THE WHARTON SCHOOL AT THE UNIVERISTY OF PENNSYLVANIA

A STUDY ON THE HISTORY AND FUNCTIONALITY OF REAL ESTATE CROWDFUNDING

Submitted to:

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ABSTRACT

Fundraising within the context of financial firms is an essential part of the functionality

of any investment vehicle. While traditional real estate is one of the oldest forms of investing, the

industry has since undergone a revolution, in which the every-day investor is attaining access to

the arena in the form of crowdfunding. While many of these platforms highlight key structural

advantages that will lead to growth and proliferation, it is important to take a deeper look into

what the competencies are, and how they will induce change, if at all. To do this necessitates

pursuing an in depth analysis of the inception and goals of the platforms, alongside an unbiased

examination of their accomplishments and shortfalls thus far. Due to the infant nature of the

platforms, interviews and first hand conversations were relied upon heavily in the analysis below.

It is found that while real estate crowdfunding has achieved success within a few individual

elements, the platforms as a whole have a long way to go, while the future brings both significant

growth potential and powerful risk factors.

KEYWORDS: (Crowdfunding, Real Estate, Capital, Access)

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INTRODUCTION

Real Estate is one of the traditional and most tangible forms of investing. At its core, almost everyone is aware of real estate in some sense but may not think deeply about how – from apartments and homes to offices, restaurants, and malls, real estate influences the way in which society lives, shops, eats, and socializes, to name a few. Today, many investors do not consider commercial and residential real estate to be an easily accessible platform for investment due to several limiting factors, such as the large capital requirements and knowledge base that necessitates any investment. While there are several different veins which allow for investment in real estate, such as Real Estate Investment Trusts [REITs] or Commercial Mortgage Backed Securities [CMBS], it is fascinating to consider how such a tangible asset can become more accessible to the masses, and how public interest can be piqued in an asset class that is so prevalent, and yet so underappreciated by the every-day investor.

The way in which individuals invest has of course evolved over time, as preferences, methodologies, and economic trends have continually shaped the economy. Many investing platforms have progressed mightily over the years, be it through regulatory modifications or technological advances. However, the real estate field, although it is one of the oldest forms of investing, has seemed to lag behind ¹. While there have been many advances, such as aware, smart home technologies as well as more efficient methods for processes such a rent collection and comparable sales analyses, the asset class still must catch up. One of the main features of many current real estate investing platforms is the fact that one must be institutionally scaled, and have a tremendous amount of capital or industry knowledge to begin to invest directly in real

¹ "Technology Trends in Commercial Real Estate | Realcomm Advisory." *Technology Trends in Commercial Real Estate*, 20 Sept. 2015. Web. 25 Mar. 2016.

estate. At the same time, one of the most interesting developments is how crowdfunding platforms, aided by the JOBS Act of 2012, can disrupt the industry. From a high level, real estate crowdfunding involves the creation of an online firm that underwrites and invests directly in real estate. Once a deal is complete, the firm will market the deal to those who are members of the platform, and these members can choose to invest in any given deal, or to simply pass and wait for the next opportunity.

Part of this research will be to understand how crowdfunding was first begun, and when, why, and how real estate crowdfunding was born. To do this requires researching the relevant legislative trends and rulings among academic research, as well as gauging the attractiveness of real estate as an alternative form of investment when compared to securities or other traditional methods. Moreover, the platform seems to provide several competitive advantages for the consumer and the firm that must be researched. From a high level, if such a platform can leverage its technological core competencies, it will not only be a viable option for the every-day investor, but it has the potential to disrupt the real estate finance marketplace in extreme ways.

It is important to note, however, that because the investment arena is so immature, there is a dearth of scholarly data and legitimate research behind many of the relevant topics regarding real estate crowdfunding, thus leading to heavy weight on existing firm analyses and on exclusive interviews, among others.

REAL ESTATE - BACKGROUND AND RELEVANT CONTEXT

Analyzing the potential market for real estate crowdfunding platforms (CFPs) necessitates having a capable understanding of what real estate encompasses from a high level as well as a conceptual grasp of the various relevant relationships and stakeholders in any real estate business interaction. It is important to note that in real estate, activities ranging from brokerage, appraisal, property management, financing, and development encompass just some of the many applicable activities². CFPs specifically are involved in the financing of real estate by pooling together capital, and also by indirectly performing some of the brokerage and appraisal duties through the process of curating the marketing and analyses of deals. There are, of course, many different asset types to choose from, ranging from residential and commercial to industrial, among others.

Real estate, like many other assets, can be a consistent revenue generator as, for example, a building collects rent payments at the end of each month. Because of this perceived stability of cash flows, there can be a high demand to purchase a real estate asset, as the tangible asset is often deemed less risky as compared to publicly traded securities, for example. However in certain circumstances, such as the 2008 financial crisis, real estate assets can be mispriced or even fraudulent in their trading.

Access to Real Estate

Historically, real estate has been a difficult asset class to break into, as it was limited by one's connections and status. In fact, in the Securities Act of 1933, securities of private

² Gaddy, Wade E., and Robert E. Hart. *Real Estate Fundamentals*. Chicago: Dearborn Real Estate Education, 2003. Print.

investments were prohibited from being marketed to the public³. As a result, the ordinary, every-day investor had no chance of having access to real estate investments if he did not have a valuable network. Moreover, investing directly in real estate often requires large amounts of money, which in and of itself can be an extreme barrier to entry for many. Access to the asset has of course evolved, and the two most noteworthy types of access for the purposes of this paper are Commercial Mortgage Backed Securities (CMBS) and investments in Real Estate Investment Trusts (REITs).

Commercial Mortgage Backed Securities are a type of fixed income investment backed by many commercial loans. They can be attractive because they often offer high credit quality and cash flow stability⁴. CMBS is usually structured as multiple tranches, as many single mortgage loans of varying size, location, and type are pooled together and sold in a securitized form as a series of bonds. This formed trust then issues various types of bonds that may vary in terms of yield, payment priority, and duration⁵. However, if one is not an institutional investor, it can be very difficult to invest in CMBS due to the sheer magnitude of the investments.

Moreover, an investor can have access to publicly traded Real Estate Investment Trusts (REITs), which are companies that own income producing real estate. REITs allow anyone to invest in portfolios of large-scale properties the same way that they would invest in other industries, through the purchase of stock. Similarly, in the same way owning a stock of a company can be valuable, stockholders of a REIT earn a share of the income produced through

³ Securities Act of 1933. Ann Arbor, MI: U Microfilms, 1974. SEC.gov. Web.

http://www.sec.gov/about/laws.shtml#secact1933

⁴ Manzi, J., Berezina, D. and Adelson, M. 2008. Commercial Mortgage-Backed Securities. Handbook of Finance. I:3:34.

⁵ Meister, Stephen B. Commercial Real Estate Restructuring Revolution: Strategies, Tranche Warfare, and Prospects for Recovery. Hoboken, NJ: Wiley, 2011. Print.

real estate investment. It is noteworthy to mention that REITs must pay out at least 90% of their incomes to shareholders, or here, unit holders⁶.

While both of these platforms allow for investments in real estate, neither allow for a direct investment into any chosen real estate asset, as the investor must simply choose a compilation of assets or loans that he or she sees as attractive.

There are of course other options for investors as well, such as joining or creating a real estate partnership to invest or develop real estate, but it is likely that these options require substantial upfront capital or insightful industry knowledge - two assets that the everyday investor is unlikely to have.

Technology as a Catalyst for Real Estate Crowdfunding Platforms

Specifically with regards to access, RE CFPs have opened the larger real estate sector to potentially enormous increases in investment capital due the introduction of the online investment platform. As compared to CMBS or REITs, RE CFPs have supplied investors with an unprecedented level of autonomy with regards to their real estate investment decisions by creating an easy to digest website with relevant analysis and risk evaluation and by allowing deal specific investments, among others. Leveraging the technology to create such a simple, coherent platform has allowed for RE CF to launch.

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⁶ Block, Ralph L. Investing in REITs: Real Estate Investment Trusts. Princeton: Bloomberg, 2002. Print.

ATTRACTIVENESS OF ALTERNATIVE INVESTMENTS – REAL ESTATE

Historically, core assets, mainly public equities or bonds, have characterized large portions of investor portfolios, both on the scale of an individual investor or a billion dollar institutionalized manager. However, over the last twenty years, there has been an increased investor demand to move beyond traditional asset classes in the curating of an investment portfolio. With "macroeconomic challenges, increased volatility, and current market conditions, such as the low interest rate environment, the allocation to alternative assets is accelerating for all types of investors". As opposed to seeking slight increases in year over year returns, alternative investors are attractive to alternatives as they can address exogenous factors such as inflation and interest rate volatility, while offering investors innovative ways to manage risk and return dynamics.

A McKinsey & Company report released in 2015 analyzes the shift in asset allocation to alternative assets, which it describes as traditionally including venture capital, private equity, commodities, hedge funds, foreign currencies, derivatives, and real estate, to name a few. The report examines how alternatives are perceived to receive higher returns as a result of their perceived risk and illiquidity, and how managers have developed growing levels of in-house expertise, as high profile alternative investments have been increasingly profitable⁸. Alternatives are described as growing at an annualized rate of about 10.7% since 2005, twice the rate of traditional investments [See Exhibit 1]. Similarly, new cash inflows into the alternatives space were about 6% of total assets in 2013, as compared to 1.5% towards non-alternatives. PwC, in a

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⁷ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

⁸ Baghai, Pooneh, Onur Erzan, and Ju-Hon Kwek. "The \$64 Trillion Question: Convergence in Asset Management." McKinsey & Company. Accessed March 27, 2016.

2015 report, reiterates the growing importance of alternatives, as it states, "Alternative asset management will undergo a transformation in the years to 2020 and beyond as it adjusts to a new operating and economic environment and moves toward center stage".

Desirability of Real Estate Investments

Within the rising alternatives space, real estate can be attractive to investors for many reasons. First, the asset class offers competitive risk adjusted returns. According on data from the National Council of Real Estate Investment Fiduciaries, private market commercial real estate yielded double-digit returns for the fifth straight year as Net Operating Income (NOI) has strengthened. For comparative context, according to a TIAA CREF Real Estate Industry Report released in 2015, excess real estate returns right after the financial crisis were mostly driven by cap rate compression and not by strong NOI growth, suggesting strong cash flow fundamentals today [See Exhibit 2]. Looking forward, cap rate compression is expected to continue to diminish as NOI growth is expected to become the main driver of performance on a total return basis 11.

Additionally, while real estate is generally viewed as a lower volatility asset class, it is susceptible to mass shocks, as in the most recent financial crisis. In an environment where market volatility is a legitimate concern, the stable pricing dynamics of real estate become increasingly attractive.

Similarly, real estate offers attractive and steady returns as a result of the asset's revenue makeup. A report issued by Russell Investments states that over the period 1977 to 2007, about

⁹ Alternative Asset Management 2020: Fast Forward to Center Stage. www.pwc.com. June 2015.

¹⁰ Property Index Returns. Report. http://www.ncreif.org/property-index-returns.aspx.

¹¹ Peyton, Martha, and Edward Pierzak. *US Commercial Real Estate Outlook: The Return of Volatility*. Report. TIAA CREF.

80% of total US real estate return was derived from contractual rent payments¹². Such consistent cash flows reduce the variability of total returns, and help to keep valuations high.

Furthermore, real estate offers a tremendous diversification benefit to investors, as real estate has historically produced low levels of correlations to equities, as represented by correlations with the Russell 3000 Index [see Exhibit 3]. Real estate often times has a very low, or even negative correlation with the market, which means that a portfolio of diversified assets that includes real estate can have lower volatility and higher return per unit of risk, or higher Sharpe Ratio.

Moreover, real estate has an incredibly high tangible asset value. Unlike many other asset classes, such as equities or bonds, a high level of brick and mortar backs real estate investments, as their solvency can theoretically be assured with a greater level of comfort. As a result, this helps to mitigate the principal agent conflict, in which an investor must fully believe in the reliability and expertise of an investment manager to retain and grow value.

Investments in real estate can also provide a valuable hedge against inflation risk. As price levels rise, rents will correspondingly increase, thus keeping real estate valuations insulated from negative effects of inflation. In addition, certain costs items can be passed through to tenants, such as utilities and common area expenses, thus shielding the property owner from rising operational expenses.

As investors continue to strive for higher returns, real estate will continue to be a desirable asset class moving forward, and an increasingly efficient marketplace for real estate

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¹² Core Private Real Estate. Report. 2013. Accessed March 28, 2016. Russell Investments.

investment will continue to allow investors to better their portfolio allocations while enhancing returns and minimizing risk.

The attractiveness of traditional real estate investments within the overall investing landscape is both storied and recognized. At the same time, for many of the reasons mentioned above, the 'everyday' investor has been largely excluded from investing in the platform as several crowdfunding sites wish to leverage technology to begin to capture this market potential.

CROWDFUNDING: ORIGINS, LEGISLATION, AND GROWTH

Brief History of Crowdfunding Platforms

Simply put, crowdfunding is a way for funding ventures by raising money from a sizeable group of individuals¹³. While crowdfunding has recently received tremendous levels of media attention, it has actually been relevant in American history since the 1800's. As a matter of fact, the Statue of Liberty was partly crowdfunded in 1885 as Joseph Pulitzer, in his newspaper *The New York World*, launched a fundraising campaign to help raise the \$2.5 million necessary to construct the base of the statue¹⁴.

Modern crowdfunding was founded with the intention of serving as a gifting site, in which passionate individuals with access to online payment platforms could support issues that he or she cared about. In 1997, *Marillion*, a British rock band, funded a US tour by raising almost \$60,000 via online donations from its fans. The campaign was a success, and would lead to the formation of ArtistShare in 2000, the first platform entirely dedicated to crowdfunding. By 2000, many charities had taken a hold of the idea, and had begun to tap into the potential for this type of funding. Projects ranging from disaster relief to funding life-saving surgeries and treatments, charities achieved success by mobilizing the masses to support grassroots campaigns. This idea became known as 'challenge fundraising', as the Internet would challenge supporters to give to individual, goal focused campaigns.

In 2005, peer to peer lending began to enter the mainstream with the creation of Kiva, a platform created to facilitate lending to developing areas of the world to help alleviate global

¹³ Sale, Jordn. "From the Statue of Liberty to Potato Salad: A Brief History of Crowdfunding." *Fundrise.com*. Fundrise, n.d. Web. 02 Apr. 2016.

¹⁴ The Statue of Liberty and America's Crowdfunding Pioneer." BBC.com. May 25, 2013.

poverty¹⁵. Kiva has been remarkably successful, as the platform has lent a total of over \$834 million with an average loan size of \$410 and a repayment rate of over 98% ¹⁶.

Moreover, crowdfunding took a hold of the political fundraising world in the form of Barack Obama's 2008 presidential campaign, which illustrated the power of the Internet to drive both fundraising and voter turnout. By reaching out to followers via email, social media, and even text, the campaign highlighted the importance of the "very smallest of donors" By the end of the 2008 campaign, Obama had raised more than \$500 million from 6.5 million online donations. Not only did the effort help to fund the campaign, but also it helped to increase voter turnout, as donors felt that they were truly making a difference and having their voices heard.

In 2010, Kickstarter was launched. The site functions as a platform for entrepreneurs to help raise funds for companies and campaigns. The platform will help fund new inventions or technologies, for example. Today, Kickstarter boasts that over \$2 billion have been pledged to the platform's projects, with over 10 million total backers ¹⁸.

Over the past decade, while crowdfunding structure has emerged onto the scene and has grown tremendously, it still continues to evolve due to legislative and political regulations. As the various platforms have gained legitimacy, the idea of using a platform to not only donate but

¹⁵ Sale, Jordn. "From the Statue of Liberty to Potato Salad: A Brief History of Crowdfunding." *Fundrise.com*. Fundrise, n.d. Web. 02 Apr. 2016.

¹⁶ Kiva - About Us - Latest Statistics." Kiva. N.p., n.d. Web. 02 Apr. 2016

¹⁷ Svcrowfundnews. "Crowdfunding's Power Helped Propel Obama to Historic Wins in '08 and '12." SV CrowdFund News. N.p., n.d. Web. 02 Apr. 2016.

¹⁸ Stats." Kickstarter. N.p., n.d. Web. 2 Apr. 2016.

to invest has been at the forefront of crowdfunding discussions. Specifically, there are a few key legislative orders that help drive the dialog.

Background of Relevant Legislation

While there are myriad of legal issues regarding crowdfunding, arguably the most important piece of legislation is the Jumpstart Our Business Startups Act (The JOBS Act), which was signed on April 5th, 2012 with bipartisan support. The JOBS Act is comprised of 7 different titles:

Title I: Reopening American Capital Markets to Emerging Growth Companies

Title II: Access to Capital for Job Creators

Title III: Crowdfunding

Title IV: Small Company Capital Formation

Title V: Private Company Flexibility and Growth

Title VI: Capital Expansion

Title VII: Outreach on Changes to the Law

While the legislation was passed in 2012, several elements, including the approval of a set of regulations for Title III, were enacted much later or are still in the process of being confirmed as law. By June 2016, the last of the revisions to Title III is to be confirmed.

Within the context of Title III, Rule 506 Regulation D, enacted in 2012, allowed smaller firms to raise capital without having to register with the SEC, which can be very expensive and arduous. However, utilizing Regulation D means abiding by its prohibition of "the general solicitation" of investors – this means that, among other things, companies can't use mass

advertising to increase awareness about an offer and that some type of pre-existing relationship be present before an investor could be approached ¹⁹. The purpose of the ban was to protect non-accredited investors that had access to Regulation D offerings, by making sure that they are given an analysis of the risk profile and types of information that the SEC would have traditionally required. Before the changes to Regulation D in 2013, real estate crowdfunding could not exist because an online platform would qualify as general solicitation. In 2013, the SEC made changes that would allow investment crowdfunding, as private offerings were to be allowed to pursue general solicitation.

In 2013, legislative changes to Title III changed the focus from the solicitation ban to the requirements for verifying that investors were accredited under the law. Under Rule 506 before the 2013 modifications, unaccredited investors could invest, but the firm had to obey the solicitation ban, thus effectively disallowing all of crowdfunding. Rule 506 C eradicated the solicitation ban, but stated that only accredited investors could invest in a project. It also puts the responsibility of having to certify accredited investors onto the firm itself, which can be a tremendous logistical burden. Many firms lack the internal resources to do such a process, and therefore shop out this process to third party firms for such verification.

The SEC defines an accredited investor in a few ways. He must have a net worth of at least \$1 million (excluding primary residence) or have a yearly income of at least \$200,000 for individuals, or a combined total of \$300,000 for a couple. Often times the accreditation necessitates more than just a tax return, but a full financial audit if deemed necessary²⁰.

 $^{19}\; Mc Bride, J.\;" The\; Definitive\; Guide\; to\; Real\; Estate\; Crowdfunding."\; \textit{PropertyMetrics}.\; Web.\; 02\; Apr.\; 2016$

²⁰ Fast Answers." SEC.gov. The Securities and Exchange Commission, n.d. Web. 02 Apr. 2016

Today, because Title III has not, as of the writing of this paper, been enacted, CFP's have largely been raising funds under the Regulation D exemption described above, which means selling securities to accredited investors only. When Title III is authorized in June 2016, non-accredited investors will be allowed to fully participate in investment crowdfunding, which should hugely increase the size of the marketplace.

At the same time, there will be stringent rules for investors within the context of Title III. Investors with a net worth of under \$100,000 can either invest up to \$2,000, or 5% of his annual income, whichever is greater. Investors with a net worth of \$100,000 or more can only invest up to 10% of their net worth or annual income in crowdfunding securities.

While the fundamental framework for online crowdfunding investments has been constructed for both accredited and unaccredited investors, the legislative atmosphere for crowdfunding will continue to develop as the marketplace matures. The legal issues regarding the investments will likely become increasingly complex, and as CFPs continue their rise onto the forefront of the investing world, the legal issues will define the manner in which growth will occur. However, it seems to be clear that CFPs fill a market gap that investors have clearly shown to not only demand, but also appreciate and support. It is likely that while legislation will define growth, crowdfunding platforms are here to stay.

Growth of Crowdfunding Investments

When one looks at the growth of crowdfunding on a sheer dollar basis, it is easy to see why it has generated so much buzz within the investment world. *Massolution*, in a 2015 crowdfunding report, estimated that the global crowdfunding industry grew from \$6.1 billion in

2013 to \$16.2 billion in 2014, a 167% increase - a shocking statistic²¹. Similarly, the industry more than doubled again over 2014-2015, increasing to \$34.4 billion [See Exhibit 3]. Specifically, *Massolution* states that the tremendous 2014 growth was due to an increase in Asian crowdfunding projects. As a matter of fact, the value of Asian crowdfunding projects grew 320% year over year from 2014 to 2015. Asia, with this increase in volume over 2014, surpassed Europe as the second largest crowdfunding market behind North America. *Massolution* also states that "Business and Entrepreneurship" was the largest crowdfunding category in 2014.

In discussions around crowdfunding, one often runs into a conversation about the "collaborative economy", which describes the popular new wave of companies based on an investment thesis of the economic benefits of sharing and renting assets. From Uber to Airbnb and WeWork, the US has seen over 15 collaborative product companies rise to billion dollar valuations within 4 years of inception²². In a 2015 article by *Forbes Magazine*, Chance Barnett explains how financial services fit within the sharing economy, and the industry's exciting growth potential²³. Real estate crowdfunding, among other financial services, is on the forefront of technological innovation that will lead to sustained growth in the sharing economy.

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²¹ The Crowdfunding Industry Report. Rep. 2015 ed. N.p.: Crowdsourcing.org, n.d. Print.

²² Koetsier, John. "The Sharing Economy Has Created 17 Billion-dollar Companies (and 10 unicorns)." *VentureBeat.* N.p., n.d. Web. 03 Apr. 2016

²³ Barnett, Chance. "Trends Show Crowdfunding To Surpass VC In 2016." Forbes. Forbes Magazine, n.d. Web. 03
Apr. 2016

REAL ESTATE CROWDFUNDING MECHANICS EXPLAINED

Real Estate Crowdfunding Practices

As mentioned above, crowdfunding platforms, from a high level, are aimed at facilitating fundraising through the marketing and sharing of an investment opportunity to a far-reaching investor population, via the Internet. Specifically within real estate crowdfunding, there can be many different services that any given CFP can perform – for example: raising capital for its own investments or servicing as an intermediary service for Sponsors, among others. However, there are several key underlying components of RE CFPs that can be seen within almost every platform²⁴.

Firstly, a platform often includes a value proposition in which the nature and configuration of the site are clearly laid out. The types of properties (hotel, retail, multi-family, etc.), investment structure (debt or equity), investment proposals (income appreciation, decreasing cap rate, etc.), holding periods (3,5,7 years, etc.), and exit strategies (how and when to return capital) are a few of the fundamental features that each RE CFP must address.

Because CFPs are only recently considered to be on the forefront of investment strategies, it is often a good idea for RE CFPs to include general and specific discussion forums regarding real estate crowdfunding, relevant legislation, risk factors, and desired goals of the platform, among many others. This may come in the form of proprietary discussion boards or education pamphlets as well as Frequently Asked Questions (FAQ) pages. These pages are found on many sites today, and are labeled in various ways – from a 'Learning Center' and 'How It Works' to 'Educational Center', among others.

²⁴ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

Of course, a key aspect of real estate crowdfunding is the availability to market to a huge number of investors, and this is only possible due to the investor registration aspect of the sites, in which investors can sign up to join the platform. Only after they are registered can investors begin to view, evaluate, and ultimately invest in the site's offerings. As discussed above, the evolving legislative landscape helps to define who can have access to the sites (accredited and/or unaccredited) and the regulations a RE CFP must abide by.

Once an established membership base is built up, the platform must continue to curate its investment strategy and offering materials. The types of activities involved here closely resemble traditional real estate shops, in which a team of investors works to analyze deals, decide which fit the firm's investment thesis, and pursue the opportunities that are deemed to match the returns profile. A key element of RE CFPs is the construction of offering materials, which are then marketed to the members of the CFP. Here, a RE CFP must effectively 'sell' their investment thesis to the members of the platform. The firm does this by creating an in depth deal synopsis that clearly walks through the key elements of the deal including a property and Sponsor descriptions, the terms and conditions of the investment, the proposed capital structure of the deal, as well as past and projected financial performance metrics²⁵. These materials are then sent to members of the platform, who then analyze and choose to invest, or to pass on the deal.

Following the marketing of a deal comes the transaction management, in which the firm closes on a deal and helps the members to follow through with their commitments. This includes instructions on how to transfer funding, as well as access to and means to review deal documentation. SEC regulations must be closely kept in consideration here, as the CFP has strict guidelines what and how to communicate with investors in this regard.

²⁵ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

After a transaction is closed, it is important to keep investors up to date by supplying post transaction reporting, just as in any traditional real estate investment. This coverage keeps investors at pace with a deal by supplying periodic financial and operating reports on the investment. Similarly, it is vital that the platform stay ahead of the curve in regards to investment servicing, in which the CFP supplies the appropriate regulatory and tax reporting as well as any relevant interest or distributions.

Overall, a real estate crowdfunding platform should include a description of both the property and the capital structure of the deal, as well as easy to access accreditation processes. An investor should also have access to a type of FAQ or Forum structure to help answer his or her questions, alongside a thorough financial and qualitative analysis. After closing, comprehensible portfolio management as well as reporting standards are key to achieving sustained success, as they keep the platform in front of its reporting requirements as well as keeping members up to speed on their investments.

Revenue Generation

Revenues can come from various sources for a crowdfunding platform, depending on what type of service is provided. Remember that a CFP can serve as both an intermediary (ex: broker) or as a principal in the investment.

Initially, it is possible for a CFP to charge an advisory fee, which is effectively an upfront fee to engage in the determination of whether or not a recommended investment will come to fruition on the platform. This may come in the form of a transaction fee once a transaction has taken place, and can be hundreds of dollars²⁶. For example, many members will pay for the right

²⁶ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

to view deals, but only the members who decide to move forward with any given investment will pay transaction fees.

There may also be development or construction fees, in which the Sponsor will compensate itself for coordination of the project, and can be as much as 10% of project costs, which can often times be quite large.

There commonly will exist a platform usage fee, in which members pay a simple annual fee to have access to the CFP's deal flow. Several platforms generate the entirety of their revenues from these fees.

Management fees, which can be very similar to those of other investment platforms, may exist as well. For example, the manager who serves as the principal participant and administrator of investments may receive a 1%-2% annual fee of the total value of the investments²⁷.

Carried interest may also be an expense in RE CFPs. This is effectively a performance fee that works to align the incentives of the investment manager with those of the members of the platform. Typically, carry is allocated only after the relevant investors have received an agreed upon base level of return (the 'hurdle rate'), which can vary tremendously by fund type, investment strategy, past performance and reputation.

Marketed Cost Savings

Real Estate CFPs boast remarkable cost savings due to the structure and layout of the online investment platform. In fact, Fundrise, one of most influential leaders in the RE CFP space, markets that it can provide 90% cost savings as compared to investing directly in real

²⁷ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

estate²⁸. Specifically, the firm discusses how, by reaching out directly to consumers via the Internet, the platform is able to effectively cut out many of the traditional middle men involved in transactions. Each middleman, of course, charges a fee for his or her services, which increases the overall cost of the investment and lowers investor returns. For example, a real estate broker may take a 3%-5% fee on the value of the deal, but by marketing directly to investors, this function, and therefore the fees as well, are entirely eradicated, thus enhancing returns to the investor. Here, utilizing a website proves to enhance risk adjusted returns for the investor on a relative basis, as the returns on the investing acumen and decisions of the platform's team itself are hopefully similar or better than those of other real estate platforms, but are paired with decreased costs.

In a Sirius XM interview on Wharton Radio, Jilhene Hellman, CEO of industry leader RealtyMogul, discusses another cost benefit of RE CFPs²⁹. She discusses the decreased cost as compared to traditional real estate firms due to the standardization in the acquisition of due diligence. Here, the CFP creates a private site that both the Sponsor and the RE CFP have access to, in the goal of attaining clear and constant communication about the types of documentation that are needed with the investment. By clearly illustrating what has been received and what has not, interactions between the Sponsor and the CFP can be quicker and cost far less money to pursue³⁰. Again, decreased costs help enhance risk-adjusted returns to the investor.

Speed of Execution

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²⁸ Introducing Online Direct Real Estate Investing." *Fundrise.com*. Fundrise. Web. 25 Apr. 2016.

²⁹ The Real Estate Hour: A Conversation with Jilhene Hellman. Interview by Sam Chanda. *Wharton Siriux XM Radio*, June 19, 2015.

³⁰ Introducing Online Direct Real Estate Investing." *Fundrise.com*. Fundrise. Web. 25 Apr. 2016.

The Fundrise website stresses the importance and competitive advantage of speed of execution for deals underwritten in RE CFPs as compared to traditional real estate investments. The firm states that banks and other traditional capital providers typically take 60 days to close, Fundrise's "streamlined digital origination and due diligence processes" enables it to fund in as little as 15 days. Specifically, the site markets that it is able to issue a term sheet within 4 days to 2 weeks, completely due diligence in as little as 1-5 weeks, as well as reach a legal agreement in 4 days to 2 weeks.

Speed of execution in a real estate transaction is instrumental towards not only competing to win a deal, but also towards building a firm's reputation of professionalism and efficiency. By working quickly while remaining exceptionally diligent, Fundrise, among others, is leveraging its online competencies to help achieve a competitive advantage³¹. This competency can help the RE CFP to build upon its current momentum, and continue to grow.

Transparency

The technology behind RE CFP can also help improve transparency in the process.

Currently, it is industry norm to have little interaction with the Sponsor, and simply give periodic updates. With the online technology, a Sponsor can have real time updates on the deal, at any moment, through the Internet. This can also help information flow, as the deal war-room (data room) can have requests for info, as well as process updates. For example, an investor can look to the site to see exactly where the originators are in underwriting the asset, and if they need any more data to move forward.

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³¹ The Real Estate Hour: A Conversation with Jilhene Hellman. Interview by Sam Chanda. *Wharton Siriux XM Radio*, June 19, 2015.

Moreover, the users of the platform get a more transparent arena in which to invest directly into real estate. As discussed before, while REITs do allow for direct investment in real estate, they represent an amalgamation of many properties, which an individual investor cannot feasibly assess on a deep enough level, thus increasing the risk of misunderstanding the investment. Similarly, many investors will invest in REITs simply as a means of exposure to real estate for diversification, but may not fully comprehend his or her investment. RE CFPs allow an investor to achieve an unparalleled level of transparency, as the platform allows for individual investment in single properties. It is far simpler for an investor to delve deeply into a single investment property when compared to investing in a REIT, for example. With the RE CFP, an investor can become comfortable with the business plan, risks, and investment thesis of a deal given the platform's sound documentation strategies and information availability as an investor has access to asset photos and can read through analyst reports about an individual asset, which is hugely valuable for individual investors.

By having such clear access to the analysis on any given deal, an investor can let his or her investment preferences shine through, as he can exhibit a certain level of control that is unmatched by REITs, for example. This can lead to increased level of satisfaction, as investors believe in his or her ability to pick and choose investments that fit within their risk profile and deal size, among others. Jilhene Hellman discusses this idea, as she explains a little bit why her customers have reacted so positively to the platform, as they have gained an appreciation for the "control and autonomy" that they are given ³².

Reporting

³² The Real Estate Hour: A Conversation with Jilhene Hellman. Interview by Sam Chanda. *Wharton Siriux XM Radio*, June 19, 2015.

RE CFP also supply their members with relevant and timely reporting on pertinent deals. While other investment platforms give investment updates and financial summaries, RE CFPs give deal specific updates to investors, which are a luxury when compared to REIT analysis, whose reporting is often the result of many syntheses of statements. An investor can have a more detailed understanding of an investment if the analysis he or she is given is only specific to his or her investment, and nothing else.

CONCERNS OF THE PLATFORM

During the growth and development of the various RE CFPs, there have been myriad issues and concerns, ranging from the difficulty of creating the technology to client management and HR concerns. Due to the disruptive nature of the RE CPFs in the traditional investment arena of real estate, there exist many skeptics at every turn. Many of the concerns are logical and pressing – and many RE CFPs continue to embrace the challenges that lie ahead.

One of the main concerns in any real estate transaction is the execution of a deal closing. One of the many steps in a closing, of course, is to have the correct amount of funds present on the day of closing, as to avoid delays and complications. This is a legitimate concern for RE CFPs, as once a deal is chosen and won by the platform, it is common for the platform to have to rally the funds from all of its member's accounts to pursue the deal and move forward. This process of accumulating funds can be seen a tremendous business risk, and is often seen as unattractive when compared to RE PE funds who can make loans on their balance sheet, and do not have this capital issue. Fundrise, for example, has tried to address this by using funds from their balance sheet to make loans, and then executing an internal capital call to make sure that the funds arrive 33. This results in the firm's having to take on debt, which comes at a cost for the firm, and can therefore hurt its profitability.

Similarly, the evolution of the legislative environment surrounding RE CFP can be seen a tremendous risk to future sustained growth, as well as the risk of fraudulent behavior. Many skeptics, including the relevant legislators regarding the JOBS Act, point to potential fraudulent action on the front of CFPs, and as a result, have instilled stringent legal requirements for these

³³ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

platforms. Their concern is based on the fact that when savvy investors reach out to the masses for investment capital, there is a clear, glaring incentive to understate or misprice the true risks of a deal. As a result, legislators have been weary of CFPs, and as the relevant legislative environment matures, the CFPs must continue to work to be profitable while closely abiding by high moral and ethical standards. It is important to keep in mind that a scandal within CFPs, in which money is raised fraudulently, has the potential to create an incredibly negative buzz for the platforms, which may still be in their growth stages - such a scandal can hurt the future growth potential and perceived trustworthiness of CFPs as a whole³⁴.

Similarly, many of the discussions around RE CFPs often bring up the competition for deals with more traditional RE PE firms, and if RE CFPs reach an attractive level of profitability, it may be possible for RE PE funds to enter the space. This is a concern because there are many RE PE firms that are incredibly large players in the space, and can seemingly easily invest in the technological aspect of CF investments to be able to compete in the space. While many RE PE firms have performed exceptionally well with their own experienced team of investors, it seems to be very probable for them to have the capability to not only emulate the RE CFPs with ease, but also have the ability to poach top talent if they feel necessary. As a result, many RE CFP executives are working tirelessly to try to differentiate their businesses while creating stronger competitive advantages.

Moreover, the platform, by its very nature, is geared towards bringing capital to smaller, less high profile deals, therefore allowing the platform to make its money via volume and efficiency, as opposed to individual deal profitability. As a result, it is important to note that

³⁴ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

quantity of high quality deal flow in the \$2-\$10 million range is vital for existing models of RE CFPs to thrive. However, there only exist so many deals within that market segment, which may be a limiting factor of the exiting platform functionality. Moving forward, as RE CFPs continue to form their identity, it is important that a belief in a desired market segment is firmly held and executed, as trying to work outside of the niche market can limit the effectiveness of the CFP. There are concerns about how once the CFP has found a niche, that it will soon become crowded out, and the platform will be slow to evolve and scale.

Interview with Daniel Miller – Founder of Fundrise

To better enhance the understanding of the risks of the platform alongside its many strengths, an interview was conducted with Daniel Miller, one of the founders of Fundrise. The first benefit of the platform, which was the dilution of fees, was a jumping off point for his opinions. Miller expressed that while CFPs enjoy the marketing benefits of being able to state cost effectiveness, no platform is close to truly capturing this advantage. While the idea of any CFP is to lower funding costs by enabling and calling many smaller investors to action, the "volume and scale of the platforms are not enormous by any measure" He expressed that for cost benefits to be a legitimate competitive advantage, the overhead costs of underwriting deals needs to be spread across far more deal flow than there currently exists within RE CFPs. At the same time, the true cost of capital of the RE CFPs was discussed, as the platforms currently do not have lower cost of capital than their competitors. Over time, Miller mentioned, the platforms hope to democratize the investments and increase both the scale of deal flow, actual deal size, and increased diversity in type of deals to help to both lower total costs of operating and to bring

³⁵ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

the cost of capital down. Again, Miller stresses that no platform is close to being there at the moment. He emphasizes intensely that as of today, most RE CFPs are very centralized, and incur significant underwriting and legal costs, and that the fundamental shift in costs that will drive the growth of platforms is simply not attainable today with the existing structures in place.

At the same time, when asked about the potential of the platform, Miller suggested that once "someone has built a robust system to create standards to assist in the preparation of materials, then it is possible to really scale and spread the overhead costs"³⁴. In this way, the discussion gravitated towards successful CFPs, in which Miller stated how impressed he is with Kickstarter, specifically the firm's ability to both secure deal flow for interesting and influential investments while protecting both sides. Miller emphasized the fact that legislation is at the center of CFPs as a whole, and that the nascent laws will continue to shape the arena's growth. In his opinion, Miller thinks that Title III's rules within JOBS Act, as discussed above, are reasonable, and that there is a slight market overreaction to the level of scrutiny that the platforms are subject to. He points to the fact that, as seen in the marketplace, there are several services that are being introduced to help facilitate accreditation and other legal documentation. He compared the build-out of these services to the early days of ecommerce, which has developed to the point of, as he mentioned, Amazon's "one click" purchasing capabilities, a massive improvement from the early days of online purchasing. Miller stipulates that the services that RE CFPs require, in terms of background checks and creation of investment prospectuses, among others, will be developed in the near future but will take time to evolve in a low cost way.

When asked about several other advantages to RE CFP, such as transparency, liquidity, and speed of execution, Miller continued to emphasize the fact that currently, the platforms have marketed the future benefits of the platform well, but that they are simply not in place at the

moment. In terms of transparency, Miller does understand that RE CFPs do provide far more transparency when compared to REIT's but that "that is an unfair comparison" 36. While it is clear that the level of transparency is moving in the right direction, it is simply not where it wants to be.

In terms of liquidity, Miller feels as though "in 10 years, there will be fantastic liquidity and standard security agreements" as capital is pooled together, which he envisions as similar to the structure of CMBS³⁵. Again, Miller reminds that RE CFPs currently achieve nowhere near this level of liquidity as most investments in CFPs today, as he states, are equity and are therefore illiquid. Moving forward, Miller hopes that platforms will move in the direction of adding more debt, as equity liquidity is not going to happen anytime in the foreseeable future but that debt liquidity is reasonable and attainable. It is important to note however that achieving this liquidity requires the platforms to restructure their investment strategies, and to invest more heavily in debt.

Additionally, Miller discusses the competitive advantage that firms like RealtyMogul and Fundrise both advertise of speed of execution. He declares, quite explicitly, that this supposed 'benefit' is almost entirely marketing, and consists of "smoke and mirrors". As explained, the underwriting and closing processes for RE CFPs and traditional RE PE shops is exactly the same, and RE CFPs can close a deal with the same rate that any other team can. Miller explained how RE CFPs have many benefits, but that speed of execution is not one of them, as there is no structural or financial advantage to RE CFPs that allows them to underwrite more quickly. Perhaps, he mentions, the due diligence process will be slightly accelerated, but that this step in

³⁶ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

the process is relatively quick within the overall context of the actual deal analysis and underwriting.

Miller provided his insights into the biggest concerns of the platform, and where Miller himself sees the RE CFPs going in the future. The scalability of the platform was the first issue discussed. Miller understands that the investor side, meaning the every-day investor interest, is growing at a rapid pace and that Title III will only make this side more efficient. "There are clear benefits", Miller states, such as low marketing costs and electronic signing and payment methods to name a few, all of which are very scalable, and that "that has been the real revolution thus far". His concerns, however, lie within the borrower side of the business. He reminds how there is still "a lot of hard work and underwriting" that has to be done, and that this process is "much more difficult to scale" 37.

At the same time, Miller foresees that scalability on the deal side is starting to happen. Of the small and mid size deal space that many RE CFPs currently shoot for, RE CFPs "have started to pursue bigger deals" because of the current level of handholding that each deal requires. He stated, "it effectively takes the same amount of time and cost to close a \$25 million deal as it does to close a \$5 million deal". The issue then becomes whether to build a system that isn't as centralized and costly as traditional PE funds but can manage a lot of smaller deals, or to simply pursue larger deals to become more quickly profitable.

Miller then led an amazing and valuable discussion about the ethical and overarching ambitions that he himself had set out to accomplish when founding Fundrise, versus the financial and economic requirements that may necessitate the success of his business and of the platforms

³⁷ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

in general. Miller announced that the initial idea for Fundrise, when it was first founded in 2012, was supposed to be to take advantage of the gap in the real estate market where small and medium enterprises do not have access to the capital they need to grow, as they are ignored by the traditional markets for real estate investments. At the same time, the firm acknowledged that as a whole, everyday investors did not have access to real estate investments. Combining these two problems, Miller's idea was intended to 'connect the small with the small'. Now, however, it seems as though firms have recognized that the profitability is limited of the small to medium size deal space, and that firms are starting to pursue larger deals to better their bottom lines. Miller here sees a simple clash of goals, as he initially wished to pursue all of these small to medium sized deals, and do so in an efficient and profitable way driven by quantity of deals, but now there are players in the space who wish to look more like a RE PE fund, and simply pursue fewer and larger deals. The latter strategy is concerning to Miller, as it is simply more of the same in the RE space, and does not fulfill the firm's goals from when the firm was first founded. It is intriguing to take the growth of RE CFPs in this context, as the very competency that the platforms were set out to achieve are being pushed away.

The end of the discussion with Miller was a deliberation about the true value of the platform, and how it can create and foster positive externalities for the real estate industry outside of this increased access for capital to small and medium sized deals. What Miller highlighted was both fascinating and eye opening, as the argument had not appeared in any of the papers, interviews, and articles that had been used in the research for this subject. Miller talked about how the true benefit today of having a RE CFP, is the opportunity to "build a brand and reputation with consumers". Miller explained that the every day network of investors simply can't recognize many of the names of the firm's that invest in real estate, and that "the need to

build a brand and a presence in today's world is more pressing" than ever³⁸. Clearly, building a digital brand is hugely important in almost any competitive space, and Miller emphasized how large RE companies do not necessarily need the increased capital that CFPs can bring in, but a RE CFP can help to aid in the construction of a brand, which can be invaluable in areas such as public relations and access to deal flow among other benefits of name recognition.

Lastly, it was again clarified that many of the benefits of RE CFPs are simply not where they need to be, but are continuing to evolve and expand. For now, attaining a large number of small deals will continue to drive growth, and that while the investor side is increasingly more legitimate in terms of legislation and access, the borrower side will be built out and improved for years to come.

³⁸ A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.

REAL ESTATE CROWDFUNDING MARKET

Global Market Size and Composition

Due to the novelty of the platform, growth statistics for RE CFPs specifically are relatively new, as credible statistics begin in 2012 when the entirety of the market's funding volume was just above \$19 million. In 2013, total funding volume jumped to just under \$400 million and then to above \$1 billion in 2014. In 2013, North America had raised over \$180 million in funding volume, which jumped to over \$560 million by 2014, a growth rate of about $207\%^{39}$.

Europe, in 2014, closed the gap on North America by increasing its total lending volume from \$32 million in 2013 to over \$420 million in 2014, a growth rate of over 1,220%. Given this incredible growth, Europe, by the end of 2014, held a 42% market share compared to North America's 55%. Asia lags behind, as it represented roughly 2% of global market share at the end of 2014.

Massolution, in its 2015 report, predicts that North America in 2015 will account for over \$1.4 billion of global funding volume, a 151% increase year over year. Europe is forecasted to break just above \$1 billion, a 151% increase as well. At the same time, the report forecasts increased growth in Asia, predicting the total finding volume to be over \$50 million.

Such bullish growth rates suggest that the future of RE CFPs is not only bright, but the platform will continue become a larger face of global investment markets in years to come.

Existing Platforms

³⁹ Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.

As the arena has grown, an increasing number of firms have entered the marketplace for RE CF, including RealtyMogul and Fundrise (See Exhibit 5 for a list of some current firms). These multitudes of competitors have unique value propositions ranging from focusing on geographic locations and property types, to stressing debt or equity, among others. The market, as it has grown, will only continue to progress as firms attain a better understanding for both the marketplace, and the demands and needs of consumers of the product. It will be fascinating to discover which firms thrive, and which do not, and analyze why. Moreover, it will be captivating to see how consumers continue to react to the changing legal and investment environment in which RE CFPs operate.

CONCLUSION

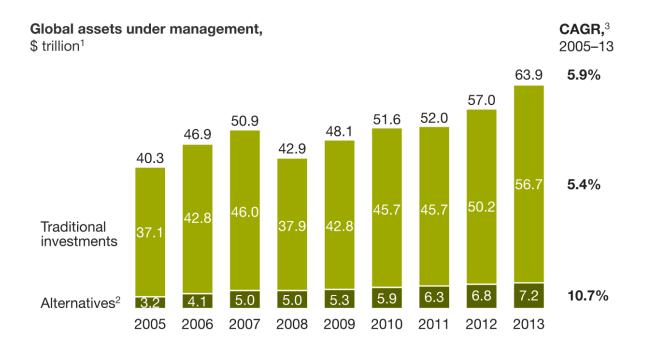
The undoubtedly upward trends and widespread successes of crowdfunding marks the investment world's desire the unlock the investment crowdfunding market's potential by building out platforms that allow for 'every-day' investor participation in the pursuit of attaining attractive risk adjusted returns. At the same time, crowdfunding platforms have had to learn and evolve almost instantaneously since inception, due to the advancing legislative and market environments.

Real estate crowdfunding platforms have shown initial success in mobilizing and attaining an investor base due to investor demand for real estate diversification and attractive risk adjusted returns in the alternatives space, among others. While there have been successfully crowdfunded real estate transactions, the sheer size and relevance of the marketplace, as it stands today, is still immature. It has become clear that to advance, firms must make industry-defining choices about what size, type of asset, and capital structure to pursue, all while keeping the fundamental thesis of real estate crowdfunding, 'connecting the small with the small', in mind.

While there are fundamental benefits of investing within a crowdfunding platform, it is even clearer that many have not yet been captured. Firms may market competencies such as 'Speed of Execution' and 'Transparency', but the reality remains that while these aspects will continue to improve moving forward, the platforms, as they stand today, still have a tremendous amount of work to do. At the same time, it will be exciting to see how the investment space evolves as there truly is immense potential to both disrupt the entire real estate industry while empowering individual investors.

EXHIBITS

[Exhibit 1]



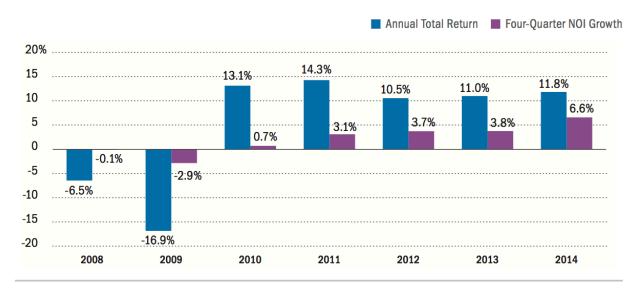
¹Figures may not sum, because of rounding.

SOURCE: Hedge Fund Research, Preqin

²Does not include retail alternatives (ie, exchange-traded funds, mutual funds, and registered closed-end funds).

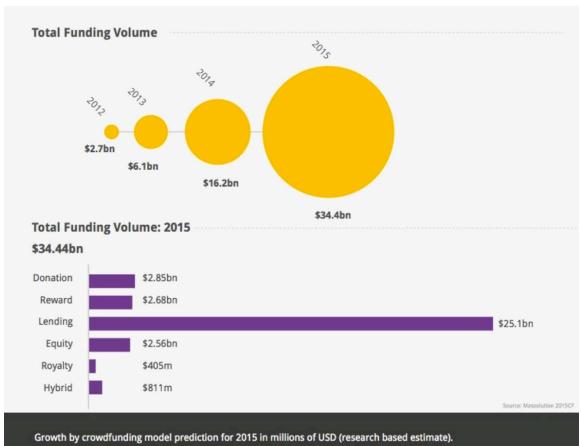
³Compound annual growth rate.

[Exhibit 2]



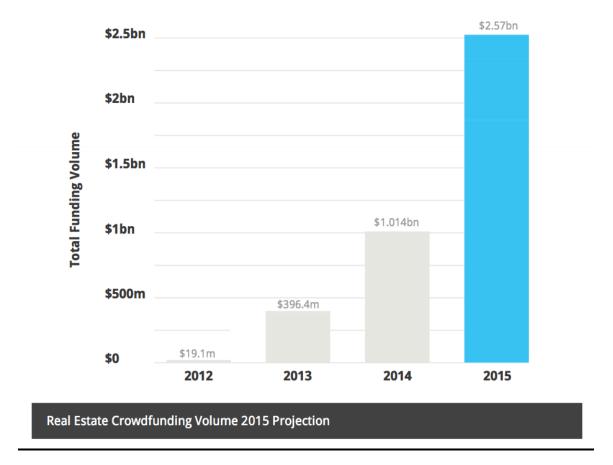
Sources: NCREIF, as of 4Q14; TIAA-CREF

[Exhibit 3]



SOURCE: Massolution 2015 Crowdfunding Report

[Exhibit 4]



SOURCE: Massolution 2015 Crowdfunding Report

[EXHIBIT 5]

Rank	CFP	Lending	Equity	Royalty	Hybrid	Volume Range	Country
1	Lendinvest	✓				> \$250m	UK
2	Prodigy Networks	✓	✓			> \$125m	US
3	Wearecrowdfunding		✓			> \$50m	US
4	Groundbreaker	✓	✓		✓	\$25m- < \$50m	US
5	Realcrowd	✓	✓			\$25m- < \$50m	US
6	RealtyMogul	✓	✓			\$25m- < \$50m	US
7	Sofi	✓				\$25m- < \$50m	US
8	Money360	✓				\$25m- < \$50m	US
9	CrowdMason	✓	✓		✓	\$25m- < \$50m	US
10	Wealth Migrate		✓	✓	✓	\$20m- < \$25m	US
11	Diversy Fund	✓	✓	✓	✓	\$20m- < \$25m	US
12	AssetAvenue	✓				\$15m- < \$20m	US
13	EarlyShares	✓	✓			\$15m- < \$20m	US
14	iFunding	✓	✓			\$15m- < \$20m	US
15	Fundrise	✓			✓	\$15m- < \$20m	US
16	Patch of Land	✓				\$10m- < \$15m	US
17	Crowdbaron	✓	✓			\$10m- < \$15m	Hong Kong
18	CoAssets	✓	✓	✓	✓	\$5m- < \$10m	Singapore
19	CrowdStreet	✓	✓		✓	\$5m- < \$10m	US
20	Sindeo	✓				\$5m- < \$10m	US

SOURCE: Massolution 2015 Crowdfunding Report

WORKS CITED

- A Conversation with Daniel Miller." Telephone interview by author. April 12, 2016.
- Alternative Asset Management 2020: Fast Forward to Center Stage. www.pwc.com. June 2015.
- Baghai, Pooneh, Onur Erzan, and Ju-Hon Kwek. "The \$64 Trillion Question: Convergence in Asset Management." McKinsey & Company. Accessed March 27, 2016.
- Barnett, Chance. "Trends Show Crowdfunding To Surpass VC In 2016." *Forbes*. Forbes Magazine, n.d. Web. 03 Apr. 2016
- Block, Ralph L. Investing in REITs: Real Estate Investment Trusts. Princeton: Bloomberg, 2002. Print.
- Core Private Real Estate. Report. 2013. Accessed March 28, 2016. Russell Investments.
- Esposti, Carl, and Steven Cinelli. "2015CF-RE Crowdfunding for Real Estate." Crowdsourcing.org. Massolution.
- Fast Answers." SEC.gov. The Securities and Exchange Commission, n.d. Web. 02 Apr. 2016
- Gaddy, Wade E., and Robert E. Hart. *Real Estate Fundamentals*. Chicago: Dearborn Real Estate Education, 2003. Print.
- Introducing Online Direct Real Estate Investing." Fundrise.com. Fundrise. Web. 25 Apr. 2016.
- Kiva About Us Latest Statistics." Kiva. N.p., Web. 02 Apr. 2016
- Koetsier, John. "The Sharing Economy Has Created 17 Billion-dollar Companies (and 10 unicorns)." *VentureBeat*. N.p., n.d. Web. 03 Apr. 2016
- Manzi, J., Berezina, D. and Adelson, M. 2008. Commercial Mortgage-Backed Securities. Handbook of Finance. I:3:34.
- McBride, J. "The Definitive Guide to Real Estate Crowdfunding." *PropertyMetrics*. N.p., n.d. Web. 02 Apr. 2016
- Meister, Stephen B. Commercial Real Estate Restructuring Revolution: Strategies, Tranche Warfare, and Prospects for Recovery. Hoboken, NJ: Wiley, 2011. Print.
- Peyton, Martha, and Edward Pierzak. US Commercial Real Estate Outlook: The Return of Volatility. Report. TIAA CREF.

- Property Index Returns. Report. http://www.ncreif.org/property-index-returns.aspx.
- Sale, Jordan. "From the Statue of Liberty to Potato Salad: A Brief History of Crowdfunding." *Fundrise.com*. Fundrise, n.d. Web. 02 Apr. 2016.
- Securities Act of 1933. Ann Arbor, MI: U Microfilms, 1974. SEC.gov. Web. http://www.sec.gov/about/laws.shtml#secact1933
- Stats." Kickstarter. N.p., n.d. Web. 2 Apr. 2016.
- Svcrowfundnews. "Crowdfunding's Power Helped Propel Obama to Historic Wins in '08 and '12." SV CrowdFund News. N.p., n.d. Web. 02 Apr. 2016.
- Technology Trends in Commercial Real Estate | Realcomm Advisory. *Technology Trends in Commercial Real Estate*, 20 Sept. 2015. Web. 25 Mar. 2016.
- The Crowdfunding Industry Report. Rep. 2015 ed. N.p.: Crowdsourcing.org, n.d. Print.
- The Real Estate Hour: A Conversation with Jilhene Hellman. Interview by Sam Chandan. *Wharton Siriux XM Radio*, June 19, 2015.