Hybrid	25000
RealtyMogul	2012	600+	480	Hybrid	5000
YieldStreet	2015	600	100+	Lending	10000
Fund That Flip	2014	450+	1450	Lending	5000
EquityMultiple	2015	350+	400+	Hybrid	5000

4.2. General Characteristics of the Main US Platforms

As the platform type is concerned, the main difference with the European platforms is the distribution of the business models: whereas in Europe there is a net gain in favor of the lending platforms, the situation in the US is different. 3 of the main platforms are equity-based, 5 are lending-based and 4 of them adopt a hybrid model. Unlike Europe, it is very common in the US that multi-project investment vehicles' shares are offered with a long-term view. Table 12 shows that the minimum investment for US platforms is higher on average than for the European platforms. Indeed, no US platform allows to invest less than $ 1000 for a single project (with a median of $ 5000). This is coherent with the abovementioned feature of the US platforms, which usually allows only accredited investors to invest into a project.

4.3. Costs and Commissions

As for the commissions applied to the sponsors (Table 13), they are more heterogeneously distributed, coherently with the different business models available (for example for some platforms such as '1031 exchange' that offers swap contracts on real estate properties to avoid capital taxes gain, the applied fees are higher).

Table 13: Fees charged by the main US RECF platforms

Platform	Partners' fee	Investors' fee (intermediation)	Investors' fee (management)	Market fee
Cadre	-	X (on every transaction)	-	-
Peer Street	-	0.25%-1%	-	-
Sharestates.com	1%-5%	-	-	-
1031 Crowdfunding	13% total	-	-	-
CrowdStreet	1%-3% total	X	-	-

Patch of Land	$1900 service expenses	1%-2% of the interests	-	-
Cardone Capital	3% for the offered services success fee up to 20%	-	-	-
Intoo	-	7% startup costs	-	-
RealtyMogul	-	X (established by the bidder)	1%-1.25%	-
YieldStreet	0%-2.5% annual	X (only in some cases)	X annual	-
Fund That Flip	1%-2% additional on the interest rate	-	-	-
EquityMultiple	0.5%-1.5% equity 1% lending	-	$30-$70 per year	X

4.4. Projects Financed by the Main US Platforms

The average size of the projects differs according to the platform, from a minimum of $ 419.486 K for Fund That Flip to a maximum of $ 25.3 M for Cadre (as shown in Table 14). What stands out is the reduced number of projects presented by the equity-based platforms, compared to a higher number of projects proposed by lending platforms. It seems that lending platforms prefer to go for a higher number of projects of reduced size. The equity platforms - also due to regulatory constraints - leverage on more sophisticated investors who can contribute with more significant amounts.

As for the average projects' duration, Table 15 shows another difference compared to European platforms; indeed, the durations are much higher in US than in Europe, with durations up to 5 years, both for equity and lending projects. One reason can be the lower percentage of residential projects in favor of commercial ones, which typically requires more time to be concluded.

Lastly, when it comes to target returns, US platforms usually do not show ex post returns – as European platforms do – not allowing a comparison between target and real returns. Sometimes neither target returns are available on the platforms. As reference, we can state a target return between 15% and 19% for equity platforms, and a target return between 5% and 10% for lending platforms.

Table 14: Average size of the projects launched by the main US RECF platforms

Platform	Average size Equity	Average size Lending	Average size Hybrid
Cadre	25,333,333	-	-
Peer Street	-	580,454	-
Sharestates.com	-	874,567	-
1031 Crowdfunding	-	-	-
CrowdStreet	-	-	3,892,857
Patch of Land	-	477,403	-
Cardone Capital	-	-	-
Intoo	-	-	-
RealtyMogul	-	-	-
YieldStreet	-	5,000,000	-
Fund That Flip	-	419,486	-
EquityMultiple	-	-	3,625,000

Table 15: Average duration of the projects

Platform	Avg duration Equity (months)	Avg duration Lending (months)
Cadre	30	-
Peer Street	-	24
Sharestates.com	-	52
1031 Crowdfunding	-	-
CrowdStreet	-	30
Patch of Land	-	27
Cardone Capital	-	-
Intoo	42	36
RealtyMogul	60	50
YieldStreet	-	27
Fund That Flip	-	12
EquityMultiple	-	-

4.5. Use Cases

Patch Lending

It is an American platform based in Los Angeles, California. The projects are exclusively aimed at professional investors and the minimum investment is $ 5,000. In 2021 the platform raised about $ 190 M, out of a total of almost $ 1.5 B raised by 2012, the year of foundation. The platform offers a variety of loan programs, including Fix & Flip (bridge loans to acquire, renovate and resell a property), long-term loans and loans for construction works. The projects' offers are mostly of residential type. The capital raised per project varies depending on the type of debt contracted by the proposer. On average the sum, independent of the type of loan, varies between $ 150,000 and up even to $ 3 M.

ShareStates

It is an American platform founded in 2014; its investment focus - in geographical terms – is the south of United States. At the end of 2021 the platform had raised $ 3 B, of which almost half a billion only in 2021. The minimum investment starts from $ 1,000, which also makes it accessible to small savers. The average return is 9%, while the average funding per project is about $ 900,000, but there are also projects exceeding $ 4 M. Sharestates is currently among the leading platforms in the US, together with PeerStreet and Cadre. It offers essentially two types of loans: bridge loans and medium-long-term loans. In particular, medium- and long-term loans start from a minimum of 5 years up to a maximum of 25 years. The bridge loans can be of six types, including the "First time borrower", which are projects that finance the construction or reconstruction of up to 4 units, thus excluding multi-families (5+units). Among medium-long loans there are four types, including that of the "cross collateralized loans", a type of loan where the collateral serves as collateral also for other loans granted by the same creditor, which can therefore recover on several assets in the event of insolvency on one of the loans.

5 The ROW Market

Expanding the analysis to the rest of the world and adopting the same criteria used for Europe and the US, 42 main platforms have been identified, divided into 4 macro-areas: Extra-EU Europe, Asia and Pacific, Middle East and Latin America (Table 16 shows the main platforms). The estimation of the capital collected as of 31/12/2021 amounts to € 8.3 B with a stable flow in 2021 compared to 2020.

Table 16: Main RECF platforms in ROW

Platform	Country	Year	Type	Projects	Raised capital (€ M)	Min Invest.
Extra-EU Europe						
Blend Network	UK	2017	Lending	80	41.65	GBP 1000
Capitalrise	UK	2016	Lending	44	192.78	GBP 1000
CrowdProperty	UK	2015	Lending	465	229.69	GBP 500
Crowdhouse	Switzerland	2016	Equity	146	329.7	CHF 100000
Swisslending	Switzerland	2015	Lending	37	195.84	CHF 50000
Kameo	Norway	2016	Lending	609	241.99	NOK 500
Asia-Pacific						
InvestaCrowd	Singapore	2015	Hybrid	36	78.2	na
Ethis-Crowd	Singapore	2015	Lending	10	6.76	SG$ 1000
Estate Baron	Australia	2014	Hybrid	na	124.6	AU$ 1000
Venture-Crowd	Australia	2013	Hybrid	10	14.33	na
DomaCom	Australia	2015	Equity	68	26.3	AU$ 2500
BrickX	Australia	2016	Equity	34	19.38	AU$ 50
PropertyShares	Australia	2016	Lending	41	64.7	AU$ 10000

OwnersBook (Loadstar Capital K.K)	Japan	2014	Lending	190	258.32	
Terafunding	South Korea	2014	Lending	4200	1957	na
SmartOwner	India	2015	Equity	17	1300	na
Latin America						
Crowdium	Argentina	2016	Equity	20	21.76	ARS 10000
Besafe	Chile	2017	Equity	57	3.92	$ 100
Briq.mx	Mexico	2015	Lending	309	32.72	MXN 5000
M2Crowd	Mexico	2017	Equity	135	174.99	MXN 5000
Urbe	Brazil	2015	Lending	74	14.91	BRL 1000
Middle-East						
SmartCrowd	EAU	2014	Equity	60	26.95	AED 5000
Hagshama	Israel	2010	Hybrid	340	3350	ILS 100000

The features vary according to the area and it is useful to divide the analysis among the different groups.

5.1. Other European Countries

In the United Kingdom, one of the main platforms, HouseCrowd, closed in 2021 due to financial distress. The leading platform is CrowdProperty with € 229.69 M collected over 465 as of 31/12/2021. In Switzerland there are different platforms, with CrowdHouse being the leader. Not by chance, it requires a high minimum investment. As for the other non-EU countries, the Norwegian platform Kameo financed 609 projects as of 31/12/2021.

5.2. Latin America

As Table 16 shows, the RECF in Latin America is not as developed as in other parts of the world yet. It seems to be an interesting opportunity, but it is conditioned by a high level of inflation, bureaucracy, and corruption. Some new platforms have opened but they do not show significant figures yet. The most important one is Briq.mx, an equity crowdfunding platform based in Mexico, founded in 2015. As of 31/12/2021 it has a track record of 309 financed campaigns and an average yield of 13%, over an investment period of 19 months; the average funding has been 30% higher in 2021 than

in 2020. Almost all the projects are located in Mexico City and they are usually financed in different tranches (sometimes up to 10 rounds).

5.3.   Middle East

In this geographic area there are only two important platforms: one in Israel (Hagshama) and one in the Emirates (SmartCrowd). The first platform promotes projects in Israel, USA and Europe and it has already collected € 3.35 B. Hagshama offers two ways of investing: Capital investment track (equity) and funding investment track (debt). They are offered to different types of investors according to their financial possibilities and preferences.

SmartCrowd is located in the Dubai Emirate (EAU) and it operates under the control of the Dubai Financial Services Authority (DFSA); it requires a minimum investment of 5000 AED (1156 €). The modality of investment is indirect through an investment vehicle (SPV). The platform financed the construction/ renovation of more than 75 properties, mainly in Dubai, offering a target return of around 10% over an average period of 5 years.

5.4.   Asia Pacific

The analysis of this area of the world has always been difficult due to both the language barrier (many platforms provide information in the local language only) and the low degree of disclosure of the platforms. The result shown must be taken considering an underestimation bias. In the last year, some new platforms in line with the Islamic rules of the Shariah have opened. They do not allow to engage into too risky investment and to borrow money with an interest rate

5.5.   Use Cases

Desierto de los Leones | Campaign 7 (Briq.mx)

The project consists of the construction of a vertical housing complex with 8 apartments of 119 to 160 m2, distributed in 2 towers. Each tower will have 5 levels (basement and 4 levels of apartments), a vertical circulation core with elevator, parking, cellars, access lobby and surveillance service.

Desert Lions Campaign 7 is an opportunity to invest through a senior debt instrument with a fixed annual rate of 13.00%, with a period of 30 months counted from the execution of the first campaign (12 November 2019), the developer has the possibility of pre-payment without penalty from the third month of running this campaign.

Hazelwood, Hazel Lane, Walsall, WS6 6AA - Phase 4 (CrowdProperty)

Great Wyrley is a village and civil parish in Staffordshire. It borders the villages of Landywood and Cheslyn Hay in the South Staffordshire district. The project is a gross facility of £5,220,000 towards the erection of 5 luxury homes on a site already owned by the borrower. The maximum term for the loan is 18 months, 14 months for this phase and Lenders will receive 7.1% per annum equivalent, rolled and paid at exit.

The proposed properties in this phase of development will comprise plots 13-17 which will all be 5 bedrooms, detached houses, extending to 4,047 sq. ft, with a RICS verified GDV of £1.5m each.

6 The Italian Market

The RECF industry in Italy has started in the recent years, with a delay compared to other European countries even due to the absence of specific rules. Equity crowdfunding was reserved only to innovative startups and SMEs until 2017, while the provision of credit to businesses has been reserved only to banks for many years. The first RECF platform active in Italy was Walliance, which opened in September 2017, just after the entry of the Spanish Housers at the end of July of the same year. The real estate sector has driven the entire market also in 2021, with the arrival of many new platforms; It can be assumed that many of them preferred to start operating before November 2021, with the entry into force of the European Regulation ECSP and the start of the new authorization procedure. In both cases, however, the return to investors depends on the periodic income generated by the property (rents) and/or from the capital gain obtained after the sale of the asset (exit). It should be noted how in the case of equity crowdfunding such performance is not certain ex ante to the subscribers of the campaign, but it exclusively depends on the success of the project.

6.1. Active Platforms in Italy

As of 30/6/2022 there were 23 operating real estate platforms in Italy, 7 of which were equity-based, and 16 lending based. There are other platforms which are not operating yet. Compared to 2021, 3 more equity-based platforms and 2 lending-based platforms have become operational. The campaigns which have been closed and financed so far are 713 (67 equity and 646 lending), while the total amount collected has reached € 286.92 M (o/w € 176.48 M from lending-based platforms and € 110.44 M from equity-based platforms).

Table 17: Main RECF platforms in Italy as of 30/06/2022

Platform	Year of launch	Type	Raised Capital (€ M)	Financed Projects	Min Invest. (€)
Bildap	2021	Equity	0.7	1	500
Brick Up	2021	Equity	0.75	1	2000

Bridge Asset	2020	Lending	6.44	24	500
Build Around	2019	Equity	2.63	5	5000
Build Lenders	2020	Lending	1.45	11	300
Concrete Investing	2018	Equity	37.35	19	5000
CrowdEstate	2018	Lending	9.25	43	100
House4Crowd (inattiva)	2019	Equity	0.55	1	500
Housers	2017	Lending	13.45	51	50
Invest-t	2020	Lending	0.61	10	500
IsiCrowd	2021	Lending	0.52	5	50
ItalyCrowd	2019	Lending	2.18	19	490
ITS Lending	2021	Lending	0.96	17	100
Leone Investment	2021	Lending	0.5	1	na
Prepay	2021	Lending	0.96	11	250
Re-Anima	2021	Equity	-	(1 funding)	1500
Re-Lender	2019	Lending	24.55	100	50
Re/Source	2021	Lending	0.42	4	500
Recrowd	2019	Lending	29.58	80	250
Rendimento Etico	2019	Lending	54.8	154	500
Trusters	2019	Lending	28.72	203	100
Valore Condiviso	2020	Lending	2.09	13	500
Walliance	2017	Equity	68.46	40	2500

In the last 12 months, 335 crowdfunding projects have been financed (o/w 20 from equity-based platforms and 315 from lending-based platforms) and the total collected amounted to € 127.25 M, with an increase compared to the previous year.

The figure below shows the distribution of the collection per semester from 2017. In the first half of 2022, the amount collected from lending-based platforms kept on

growing (€ 48.07 M), whereas the one from equity-based platforms slightly slowed down (€ 21.99 M).

Table 18 summarizes the costs and commissions of the Italian platforms. For some of the platforms, usually the most recent ones, the info is not available. What stands out is that almost no platforms apply an investor's fee, whereas a success fee is applied to the promoting companies, sometimes with the addition of a fixed fee.

Figure 10: Semestral flow of the capital collected from RECF platforms in Italy
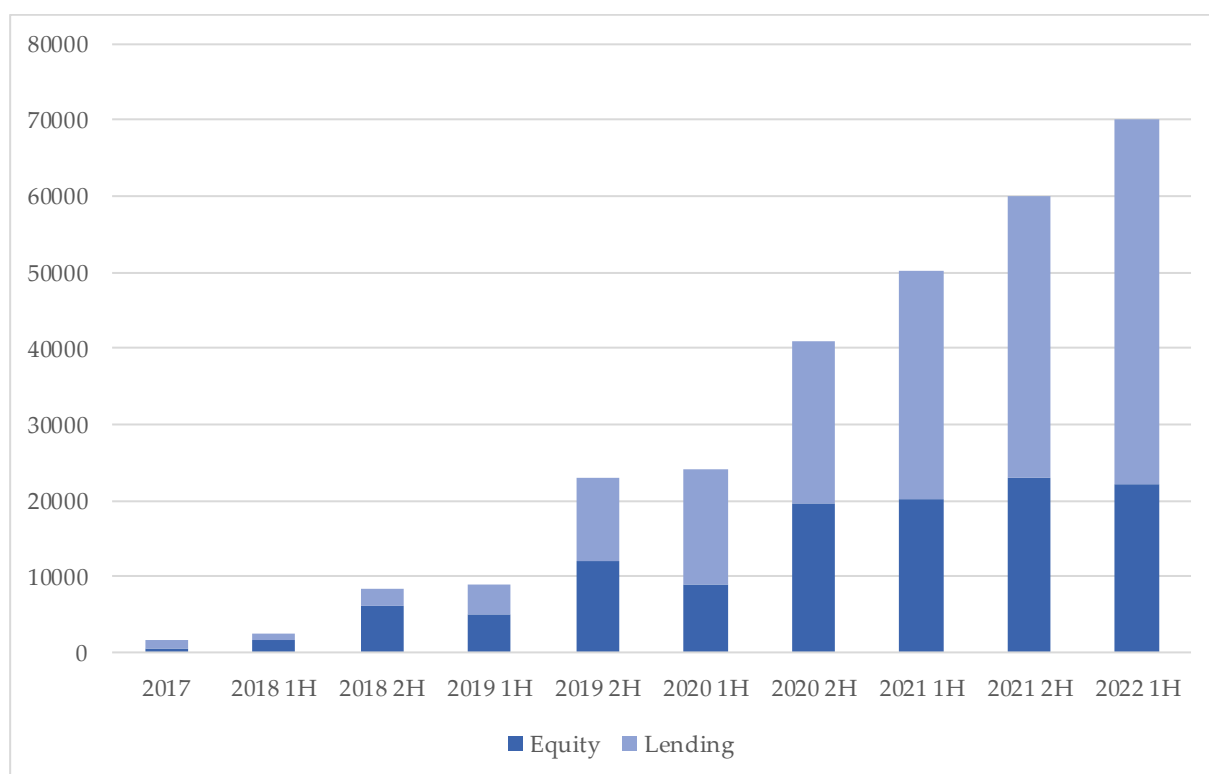
Table 18: Fees charged by the main Italian platforms

| Platform	Investors' fees	Sponsors' fees
Bildap	No	Success fee
Brick Up	Variable between 1.5% and 2% (function of the invested capital)	Retainer fee + Success fee
Bridge Asset	No	Yes
Build Around	No	Success fee between 4% and 7% to cover the expenses for the collection, due diligence and intermediation

Build Lenders	No	-
Concrete Investing	Variable between 1% and 3% (function of the invested capital)	Success fee computed on the collected capital between 4% and 6%
CrowdEstate	No except for 2% fee on the secondary market; success fee for returns above expectations (up to 20% compared to the pre-established hurdle rate)	4% to cover services and due diligence
House4Crowd (closed)	No	Success fee 7%
Housers	10% on the obtained return	10% to cover the fundraising costs, due diligence and intermediation
Invest-t	No	Fixed + Variable (function of the collected capital)
IsiCrowd	No	-
ItalyCrowd	-	-
ITS Lending	-	-
Leone Investment	-	-
Prepay	-	-
Re-Anima	No	Success fee between 3% and 6% (function of the provided services)
Re-Lender	No	Success fee with a fixed component + a Variable component (function of the collected capital and of the due diligence requested)
Re/Source	No	Fixed + Variable (function of the collected capital)
Recrowd	No	Fixed component + Variable Success fee which includes: 1% fee on the collected capital, linked to the feeding of the "Garanzia default" fund 0.5% to feed the "Fondo etico di

		assistenza" for the cases of housing diseases
Rendimento Etico	No	between 5% and 7% (function of the collected capital and of the project's risk)
Trusters	No	-
Valore Condiviso	-	Success fee between 5.5% and 7.5%. Tutoring fee in case of assistance to the sponsor.
Walliance	No	

6.2. Italian RECF Campaigns: Last 12 Months

In order to better analyze the trend of the Italian market, we can focus on the last 12 months (July 2021-June 2022). As we can observe from Figure 11, most of the financed campaigns is about projects in the Lombardy region, with the Metropolitan city of Milan covering 22% of the total. The other Lombard provinces cover another 12%. Nonetheless, there has been a more homogeneous distribution lately since many campaigns have been financed in other regions. The main reasons are a higher territorial diversification and the entrance of new players which launch projects in regions they are more knowledgeable of.

Figure 11: Capital collected in Italy by regions
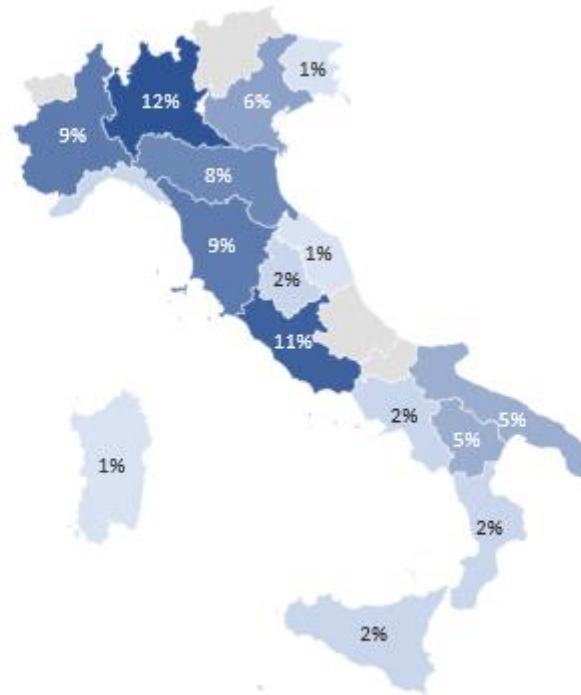
In particular, the fastest growing regions are Lazio (11%), Piemonte (9%), Veneto (6%), Basilicata and Puglia (5% each). Emilia Romagna and Toscana keep a good share (8% and 9%).

As Table 19 shows, the average investment for equity campaigns is equal to € 1.540 M, whereas for lending campaigns it is much lower and equal to € 0.285 M. As for the investment's duration, equity campaigns promote projects with an average maturity of 19.8 months, whereas lending projects have an average maturity of 11.7 months. The values have decreased compared to the previous year.

The annualized target returns for investors are around 9.8% for lending projects and 11.4% for equity projects. This is due to the higher intrinsic risk of an equity project, being the investor or shareholder of the promoting company. As for the lending campaigns, it is frequent that a single campaign is divided into different tranches. This usually happens when a gradual pre-sale of the apartments is forecasted. As they are sold, the collected capital is reimbursed and it is possible to collect a further amount in order to finance the following works needed for the same project. Furthermore, it often happens that the same company promotes different projects. It can be assumed that a positive funding experience pushes them to collect further capital for another project. Meanwhile, the investors can track the previous projects promoted from the same company in order to assess their reliability. It is a signaling effect which values the track record of the sponsor. For some platforms, the first campaigns launched were sponsored by the same company. This suggests that the platforms first rely on trustworthy sponsors, in order to expand to other operators once the market's trust is

gained. In the last twelve months, the delays in refunds and extensions of the initial deadlines have increased, mainly due to the bureaucratic times for the building site permits and the lack of construction materials. Furthermore, the increase in the costs of materials has impacted on the expected returns. Unfortunately, not all the platforms provide clear information on this aspect, which is often shared only with the investors. As for the projects still in progress at 30/06/2022, it results that 7.2% of them were delayed. As the intervention needed is concerned, Italy seems in line with the rest of Europe. Indeed, there has been a boom in the projects of renovation (87%), compared with the constructions ex novo (13%), since they require lower investments and they are preferred by lending platforms.

Table 19: Average target capital by platform type

Type	Campaigns	Avg Target Capital (€)	Avg duration (months)	Annualized target return
Lending	315	285.318	11.7	9.80%
Equity	20	1.540.843	19.8	11.40%
Total	335	360.275	12.2	9.90%

The majority of the projects involve urban contexts (74%, still increasing compared to the previous year), whereas the percentage of projects in the metropolitan areas decreased down to 22%. The other 4% regards projects in the rural/ tourist areas. As for the destination of use of the real estate, the residential projects still represent most of them, equal to 98%.
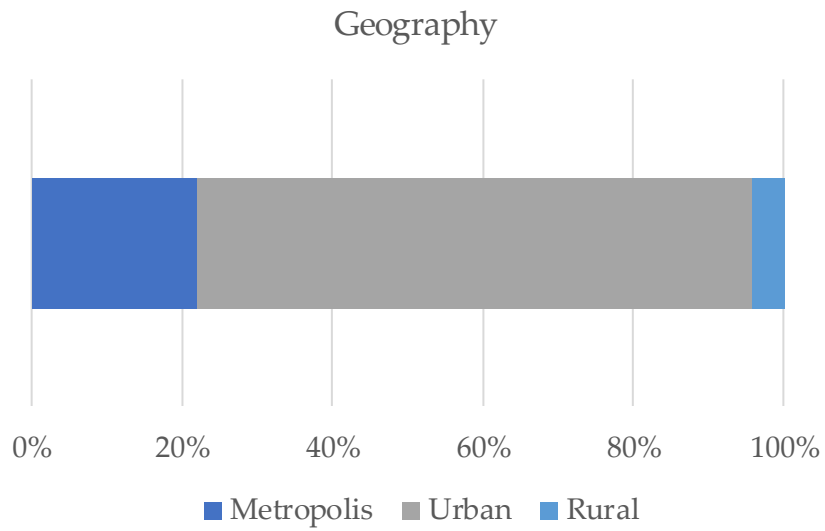
Figure 12: Geography

Geography

Figure 13: Destination of use

Destination of use

Figure 14: Intervention

Intervention

■ Renovation   ■ Construction/Greenfield
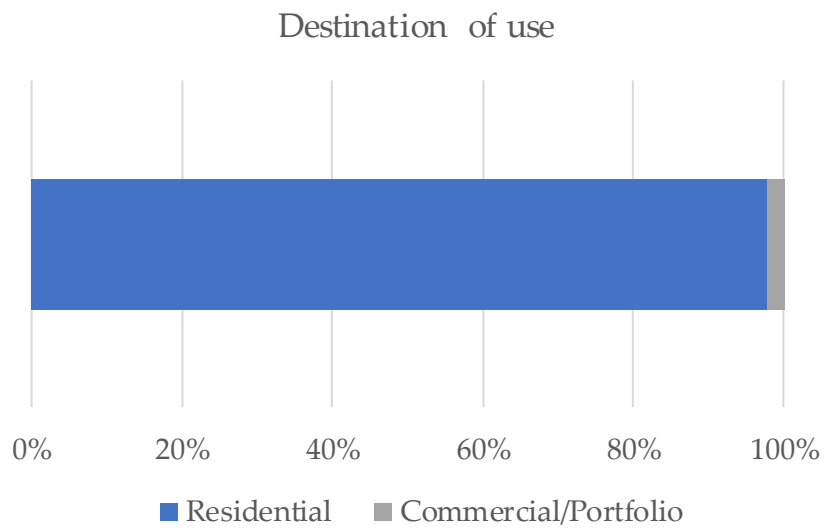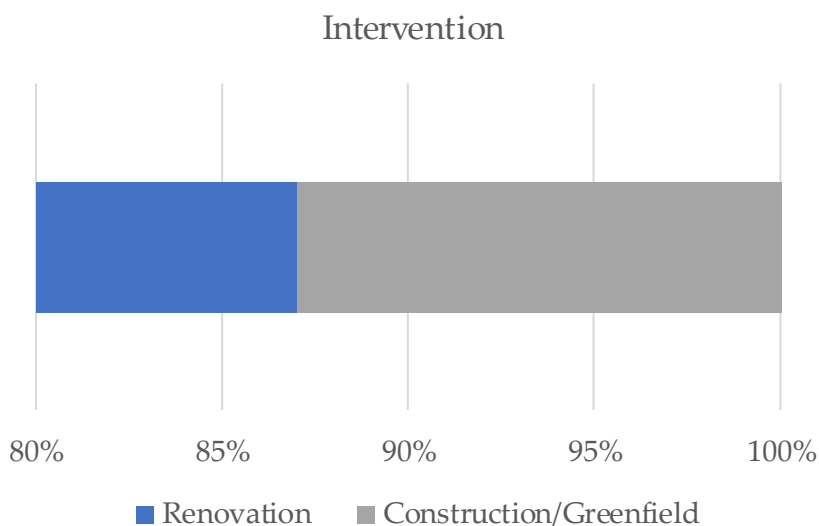
Lastly, from an economic perspective, it is interesting to see how much the amount collected through crowdfunding impacts on the overall amount needed for a single project. It is about making a ratio between the capital collected through crowdfunding and the overall capital, which can include capital provided by the sponsor, financial partners, industrials or banks. Figure 15 shows that for the equity projects the capital provided through crowdfunding represents a minor part of the overall investment. The average percentage is 29%, and only in 5% of the cases it overcomes the 75%. In 38% of the projects financed in the last twelve months it is lower than the 10%. Therefore, the RECF contribution is not that relevant. Nevertheless, being risk capital, it allows to leverage on other financial resources, increasing the access to debt capital. Instead, regarding the lending projects, the percentage is much higher, being the capital required much lower than the capital needed for equity projects. The average percentage is 61% and in 19% of cases it is higher than 90%. It is important to highlight the importance of having a higher contribution from the crowd when it comes to lending projects. The minimum yields required by the market are high due to the risk and the illiquid nature of the investment. It is convenient for an entrepreneur to finance just a part of the investment, otherwise it would erode the profits, without any leverage effect. This is the right trade off in order to obtain liquidity -which is crucial to start up the project – as soon as possible and without incurring bureaucratic issues.

Figure 15: RECF contribution in equity projects

Figure 16: RECF contribution in lending projects
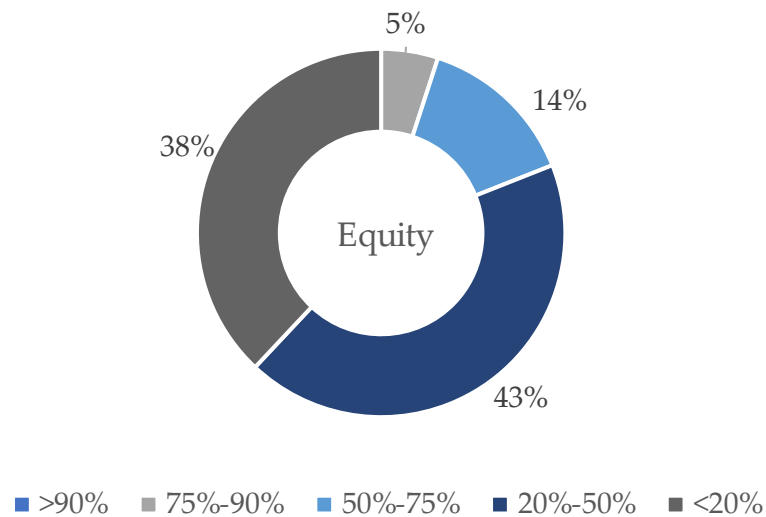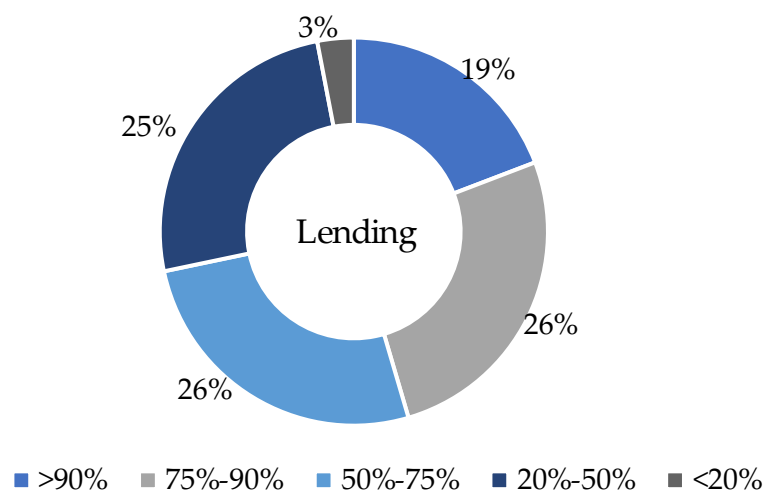

6.3. Use Cases

Milano Duomo (Walliance)

It is a project that involves the renovation and fractionation of 8 units on the third floor of a building in Galleria Pattari 2, near the famous Duomo di Milano. The crowdfunding campaign was held in June 2022 on the platform Walliance, with the offer of shares in the vehicle capital Pattari2 Srl, founded by the entrepreneur Gianluca

Gaspari, already promoter of other 3 projects funded by the platform (one already reimbursed and one being reimbursed).

The campaign raised € 4 M in one day, from Italian and French investors. Repayment is expected in a year, with an expected return of 14.7%. In addition to a preferential liquidation clause for crowd investors, the principal will be repaid upon reaching 60% of the expected revenue.

Appartamenti a Milano Via Macchi (Rendimento Etico)

One of the greatest projects launched on the platform, "Appartamenti a Milano Via Macchi" is sponsored by Klack srl and raised a total amount of € 4 M during a fund raising that lasted between 6th and 13th of March 2021. The project involves the acquisition and renovation of 19 apartments that used to belong to a hotel building in Stazione Centrale area, Milano.

The project has an expected return of 14% and a duration of 20 months. This operation includes the "A prescindere" formula, which means that if the loan is repaid before the deadline, the investor will be paid the expected interest rate for 20 months.

Hara abitare | Sclemo #1 (Trusters)

The initiative "Hara Abitare" is a real estate development that consists of a renovation of four rural buildings for a total of 4000 square meters covered, in the small mountain village of Sclemo (TN). The buildings will be re-adapted to residences, for a total of 2,000 square meters, and will be divided into 29 independent units for residential use with sizes between 35 square meters and 150 square meters. Each building will be equipped with high standard common services (smart-working spaces, gyms, play and relaxation areas, swimming pool, sauna and clinics).

The project has a target return of 12.50% in 21 months. The refund of the € 180 K plus the interest is forecasted for the 21/11/2022. The capital has been collected in 13 days, higher than the average raising time for the other projects promoted on Trusters.

7 Future Scenarios

In 2020, the lockdown due to the Covid-19 had a negative impact on the ongoing shipyards and on real estate projects, delaying administrative processes, procurement and sales.

However, in these months even greater difficulties are forecasted, related to lack of material, to increased costs for energy and raw materials and the increase in interest rates. At this stage of possible lower propensity of the financial markets to support the real estate projects, the role of the crowdfunding becomes even more important to ensure in a short time the necessary liquidity for the startup. However, it is important to analyze the project risks in detail; in the previous pages we have seen that in the 2021 the percentage of projects in delay with respect to the repayment of the capital raised has increased in Europe as in Italy, although not in a drastic way for now. The platforms will have to be very careful in the selection of projects and in the verification of economic and financial plans. The application of the new ECSP Regulation will be the testing ground to further improve the level of service offered from platforms; it will be desirable - beyond regulatory obligations - the adoption of self-determined good practices to ensure transparency on performance and "ownership" of funded projects. As highlighted in 2021, in Italy the PNRR offers interesting opportunities for the future and reserves a strategic role to the buildings, also as for the development of the entire economic sector. Indeed, the highest share of the resources coming from the various instruments forecasted by the plan (32.6%) will flow into buildings and civil construction works. In particular, they can be two areas where crowdfunding can provide concrete support: (1) energy upgrading and earthquake-proof adaptation of private real estate and for social housing (it is estimated to intervene on 1/5 of the entire estate residential building); (2) construction of installations for the ecological transition and the development of district-heating efficient systems, in order to achieve energy savings in line with the reduction targets of the greenhouse gas emissions set for 2030 by EU.

7.1. Growth Prospects

As highlighted, the worldwide Real Estate crowdfunding seems to be slowing down. In the USA the goal for 2022 is to reach the cumulative threshold of $ 24 B, with a collection slightly down compared to 2021, due to the first recessive signals. In the rest of the world, we expect a collection in light increase, which will lead to graze

cumulative $ 10 B. As for the European Union, the annual goal is to confirm the flow of 2021, reaching the threshold of € 8 B (see Figure 17). The leading countries like France and Germany will continue to dominate the collection, while the ECSP regulation will favor the market in countries that have so far remained on the margins for the lack of a clear regulatory framework. We expect a declining role for pan-European platforms, which are losing ground because of the greater attractiveness of national platforms. We think it will be much easier to convince investors of a certain country to invest in another (in this sense a war between platforms will be played), rather than persuading real estate entrepreneurs to raise capital on a foreign platform. Italy will be one of the leading countries in the European Union on real estate crowdfunding, in terms of revenue growth. The goal of 2022 (see Figure 18) is to arrive to the cumulative collection of € 400 M, with any positive surprises that might bring to a clear overcoming. The very conservative scenario to stop at € 370 M is considered unlikely, given the arrival of new licensed but not yet operational platforms. Much will also depend on the outcome of the political elections, especially in terms of uncertainty and fragmentation.

Figure 17: Forecasts on the growth of the European RECF
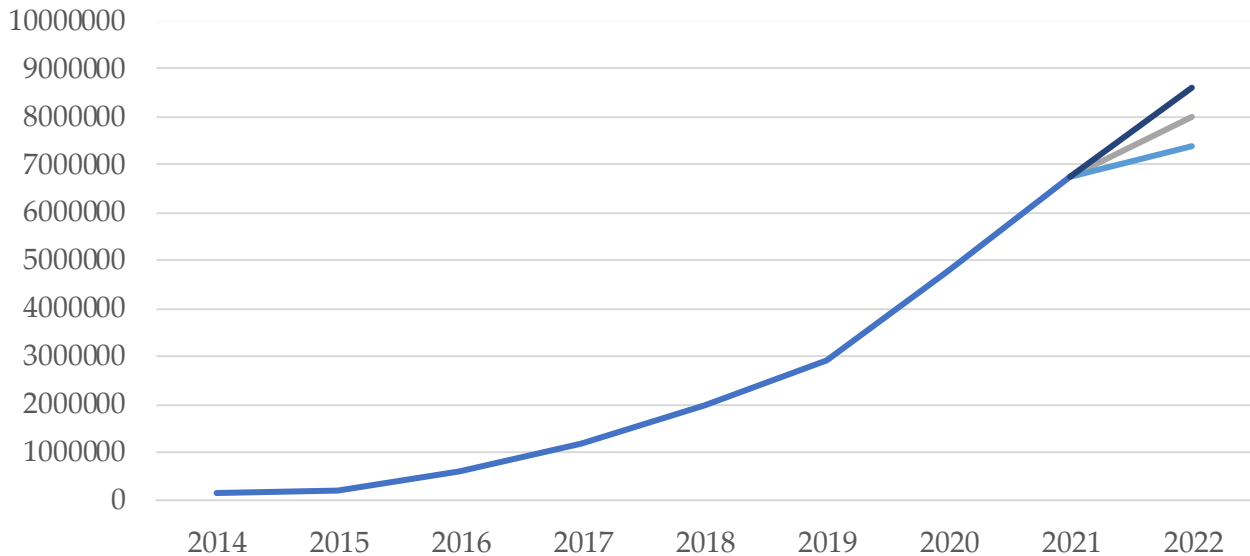
Figure 18: Forecasts on the growth of the Italian RECF
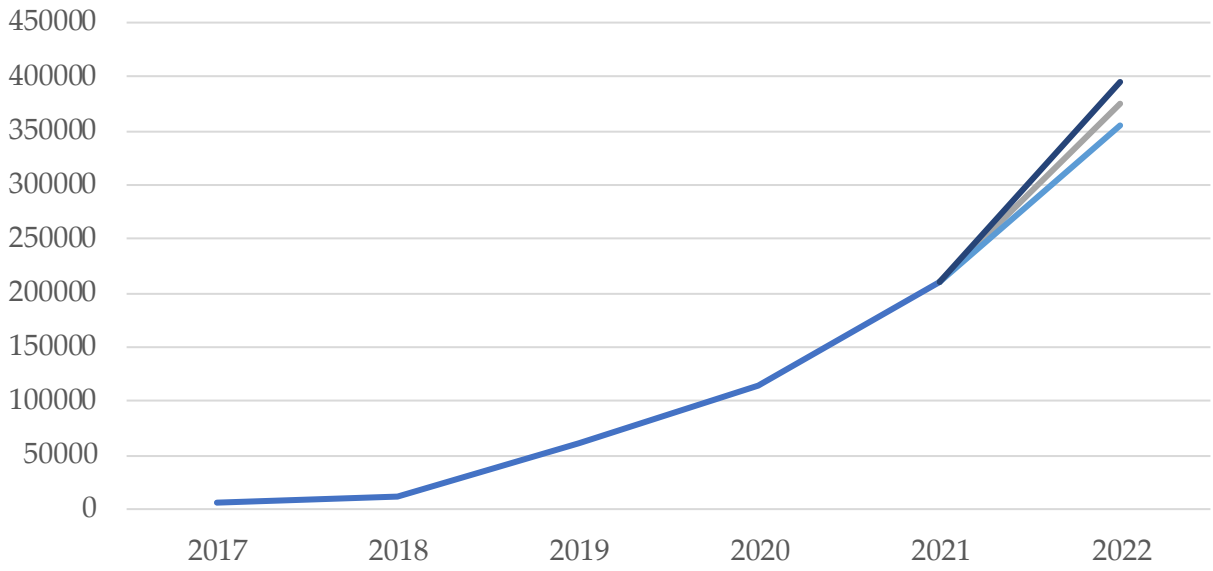
8 Literature about Crowdfunding Success Factors

In crowdfunding literature there are many empirical findings that confirm the relationship between the outcome of a crowdfunding campaign and the following features:

- The project characteristics;

- The location of the property;

- The information asymmetry;

- The Real Estate market condition.

Below the 4 key factors will be described one by one, mentioning some important studies that have highlighted their relevance.

8.1. Project Characteristics

Among the characteristics of the project one of the criteria for choosing an investment concerns the destination of use of the property that can be either commercial or residential.
Adair, Berry and McGreal (1994) explained that commercial investments are riskier than residential ones, especially if the buildings are in peripheral areas. They also stated that investors are more likely to invest in assets they feel comfortable with, both because they are familiar with the area and the type of asset. Schweizer and Zhou (2017) have conducted a similar analysis but focusing only on the US market, confirming that in general RECF commercial investments offer a greater risk premium compared to the residential ones.

Furthermore, a significant number of papers reports that lenders and investors prefer shorter maturities because of the effect of liquidity preferences and supports a positive impact of the interest rate and of the loan amount on the funding rate of the project (Barasinska & Schaefer, 2010; Feng, Fan, & Yoon, 2015; Freedman & Jin, 2008; Pope & Sydnor, 2011).

The study by Schweizer & Zhou: "Do Principles Pay in Real Estate Crowdfunding", is based on a sample of 733 crowdfunding US-based real estate project from seven different platforms: Asset Avenue, Crowd Street, Fundraise, iFunding, Patch of Land, Realty Mogul and Realty Share. They studied whether factors as the property type, the type of financing, the crowdfunding campaign characteristics and information risk explain the expected returns based on the principles of investment risk in the real estate industry.

They came up with 4 hypotheses concerning the four abovementioned categories.

• Property characteristics: "The expected return is higher if the underlying property is commercial real estate, involves development or redevelopment, is located in an urban area, is smaller in size, and is in worse condition or quality."

• Financing characteristics: "The expected return is higher for equity investments and for those with higher leverage levels."

• Campaign characteristics: "Less frequent payments over longer terms, with less crowd participation, higher minimum investments, and more reputational sponsors, are positively correlated with the expected return."

• MSA and Region risk: "Higher internet penetration, a higher percentage of financial establishments, and higher related growth rates indicate lower risk, and will thus be negatively correlated with the expected return."

The empirical analysis verified these hypotheses.

8.2. Location of the Property

Within the real estate literature, the geographical position of the underlying asset is considered a key factor influencing the real estate asset evaluation.

In Adair et al. (1994) it is claimed that a geographical area will have difficulties in attracting private and institutional investors if it is perceived as peripherical to the core economy of a country. Location can also drive the perceived level of risk of an investment. For instance, urban areas are associated with lower long-term risk by most of the investors. A similar analysis was conducted by Roberts and Henneberry (2007) but with a focus on the UK. In their paper was discovered that investors prefer to invest in properties located in core cities and core regions of the UK.

Further studies included the relevance of the location feature in the real estate asset class: Rosen and Topel (1986), Malizia (1991), Abraham and Hendershott (1994), Lamont and Stein (1999), Capozza et al. (2002), Pagourtzi et al. (2003), Gardner and

Matysiak (2005), Ghysels, Plazzi and Valkanov (2007), Mollick (2014) and Pace and Sage (2016).

8.3. Information Asymmetry

It has been demonstrated that the success of a crowdfunding campaign is related to the quantity and quality of information provided. Several studies sustained that projects that disclose more financial and personal information of the borrowers and of the initiative have more probability of success.

One way to reduce the information asymmetry is exploiting signaling effect. An example is the participation of a third investor providing a portion of the capital required for the project. Indeed, the presence of a third party such as a bank which supports the project strongly reduces the perceived risk and the uncertainty for less informed investors (James & Wier, 1990; Habib & Ljungqvist, 2001).

The following papers are the most relevant ones that analyzed the issue of information asymmetry since 2014.

E. Mollick (2014)

In 2014 Ethan Mollick studied the underlying behavior of crowdfunding success determinants by a sample of 48,500 projects published on the platform Kickstarter, one of the biggest crowdfunding platforms worldwide. He sustained the quality signals theory, according to which the projects able to provide quality signals have success. Furthermore, the study highlighted that the network size (Facebook friends of the funders), the descriptive video of the project and the frequent updates of information are positively correlated with the success of the campaign.

Mamonov et al. (2017)

This study explored a dataset of 6,439 Title II crowdfunded projects from 17 crowdfunding platforms between 2013 and 2016. The sample contained projects from 8 sectors of industries. The study aimed to gain insights into the factors that influence the success of a crowdfunding campaign. A campaign is successful when capital raised meets or exceeds the target amount. They reported that the success of projects that involve real estate is higher (88%) than other types of offerings. They were able to text mine the project description and consequently to identify some lexical indicators able to predict the success of the campaign. They discovered that most of the successful campaigns were proposed by the real estate platform Patch of a Land. This platform achieves positive results standardizing the due diligence process. The results confirmed that well performed due diligence can reduce information asymmetry issues between the entrepreneurs and potential investors leveraging the probability of success.

GL de Larrea, M Altin, D Singh (2019)

This study explores the determinants of restaurant crowdfunding success. The population of this study is rewards-based restaurant crowdfunding projects in the United States. The study is focused exclusively on the popular rewards-based crowdfunding platform, Kickstarter and is limited to projects with a goal between $1000 and $100,000. Among the main findings, the study shows that images showing elements of the restaurant concept, and frequent communication with funders are key drivers for success.

Miwako Nitani et al. (2019)

Based on observations from 4 European equity crowdfunding platforms, this study assesses crowdinvestors' ability to interpret signals associated with firm and owner attributes, financial statements, and social networking activity when selecting investment opportunities. Some key findings of these studies concern the investors' willingness to reduce risk by trusting larger and more experienced firms. At the same time, the contribution of the sponsor to the project came up to be another discriminant in the choice of the project. It would show a strong belief in the proposal by the promoting company itself. On the other hand, the aim to maximize returns is kept: the investors prefer projects with higher growth opportunities. These results suggest that participants in the crowdfunding market are rational. The firm's and entrepreneur's social networks also have a strong influence on investment decisions, so much so that the inclusion of this variable weakens the impacts of firm size, expected sales growth and margin on campaign success. This suggests the possibility that social media provides investors with an opportunity to validate otherwise less credible information.

Adamska-Mieruszewska, Joanna et al. (2021)

The goal of the study was to investigate the relation between the readability, the length of a description and the funding success of a campaign in the reward-based crowdfunding model. The study conducted logit regression on a dataset comprising over 2800 projects published on one of the largest Polish crowdfunding platforms. The results provided evidence that both description's length and text readability significantly influence the fundraising outcome. Indeed, a more detailed description decreases information asymmetry between the crowd and the project's author as well as induces the level of trust towards the latter and overall, the projects with a clearer description are preferred by the online community.

L Yang, M Zhao, M Liao, Y Cao (2022)

The study was aimed at exploring the determinants of success of crowdfunding campaigns for cultural and creative projects. The study explores the importance of the signal theory in the success of the campaigns (peer review valence, project cultural

background, face information disclosure etc.). The success of crowdfunding campaigns is represented by the ability to reach the target capital. They use an econometric model to examine the success determinants of cultural and creative crowdfunding projects on a data set with 2877 real CCCF projects. One key finding is that the information entropy of peer reviews negatively moderates the influence of peer review valence on crowdfunding success

Other relevant works that analyzed this topic are: Butticè et al. (2018), Moritz & Block (2016), Feng et al. (2015); Freedman & Jin (2008); Pope & Sydnor (2011); Vogel & Moll (2014); Vojtovic et al. (2017).

8.4. Real Estate Market Conditions

Market conditions can affect investors' decisions. Indeed, the valuation of a real estate property includes an economic and political analysis of local and national markets.

Ling and Naranjo (2003) sustained that positive returns on the real estate market can lead to an increase in capital flows in subsequent periods.

Shilling and Sing (2007) claimed that investors' behavior in the real estate market is consistent with models of investor irrationality. Their work highlighted that the investors generally anchor their expectations to previous period performances. If current returns are solid and positive the investor tends to presume that similar trends will continue even in the future.

8.5. The Purpose of this Master Thesis

The aim of this master thesis is to analyze the determinants of success of the Real Estate Crowdfunding campaigns, examining the impact of the 4 main factors previously described and of a new added one: the sustainability advertisement of the projects.

Two worthy to mention studies that have already investigated these topics are:

- A master thesis of 2018 of two previous scholars from "Politecnico di Milano" that analyzed the impact of the 4 factors on the success of Real Estate crowdfunding campaign. The analysis was conducted on a sample of 165 projects launched by the Spanish platform Housers. The findings indicated that the campaigns with the greater success appear to be correlated to the ones that are:

  o supported by an external investor;

  o related to a new property;

  o offering higher returns;

- located in neighborhoods with higher expected revaluation;

- offered in periods associated with favorable market conditions.

- A paper written by Monica Rossolini, Alessia Pedrazzoli, Alessandro Ronconi published in 2021 on the International Journal of Bank Marketing that investigated the influence of message framing, green emphasis and quantitative information on the probability of green crowdfunding campaigns' success. This analysis was based on a dataset of 86 crowdfunding projects published between 2015 and 2020 on the Indiegogo platform. The study included the "green" factor in a regression model by counting the number of words in a project description. The key finding was that the presence of a significant number of environmental words increases the probability of success by 28% compared to descriptions that include a small number of environmental words.

9 The Empirical Study

9.1. Introduction

The focus of this study is on the Italian market that is represented by 23 active platforms. To carry out the analysis, one platform has been selected among the 23: Trusters. The main reasons behind this choice are the following:

- Trusters is a leader platform belonging to the lending-based category that represents more than 60% of the Italian market in terms of funds collected;

- The platform presents a comprehensive amount of information regarding the projects on its website. This characteristic is fundamental to create a qualitative database;

- Since its foundation, Trusters has launched more than 200 projects that are enough for building a valuable statistical sample.

In the next paragraphs the entire analysis will be presented starting with a further description of Trusters, proceeding with the hypotheses formulation, the presentation of the variables and the methodology adopted in the model, concluding with a comment on the obtained results.

9.2. The Analyzed Platform

Trusters is an Italian lending-based platform founded in 2018 by Laura and Andrea Maffi, who are the CEO and COO of the company, respectively. The platform has published 200+ projects and collected more than € 35 M up to date. The following two graphs show the number of projects launched by Trusters, the amount of money they collected, respectively, and where they are located.

Figure 19: Projects launched by Trusters since its foundation

Number of projects
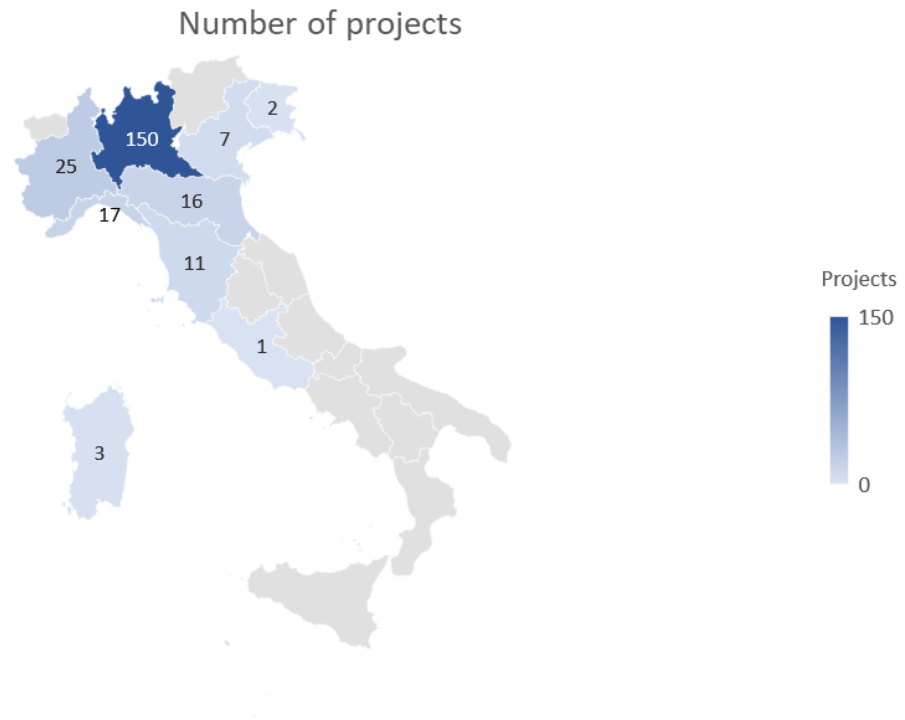
Figure 20: Capital raised through Trusters since its foundation

Raised Capital € M
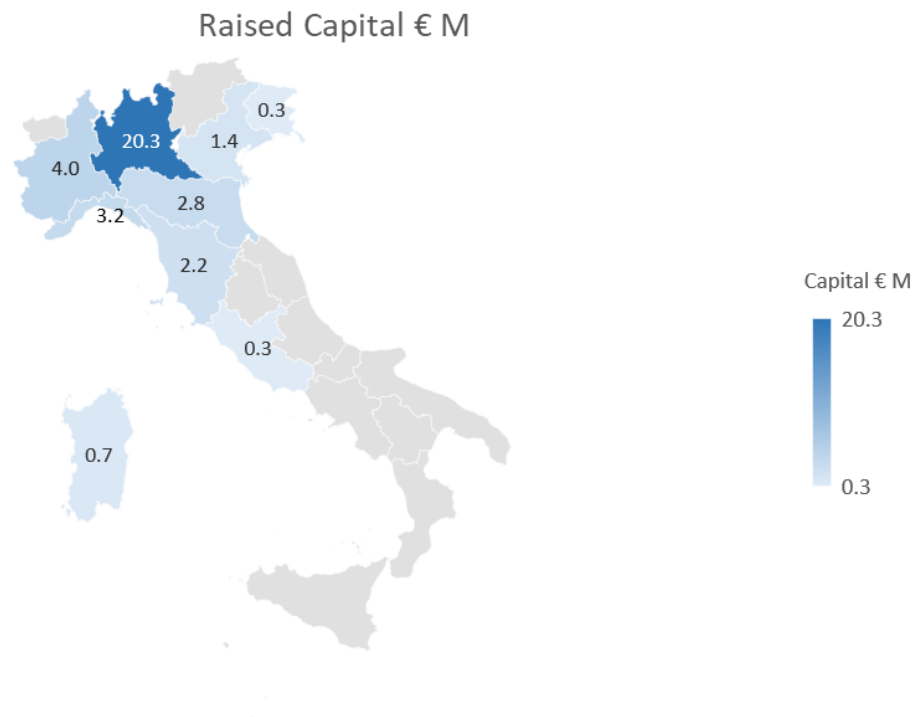
Considering the data displayed by the graphs, the main market is represented by Lombardia, in particular by Milano, followed by Piemonte and Emilia Romagna.

Except for the three projects in Sardegna and the one in Roma, Trusters has not sponsored any campaign in the central and southern regions of the country yet.

The typical projects sponsored by the platform involve the purchase, renovation and future resale of one or more residential properties in an urban or metropolitan area of the northern Italy. The duration of the projects is usually around 12 months while the expected return is about 9.5%.

On its website Trusters provides all the relevant information for the investors. Since 2020 the platform has also assigned a score to every project and the company promoting it. The score is based on the analysis of the quality of the campaign and the credit risk of the sponsor.

Trusters allows investors to keep their investment in blockchain. For every project, there is a section called "blockchain" where all the details about the initiative are written, such as: the date and time of the opening and closing of the fundraising, the estimated date for the end of the project, the cadastral category of the property and the VAT number of the sponsor company.

9.3. Hypotheses

The phenomena that are supposed to have a relationship with the outcome of a RECF campaign are:

- The sustainability advertisement (Hypothesis 1);

- The characteristics of the project (Hypothesis 2);

- The geographical position of the property (Hypothesis 3);

- The level of information asymmetry (Hypothesis 4);

- The condition of the real estate market (Hypothesis 5).

9.3.1. Hypothesis 1: Sustainability Advertisement

The aim of this study includes checking whether the factors related to the issue of sustainability affect the choice of financing a project, or not. In particular, it is of interest to understand if a real estate marketing campaign that highlights environmental and social characteristics of the project has an influence on investors' investments. It is important to underline that the object of analysis is not sustainability itself but if the sustainable aspects of a project are pointed out by the advertisement of it or not.

Trusters platform does not provide official quantitative indicators for referring to the sustainability of a campaign. However, in some project descriptions, when referring

to the property, some sustainable characteristics are recurrent. Therefore, in order to assign sustainability values to each campaign, the presence of these characteristics in the project description was controlled. Two areas of sustainability are considered:

Eco-environmental sustainability

Economic and environmental sustainability are brought together under the same concept because they are closely related. In fact, buildings that are environmentally friendly are more energy efficient and for this reason they always guarantee economic savings. The environmentally sustainable characteristics considered are:

- The energy class of the building;

- The use of renewable resources, for example through photovoltaic panels;

- The presence of autonomous systems;

- The thermal insulation guaranteed for example by insulated walls;

- The presence of an underfloor heating;

- The presence of a condensing boiler;

The independence of the structure from methane gas, which represents a fixed cost, that is usually provided by a heat pump.

Two examples of projects which present elements such as those mentioned above are the following:

Via Kennedy 5/7 | Cesano Boscone (MI)

Thermal insulation: *"Di fatto le due residenze saranno considerabili di «nuova costruzione», con finiture interne di prima scelta e dotazioni impiantistiche ad alta prestazione energetica, coibentazioni dell'involucro edilizio e dei serramenti esterni rispondenti ai migliori standard costruttivi"*;

Residenze Vivet | Cittadella (PD)

Other characteristics: "*L'immobile ha una marcata vocazione al risparmio energetico (classe energetica A): ogni appartamento sarà dotato di impianti autonomi, in particolare ogni unità avrà a disposizione pannelli fotovoltaici, pompa di calore con climatizzazione a pavimento, senza avere i costi fissi dell'allacciamento alla rete del gas metano. Infatti basterà attivare solo le utenze della corrente e dell'acquedotto in quanto non ci sarà allacciamento alla rete del gas"*.

Social sustainability

In general, a property is considered socially sustainable if it is built by respecting the community and the inhabitants or if it has positive consequences both for the territory

and the surrounding businesses. The characteristics to check in the project descriptions are:

- The presence of a seismic certification;

- The sound insulation of the building;

- A clear reference to the initiative's willingness to have a beneficial social impact.

It is important to specify that by law all new constructions must comply with European standards, in particular regarding the seismic parameters. However, many projects do not specify in their description either the possession of a seismic certification or the obtaining of it after restructuring. In this case, the purpose of the analysis is to study whether highlighting the presence of the certification, during the campaign's funding, can affect investors' decisions. Indeed, investors may not be well informed about European standards, or they may simply consider a project that is described with more details (referring to the certification) more serious, hence successful.

The following are examples of projects that present textual attributes to socially sustainable variables in their descriptions:

Via Adige 15 | Cusano Milanino (MI)

Seismic certification: **"*Ai fini dell'esecuzione sul lotto di circa 500 mq si è dovuto provvedere alla demolizione della palazzina residenziale esistente di minori dimensioni di sedime e di tre piani fuori terra; si è quindi proceduto alle nuove opere di fondazione ed innalzamento delle strutture di sostegno in cemento armato secondo i più rigidi criteri in materia antisismica";*

Soperga 2 | Milano (MI)

Sound insulation: *"Realizzazione di contropareti acustiche su tutta la perimetrazione esterna"*;

Hara Abitare | Sclemo (TN)

Social impact: *"…Saranno eseguiti anche interventi di riqualificazione delle aree esterne inserendo impianti sportivi, una piscina riscaldata plein-air e servizi commerciali che contribuiranno all'aumento dei valori immobiliari del Borgo"*.

9.3.2. Hypothesis 2: Project characteristics

By analyzing the characteristics of the project, it is assumed that the funders prefer:

- Shorter maturities as short-term investments are considered more liquid;

- Higher expected returns. Since an investment in real estate crowdfunding is by nature risky, an important driver for discriminating between one project and the other, is the promised return;

- Residential destination of use rather than commercial one. Indeed, the commercial purpose is considered riskier on average by the lenders, especially if the properties are located in peripheral areas. The recent pandemic has further confirmed this hypothesis, as many offices have closed during the lockdown. In general, a small investor is more attracted to a residential property and its location because is more familiar with it;

- Projects with a lower LTV as the probability of not having the entire funding returned is lower;

- Projects that have not had more than one round of funding because dividing the collection into several tranches could be a sign of more time required for the work and difficulty in collecting the expected sum;

- Projects that invest in a reduced number of properties and square meters, because the excessive renovation/construction work and the subsequent sale of the properties can make the project perceived as riskier.

9.3.3. Hypothesis 3: Geographical position

Regarding the location of the property, various geographical variables are taken into account, such as: population, price per square meter and revaluation of the area. In particular, better results are expected for a project that invest in:

- Large cities;

- Neighborhoods with high price per square meter;

- Areas that have been revaluated during the months before the financing of the project.

9.3.4. Hypothesis 4: Information Asymmetry

By analyzing the information asymmetry, a greater success is expected for the campaigns that:

- Are financed by a third-party investor (for example a bank) as this is a sign of the quality of the project;

- Show a video and/ or a large number of photos because a lender is more encouraged to finance a project that has a better representation of the property;

- Make more documents available as more detailed project information is shared;

- Attach among the documents the "specification" as it describes the technical details of the project and also the sustainability of the initiative;

- Are promoted by companies that have a successful track record of past projects.

9.3.5. Hypothesis 5: Real Estate Market Conditions

The expected results of a crowdfunding campaign depend on the condition of the real estate market. In particular, a better outcome of a campaign is expected if the market trend is positive.

9.4. Sample Construction

The study is based on a sample of 232 projects launched by the Italian platform Trusters since its foundation until October 2022. In particular, the first project in the sample is "Loft Bocconi | Milano" launched on 4th of January 2019 as the last one being "Via Principessa Clotilde 56 | Torino" launched on 26th of October 2022.

In order to build the dataset, descriptions, specifications and business plans of all the 232 projects were read and interpreted. Some data were easy to access (for example the Target Return, the Maturity, the Number of Photos), others have required a more laborious activity based on a qualitative interpretation of the texts and further research.

The sustainable variables required a careful reading of the advertising of all the campaigns both in the project descriptions and in the specifications.

The raising time that refers to the duration of the collection of the target capital of a project, has been calculated using the dates and times specified in the "blockchain" section of each Trusters campaign.

The data related to the location of the property of a project have been collected in the following way: the population of each area was obtained directly from the Istat site while prices per square meter have been found in the archive of Immobiliare.it.

For the "location" category each value in the database refers to the population or price per square meter of the area of the property on the day when the fundraising of the project, which involves the property, has started.

For analyzing the Real Estate market condition were used data from the Italy House Price Index, provided by Eurostat site.

In the following paragraph, a presentation of the variables of the model and their summary statistics are provided.

9.5. Variables

9.5.1. Dependent variables

The most common variables that have been used by previous studies to describe whether a crowdfunding campaign is successful are:

• Success YES or NO: dummy variable equal to 1 if the campaign reached the minimum target capital, 0 if it failed;

• Overfunding: it considers the capital raised in addition to the initial target capital of the campaign. The value is normally calculated as a percentage of the capital raised on the initial target capital of the project.

Trusters has not published any campaign that has not reached the target capital nor allows overfunding.

For these reasons, in order to conduct the analysis, 4 dependent variables are considered as drivers of the crowdfunding campaigns' success:

Raising_Time

The raising time of the campaign, expressed as the number of days necessary to collect the capital needed for the campaign. It is a variable which measures the speed at which the project is financed. It is considered a measure of success since the less is the time needed to collect, the more is the interest of the crowd for that specific project. It seemed more interesting to evaluate the percentage change in the raising time when a change in the independent variables happens. To study the percentage change and to normalize the variable, its natural logarithm is considered. The total time needed to finance the project is then considered this way:

$$Raising\ Time = ln(Raising\ days + 1)$$

Raising_Per_Hour

The raising per hour is considered to analyze the pace at which the capital is collected, taking into account the capital needed for the specific project. It is measured dividing the capital needed by the raising time. In order to consider the percentage change, as for the raising rime, the natural logarithm of this variable is calculated. The Raising per hour is then expressed as:

$$Raising\ per\ Hour = ln(Target\ Capital/Raising\ Time + 1)$$

Number_Of_Investors

The number of people that financed the project. This data is provided by the platform for each project. Being Trusters a crowdfunding platform, the more are the people from the "crowd" who finance a project, the more is the interest aroused for that project, the more is the success. In order to assess the percentage change and to normalize this variable, the natural logarithm is calculated. The number of investors is then computed as:

$$Number\ of\ Investors = ln(Number\ of\ Investors + 1)$$

However, it is important to underline that there is no unilateral correlation between the number of investors and the success of a campaign. Indeed, even when the number of investors is relatively low, it can be that the average investment made is high. It can depend on different factors such as the type of project or the type of sponsor.

Average_Investment

The average amount of euros invested by each person who took part in the campaign. It is computed as the ratio between the capital raised and the number of investors. In order to normalize and see the percentage change of this variable, the natural logarithm is used. The variable is then calculated as:

$$Average\ Investment = ln(Target\ Capital/Number\ of\ Investors + 1)$$

9.5.2. Independent variables

In order to conduct the analysis, we have identified some independent variables which belong to the five different categories described in the hypotheses:

Sustainability Advertisement

Energy_Label

This variable refers to the energy class that the property will obtain after the renovation works. It is obtained by converting the scale provided by the European Union that goes from the G-level to the A-level. In order to use it in the model, every letter is converted into a number. The numbers goes from 1 to 7. The level 7 corresponds to the A class, whereas the level 1 corresponds to the G class. Only 23 out of 232 projects have the energy label explicated, and 15 of them are of class A. For those which do not show an energy label, the value is 0 and the variable does not appear in the model.

Heat_Pump

This is a dummy variable and refers to the presence of a heat pump for the heating system. The heat pump helps to reduce primary energy consumption, since it uses largely renewable energy from the external environment and in small part electricity, which is usually produced by power plants, when not combined with a photovoltaic system. However, it is not always specified whether the use of a heat pump corresponds to an independency from the methane gas, otherwise it would have been possible to distinguish these two cases. Overall, 25 out of 232 projects use a heat pump for their heating system.

Autonomous_System

This is a dummy variable which is equal to 1 if the property uses an autonomous system rather than a centralized one. The main advantage is the autonomy to adjust the system according to the specific needs and to turn it on and off when necessary. A family with independent heating system consumes on average over 1000 cubic meters of gas per year. It should be noted that consumption and the relative bill depend on many factors, such as the size of the house and its characteristics of isolation and exposure, the more or less frequent presence of the inhabitants and the area in which it is located. However, it is in general a better option unless the single autonomous systems are oversized and there is a misuse of them. 43 out of 232 projects promote buildings which have an autonomous system.

Condensing_Boiler

This is a dummy variable and refers to the presence of a condensing boiler in the property. It has different advantages: Up to 98% energy efficiency; low emissions of

pollutants thanks to the condensation technology; 30% lower gas consumption respect to a traditional boiler and low investment costs. 18 out of 232 projects, less than 10%, promote condensing boilers.

Floor_Heating

This is a dummy variable which refers to the presence of a floor heating. It is equal to 0 when the property has a floor heating. The floor heating has the greatest advantage of minimal heat loss and constant heating over the entire surface of the heated room, while the main disadvantage is the higher construction cost of the flooring. At the same time, it's important to remember that energy renovations get great incentives from the state. Hence the total cost of the plant can be deducted up to 55% of the cost. Therefore, even if it is a more expensive system if compared to other alternatives, the incentive from the state can compensate the higher costs of instalment. 43 out of 232 projects promote the renovation or construction of properties with a heating floor.

Renewable_Resources

This is a dummy variable which refers to the use of renewable energies to run the building. It is equal to 1 when the property uses renewable energies, 0 otherwise. The main type of renewable energy mentioned in the projects is the one of photovoltaic panels. Out of 232 projects, less than the 10% (20 projects) promotes the financing of properties where renewable energies are used.

Thermal_Insulation

This is a dummy variable which assesses whether the financed property adopts systems of thermal insulation. An adequate thermal insulation brings benefits on several aspects. For example, it helps to reduce heat loss during the cold season or the entrance of hot flows during the summer. Furthermore, it contributes to the reduction of thermal bridges, makes the power plant more efficient and extends the life of the building, lowering energy costs and reducing greenhouse gas emissions. In general, it is estimated that a correct thermal insulation in old buildings will reduce energy consumption by 20-40%. Almost 30% (73 projects) of the 232 projects promote the financing of properties insulating from a thermal standpoint.

Antiseismic_Certification

This is a dummy variable which is equal to 1 when the financed property is provided with a seismic certification, 0 otherwise. The seismic certification assesses the seismic risk of a building. It is now mandatory for new constructions and for the renovation of the properties. Nonetheless, many projects promoted on the platform are not provided with (explicitly at least) this certification. Out of 232 projects, less than 7% of them highlight the presence of a seismic certification.

Sound_Insulation

This is a dummy variable which refers to the adoption of a system of sound insulation by the property. The advantage of Sound Insulation is to prevent too much noise, for example, from hindering the concentration in your work or disturbing your night sleep, ultimately increasing the quality of life. 67 out of 232 projects promote the financing of buildings acoustically insulated.

Social_Impact

This is a dummy variable which refers to whether a certain project explicitly pursues social purposes. It is equal to 1 when in the description of the project it is written that the project itself will have a social impact. The social impact can express itself in different forms, for example through the renovation of the environment surrounding the financed property. Out of 232 projects, the 5% of projects (12 projects) shows this feature.

Project characteristics

Target_Capital

This variable represents the target capital that is the amount to be collected in order to finance the project. It is expressed in euro, and it can be found on the platform for each project. In order to normalize and to see how a percentage change of this variable affects the dependent variable, the natural logarithm is used. The average amount collected is € 150K. The minimum raised is € 30K ("Corte San Pietro"), whereas the maximum is € 850K ("Via Buratti 13"). 75% of the projects raises less than € 200K. The Target_Capital is treated as a control variable that is introduced in the model because it could influence the outcomes capturing part of the variability.

Target_Return

This variable represents the target return, that is the return offered to the investors for each project. The average target return is 8.41%. The minimum return offered on the platform is 1.58% for a 2-month project, whereas the maximum is 16.29% for a 23-months project. The returns are generated by the rent or resale of the financed property.

Maturity

This variable represents the duration of the campaign, that is the time needed to give back the capital and the interests to the investors. It is measured in months and is available for each project. The average maturity is 12 months. The minimum maturity is 2 months and the maximum is 29 months. However, the latter is an exceptional case since 75% of the projects have a maturity lower than 13.25 months.

RECF_Contribution

This variable represents the contribution of the crowd to the total capital needed for the project. It is expressed as a percentage and indicates the total capital collected by the platform over the total capital needed for the project. It is a measure of the risk of not having the capital returned. The higher the RECF contribution, the higher the risk. The average RECF contribution is 39.59%, with a minimum of 30% and a maximum of 73%. 90% of the projects have a RECF contribution lower than 53%.

Second_Tranche

This is a dummy variable and indicates whether a project is financed in more financing rounds. The projects with more than one financing round have a dummy variable equal to 1; the projects which are financed in one round have a dummy variable equal to 0.

Residential_Commercial

This variable indicates which is the property's destination of use. It can be residential or commercial. Some properties are not fully residential or commercial but can have different locals intended for both uses. The variable varies between 0 and 1, and the values in between are chosen according to how many square meters are intended for residential use. It is calculated as the ratio between residential square meters over total square meters. There are 9 cases in which the properties are not fully residential or commercial. Aside from these cases, more than 95% of the projects promote residential buildings.

M2

This variable refers to the square meters of the financed property. In order to normalize it, the natural logarithm is used.

Number_Of_Properties

This variable refers to the number of properties to be financed in a project. Sometimes the projects promote the construction or renovation of entire buildings with different properties. When that is the case, the number of properties is reported. The variable is expressed in absolute terms. The project with the highest number of properties ("Hara Abitare") finances the construction of 29 properties in 3 different tranches.

Location

Population

This variable refers to the number of inhabitants of the area in which the project is promoted. It may change according to the year in which the project is financed, since

the population of a certain area (e.g. Milan) could have changed over the years. Almost 30% of the projects is promoted in Milan. If the province of Milan is taken into account too, this percentage goes up to 50%. In order to normalize it, the natural logarithm is used.

Price_Per_M2

This variable refers to the price per square metres of the neighbourhood in which the project in financed. This number was provided by Immobiliare.it, an Italian real estate platform. As for the population of an area, this number varies according to the year in which the project is financed, and sometimes it may vary a lot. In order to normalize it, the natural logarithm is used.

Revaluation_Area

This variable is obtained by considering the prices per square metres of two subsequent years. The year of reference is the year before the starting year of the project (e.g if a project is promoted in February 2018, the two prices taken into account are those in February 2017 and February 2018). It is expressed as a percentage difference and is used to assess how much a certain area has been revaluated in one year.

Information Asymmetry

Number_of_Pics

This variable refers to the number of photos that are published in the project description. It is an absolute number and it is on average equal to 9. There are some projects with 2 photos, whereas other with a greater level of detail, which have 15 photos.

Video

This is a dummy variable and refers to the presence of a video describing the project to be promoted. Sometimes the video is a webinar with some representatives of the platform who explain the project in detail. The variable is equal to 1 when the project contains a video and is equal to 0 otherwise.

Past_Projects

This variable refers to whether the sponsor of the project has already closed other deals before. Sometimes it is possible to have the number of projects already promoted on the platform by the same sponsor. Otherwise, the overall number of projects closed by a certain sponsor (not necessarily on the platform) is used.

Specification

This variable refers to the number of pages of a specification in the documents of the project, when provided in the documentation. The 85% of the project does not have a specification. For those which have it, there are some specifications with more than 40 pages, even if more than 50% of them has less than 15 pages.

Third_Investor

This is a dummy variable referring to the presence of a third party (aside the promoting company and the crowd) financing the project. Out of 232 projects, only 2 of them are financed even by a third investor. For this reason, this variable is not included in the model.

Real Estate Market Conditions

RE_Prices

This variable refers to the condition of the real estate market in the year before the starting date of the collection. It is obtained as a difference in percentage between the Italian Real Estate Index' prices in the year in which the project is promoted and the previous one. The value of the index is provided by Eurostat website.

9.5.3. Summary Statistics

Table 20: Summary Statistics

	Obs.	Mean	SD	Q1	Median	Q3	Count
Dependent Variables							
Raising_Time	232	108.91	187.33	0.85	19.54	142.02	
Raising_Per_Hour	232	382129	997096	974	7712	148385	
Numb_Investors	232	140.16	83.06	83.75	127.00	196.50	
Avg_Investment	232	1652	2522	792	990	1241	
Sustainability							
Energy_Label	232	0.67	2.00	0.00	0.00	0.00	
Renewable_Resources	232	0.09	0.28	0.00	0.00	0.00	20
Autonomous_Systems	232	0.19	0.39	0.00	0.00	0.00	43
Heat_Pump	232	0.11	0.31	0.00	0.00	0.00	25

Floor_Heating	232	0.19	0.40	0.00	0.00	0.00	45
Condensation_Boiler	232	0.08	0.27	0.00	0.00	0.00	18
Thermal_Insulation	232	0.31	0.47	0.00	0.00	1.00	73
Antiseismic_Certification	232	0.07	0.25	0.00	0.00	0.00	16
Social_Impact	232	0.05	0.22	0.00	0.00	0.00	12
Sound_Insulation	232	0.29	0.45	0.00	0.00	1.00	67

Project Characteristics

Maturity	232	12.06	4.31	9.00	12.00	13.25	
Residential_Commercial	232	0.93	0.23	1.00	1.00	1.00	
Second_Tranche	232	0.39	0.49	0.00	0.00	1.00	
RECF_Contrib	232	0.40	0.14	0.29	0.45	0.50	
Target_Return	232	0.08	0.02	0.07	0.09	0.10	
Target_Capital	232	151261	95366	90000	122500	200000	
M2	232	406	649	110	178	369	
Properties	232	3.93	4.60	1.00	2.00	5.00	

Location Characteristics

Price_Per_M2	232	2875	1657	1887	2267	3305	
Revaluation_Area	232	4%	6%	0%	3%	7%	
Population	232	561432	594046	79709	185000	1371000	

Information Asymmetry

Specification	232	2.16	5.94	0.00	0.00	0.00	
Numb_Pics	232	9.08	2.77	7.00	9.00	11.00	
Video	232	0.60	0.49	0.00	1.00	1.00	
Numb_Docs	232	6.28	1.89	5.00	6.50	7.00	
Past_Projects	232	5.00	6.37	1.00	2.00	7.00	

Real Estate Market Conditions						
RE_Prices	232	0.00	0.01	0.00	0.01	0.01

9.5.4. Correlation Matrix

Table 21: Correlation Matrix

		1	2	3	4	5	6	7	8	9	10
1	Target_Cap	1									
2	Target_Ret	0.39	1								
3	Maturity	0.24	0.57	1							
4	Res_Com	-0.08	0.05	-0.12	1						
5	Sec_Tra	0.02	0.13	0.32	-0.09	1					
6	RECF	-0.18	-0.18	-0.24	0.19	-0.25	1				
7	M2	0.34	0.21	0.21	-0.50	0.23	-0.41	1			
8	Properties	0.28	0.37	0.33	-0.06	0.39	-0.49	0.51	1		
9	Price_M2	0.11	-0.06	-0.03	0.15	0.09	-0.15	-0.19	-0.01	1	
10	Rev_Area	0.03	0.02	0.00	0.18	0.07	-0.12	0.00	0.06	0.15	1

		1	2	3	4	5	6	7	8	9	10
11	Pop	0.06	0.01	0.04	0.10	0.08	-0.03	-0.19	-0.01	0.55	0.22
12	RE_Prics	0.13	0.22	0.02	-0.06	-0.01	0.04	0.04	-0.03	0.04	0.01
13	Specific	0.15	0.00	-0.07	0.09	-0.06	-0.03	-0.05	0.00	-0.06	0.15
14	#_Pics	0.06	0.21	0.11	0.16	0.14	-0.16	0.00	0.14	-0.11	0.02
15	Video	0.24	0.22	0.17	-0.01	0.18	-0.15	0.20	0.22	0.09	-0.05
16	#_Docs	0.13	0.00	-0.09	-0.02	0.00	-0.15	0.01	-0.01	-0.01	-0.11
17	Past_Proj	-0.02	-0.08	-0.17	0.15	-0.16	0.11	-0.14	-0.11	-0.02	0.06
18	Ene_Lab	0.12	0.27	0.19	0.10	0.09	-0.10	0.01	0.02	-0.21	0.07
19	Ren_Res	0.07	0.16	0.25	0.09	0.19	-0.20	0.07	0.04	-0.15	0.07
20	Aut_Sys	0.22	0.19	0.05	0.06	0.12	-0.17	0.14	0.26	-0.02	0.16

		11	12	13	14	15	16	17	18	19	20
11	Pop	1									
12	RE_Prices	-0.03	1								
13	Specific	-0.14	0.01	1							

14	#_Pics	-0.22	0.00	0.15	1					
15	Video	-0.06	0.10	-0.03	0.14	1				
16	#_Docs	-0.18	0.03	0.24	0.22	0.29	1			
17	Past_Proj	-0.04	0.00	0.03	0.01	0.00	0.15	1		
18	Energy_Lab	-0.11	-0.09	0.19	0.14	0.05	0.04	-0.06	1	
19	Renew_Res	-0.18	-0.04	0.25	0.22	0.03	0.16	-0.12	0.40	1
20	Auton_Syst	-0.07	0.09	0.28	0.05	0.11	0.14	-0.09	0.21	0.37	1

		1	2	3	4	5	6	7	8	9	10
21	Heat_Pump	0.05	0.14	0.17	0.06	0.12	-0.17	-0.02	0.03	0.06	0.21
22	Floor_Heat	0.18	0.30	0.16	0.11	0.05	-0.09	0.02	0.08	-0.02	0.03
23	Cond_Boil	-0.16	-0.04	-0.09	0.05	0.10	0.06	-0.10	-0.07	-0.08	-0.02
24	Therm_Ins	0.24	0.02	0.05	0.05	0.22	-0.16	0.11	0.13	0.06	0.03
25	Seis_Cert	0.13	0.15	0.34	0.00	0.16	-0.29	0.20	0.35	-0.09	0.12
26	Soc_Imp	0.16	-0.01	0.10	-0.60	0.17	-0.18	0.60	0.23	-0.18	-0.09
27	Sound_Ins	0.21	-0.07	-0.01	0.02	0.17	-0.17	0.07	0.09	0.11	0.04

		11	12	13	14	15	16	17	18	19	20
21	Heat_Pump	0.08	0.10	0.15	0.09	0.14	0.35	-0.11	0.26	0.34	0.23
22	Floor_Heat	0.04	0.07	0.31	0.22	0.13	0.29	-0.07	0.34	0.51	0.38
23	Cond_Boil	-0.09	-0.06	-0.06	-0.02	-0.03	-0.22	-0.13	0.22	0.08	0.28
24	Therm_Ins	0.05	-0.02	0.19	0.12	0.21	0.18	-0.05	0.25	0.29	0.27
25	Seis_Cert	-0.11	-0.14	0.23	0.20	0.12	0.10	-0.14	0.03	0.52	0.13
26	Soc_Imp	-0.11	0.04	-0.08	-0.05	0.03	-0.07	-0.10	-0.08	0.00	-0.06
27	Sound_Ins	0.06	-0.07	0.11	0.03	0.11	0.18	0.00	0.24	0.31	0.31

		21	22	23	24	25	26	27
21	Heat_Pump	1						
22	Floor_Heat	0.43	1					
23	Cond_Boil	-0.10	0.02	1				
24	Therm_Ins	0.21	0.40	0.05	1			
25	Seis_Cert	0.29	0.30	-0.08	0.15	1		
26	Soc_Imp	-0.08	-0.07	-0.07	0.01	0.17	1	
27	Sound_Ins	0.18	0.26	0.14	0.62	0.16	0.02	1

As shown in the table above the correlation between variables never overcome the threshold of 0.7. It seems that there are not highly correlated variables. Therefore, it has been decided to include all of them in the starting model for the stepwise

regression. Moreover, in the next paragraph a VIF analysis will be run in order to further check the multicollinearity issue.

9.5.5. VIF Variables

The variance inflation factor (VIF) is a measure of the amount of multicollinearity in a set of multiple regression variables. It is equal to the ratio of the overall variance of the model to the variance of a model that includes only that single independent variable. This ratio is calculated for each independent variable.

Table 22: VIF variables

Variable	VIF
Target_Return	3.068
Maturity	2.731
Residential_Commercial	2.499
Second_Tranche	1.589
RECF_Contrib	1.796
M2	3.432
Properties	2.579
Price_Per_M2	2.147
Revaluation_Area	1.312
Population	2.255
RE_Prices	1.253
Specification	1.428
Numb_Pics	1.336
Video	1.354
Numb_Docs	1.814
Past_Projects	1.181
Energy_Label	1.774
Renewable_Resources	2.618
Autonomous_Systems	1.867
Heat_Pump	1.712
Floor_Heating	2.134
Condensation_Boiler	1.495
Thermal_Insulation	2.513
Seismic_Certification	2.381
Social_Impact	3.386
Sound_Insulation	2.481
Target_Capital	1.626

As the table above shows, all the variables report a very low VIF, always below 10, that indicates a lack of collinearity among the variables.

9.6. Methodology

The methodology applied consists in running a multivariate OLS regression for 4 model corresponding to the 4 response variables previously described:

- Raising_Time;

- Raising_Per_Hour;

- Number_Of_Investors;

- Avg_Investment.

Through this method it is possible to find out the regression lines that best explain the movements of the dependent variables by reference to the change of the independent ones.

Among the dependent variables the one that best represents the success of a campaign is the Raising_Per_Hour, that is calculated as the Target_Capital divided by the Raising_Time and can be interpreted as the speed of the fundraising. Indeed, considering the case where two projects have raised two different sums of capital but in the same amount of time, the project with the highest target capital will be the most successful one because it has a higher collection speed.

Considering the large number of independent variables, it was decided to apply a stepwise method for each of the 4 models.

In statistics, the stepwise regression is a method of fitting regression models in which the choice of the predictive variables is carried out by an automatic iterative procedure. In each step, a variable is considered for addition to or subtraction from the set of explanatory variables based on a prespecified criterion. After each iteration a testing for statistical significance (usually checking the R squared of the model) is conducted.

In this case it was decided to use a backward elimination which starts with all the 27 variables, testing the deletion of each variable, deleting the variable whose loss gives the most statistically insignificant deterioration of the model fit, and repeating this process until no further variables can be deleted without a statistically significant loss of fit.

In the next paragraph the results commented of both the regressions with all the 27 variables and of the stepwise regressions for the 4 models are presented.

9.7. Results

As shown by the results reported below, the stepwise regression improves the adjusted R-squared of the model but slightly worsens the R-squared because it removes several variables, simplifying the model itself.

In general, the R-squared of the different models are always below 0.5. Three possible explanations for it could be:

- The small size of the sample taken in consideration;

- The omission of some variables representing some phenomena that influence the dependent variables but are not subject of this analysis;

- 13 out of 27 variables are dummy variables. It is important to underline that some of them such as the "sustainable" ones have some structural limitations. Indeed, as mentioned before, they are the products of a qualitative interpretation of the text of the projects' descriptions since Trusters does not provide any official quantitative figures about the sustainability of the sponsored campaigns.

In order to interpret the results, it should be noted that:

*	p-value < 0.1	Less Significant
**	p-value < 0.05	Moderately Significant
***	p-value < 0.01	Very Significant

Model 1: Raising_Time

	coefficient	std. error	t-ratio	p-value	
const	−10.8973	5.99019	−1.819	0.0703	*
Target_Return	−5.88306	12.8401	−0.4582	0.6473	
Maturity	−0.0351001	0.067323	−0.5214	0.6027	
Residential_Commercial	−1.96660	1.22186	−1.610	0.109	
Second_Tranche	1.49081	0.493627	3.02	0.0028	***
RECF_Contrib	−0.486094	1.77974	−0.2731	0.785	
Properties	0.198756	0.062858	3.162	0.0018	***
Revaluation_Area	0.99136	3.42066	0.2898	0.7723	
RE_Prices	−23.9563	13.2585	−1.807	0.0723	*
Specification	0.0518415	0.0352194	1.472	0.1426	
Numb_Pics	−0.0759581	0.07198	−1.055	0.2926	

Video	0.278572	0.419563	0.664	0.5075	
Numb_Docs	−0.581790	0.124497	−4.673	5.38E-06	***
Past_Projects	0.00579728	0.0300867	0.1927	0.8474	
Energy_Label	0.217151	0.119682	1.814	0.0711	*
Renewable_Resources	0.813337	1.01221	0.8035	0.4226	
Autonomous_System	−0.872250	0.618518	−1.410	0.16	
Heat_Pump	1.48173	0.738468	2.006	0.0461	**
Floor_Heating	0.468525	0.650361	0.7204	0.4721	
Condensing_boiler	−0.264279	0.838185	−0.3153	0.7529	
Thermal_Insulation	0.562831	0.60303	0.9333	0.3517	
Seismic_Certification	−1.72835	1.06875	−1.617	0.1074	
Social_Impact	−2.61162	1.27054	−2.056	0.0411	**
Sound_Insulation	−1.18487	0.618776	−1.915	0.0569	*
l_M2	−0.474369	0.418886	−1.132	0.2588	
l_Price_Per_M2	1.07193	0.628027	1.707	0.0894	*
l_Target_Capital	1.45047	0.526503	2.755	0.0064	***
l_Population	−0.324552	0.131364	−2.471	0.0143	**

Mean dependent var	2.267416	S.D. dependent var	3.046703
Sum squared resid	1,453.439	S.E. of regression	2.669214
R-squared	0.322164	Adjusted R-squared	0.23245
F(27, 204)	3.591028	P-value(F)	9.31E-08

Stepwise Regression

Model 1: Raising_Time

	coefficient	std. error	t-ratio	p-value	
const	−14.0397	4.94957	−2.837	0.005	***
Second_Tranche	1.18278	0.400485	2.953	0.0035	***
Properties	0.120577	0.0464467	2.596	0.0101	**
RE_Prices	−26.3354	12.5142	−2.104	0.0365	**
Specification	0.0599487	0.0319632	1.876	0.062	*
Numb_Docs	−0.528660	0.105384	−5.016	1.09E-06	***
Energy_Label	0.23702	0.103311	2.294	0.0227	**
Heat_Pump	1.64233	0.674257	2.436	0.0157	**
Seismic_Certification	−1.60149	0.822984	−1.946	0.0529	*
Sound_Insulation	−0.799013	0.427171	−1.870	0.0628	*
l_Price_Per_M2	1.46498	0.508967	2.878	0.0044	***
l_Population	−0.276856	0.121081	−2.287	0.0232	**

l_Target_Capital	0.896498	0.373341	2.401	0.0172	**

Mean dependent var	2.267418	S.D. dependent var	3.046703
Sum squared resid	1,540.449	S.E. of regression	2.652171
R-squared	0.281586	Adjusted R-squared	0.242221
F(12, 219)	7.153170	P-value(F)	5.62E-11

After the application of the stepwise method the model is represented by 12 independent variables. Below the relationship between these 12 variables and the Raising_Time will be described more in details:

Second_Tranche

As expected, there is a very significant positive relationship between the Second_Tranche and the dependent variable. Dividing the collection into several tranches could be a sign of more time required for the work and difficulty in collecting the expected sum, hence this could discourage the lenders from investing, leading to an increase in the duration of the fundraising. If all the other variables are fixed and the Second_Tranche is set to 1, the Raising_Time would increase by 1.18%.

Properties

A project that involves several properties can be perceived as riskier by the investors because of the increase in the amount of renovation or construction and of the difficulty in selling all the properties. This could explain the positive and moderately significant relationship between this variable and the Raising_Time. If the number of properties increases by 1 unit, keeping all the other variables fixed, the dependent variable would increase by 0.12%.

RE_Prices

As expected, positive conditions of the Real Estate market are drivers of success for a campaign. The significance of the relationship is moderate, and the slope is negative and very high in absolute terms.

Specification

The results show a low significance for this variable. It must also be stressed that the coefficient is very small and can take negative values if looking at the 95% confidence interval where it varies.

Numb_Docs

A very strong significant negative relationship between the number of documents and the duration of the campaign is shown. As expected, the removal of information asymmetry barriers such as providing more documentation material about the project is well perceived by the investors and this leads to a shorter raising time. If everything is kept fixed, an increase by one unit in the number of documents would lower the raising time by 0.52%.

Energy_Label

There is a moderately significant relationship between the Energy_Label and the Raising_Time. Declaring in the project description the objective of improving the energy efficiency of a building could have a double effect: the investor that does not have clear in mind the energy efficiency concept could interpret this only as more work to be done, whereas a more informed investor could try to investigate the information about the building further. In both cases the raising time increases.

Heat_Pump

The installation of a heat pump may take a lot of time, prolongating the workload for completing the renovation or construction of the building involved in the project. This could be seen badly by the investors and explains the positive slope. However, it must be noticed that the relationship is moderately significant.

Seismic_Certification & Sound_Insulation

Both variables seem to influence the duration of the campaign by decreasing it. However, the coefficients have a statistically low significance.

L_Price_Per_M2 & l_Population

The relationships between the dependent variable and the l_Price_Per_M2 and l_Population are very and moderately significant, respectively. If all the other variables are fixed, a project that invests in areas with a high number of inhabitants and a price per square meters that is not high would be more successful in terms of raising time. Regarding the involvement of a high population in projects what was stated in Hypotheses is confirmed. On the contrary what was assumed for the price per square meters is disproven. This could be justified by the peculiarity of the Trusters platform whose majority of projects involve residential properties in the suburban area of Milan that has a high population and lower prices than the city centre.

Target_Capital

Target capital is used as a control variable. The positive relationship between the Target Capital and the raising time can be easily justified: the more the amount of money to collect the more the time it takes to collect it.

Model 2: Raising_Per_Hour

	coefficient	std. error	t-ratio	p-value	
const	8.59294	5.34706	1.607	0.1096	
Target_Return	3.47144	12.5187	0.2773	0.7818	
Maturity	0.033332	0.0672473	0.4957	0.6207	
Residential_Commercial	1.9142	1.21952	1.57	0.118	
Second_Tranche	−1.35096	0.465478	−2.902	0.0041	***
RECF_Contrib	0.172498	1.74045	0.09911	0.9211	
Properties	−0.191986	0.0623173	−3.081	0.0023	***
Revaluation_Area	−1.08419	3.41671	−0.3173	0.7513	
RE_Prices	22.8846	13.1906	1.735	0.0843	*
Specification	−0.0545825	0.0350505	−1.557	0.121	
Numb_Pics	0.0750364	0.0719248	1.043	0.2981	
Video	−0.288960	0.419113	−0.6895	0.4913	
Numb_Docs	0.569328	0.123561	4.608	7.15E-06	***
Past_Projects	−0.00829349	0.0299254	−0.2771	0.782	
Energy_Label	−0.230420	0.118596	−1.943	0.0534	*
Renewable_Resources	−0.756620	1.00937	−0.7496	0.4544	
Autonomous_System	0.858921	0.617918	1.39	0.166	
Heat_Pump	−1.41541	0.73391	−1.929	0.0552	*
Floor_Heating	−0.446024	0.649404	−0.6868	0.493	
Condensing_boiler	0.288558	0.837156	0.3447	0.7307	
Thermal_Insulation	−0.633637	0.596934	−1.061	0.2897	
Seismic_Certification	1.60336	1.05802	1.515	0.1312	
Social_Impact	2.5439	1.26725	2.007	0.046	**
Sound_Insulation	1.15754	0.617547	1.874	0.0623	*
l_M2	0.286037	0.356155	0.8031	0.4228	
l_Price_Per_M2	−1.25213	0.591269	−2.118	0.0354	**
l_Population	0.316401	0.130932	2.417	0.0165	**

Mean dependent var	9.502672		S.D. dependent var	3.016587
Sum squared resid	1458.655		S.E. of regression	2.667469
R-squared	0.306081		Adjusted R-squared	0.218072
F(26, 205)	3.477828		P-value(F)	2.87E-07

Stepwise Regression

Model 2: Raising_Per_Hour

	coefficient	std. error	t-ratio	p-value	
const	15.0525	3.33267	4.517	1.02E-05	***
Second_Tranche	−1.19769	0.396028	−3.024	0.0028	***
Properties	−0.116286	0.0436994	−2.661	0.0084	***
RE_Prices	27.0892	12.1896	2.222	0.0273	**
Specification	−0.0596642	0.0318797	−1.872	0.0626	*
Numb_Docs	0.534842	0.102782	5.204	4.47E-07	***
Energy_Label	−0.232302	0.101685	−2.285	0.0233	**
Heat_Pump	−1.66367	0.668441	−2.489	0.0136	**
Seismic_Certification	1.62724	0.816009	1.994	0.0474	**
Sound_Insulation	0.81854	0.420439	1.947	0.0528	*
l_Price_Per_M2	−1.45307	0.506088	−2.871	0.0045	***
l_Population	0.280996	0.119904	2.344	0.02	**

Mean dependent var	9.502672		S.D. dependent var	3.016587
Sum squared resid	1,540.989		S.E. of regression	2.646601
R-squared	0.266912		Adjusted R-squared	0.230258
F(11, 220)	7.281868		P-value(F)	1.42E-10

The backward elimination algorithm shrinks the model to a size of 11 variables.

Among these the target capital is obviously not considered because it is already included in the formula used for calculating the dependent variable itself.

The 11 variables are the same ones that were representing the Model 1. The coefficients did not vary significantly in absolute terms. However, the signs of the coefficients are the opposite of the ones in Model 1. This is because the Rasing_Per_Hour represents the speed of the fundraising and is calculated as Target_Capial divided by Raising_Time.

Properties and Siesmic_Certification have a stronger statistically relationship with the dependent variable with respect to their representation by Model 1.

Model 3: Number_Of_Investors

	coefficient	std. error	t-ratio	p-value	
const	−4.23175	1.63827	−2.583	0.0105	**
Target_Return	−2.84002	3.51166	−0.8087	0.4196	
Maturity	0.00991799	0.0184123	0.5387	0.5907	
Residential_Commercial	−0.0123488	0.334169	−0.03695	0.9706	
Second_Tranche	0.0970876	0.135003	0.7192	0.4729	
RECF_Contrib	−1.43109	0.486744	−2.940	0.0037	***
Properties	−0.0142596	0.0171912	−0.8295	0.4078	
Revaluation_Area	−0.816660	0.935525	−0.8729	0.3837	
RE_Prices	−0.208660	3.6261	−0.05754	0.9542	
Specification	−0.0277436	0.0096322	−2.880	0.0044	***
Numb_Pics	0.012267	0.019686	0.6231	0.5339	
Video	0.344091	0.114747	2.999	0.003	***
Numb_Docs	0.0299058	0.0340489	0.8783	0.3808	
Past_Projects	−0.0172482	0.00822849	−2.096	0.0373	**
Energy_Label	0.0236961	0.0327322	0.7239	0.4699	
Renewable_Resources	−0.422915	0.276831	−1.528	0.1281	
Autonomous_System	−0.0320190	0.16916	−0.1893	0.8501	
Heat_Pump	−0.271001	0.201965	−1.342	0.1811	
Floor_Heating	0.341213	0.177869	1.918	0.0565	*
Condensing_boiler	−0.0062972	0.229237	−0.02747	0.9781	
Thermal_Insulation	0.148066	0.164924	0.8978	0.3704	
Seismic_Certification	0.260795	0.292294	0.8922	0.3733	
Social_Impact	0.311802	0.347484	0.8973	0.3706	
Sound_Insulation	0.119248	0.16923	0.7046	0.4818	
l_M2	−0.248613	0.114562	−2.170	0.0312	**
l_Price_Per_M2	−0.120076	0.17176	−0.6991	0.4853	
l_Population	0.00881072	0.035927	0.2452	0.8065	
l_Target_Capital	0.962897	0.143994	6.687	2.14E-10	***

Mean dependent var	4.664397	S.D. dependent var	0.931283
Sum squared resid	108.7144	S.E. of regression	0.730009
R-squared	0.45736	Adjusted R-squared	0.38554
F(27, 204)	6.368146	P-value(F)	9.10E-16

Stepwise Regression

Model 3: Number_Of_Investors

	coefficient	std. error	t-ratio	p-value

const	−4.92155	116,215	−4.235	3.34E-05	***
RECF_Contrib	−1.11438	0.40058	−2.782	0.0059	***
Specification	−0.0244431	0.00824624	−2.964	0.0034	***
Video	0.348636	0.103958	3,354	0.0009	***
Past_Projects	−0.0159991	0.00759222	−2.107	0.0362	**
Thermal_Insulation	0.286544	0.11039	2,596	0.0101	**
l_M2	−0.178227	0.0679255	−2.624	0.0093	***
l_Target_Capital	0.919301	0.110285	8,336	7.79E-15	***

Mean dependent var	4.664397	S.D. dependent var	0.931283
Sum squared resid	116.8445	S.E. of regression	0.722238
R-squared	0.416779	Adjusted R-squared	0.398554
F(7, 224)	22.86775	P-value(F)	2.85E-23

The algorithm reduces the number of variables to 7. All the variables belonging to the location category are excluded in the stepwise regression. Here the interpretation of the relationships between the number of investors and the independent variables:

RECF_Contribution

As expected, a negative relationship between the contribution from the platform's investors and the number of investors stands. An increase in the RECF contribution of 1%, means an 1.11% decrease of the number of investors. The contribution of the crowd to the total financing needed for a project is a risk factor since a higher contribution corresponds to a higher probability of not having the initial investment back. Indeed, this result shows the rationality of the investors, who prefer keeping the other variables fixed, a lower level of risk.

Specification

The number of pages of the specification shows a negative relationship with the number of investors financing the project, even if the coefficient is very low. This result was not expected, since a higher degree of detail should positively impact the number of people who want to invest in a project. One possible interpretation is that the number of pages is not considered by the investors, but rather the level of detail and the quality of information in the specification.

Video

As expected, the presence of a video in which some representatives of the platform explain the project in detail increases the number of investors. Other studies have

already shown the positive relationships between these variables as mentioned by the Literature chapter. Furthermore, it is quite reasonable that the presence of a video allows the investors to better understand the project and makes more interactive the relationship between the platform and the investors. This variable turned out to be the most significant one, with a p-value of 0.09%, just after the target capital.

Past_Projects

Nonetheless a positive relationship between this variable and the number of investors was expected, there is one possible explanation to this result. A sponsor with a higher number of past projects could have strengthened the loyalty of the investors over time, who could have gone for higher average investments. However, it is worth mentioning that the coefficient is very low, and that the relationship is not strongly significant.

Thermal_Insulation

The results show a positive relationship between the thermal insulation of the properties and the number of investors even if it is not strongly significant. Probably this feature in the properties is highly appreciated by investors, both from a sustainability standpoint and an economical one. Moreover, another reason could be that almost all the projects are located at the north of Italy where the temperature during the winter is lower on average. Being thermal insulation one of the most used techniques to protect houses from the cold, the investors could consider it a "must-have" in the projects of renovation/construction of a property.

l_M2

A negative relationship between the square meters of a property and the number of investors stands. The reason for this outcome could lay in those projects which promote the renovation or construction of huge sites, with more than 1000 square metres. Sometimes the projects of this aforementioned category are the ones with a relatively small number of investors, who make a higher average investment. This feature of the crowdfunding campaigns could deviate from the real relationship existing between these two variables. ("Sviluppo per catena ristorazione internazionale" 5200 squared metres and 297 investors vs "Corso Mediterraneo 116" 650 squared metres and 425 investors)

l_Target_Capital

There is a positive relationship between the target capital and the number of investors. The Target_capital is used as a control variable. The relationship with the number of investors seems trivial. However, it could be that a higher target capital attracts less investors willing to invest more. Therefore, by using this variable in the model, it was possible to confirm a positive relationship with the number of investors.

Model 4: Avg_Investment

	coefficient	std. error	t-ratio	p-value	
const	4.42155	1.46	3.028	0.0028	***
Target_Return	3.03866	3.4182	0.889	0.3751	
Maturity	−0.0097723	0.0183617	−0.5322	0.5952	
Residential_Commercial	0.016665	0.332988	0.05005	0.9601	
Second_Tranche	−0.108606	0.127098	−0.8545	0.3938	
RECF_Contrib	1.45692	0.475225	3.066	0.0025	***
Properties	0.013702	0.0170156	0.8053	0.4216	
Revaluation_Area	0.824306	0.932923	0.8836	0.378	
RE_Prices	0.296935	3.60165	0.08244	0.9344	
Specification	0.0279694	0.0095704	2.922	0.0039	***
NumbPics	−0.0121911	0.0196389	−0.6208	0.5354	
Video	−0.343235	0.114438	−2.999	0.003	***
Numb_Docs	−0.0288793	0.0337379	−0.8560	0.393	
Past_Projects	0.0174538	0.0081710	2.136	0.0339	**
Energy_Label	−0.0226032	0.0323822	−0.6980	0.486	
Renewable_Resources	0.418243	0.275607	1.518	0.1307	
Autonomous_System	0.0331169	0.168721	0.1963	0.8446	
Heat_Pump	0.265539	0.200392	1.325	0.1866	
Floor_Heating	−0.343066	0.177318	−1.935	0.0544	*
Condensing_boiler	0.00429744	0.228583	0.0188	0.985	
Thermal_Insulation	−0.142234	0.162991	−0.8727	0.3839	
Seismic_Certification	−0.250500	0.288891	−0.8671	0.3869	
Social_Impact	−0.306224	0.346019	−0.8850	0.3772	
Sound_Insulation	−0.116997	0.16862	−0.6939	0.4886	
l_M2	0.264125	0.0972472	2.716	0.0072	***
l_Price_Per_M2	0.134919	0.161444	0.8357	0.4043	
l_Population	−0.00813934	0.0357507	−0.2277	0.8201	

Mean dependent var	7.105693	S.D. dependent var	0.774975
Sum squared resid	108.7498	S.E. of regression	0.728345
R-squared	0.216135	Adjusted R-squared	0.116718
F(27, 205)	2.174027	P-value(F)	0.001454

Stepwise Regression

Model 4: Avg_Investment

	coefficient	std. error	t-ratio	p-value	
const	5.57316	0.425855	13.090	1.91E-29	***
RECF_Contrib	1.24709	0.401837	3.103	0.0022	***
Revaluation_Area	1.45158	0.833008	1.743	0.0828	*
Specification	0.0232947	0.00820645	2.839	0.0049	***
Video	−0.330880	0.102414	−3.231	0.0014	***
Past_Projects	0.0158159	0.00751151	2.106	0.0364	**
Thermal_Insulation	−0.272941	0.107901	−2.530	0.0121	**
l_M2	0.21121	0.0591131	3.573	0.0004	***

Mean dependent var	7.105693	S.D. dependent var	0.774975
Sum squared resid	115.5573	S.E. of regression	0.718248
R-squared	0.167067	Adjusted R-squared	0.141038
F(7,224)	6.418464	P-value(F)	6.79E-07

The algorithm reduces the number of variables to 7. This time a variable belonging to the location characteristics (Revaluation_Area) turns out to be weakly significant.

Among the variables considered, the target capital was excluded because it is already used to calculate the dependent variable.

As expected, the outcome is almost the same as for the number of investors, but with opposite signs. Indeed, when the number of investors increases, the average investment decreases. Even the coefficients are almost the same as for the number of investors, and their degree of significance too.

As stated in the first lines, the only one difference is given by the presence of the variable Revaluation_Area which turned out to have a positive relationship with the dependent variable. The interpretation provided is that when dealing with an area which has been revaluated over the years, the average investment made by the investors is higher. Nonetheless, its degree of significance is low since the p-value is higher than 5%

10 Conclusions

There is much literature discussing the phenomenon of Crowdfunding all over the world. There are many studies which have analyzed its impact as an investment alternative which gave the small savers the possibility to take part in investment projects of different types. Among the most recent form of crowdfunding, the real estate crowdfunding started to spread from US to the rest of the world, including Italy. As the word suggests, the crowdfunding is aimed at the "crowd". The purpose of the research was to understand which are the main features the crowd looks at when it chooses an investment rather than another one. The study especially focused on assessing which are the determinants of success for a real estate crowdfunding project.

The first step was to review the literature about the determinants of success of the crowdfunding campaigns. Indeed, a dedicated literature on the real estate crowdfunding still misses, or it is not exhaustive. Many studies which analyzed the determinants of success were found by scholars and professors from all over the world. The ones that influenced this study the most were a study made by some professors from Bicocca ("Greening crowdfunding campaigns: an investigation of message framing and effective communication strategies for funding success") and a master thesis made by two scholars of Politecnico di Milano ("Real Estate Crowdfunding: an empirical study on the determinants of success"). Moreover, other suggestions were provided by some representatives of two Italian RECF platforms, Build Lenders and Trusters.

Finally, it was decided to analyze whether the sustainability - together with other characteristics of a campaign - when promoted in the description of a campaign, could drive the investors to finance a certain project.

The analysis conducted was aimed at identifying on one hand the indicators representing the success of a campaign. On the other hand, it was necessary to state proper hypotheses and identify the factors which most affect these indicators. Finally, 4 dependent variables were chosen to assess the success of a project: the Raising_Time, Raising_Per_Hour, Number_of_Investors and Avg_Investment. As for the factors influencing these metrics, 5 of them were considered: sustainability advertisement, project characteristics, location of the property, information asymmetry and real estate prices. Overall, 27 independent variables were selected and divided among the 5 factors, assuming the impact that each one of them could have.

In order to assess the effect of the independent variables on the dependent ones, a multivariate OLS regression was used. More in detail, a stepwise method based on backward elimination was adopted, starting with all the 27 variables and ending up with the most significant ones. The regression was run for all the 4 dependent variables to see which independent variables affected the most the dependent ones.

For the first two dependent variables, Raising_Time and Raising_Per_Hour, all the 5 factors turned out to be significant. The number of variables resulting after the backward elimination was 11 (12 for the raising time if the target capital is considered, which is a control variable) for both the models corresponding to the 2 output variables. The models revealed the same results: a project that is provided with a seismic certification, acoustically isolated and promoted in more populated areas is more successful. Other features of a project which reduce the duration and increase the speed of fundraising are a higher number of documents provided to the investors, and a positive condition of the Real Estate market in the year before the project is launched. On the contrary, projects divided into different rounds of funding, located in more expensive neighborhoods and involving more properties tend to be less successful. The most surprising outcome of these first 2 models was that advertising in the project's descriptions the objective of reaching a higher energy class of the property and the presence of a heat pump negatively impact on the campaign success. An explanation for this last result can be that installing a heat pump in a building and improving its energy efficiency could be interpreted by the investors as an increase of the workload.

As for the other 2 models, which considered the effects on the number of investors and the average investment, 7 independent variables turned out to be significant. Regarding the number of investors, the backward elimination excluded all the variables related to the location of the property. In particular, it came out that the projects with a high contribution of the "crowd" over the total financing needed and which promote properties with more squared meters have a lower number of investors. Another factor which also negatively affects the number of investors is the presence of a sponsor with a higher number of past projects. It was interesting to assess why more experienced sponsors attract less funders. One possible interpretation of this result is that a more experienced sponsor could have solidified the loyalty of the current investors, who start to increase their average investment for the projects promoted by that sponsor. Conversely to the previous variables, the presence of a video showing the purpose of the project positively impacts the number of investors. Regarding the sustainable features of the building, the projects which promote the construction/renovation of thermically isolated buildings attract more investors.

Regarding the Average_Investment, the results are the same that were obtained for the Number_Of_Investors, but with opposite signs. The only one difference lays in the presence of the variable Revaluation_Area among the ones which are significant.

Indeed, even if the degree of significance is low, an area which has been revaluated in the year before the starting date of the project positively contributes to the success of the project.

Overall, all the 5 factors considered turned out to impact the dependent variables, even if with a different degree of significance. One important outcome of the analysis was that even when it comes to the "crowd", which by definition is less rational than the institutional investors, the sustainability issue is taken into account when making an investment. Indeed, an implicit purpose of this study was to assess whether the sustainability, even if just as a form of marketing, enters the decisional sphere of the less experienced investors or not.

10.1. Limitations and Future Works

Although many variables have resulted not to be significant for the success of crowdfunding campaigns, it cannot be rejected the hypothesis that they impact on it. The reason behind this statement lays in the explorative nature of this study, whose limitation could be further improved in future works.

The first limitation of the research was the small size of the sample that is based only on 232 projects launched by a single platform: Trusters. Even though it has been selected because it was the best representative of the lending based RECF platforms in Italy, the Italian market is very wide and presents many different business models. The possible future works could focus on increasing the size of this sample including also other different platforms in the analysis. Moreover, considering the increasing of the internationalization of the European platforms (that will be even more facilitated by the ECSP in the coming years), the European RECF market will become more homogeneous from a platforms' business models and information transparency standpoint. This will ease future studies because they will be able to consider platforms from different European countries building a more meaningful database.

Another limitation was experienced by the methodology applied. Indeed, many critics have been made about the stepwise regression. The main problem is that the models created by this method may be oversimplifications of the real ones. Moreover, the tests of the stepwise algorithm are biased since they are based on the same data. Wilkinson and Dallal (1981) showed that a final regression obtained by forward selection, said by the F-procedure to be significant at 0.1%, was in fact only significant at 5%. Future possible works could try to make a more sophisticated and accurate econometric analysis.

Another obstacle was encountered with the choice of the dependent variables as indicators of the project's success. Indeed, as explained in the previous chapter, the percentage of campaigns launched by Trusters that reached the target capital was 100%. This value prevented the use of the dummy variable Success_YES_NO, a

variable largely adopted in the Crowdfunding literature. Nevertheless, this percentage could decrease in the future with an increase in the offer for projects. This scenario will allow the researchers to adopt this variable.

Finally, another problem faced by this research is related to the dataset used. Due to the limited data availability, the inclusion of some interesting variables was not possible, whereas some other variables have been structured in a too simplistic way. For instance, having more information about the investors would allow to study the outcome of the project using different and more accurate indicators such as: the amount raised in any duration of time (such as during a particular day of the week or a period in a month/ year), the average investment per investor, the number of professional/ institutional investors investing in the initiative. Furthermore, having personal information about each investor would allow the analysis of their investment behavior considering data such as the age, the job, the level of education and the residential area.

Regarding the sustainability advertisement the research faced one main problem: the lack of official sustainable indicators on the platform's website. Many of the variables belonging to this category are structured in a binary form expressing the presence or absence of a sustainable factor in the building. If Trusters will display more detailed data about the sustainability of the projects in the future, a more accurate definition of the variables would be able to be provided. For example, the environmental variables could be defined as the exact energy savings that the sustainable factors (e.g. the heat pump) will guarantee to the building in terms of kwatt/h.

With the upcoming of the new European laws about transparency, the platforms will publish more details about the projects allowing future researchers to deepen the topic of the Real Estate Crowdfunding success drivers.

Bibliography

Abraham, J., & Hendershott, P. (1994), "*Bubbles in Metropolitan Housing Markets*", Cambridge, MA. https://doi.org/10.3386/w4774

Adair, A., Berry, J., & McGreal, W. (1994), "*Investment Decision Making: A Behavioural Perspective*", Journal of Property Finance, *5*(4), 32–32.

Adamska-Mieruszewska et al. (2021), *"Keep it simple. The impact of language on crowdfunding success"*, Economics & Sociology; Ternopil Vol. 14, Fasc. 1, : 130-144

Amatulli, C., De Angelis, M., Peluso, A.M., Soscia, I. and Guido, G. (2019), "*The effect of negative message framing on green consumption: an investigation of the role of shame*", Journal of Business Ethics, Vol. 157 No. 4, pp. 1111-1132.

Bailey, A.A., Mishra, A. and Tiamiyu, M.F. (2016), "*Green advertising receptivity: an initial scale development process"*, Journal of Marketing Communications, Vol. 22 No. 3, pp. 327-345.

Barasinska, N., & Schaefer, D. (2010), "*Does Gender Affect Funding Success at the Peer-to-Peer Credit Markets? Evidence from the Largest German Lending Platform Ssrn.*"

Belleflamme, P. Lambert, T., & Schwienbacher, A. (2014), "*Crowdfunding: Tapping the right crowd.*", Journal of Business Venturing, *29*(5), 585–609.

Butticè, V., Franzoni, C., Rossi-Lamastra, C., & Rovelli, P. (2018), "*The Road to Crowdfunding Success: A Review of the Extant Literature. Mycological Research*", (Vol. 1). Cambridge: Oxford University Press.

Buttice, V., Colombo, M.G., Fumagalli, E. and Orsenigo, C. (2019), "*Green oriented crowdfunding campaigns: their characteristics and diffusion in different institutional settings*", Technological Forecasting and Social Change, Vol. 141, pp. 85-97.

Calic, G. and Mosakowski, E. (2016), "*Kicking off social entrepreneurship: how a sustainability orientation influences crowdfunding success"*, Journal of Management Studies, Vol. 53 No. 5, pp. 738-767.

Capozza, D., Hendershott, P., Mack, C., & Mayer, J. C. (2002), "*Determinants of Real House Price Dynamics*"

Chapnick, A. (2014), "*How crowdfunding is changing the face of commercial real estate*", National Real Estate Investor.

Chang, H., Zhang, L. and Xie, G.X. (2015), "*Message framing in green advertising: the effect of construal level and consumer environmental concern*", International Journal of Advertising, Vol. 34 No. 1, pp. 158-176.

Clayton, J., Ling, D. C., & Naranjo, A. (2009), "*Commercial real estate valuation: Fundamentals versus investor sentiment*", Journal of Real Estate Finance and Economics, *38*(1), 5–37.

Cohen, J. (2016), "*A Study on the History and Functionality of Real Estate Crowdfunding.*", Joseph Wharton Scholars.

Courtney, C., Dutta, S., & Li, Y. (2017), "*Resolving Information Asymmetry: Signaling, Endorsement, and Crowdfunding Success*", Entrepreneurship: Theory and Practice, *41*(2), 265–290.

Crosetto, P., & Regner, T. (2014)., "*Crowdfunding: Determinants of success and funding dynamics.*", Jena Economic Research Papers.

Dushnitsky, G., Guerini, M., Piva, E., & Rossi-Lamastra, C. (2016)., "*Crowdfunding in Europe: Determinants of Platform Creation across Countries.*". California Management Review, *58*(2), 44–71.

Feng, Y., Fan, X., & Yoon, Y. (2015)., "*Lenders and Borrowers' Strategies in Online Peer-To-Peer Lending Market: an Empirical Analysis of Ppdai.*", Com. Journal of Electronic Commerce Research, *16*(3), 242–260.

Freedman, S., & Jin, G. (2008)., "*Do Social Networks Solve Information Problems for Peer-to-Peer Lending? Evidence from Prosper.com.*", SSRN Electronic Journal

G. Lelo de Larrea et al. (2019), "*Determinants of success of restaurant crowdfunding*", International Journal of Hospitality Management, Vol 78, pp 150-158

Gardner, A., & Matysiak, G. (2005)., "*Holding periods and investment performance: Analysing UK office returns 1983-2003.*", In European Real Estate Society (ERES) Conference (pp. 1–18).

Garmaise, M. J., & Moskowitz, T. J. (2004)., "*Confronting information asymmetries: Evidence from real estate markets.*", Review of Financial Studies, *17*(2), 405–437.

Ghysels, E., Plazzi, A., & Valkanov, R. (2007)., "*Valuation in US commercial real estate.*", European Financial Management, *13*(3), 472–497.

G. Giudici, M. Conti, F. Giordano, M. Zaccagnino (2022) "*Real Estate Crowdfunding Report 2021*"

Grankvist, G., Dahlstrand, U. and Biel, A. (2004), "*The impact of environmental labelling on consumer preference: negative vs. Positive labels*", Journal of Consumer Policy, Vol. 27 No. 2, pp. 213-230.

Greenberg, M.D., Pardo, B., Hariharan, K. and Gerber, E. (2013), *"Crowdfunding support tools: predicting success and failure"*, Conference on Human Factors in Computing Systems - Proceedings, 2013-April, pp. 1815-1820.

Habib, M. A., & Ljungqvist, A. P. (2001), *"Underpricing and Entrepreneurial Wealth Losses in IPOs: Theory and Evidence"*. The Review of Financial Studies, *14*(2), 433–458.

Hauff, J.C., Carlander, A., Gamble, A., Gearling, T. and Holmen, M. (2014), *"Storytelling as a means to increase consumers' processing of financial information"*, International Journal of Bank Marketing, Vol. 32 No. 6, pp. 494-514.

Heorisch, J. (2018), *"'Think big' or 'small is beautiful'? An empirical analysis of characteristics and determinants of success of sustainable crowdfunding projects"*, International Journal of Entrepreneurial Venturing, Vol. 10, pp. 111-129.

James, C., & Wier, P. (1990), *"Borrowing relationships, intermediation, and the cost of issuing public securities."*, Journal of Financial Economics, *28*(1–2), 149–171.

Jiang, C., Han, R., Xu, Q. and Liu, Y. (2020), *"The impact of soft information extracted from descriptive text on crowdfunding performance"*, Electronic Commerce Research and Applications.

Kaminski, J.C. and Hopp, C. (2020), *"Predicting outcomes in crowdfunding campaigns with textual, visual, and linguistic signals"*, Small Business Economics, Vol. 55 No. 3, pp. 627-649.

L Yang et al. (2022), *"Exploring the success determinants of crowdfunding for cultural and creative projects: An empirical study based on signal theory"*, Technology in Society, Vol. 70

Lamont, O., & Stein, J. C. (1999), *"Leverage and House-Price Dynamics in U.S. Cities."* RAND Journal of Economics, *30*(3), 498–514.

Ling, D., & Archer, W. (2013), *"Real estate principles: A value approach."*, McGraw Hill/Irwin Series in Finance, Insurance and Real Estate, 4th ed.

Ling, D., & Naranjo, A. (2003), *"The Dynamics of REIT Capital Flows and Returns."*, Real Estate Economics, 31(3), 405–434.

M. Rossolini, A. Pedrazzoli, A. Ronconi (2021), *"Greening crowdfunding campaigns: an investigation of message framing and effective communication strategies for funding success"*

Malizia, E. (1991), *"Forecasting Demand for Commercial Real Estate Based on the Economic Fundamentals of U.S. Metro Markets."*, Journal of Real Estate Research, *6*(3), 251–265.

Mamonov, S., Malaga, R., & Rosenblum, J. (2017), *"An exploratory analysis of Title II equity crowdfunding success."*, Venture Capital, *19*(3), 239–256.

Miwako Nitani et al. (2019). "*On equity crowdfunding: investor rationality and success factors*", An International Journal of Entrepreneurial Finance, Volume 21, 2019, pp 243-272.

Mollick, E. (2014), "*The dynamics of crowdfunding: An exploratory study.*", Journal of Business Venturing, *29*(1), 1–16.

Montgomery et al. (2018), "*Disruptive potential of real estate crowdfunding in the real estate project finance industry: A literature review.*" Property Management, *36*(5), 597–619.

Moritz, A. Block, J. H. (2016), "*Crowdfunding: A Literature Review and Research Directions*" (pp. 25–53).

Pace, R. K., & Sage, J. P. (2016), "*Fast simulated maximum likelihood estimation of the spatial profit model capable of handling large samples.*", Advances in Econometrics, *37*.

Pagourtzi, E. Assimakopoulos, V. Hatzichristos, T. & French, N. (2003), "*Real estate appraisal: a review of valuation methods*", Journal of Property Investment & Finance, 21(4), 383–401.

Pai, A., & Geltner, D. M. (2006), "*Stocks Are From Mars, Real Estate Is From Venus: An Inquiry into the Determinants of Long-Run Investment Performance.*", Massachusetts Institute of Technology.

Pope, D. G., & Sydnor, J. R. (2011), "*What's in a Picture?: Evidence of Discrimination from Prosper.com.*" Journal of Human Resources, 46(November 2009), 53–92.

Regulation of the European parliament and of the council on European Crowdfunding Service Providers (ECSP) for Business (2018). https://eur-lex.europa.eu/resource.html?uri=cellar:0ea638be-22cb-11e8-ac73-01aa75ed71a1.0003.02/DOC_1&format=PDF

Roberts, C., & Henneberry, J. (2007), "*Exploring office investment decision-making in different European contexts.*", Journal of Property Investment & Finance, 25(3), 289–305.

Rosen, S., & Topel, R. H. (1986), "*A Time-Series Model of Housing Investment in the U.S.*" Cambridge, MA. https://doi.org/10.3386/w1818

S. Tranquillini, A. Venturelli (2018), "*Real Estate Crowdfunding: An Empirical Study on the Determinants of Success*"

Schweizer, D., & Zhou, T. (2017), "*Do principles pay in real estate crowdfunding?*", Journal of Portfolio Management, *43*(6), 120–137.

Sharma, A. (2010), "*Crowdsourcing Critical Success Factor Model.*", Unpublished Working Paper, London School of Economics., 1–22.

Shilling, J. D., & Sing, T. F. (2007), "*Do Institutional real estate investors have rational expectations?*"

Skirnevskiy, V., Bendig, D., & Brettel, M. (2017), *"The Influence of Internal Social Capital on Serial Creators' Success in Crowdfunding."*, Entrepreneurship: Theory and Practice, 41(2), 209–236.

Vogel, J. H. J., & Moll, B. S. (2014), *"Crowdfunding for Real Estate."*, The Real Estate Finance Journal, 5–16.

Vojtovic, S., Ditkus, D., & Navickas, V. (2017), "*Real estate investment and financing: Crowdfunding.*", In Trends and Issues in Interdisciplinary Behavior and Social Science - Proceedings of the 5th International Congress on Interdisciplinary Behavior and Social Science, ICIBSOS 2016 (pp. 29–32).

Calic, G. and Mosakowski, E. (2016), *"Kicking off social entrepreneurship: how a sustainability orientation influences crowdfunding success"*, Journal of Management Studies, Vol. 53 No. 5, pp. 738-767.

A Appendix A: List of Platforms

Argentine

Crowdium Equity (2016) crowdium.com.ar

Grupo Konstruir Equity (2016) grupokonstruir.com

Sumar Inversiòn Equity (2017) sumarinversion.com.ar

Australia

BrickX Equity (2016) brickx.com

CrowdfundUP Equity (2015) crowdfundup.com

DomaCom Hybrid (2015) domacom.com.au

Estate Baron Hybrid (2014) estatebaron.com

PropertyShares Lending (2016) propertyshares.com.au

VentureCrowd Equity (2013) venturecrowd.com.au

Austria

Dagobertinvest Lending (2016) dagobertinvest.at

Home Rocket Hybrid (2015) homerocket.com

Immofunding Lending (2016) immofunding.com

Rendity Lending (2015) rendity.com

Brazil

Urbe Lending (2015) urbe.me

Glebba Lending (2018) glebba.com.br

Canada

NexusCrowd Hybrid (2016) nexuscrowd.com

China

Crowd Funding House (众筹房) (2014)

Duocaitou (多彩投) Equity (2015) duocaitou.com

Ezc360 (资产) (2016)

rongnuo.net (融诺网) (2015)

touchwang.net (孿筹网) (2015)

Cile

Besafe Equity (2017) besafeinversiones.com

Lares Equity (2018) lares.cl

Estonia

Bulkestate Lending (2016) bulkestate.com

Crowdestate Lending (2015) crowdestate.eu

EstateGuru Lending (2014) estateguru.co

EvoEstate Hybrid (2019) evoestate.com

Reinvest24 Hybrid (2018) reinvest24.com

France

Anaxago Immobilier Lending (2014) anaxago.com/club/immobilier

Baltis Capital Equity (2015) baltis-capital.fr

Clubfunding Lending (2015) clubfunding.fr

Finple Lending (2015) finple.com

Find&Fund Lending (2016) findandfund.com

Fundimmo Lending (2016) fundimmo.com

Homunity Lending (2016) homunity.com

Immocratie Lending (2017) immocratie.com

Immovesting Hybrid (2016) immovesting.com

Koregraf Lending (2015) koregraf.com

Lendopolis Lending (2017) lendopolis.com

Look&Fin lending (2012) www.lookandfin.com

Lymo.fr Lending (2015) lymo.fr

Monego Lending (2016) monego.fr

My Capital Immo Equity (2015) mycapital.immo

Proximea Hybrid (2015) proximea.net

Raizers Hybrid (2015) raizers.com

Upstone Lending (2016) upstone.co

Vatel Direct Lending (2017) vateldirect.com

Weeximmo Lending (2015) weeximmo.com

WiSEED Lending (2011) wiseed.com

Germany

Bergfürst Lending (2014) de.bergfuerst.com

Engel & Volkers Capital Lending (2017) ev-digitalinvest.de

Exporo Lending (2014) exporo.de

iFunded Lending (2016) ifunded.de/de

Mezzany Lending (2015) mezzany.com

Zinsbaustein Lending (2016) zinsbaustein.de

India

SmartOwner Equity (2015) https://www.smartowner.com/so/on/index.htm

Indonesia

Crowdana Equity (2019) https://crowddana.id/

Properti Anda Equity (2017) https://propertianda.com/

Dana Syariah Lending (2017) https://www.danasyariah.id/

Ireland

Property Bridges Lending (2018) propertybridges.com

Israel

Hagshama Hybrid (2010) https://www.kerenhagshama.co.il/

Italy

Bildap Equity (2021) bildap.it

Brick Up Equity (2021) brickup.it

BacktoWork24 Equity (2015) https://www.backtowork24.com/

CrowdFundMe Equity (2014) https://www.crowdfundme.it/en/

CrowdInvest Italia Equity (2018) https://crowdinvestitalia.it/

Bridge Asset Lending (2020) bridgeasset.it

Build Around Equity (2019) buildaround.eu

Build Lenders Lending (2020) buildlenders.it

Concrete Investing Equity (2018) concreteinvesting.com

Crowd2Be Lending (2021) crowd2be.com

Demetra Lending Lending (2021) demetralending.com

House4Crowd Equity (2019) house4crowd.it

Invest-t Lending (2020) invest.t.it

Isicrowd Lending (2020) isicrowd.it

Italy Crowd Lending (2019) italy-crowd.com

ITS Lending Lending (2021) itslending.it

Leone Investments Lending (2021) leoneinvestments.it

Prepay Lending (2020) prepayinvestimenti.it

Recrowd Lending (2019) recrowd.com

Re-anima Equity (2021) re-anima.com

Re-Lender Lending (2019) relender.eu

Rendimento Etico Lending (2019) rendimentoetico.it

Re/source Lending (2020) realestatesource.it

Trusters Lending (2018) trusters.it

Valore Condiviso Lending (2020) valorecondiviso.it

Walliance Equity (2017) walliance.eu

Japan

Crowd Realty Hybrid (2014) https://www.crowd-realty.com/en/

OwnersBook lending (2014) https://www.ownersbook.jp/

Lithuania

Nordstreet Lending (2017) nordstreet.com

Profitus Lending (2017) profitus.com

Röntgen Lending (2017) rontgen.lt

Mexico

Briq.mx Lending (2015) https://www.bric.com.mx/

Expansive Equity (2018) https://expansive.mx/

Inverspot Equity (2019) https://inverspot.mx/

M2Crowd Equity (2017) https://www.m2crowd.com/

Monific Lending (2018) https://monific.com/

Netherlands

Bouwandeel Lending (2016) bouwandeel.com

Brickfund Equity (2016) brickfund.com/en

Crowdrealestate Lending (2015) crowdrealestate.nl

Vastgoedinvesteeren Hybrid (2017) vastgoedinvesteeren.nl

ZIB Investments Crowfunding Lending (2015) zibinvestments.nl

Norway

Kameo Lending (2014) kameo.no

Philippine

Flint Lending 2019 https://flint.ph/

InvestaCrowd Hybrid 2015 https://e27.co/startups/investacrowd/

South Korea

Terafunding Lending https://www.terafunding.com/

Roof funding Lending https://www.rooffunding.com/

WeFunding Lending

Loan Point Lending https://www.loanpoint.co.kr/

Spain

Alfabricks Equity (2016) alfabricks.com

Housers Hybrid (2015) housers.com

Inveslar Hybrid (2016) inveslar.com

Urbanitae Equity (2019) urbanitae.com

Sweden

Tessin Hybrid (2015) tessin.com

Switzerland

Crowdhouse Equity (2016) crowdhouse.ch

Crowdli Equity (2017) crowdli.ch

SwissLending Lending (2015) swisslending.com

UK

Blendnetwork Lending (2017) blendnetwork.com

Capitalrise Lending (2016) capitalrise.com

Crowd2let Equity (2014) crowd2let.com

CrowdProperty Lending (2015) crowdproperty.com

LandlordInvest Lending (2017) landlordinvest.com

Loanpad Lending (2015) loanpad.com

MamaCrowd Equity (2014) mamacrowd.com

Property Crowd Hybrid (2014) propertycrowd.com

PropertyMoose Hybrid (2013) propertymoose.co.uk

Property Partner Equity (2014) propertypartner.co

United Arab Emirates

SmartCrowd Equity (2016) https://smartcrowd.ae/

USA

1031 Crowdfunding Equity (2014) 1031crowdfunding.com

BlockShares Equity (2013) blockshares.com

Cadre Equity (2014) cadre.com

Cardone Capital Equity (2014) cardonecapital.com

CrowdStreet Hybrid (2013) crowdstreet.com

CrowdTrustDeed Lending (2014) crowdtrustdeed.com

EquityMultiple Hybrid (2015) equitymultiple.com

EquityRoots Equity (2014) equityroots.com

FlashFunders Hybrid (2013) flashfunders.com

Fund That Flip Lending (2014) fundthatflip.com

Groundfloor Lending (2013) groundfloor.us

Holdfolio Equity (2014) holdfolio.com

Instalend Lending (2016) instalend.com

Patch Lending Lending (2012) patchofland.com

Peer Realty Equity (2014) peerrealty.com

Peer Street Lending (2014) peerstreet.com

Prodigy Network Equity (2013) prodigynetwork.com

RealCrowd Equity (2013) realcrowd.com

RealtyMogul Hybrid (2012) realtymogul.com

Realty Shares Hybrid (2013) realtyshares.com

IINTOO Equity (2015) https://www.iintoo.com/

Sharestates.com Lending (2014) sharestates.com

Small Change Equity (2014) smallchange.com

TripleNetZeroDebt Equity (2015) triplenetzerodebt.com

YieldStreet Lending (2015) yieldstreet.com

Zeus CrowdFunding Lending (2016) zeuslending.com/zeuscrowdfunding/

Common Owner Lending (2020) https://commonowner.com/projects

Small Change Equity (2016) https://smallchange.co/projects

ArborCrowd Equity (2016) https://www.arborcrowd.com/how-it-works/

LexMarkets Equity (2017) https://invest.lex-markets.com/browse

Landa Equity (2019) //landa.app/

Arrived Equity (2019) https://arrivedhomes.com/properties/the-richardson

Quickliquidity Lending (2015) https://www.quickliquidity.com/invest-with-us.php

Money360 Lending (2010) https://www.money360.com/featured-transactions/

Crowd Trust Deed Lending (2009) crowdtrustdeed.com

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