THE ROLE OF MICROFINANCE FOR HOUSING REPAIR FOR LOW-INCOME HOUSEHOLDS IN THE UNITED STATES

ANTHONY TYRONE SCOTT JUNIOR

SÃO PAULO
2016
THE ROLE OF MICROFINANCE FOR HOUSING REPAIR FOR LOW-INCOME HOUSEHOLDS IN THE UNITED STATES

Thesis presented to Escola de Administração de Empresas de São Paulo of Fundação Getulio Vargas, as a requirement to obtain the title of Master in International Management (MPGI).

Knowledge Field: Microfinance

Advisor: Prof. Dr. Lauro Emilio Gonzalez Farias

SÃO PAULO
2016
Scott Junior, Anthony Tyrone.
The role of microfinance for housing repair for low-income households in the United States / Anthony Tyrone Scott Junior. - 2016.
67 f.

Orientador: Lauro Emilio Gonzalez Farias
Dissertação (MPGI) - Escola de Administração de Empresas de São Paulo.


CDU 336.732(73)
THE ROLE OF MICROFINANCE FOR HOUSING REPAIR FOR LOW-INCOME HOUSEHOLDS IN THE UNITED STATES

Thesis presented to Escola de Administração de Empresas de São Paulo of Fundação Getulio Vargas, as a requirement to obtain the title of Master in International Management (MPGI).

Knowledge Field: Microfinance

Approval Date
21/12/2016

Committee members:

Prof. Dr. Lauro Emilio Gonzalez Farias

Prof. Dr. Edgar Elie Roger Barki

Prof. Dr. Álvaro Alves De Moura Junior
ACKNOWLEDGEMENTS

First and foremost, I am thankful to God for my supportive family and friends, who even in the midst of my grandmother’s passing and grandfather’s illness, pushed me to prioritize my thesis work and get it done. Many thanks to my understanding thesis advisor, Prof. Lauro Emilio Gonzalez Farias, who helped me establish a workable thesis schedule, yet still pushed me to provide a quality final product.

Thank you to all of my family and friends and acquaintances, who helped me get interviews with the appropriate contacts, reviewed and gave feedback throughout my thesis process, and were understanding in giving me the space and time I needed to focus.

I am also thankful to my current workplace, the Finance Department of the City of Baltimore, for allowing me a flexible work schedule, so that I could take time off to work on my thesis. Even though I was a new employee, they have been very accommodating in working with me to prioritize and work through both family and academic obligations. I am thankful to work for such empathetic and supportive management.
ABSTRACT

Ever since microfinance gained popularity in the United States in the early 1990s, American microfinance institutions (MFI) have been trying to figure out how microfinance fits in the American financial system. Initially, the U.S. bought into microcredit’s theory of change as a financially self-supporting vehicle to help the poor exit poverty (Where Credit is Due, 2015), however structural challenges in the U.S. economic system make microfinance difficult for scale, like that seen in developing countries. In 2012, for example, the U.S. microfinance industry served over 361,000 people with a total loan volume of $366 million, while in Brazil—a country of comparable population, for example—served over 3 million people with a volume of $2.5 billion (FIELD, 2012; Microfinance Information Exchange, 2016). When it comes to microfinance specifically for housing in the U.S., the sector is virtually non-existent. This is largely a result of the U.S. debt-heavy model, which discourages progressive housing construction in favor of requiring the client to buy the entire house upfront. Consequently, most research has discarded microfinance as a viable option for housing purchase in the U.S., resulting in a lack of analysis on using it for a more targeted market in home improvements and repairs. The key assumption this paper makes is that the housing microfinance (HMF) repair market might be more financially sustainable in the U.S. due to both the smaller dollar value, relative to home purchase, and the high and reoccurring need for repair that is unlike microloans to businesses.

This paper maps the barriers to scaling the microfinance industry in the U.S., as it pertains to home maintenance and improvement for low-income households. It uses the American city of Baltimore as the context for analysis, due to the city’s high need for housing repair and large percentage of residents with limited access to finance. Analysis relies on qualitative interviewing of both lenders and borrowers, concluding that microlending for housing repairs can only be financially sustained with private and public partnership. What Baltimore demonstrates is that HMF, unlike microloans for businesses, is impacted by subsidized interest rates due to government and philanthropic priorities in housing, which prioritize affordability over financial sustainability. Further research is needed on extending microcredit to small landlords for rental properties, since the need and impact on the poor is greater.

Keywords: microfinance, housing, Baltimore, United States
RESUMO

Desde que as microfinanças ganharam popularidade nos Estados Unidos no início da década de 1990, as instituições de microfinanças americanas (MFI) têm tentado descobrir como as microfinanças se encaixam no sistema financeiro americano. Inicialmente, os EUA aderiram à teoria da mudança do microcrédito como um veículo financeiramente autossustentado para ajudar os pobres a sair da pobreza (Where Credit is Due, 2015), porém, os desafios estruturais dificultam a expansão, como os países em desenvolvimento. Em 2012, por exemplo, a indústria de microfinanças dos EUA serviu a mais de 361 mil pessoas, com um volume total de empréstimos de US$ 366 milhões, e no Brasil – por exemplo, um país de população comparável – atendeu mais de 3 milhões de pessoas com um volume de US$ 2,5 bilhões (FIELD, 2012; Microfinance Information Exchange, 2016). Quando se trata de microfinanças especificamente para habitação nos EUA, o setor é praticamente inexiste. Isso é em grande parte resultado do modelo de dívida pesada dos EUA, que desencoraja a construção progressiva de moradias em favor de exigir que o cliente compre a casa inteira antecipadamente. Consequentemente, a maioria das pesquisas descartou o microfinanciamento como uma opção viável para compra de moradia nos EUA, resultando em uma falta de análise sobre como usá-lo para um mercado mais direcionado em melhorias e reparos em casa. O pressuposto-chave deste artigo é que o mercado de reparo de microfinanças habitacionais (HMF) pode ser mais financeiramente sustentável nos Estados Unidos devido ao menor valor em dólar, em relação à compra de imóveis, e à alta e recorrente necessidade de reparo que é diferente dos microcréditos para empresas.

Este artigo mapeia as barreiras à expansão da indústria de microfinanças nos EUA, uma vez que se refere especificamente à manutenção e melhoria de domicílios para famílias de baixa renda. A cidade americana de Baltimore é usada como o contexto para a análise devido à grande necessidade de reparo de moradia que a cidade possui, além da grande porcentagem dos residentes com acesso limitado ao financiamento. A análise baseia-se em entrevistas qualitativas de credores e mutuários para traçar um contexto de mercado diferenciado, concluindo que o microcrédito para reparos de moradias só pode ser sustentado financeiramente com a parceria privada e pública. São necessárias pesquisas adicionais para estender o microcrédito aos pequenos proprietários de imóveis alugados, uma vez que a necessidade e o impacto sobre os pobres são maiores.

Palavras-chave: microfinanças, habitação, Baltimore, Estados Unidos
LIST OF TABLES

Table 1. Literature Review Conceptual Summary
Table 2. Baltimore Comparison to U.S. Market

LIST OF FIGURES

Figure 1. Classical Microfinance Model
Figure 2. American Microfinance Model
Figure 3. Research Outline
Figure 4. PESTEL Analysis Baltimore Market for HMF Lenders
Figure 5. Porter’s Five Forces for HMF Lenders in Baltimore
Figure 6. Baltimore HMF Model

LIST OF ACRONYMS

AMI    Area Median Income
HMF    Housing microfinance
HMFI   Housing microfinance institution
HUD    U.S. Department of Housing and Urban Development
MFI    Microfinance Institution
# TABLE OF CONTENTS

Acknowledgements ................................................................................................. 5
Abstract .................................................................................................................. 6

1 INTRODUCTION .................................................................................................. 10

2 LITERATURE REVIEW ......................................................................................... 11
2.1 Microfinance ..................................................................................................... 11
2.2 Housing Microfinance for House Purchase/Construction/Rehabilitation .......... 15
2.3 HMF for Routine Maintenance & Home Improvements ............................... 20
2.4 Definitions ....................................................................................................... 20

3 METHODOLOGY ................................................................................................ 24
3.1 Qualitative Research ....................................................................................... 24
3.2 Market Selection ............................................................................................... 26
   3.2.1 Interviews .................................................................................................. 28
3.3 Frameworks ..................................................................................................... 29
3.4 Limitations ....................................................................................................... 33
   3.4.1 Data on “Low-Income” households ............................................................. 33
   3.4.2 Geographic boundaries ......................................................................... 33

4 ANALYSIS ............................................................................................................ 34
4.1 PESTEL ............................................................................................................. 34
   4.1.1 PESTEL Summary .................................................................................. 40
4.2 FIVE FORCES ................................................................................................. 42
   4.2.1 Five Forces Summary ........................................................................... 48

5 CONCLUSIONS .................................................................................................. 50
5.1 Summary .......................................................................................................... 50
5.2 Further Research .............................................................................................. 52

6 References .......................................................................................................... 54

7 Appendices .......................................................................................................... 62
1 INTRODUCTION

In 2003, the U.S. Department of Housing and Urban Development (HUD) estimated that the United States needed $1.3 trillion in rehabilitation of aging housing stock, but that 40% of that funding was unaffordable without some measure of government subsidy or other means of support (e.g. “Sweat equity” or staggering improvements over time) (Listokin & Crossney, 2006). Since then, the U.S. government has been searching for ways to close this gap. This mismatch between the costs of rehabilitation and the financial resources and instruments available is worse for minorities and the poor in the U.S., who often find themselves in older housing stock and without the means to make the needed repairs.

Ever since microfinance gained force in the United States in the early 1990s, American microfinance institutions (MFI) have been trying to figure out what role microfinance plays in the American financial system. Initially, the U.S. bought into microcredit’s theory of change as a vehicle to help the poor set up new microenterprises and startups, with the hopes of creating economic growth and an exit out of poverty (Where Credit is Due, 2015). Unlike in developing countries, however, microfinance never developed a strong role in the U.S. financial market. In 2012, the U.S. microfinance industry served about 361,460 people with a total loan volume of $366 million, while the Brazilian industry—a country of comparable population, for example—served over 3 million people with a volume of $2.5 billion (FIELD, 2012; Microfinance Information Exchange; 2016). This is an order of magnitude in difference. When it comes to microfinance specifically for housing in the U.S., the sector is virtually non-existent. This is largely due to housing being more expensive to build and maintain, as a result of the U.S. debt-heavy model requiring homeowners to buy their entire house upfront—i.e. not allowing incremental or “progressive” building. This fact alone makes microfinance services less economically feasible for the poor, who would have to take out larger loans, and for MFIs, who would have to provide larger loans to a riskier clientele. Consequently, most research has discarded microfinance as a viable option for a housing market solution, resulting in lack of analysis for its potential use in home improvements and repairs. The key assumption this paper makes is that the microfinance for housing repair market might be more financially sustainable in the U.S. due to the smaller dollar value of repair loans, relative to housing purchase, and the high and recurring need for repair that is unlike microloans to businesses.

This paper makes a first attempt at analyzing and mapping the barriers to scaling the microfinance industry in the U.S., as it pertains to home maintenance and improvement for
low-income households. It will use the American city of Baltimore as the context for analysis, due to the city’s high need for housing repair and large percentage of residents with limited access to finance. Analysis relies on U.S. census data and private analysis (university and nonprofit), as well as qualitative interviewing of both lenders and borrowers to map out a nuanced market context. The goal of this paper’s market diagnostic is to help MFIs, who want to expand into housing finance, understand the main challenges to sustainable market entry in the U.S., as well as highlight areas for further research into sustainably financing housing repairs for the poor.

In order to gain an understanding of the unique challenges of microfinance generally within the U.S. context, the paper begins with the evolution of academic literature on microfinance in the U.S. along with its shortcomings, setting the groundwork for the thesis topic. After the literature review, the paper will lay out the methodology used and research design and plan, followed by a reporting of the results of that research. It will conclude with an analysis of the findings in order to address the research question: How can microfinance apply to housing repair in the U.S.?

2 LITERATURE REVIEW

To understand the research need, this section will present the evolution of academic literature on microfinance, tracing how it entered the U.S., how it developed conceptually, and how it has struggled to be applied to housing issues.

2.1 Microfinance

Modern microfinance as a large-scale business model started with Economist Muhammad Yunus, who established Grameen Bank in the 1970s as a way to provide small loans to entrepreneurs in Bangladesh. These clients were often excluded by traditional financial institutions due to the perceived lack of economic return from making small loans to higher risk borrowers. These risks included having poor or sparse credit histories, lacking the physical collateral required to obtain bank loans, and not having stable income or sufficient cash flow to maintain bank accounts in good standing. Yunus’ business model relied on employing low-cost, yet educated loan officers, who could make small loans at high interest rates to groups of people, otherwise excluded from finance. The accountability of group lending provided the collateral and accountability to make the model financially sustainable and scalable, i.e.
without need for ongoing government or philanthropic subsidy. As such, this constituted the “classical” model for microfinance that has improved access to financial services for those the traditional banking sector deemed “unbankable” (Carr & Tong, 2002).

**Microfinance’s main innovations center around:** 1) group lending, and 2) modifications to loan terms, such as shorter loan terms, lower loan amounts, and frequent payments (Christen, 2004).

1) **Group lending** involves using peer-based knowledge (neighbors) to assess the trustworthiness of other borrowers. This shifts the cost of screening the borrower, monitoring the use of loans, and enforcing repayment onto the borrower (Aghion & Morduch, 2005). In a standard banking relationship, the borrower gives the bank collateral as security, gets a loan from the bank, invests the capital to generate a return, and repays the loan with interest. If borrowers cannot repay, their collateral is seized. Grameen clients, however, are most often too poor to be able to offer collateral. Instead, the Grameen loan takes advantage of the client’s close ties within their community, by involving them in the contract. The groups form voluntarily, and, while loans are made to individuals within groups, all members are expected to support the others when difficulties arise (Aghion & Morduch, 2005). This is a stark difference from traditional western lending that is based on individual lending and liability, however is not without precedent. Joint-stock companies, for example, became an especially useful way for colonial merchants to hedge risk against product loss as they explored new trade routes, and continue today in the modern stockholder-based corporation. Group lending increases the borrower’s capacity to repay a microloan, while also increasing the lender’s willingness to lend.

2) **Innovations to loan terms** have increased the poor’s willingness to borrow as they better fit their economic reality. Lower loan amounts cater to those with lower incomes and greater aversion to taking on debt they might not be able to repay. Shorter loan terms and frequent payments more closely follow the often irregular cash flow of the poor, as few people in poverty can guarantee loan payments for 10, 20 years. These features also serve as an additional control lever for lenders to hedge risk of default. Lower loan amounts reduce the absolute size of potential default, shorter loan terms limit the higher risk of borrowers running out of income
to make repayments, and frequent payments allow lenders a regular “check-in” with the lender to determine and manage potential default. These innovations also allow a borrower with poor credit or low credit history to create a history of good behavior to increase their trustworthiness to receive future loans at more favorable rates (Aghion & Morduch, 2005).

Renewing faith in private markets to help eliminate poverty, MFIs grew rapidly during the emergence of neoliberalism in the 1980s, now serving over 200 million clients worldwide (Where Credit is Due, 2015). In the 1990s, microfinance became a more widely discussed topic in the U.S. after then-President Bill Clinton spearheaded it during his presidency. In 1991, the Association for Enterprise Opportunity became the first member-based microfinance trade association in the U.S. Within a year, the Association successfully advocated for the U.S. Small Business Administration (SBA) to implement the Microloan Demonstration Program (Carr & Tong, 2002). Funding was initially awarded to 35 microfinance organizations in 1992, and by 1997 the pilot had become a permanent program. Today in the U.S., nearly 200 microfinance organizations receive funds from the federal government through the SBA, and several hundred others in the U.S. operate without SBA assistance (Carr & Tong, 2002).

Initially, the U.S. saw microfinance as a way to help the poor set up new microenterprises and startups, with the hopes of creating economic growth (Schreiner & Morduch, 2002). Nonetheless, studies from Bhatt (2000/2002), Bates and Servon (1998/2002), and Taub (1998/2002) all found that scale and financial independence all proved unsustainable in the U.S. context. Of the top 50 microfinance institutions in the world, none are in the U.S. (Swibel, 2007). Schreiner & Morduch (2002) argue that there are six main reasons for the anemic performance of microfinance in the U.S.:

1) The size of the microenterprise sector is small. Compared to developing countries, microfinance in the U.S. serves a very small population. In 2012, the U.S. microfinance industry served about 361,460 people with a total loan volume of $366 million, while the Brazilian industry—a country of comparable population, for example—served over 3 million people with a volume of $2.5 billion (FIELD, 2012; Microfinance Information Exchange; 2016). While developing countries often provide funding for informal, small-scale entrepreneurs, usually selling goods and services in a marketplace, the U.S. workforce is structured on wage employment, where benefits such as health insurance, pensions and paid vacations are required. This makes self-employment riskier and less
attractive. While it is a good sign that so few people need these special services, it
makes reaching scale more difficult, as programs are able to reduce costs per transaction
and gain efficiency with scale.

2) **The government safety net is functional.** The U.S. has a public safety net that reduces
the pressure for self-employment, giving people time to look for new wage employment
in the formal sector. Novogratz (1992) argues that this fact might even reduce
entrepreneurialism as the expectation of a safety net teaches people not to look for self-
employment in bad economic times.

3) **Competition from large firms limits true scale.** In developing countries, big chain
stores and retailers are not as common, making most competition between local
vendors. Competition against large firms in the U.S., however, means that
microentrepreneurs are unlikely to be able to compete on price or quality against the
imported goods made by lower-wage workers. This pushes microentrepreneurs into
niche, often service-oriented markets that do not pay well (Schreiner & Morduch,
2002).

4) **It is hard to compete with easy credit.** Microfinance’s largest competitor in the U.S.
is credit cards, which are more accessible to the poor in the U.S.—especially if they
have a good credit history (Schreiner & Morduch, 2002). According to the National
Small Business Association (2012), 37% of small businesses use credit cards to finance
their business, second only to a “revolving line of credit from a [formal] bank (43%)”
*(Access to Capital Survey, 4).*

5) **Group lending does not work well in the US.** Microfinance became well known for
its innovative use of group lending to hedge loan risks. Sternberg (1998/2004) reflects,
that the “purpose of joint-liability groups is to shift some of the work of screening and
enforcement from the lender to the group...however it is [U.S.] lenders who often place
strangers together in groups, losing the potential gains from self-selection and informal
contract enforcement.” While using neighbors and demographically similar lenders as
collateral has worked in developing countries, the U.S. context, which is more
culturally diverse, individualistic and physically mobile, has found leveraging social
capital to be a less valued and effective tool (Schreiner & Morduch, 2002).
6) **Microfinance for housing in the U.S. is more complex.** Unlike developing countries, in the U.S. few poor people build their own homes. For legal reasons, larger home improvements are often left to professionals; for safety and to protect the value of neighboring houses, local governments make and enforce building codes and zoning laws. These factors constrain access to small, low-cost houses because they increase minimum cost of a house and limit progressive improvements once a home is built (Schreiner & Morduch, 2002).

Consequently, the growth of microfinance has been limited. To improve results, the sector in the U.S. has increasingly turned towards financial education, a preference for individual lending, and diversification to include better-off clients (Schreiner & Morduch, 2002; Aghion & Morduch, 2005). While these barriers persist, the recent U.S. recession might weaken some of them as credit has become less available. The fact that the number of individuals served by MFIs has more than doubled since 2008 (>130% growth), along with a tripling of loan volume is suggestive of the recession’s impact on increasing demand for microloan services (Girardo & Edgcomb, 2011; U.S. Microenterprise, 2015). While concerns have surfaced over microloans creating a new “subprime” bubble, the fact that U.S. financial institutions largely rely on national credit rating scores, reduces the risk of loaning to someone who’s debt-to-income ratio is unsustainable (Hahn, 2008).

### 2.2 Housing Microfinance for House Purchase/Construction/Rehabilitation

Much like microfinance, classical Housing Microfinance (HMF) is not a subsidy-driven model but a market-based, demand-driven solution that has made housing an affordable and economically viable option for low-income households, addressing a market failure to extend traditional means of housing finance to low- and moderate-income households (Huh & Kolluri, 2004). Over time, HMF came to encapsulate any financial institution, whether a credit union with flexible terms or a stand-alone MFI that loans to low-income people for renovation or expansion of an existing home, construction of a new home, land acquisition, or basic

---

2. * “Rehabilitation” is generally understood as replacement of housing systems or features needed to satisfy building codes or make substantial, non-luxury improvements to these core systems or features. (See “Homeowner Rehabilitation Activities” retrieved from http://portal.hud.gov/hudportal/documents/huddoc?id=20653_ch04.pdf, p. 5). Rehabbing vacant properties usually exceeds these basic requirements in attempts to resell the homes for profit, and make them more attractive to new, potential homeowners.
infrastructure. Conceptually, HMF developed out of a realization that microentrepreneurs often use their homes as productive assets in generating income. A report issued by the U.S. Agency for International Development (2000) confirmed and aggregated its previous studies, along with those from the World Bank (1999), concluding that there was a growing field of home construction and improvement microloans in MFI’s across various countries (Housing Microfinance Initiatives, 2000). This trend was a logical evolution from the strong connection that exists between the home as both shelter and a place to house or support income-generating activities, easing the transition for MFIs to begin offering new financial products, structures, and loan terms. To date, most of the successes in this field in developing countries have been with home improvement loans (CGAP, 2004).

Unlike in developing countries, however, microfinance in the U.S. never developed a strong role in the housing market. As previously mentioned, this is partly because housing in the U.S. is more expensive to build and maintain, due to stricter housing standards and regulation. Additionally, the U.S. housing finance model is “debt-heavy and does not account for drops in income, changes in family size, or increases in housing expenses over time” (Huh & Kolluri, 2004). These structural factors make the HMF market for house purchase less economically viable for the poor (Louie, et al., 1998/2004) and less economically sustainable for microfinance institutions (Daphnis, 2004). The weakness of HMF in the U.S. is also due to a wider range of government programs and subsidies that service housing for the poor. Since the passage of the Housing and Community Development Act of 1974, a number of social programs became targeted at making housing purchase and maintenance more affordable for the poor. As a consequence, the Community Development Block Grant (CDBG) program came online, in part, helping existing homeowners repair and rehabilitate their homes. In 1977, the Community Reinvestment Act (CRA) required federally-regulated banks to extend credit to low-income communities in which they were chartered, leading to a range of new lending products targeted to areas that counted toward CRA (Williams, 1999/2004). This was followed by the 1978 Neighborhood Reinvestment Act (NeighborWorks America), which chartered branches across the country with the mission to promote affordable housing and community development through grants and training to local institutions. Maybe the most significant government intervention was the Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA) in 1992, which forced the largest government housing finance lenders, Fannie Mae and Freddie Mac, to serve lower-income families and lower-income and minority neighborhoods. The act contained three important provisions:
1. Quantitative targets for purchases of loans made to low-income borrowers and in low-income and minority neighborhoods;

2. A mandate that the Government-Sponsored Enterprises (GSEs) “lead the industry in affordable lending” through financing innovative pilots; and

3. Language that prohibits the GSEs from discriminating based on prohibited factors, such as a borrower’s race, ethnicity, or gender, in their loan purchase activities (Temkin & Ferguson, 2004).

As a result of these efforts, the government successfully led the market in the adoption of:

(1) More flexible standard conventional lending guidelines that allowed private lenders to serve borrowers with little equity, less than perfect credit, and relatively high levels of debt; and (2) affordable lending programs that allowed even more underwriting flexibility for eligible borrowers than do standard conventional loans (Temkin & Ferguson, 2004). These efforts, however, spurred a housing bubble in 2006-2007 as the same secondary markets used to hedge risk through Mortgage-Backed Securities (MBS), created a boom in riskier and predatory mortgage products. Starting in the early 1990’s, banks and other financial institutions began widely adopting a practice known as “securitization,” which allowed banks to package together illiquid assets such as mortgages, and sell them as securities to investors. Pushed by regulatory pressure to extend lending to riskier clients, banks saw securitization as a way to transfer risk associated with defaulting mortgages from the banks to the investors, and thereby offer riskier clients a financially accessible interest rate (Demyank and Hemert, 2008). This created a boom in subprime loans, increasing from the historical 4.5% of new loan origination in 2000 to 20% by 2006 (Inside Mortgage Finance, 2007). With real estate values surging, increased competition between banks for subprime clients led to a deterioration of underwriting that created a surge in nontraditional mortgage loan features. Examples of these features include adjustable rate mortgages (ARM), interest-only mortgages, pay option mortgages, and mortgages with large final payments known as “balloon payments.” When real estate prices began to stagnate, however, and banks raised loan interest rates to hedge against loses, many of the nontraditional mortgage features that had made mortgages accessible, quickly made the loans unsustainable. Since subprime loans with nontraditional features were mostly targeted and attractive to lower-income, poorer credit households, when rates increased sharply on new bank loans, subprime features followed suit in 2007-2008, producing a wave of defaults. Since national and international investors in MBS shared the default risks, ballooning defaults wiped out the assets of a much wider audience than the original lending institution.
Consequently, a new wave of regulatory protections came in the aftermath of the crisis, intended to maintain a safe level of mortgage lending to borrowers. Despite this renewed focus on safe mortgage lending to new homeowners, little attention has been given to existing homeowners who now have limited capacity to maintain their homes. According to David Dangler of Neighborhood Reinvestment Corporation:

…while significant resources have been focused to date on expanding first-time home buyer programs for low-income individuals, there is a real need to focus national efforts on post-purchase support for families and other programs to ensure that low-income home owners are able to sustain these gains in home ownership (Dangler, 2002).

Nonprofits, like Habitat for Humanity, have rushed in to provide rehab and post-purchase programs for low-income homeowners, however these programs are limited in funding, hence scale. As the number and percentage of owner-occupied households below the poverty level has continued to increase over the past five years the ability to afford housing maintenance becomes a greater concern (US Census Bureau, 2007-2013).

Nonetheless, private microloans for rehabilitation of aging housing stock have had success in the past. MFIs, like ShoreBank in Chicago, have proven since 1973 the economic viability of using microloans to rehabilitate aging homes in low-income markets. ShoreBank started when four friends purchased a bank in the South Shore neighborhood of Chicago to counteract the departure of other banks from an area undergoing racial and economic transition. By making loans to local landlords who wanted to rehabilitate their apartment buildings, ShoreBank helped stabilize working-class neighborhoods (von Hoffman, 2012). Nonetheless, the scalability of this model has been limited across the U.S., and ShoreBank was one of many small banks that did not survive the economic recession in 2008 (The Economist, 2010).

With all this said, U.S. MFIs discovered that HMF in the U.S. presents a unique set of challenges beyond the existing tensions with lending to riskier clients:

- **Cost versus affordability:** Interest rates for microenterprise finance are generally set much higher than prime rates for mortgage, while U.S. nonprofit lenders resist charging high interest rates in order to increase affordability (Ferguson & Haider, 2002). This undermines HMFs’ financial sustainability.
- **Term mismatch and interest-rate risk:** Unlike microenterprise finance, housing loans are spread out over a much longer period, increasing the risk of default by already risky clients (Ferguson & Haider, 2002). In the U.S., however, secondary market institutions,
such as Fannie, Mae, Freddie Mac, and the Federal Home Loan Bank System, better allocate the risk of mortgage lending to investors. As a result, borrowers can reduce their payments by extending the loan term (Ferguson & Haider, 2002). It is important to note that investors are given fiscal incentives to buy secondary mortgage debt instruments (e.g., mortgage investments were tax exempt, could be used as part of the legal reserve of commercial banks, and were compulsory assets in insurance companies).

- **Underwriting/credit analysis:** In microfinance loans for entrepreneurs, the ability to pay is generally measured using a maximum loan payment-to-income ratio based on household earnings. In housing microfinance, where the house is used as collateral, the Loan-to-Value ratio becomes much more important, as it ensures the lender can recuperate its loses, should the borrower default. While it is much easier to foreclose on property in the U.S. than in other countries, it is still expensive to do, and many nonprofit or mission-driven organizations go to great lengths to avoid doing so for both ethical and cost reasons. Though an understandable practice, this undermines HMFIs’ ability to effectively manage risk.

- **Technical assistance:** Traditional mortgage finance in developing countries funds the purchase of complete, newly built standard units, however HMF funds progressive, incremental building, such as new room additions or renovations that may require more technical assistance (Ferguson & Haider, 2002). In the U.S., zoning laws limit or outright prohibit progressive building in many places, making the building process more complex and rife for housing code violations, if done incorrectly. Lending directly to homeowners or small-scale developers who are less experienced, HMF institutions in the U.S. usually require more hands on assistance and oversight, increasing their operating costs.

- **Loan security and collateral:** Unlike microenterprise finance, HMF does not use group lending for two reasons:
  - 1) Housing lenders work in many communities, thus fail to create the needed peer pressure that is created by those that focus intensively on one neighborhood or village.
  - 2) The larger loan amounts and longer terms of housing loan impose greater risk on other members (Ferguson & Haider, 2002).
2.3 HMF for Routine Maintenance & Home Improvements

HMF for housing repair might be a more viable market for microfinance. According to a 2013 study by the National Center for Healthy Housing, 40% of metropolitan homes in the U.S. contain one or more health and safety hazards, indicating a 5% decline in housing quality since the 2009 Census at the height of the foreclosure crisis (NCHH, 2013). According to research by Huh and Kolluri (2004), this problem is greater in central cities than in suburbs, due in part to older housing stock, costlier house maintenance (e.g. historic preservation), and a greater concentration of low-income households. Belsky (2002/2004) estimates that 45% of extremely low-income homeowners have difficulty properly maintaining their homes because they spend more than half their income on other housing costs; and about 20% of low-income homeowners have a tough time accessing credit for home repairs and improvements for the same reason. As previously mentioned in the Microfinance section, U.S. households have a greater variety of financial products to help them finance housing, including home equity lines-of-credit, home equity lump sums, and reverse mortgages (for elderly). The poor, however, struggle to fully enjoy these products due to lower home values (due to where the poor tend to live), disproportionately reduced equity after the Recession (due to financial products that were predatory for lower income families), and a tendency for lower credit scores (due to the limited and/or irregular cash flow that comes with poverty).

Due to the scarcity of research done on HMF in the U.S., this paper pursues qualitative research methods within the market context of Baltimore City, to understand how microfinance is being applied to housing repair.

2.4 Definitions

Based on this literature, this paper uses the following definitions:

*Homeowner:* This paper understands the term “homeowner” to represent someone who lives in the house they own, i.e. owner-occupied house. This excludes those who own houses, but live elsewhere, potentially renting out their house to another household.

*Housing Microfinance (HMF) Lender:* Any lender that provides financial products to low-income households that use microfinance innovations (e.g. flexible underwriting, flexible payment terms, loan counseling or training). While this is not a perfect conception of HMF, which also demands fiscal sustainability, this definition best captures the diverse financial products currently available in the market that are different than traditional bank loans.
Microloans: Although the term “microloans” can cover a large spectrum of enterprises, this paper will focus on lenders that offered loans for routine housing maintenance and home improvements less than $25,000 that were accessible to “low-income” homeowners. The $25,000 loan and income limits are set by HUD for owner-occupied single-family homes, and most housing finance institutions use them as guidance (Fixing Up Your Home, 2016).

Low-Income: HUD defines a low-income household as one that makes less than 80% of the area median income (AMI) for a particular geographic region (HUD, 2016).

Routine Maintenance vs. Home Improvement: HUD’s definitions of “routine maintenance” and “home improvements” will represent the total scope of “repairs” applicable for microfinance (See Appendix A from the American Housing Survey). Generally, “routine maintenance” includes minor repairs and parts replacements to keep the house in compliance with housing codes, while “home improvements” means additions of new rooms, renovations or replacement of whole systems (e.g. fixing a hole in the roof is “maintenance”; replacing the whole roof is “improvement.” One maintains value; the other adds value). This paper will apply microfinance to both types of repairs.
Figure 1. Classical Microfinance Model

One-Time Infusion of Capital

- Financing Pool
- Principal + Interest returns to Capital loan pool
- Group Lending (Peer Accountability)

Figure 2. American Microfinance Model

Ongoing Infusion of Capital

- Financing Pool
- Principal + Interest returns to Capital loan pool
- Individual Lending (Credit Score & Training)
- High-cost, Educated Loan Officers
- Small Loans, moderate interest
<table>
<thead>
<tr>
<th>CONCEPT</th>
<th>DEFINITIONS</th>
<th>REFERENCES (AUTHOR, YEAR)</th>
<th>RELATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microfinance for Housing (Routine maintenance and home improvements)</td>
<td>Extension of microloans, whether from traditional bank or MFI, to low-income individuals or groups for purpose of home improvements and maintenance. This paper defines “home repairs and improvement” to include both “routine maintenance” and “home improvements,” as defined in Appendix A of the American Housing Survey (U.S. Census Bureau &amp; HUD).</td>
<td>(Belsky, 2002/2004) (Louie, et al., 1998/2004)</td>
<td>Microloans for routine home maintenance and small-scale home improvements, greatest potential for financial stability and scalability.</td>
</tr>
</tbody>
</table>

*“Rehabilitation” is generally understood as replacement of housing systems or features needed to satisfy building codes or make substantial, non-luxury improvements to these core systems or features. (See “Homeowner Rehabilitation Activities” retrieved from [http://portal.hud.gov/hudportal/documents/huddoc?id=20653_ch04.pdf](http://portal.hud.gov/hudportal/documents/huddoc?id=20653_ch04.pdf), p. 5). Rehabbing vacant properties usually exceeds these basic requirements in attempts to resell the homes for profit, and make them more attractive to new, potential homeowners.
3 METHODOLOGY

The general methodological approach will be qualitative research of how microfinance for housing repair works within the market context of Baltimore City, leveraging secondary government and private research, along with primary interviews with lenders and borrowers.

3.1 Qualitative Research

We conduct qualitative research because a problem or issue needs to be explored...because we need a complex, detailed understanding of the issue. This detail can only be established by talking directly with people, going to their homes or places of work, and allowing them to tell the stores unencumbered by what we expect to find or what we have read in the literature. We conduct qualitative research when we want to empower individuals to share their stories, hear their voices, and minimize the power relationships that often exist between a researcher and the participants in a study (Creswell, 2007).

Due to the lack of research specifically on HMF in the U.S., along with a lack of MFIs that do HMF work, this paper pursued an exploratory model that used semi-structured interviews to understand nuances in the HMF lending market. This qualitative approach to inquiry allowed a “the collection of data in a natural setting sensitive to the people and places under study, and a data analysis that is inductive and establishes patterns or themes” (Creswell, 37). Creswell lays out eight factors that frame qualitative research:

- Researcher as key instrument
- Multiple sources of data
- Inductive data analysis
- Participants’ meanings
- Emergent design
- Theoretical lens
- Interpretive inquiry
- Holistic account

Researcher as key instrument. This is when the qualitative researcher collects data themselves through examining documents, observing behavior, and interviewing participants. This was the case in this paper, where the researcher directly interviewed lenders and homeowners, observed lending patterns in his community, and examined documents and resources provided directly by lenders.

Multiple sources of data. Creswell explains that qualitative researchers typically gather many forms of data, such as interviews and documents, rather than relying on a single data source. The researchers then, “review all the data and make sense of them, organizing them into
categories or themes that cut across all the data sources” (Creswell, 38) This paper also used multiple sources of data including interviews, and secondary documentation from government and nonprofit publications. All this data is analyzed through the lens of theoretical frameworks, explained in Methodology, and used to draw common themes across the data and draw conclusions.

*Inductive data analysis.* Creswell asserts that qualitative researchers build their patterns, categories, and themes from the “bottom up,” by organizing the data into increasingly more abstract units of information (38). This paper filters primary and secondary sources through two theoretical frameworks, in order to group and explain commonalities and their impact on the thesis question.

*Participants’ meanings.* Some qualitative researchers keep a focus on learning the meaning that the participants hold about the thesis “problem” identified, not the meaning that the researchers bring to the research or writers from the literature (Creswell, 39). Since there is not much literature specifically on HMF in the U.S., most of this paper is driven by interview results and compared to existing literature only to provide opportunity to highlight differences and areas for further research and understanding.

*Emergent design.* Creswell calls the research process for qualitative researchers, “emergent,” meaning that the initial plan for research “cannot be tightly prescribed, and that all phases of the process may change or shift after the researchers enter the field and begin to collect data.” This certainly occurs in the interviews, where the researcher follows a semi-structure format that allows him to skip impertinent questions, while asking follow-up questions on others.

*Theoretical lens.* “Qualitative researchers often use a lens to view their studies…the study may be organized around identifying the social, political, or historical context of the problem under study” (40). This is clearly done in the paper’s use of market frameworks that seek to help define the market itself through exploring historical, social and political context.

*Interpretive inquiry.* “Qualitative research is a form of inquiry in which researchers make an interpretation of what they see, hear and understand” (Creswell, 40). After collecting various data both primary and secondary, and filtering it through different lens, this papers makes conclusions about what the data means for resolving the thesis topic. The researcher had to interpret what issues or components were most salient to homeowners and lenders and use different frameworks to bring them together for analysis.
Holistic account. “Qualitative researchers try to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges” (Creswell, 40). Since this paper is looking to define a market, a core component was hearing from both borrowers and lenders through interviews.

These eight factors framed this paper’s topic well, making the choice for a qualitative approach clear.

3.2 Market Selection

Baltimore City is a relevant starting point for research, as it has one of the highest poverty rates in its region (Sandoval, 2015) and one of the largest unbanked and underbanked populations in the country (Harvie & Kast, 2016).

Founded in 1729, before American independence, Baltimore City has an older housing stock than the U.S. average—44 years old versus 40 (AHS, 2013). Reaching its peak population of over 900,000 in 1970s as a major manufacturing and port city, the city’s population has declined by over 30% due to deindustrialization and a shift to services industry (Lazarick, 2015). Consequently, 16,000 houses have remained uninhabitable within the city limits, with an additional 46,800 homes that are vacant—approximately 10.1% of Baltimore’s housing stock (McCoy, 2015). This clustering of high vacancy in the city reduces the property value of neighboring occupied homes, and increases the need for repair. Additionally, the concentration of poverty in the city, along with the poor tending to live in older housing stock, makes the ability to make these repairs less economically feasible. While a number of programs in Baltimore focus on first-time home purchase and rehabilitation, very few focus on property upkeep for those who already have homes (Huh & Kolluri, 2004). Low-income Baltimorean homeowners are also less likely to have access to a home equity loan (AHS, 2013), with lower income, leaving them to their savings, credit cards or alternative financial services (like payday loans or check cashing stores³). This credit-financing gap may provide an opportunity for microfinance to play a role.

³ Payday loans and other alternative financial services are frequently considered “predatory” due to high interest rates that keep the borrower in debt. Recent research by Pew Charitable Trusts has not found these services commonly used by low-income homeowners, and even more rarely for home repairs. As such, this paper does not examine them as comparable competitors in the HMF market. (Source: http://www.pewtrusts.org/en/research-and-analysis/reports/2012/07/19/who-borrows-where-they-borrow-and-why)
Table 2. Baltimore Comparison to U.S. Market

<table>
<thead>
<tr>
<th></th>
<th>U.S.</th>
<th>Baltimore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Median Income (AMI)</td>
<td>$53,482$(^4)</td>
<td>$41,819</td>
</tr>
<tr>
<td>Inadequate Housing(^5)</td>
<td>4.7%(^6)</td>
<td>4.5%</td>
</tr>
<tr>
<td>Median Housing Stock Age</td>
<td>40 years old</td>
<td>44 years old</td>
</tr>
<tr>
<td>Vacant Housing (Year Round)</td>
<td>9.3% (2015)(^7)</td>
<td>10.4% (2015)</td>
</tr>
<tr>
<td>Home Equity Use among</td>
<td></td>
<td></td>
</tr>
<tr>
<td>homeowners below AMI (vs.</td>
<td>1.7% (vs 3.2% above median)</td>
<td>1.4% (vs 4.4% above median)</td>
</tr>
<tr>
<td>those above AMI)(^8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No/limited credit card access</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Unbanked &amp; Underbanked)(^9)</td>
<td>26.9% (2015)</td>
<td>39.3% (2009)(^10)</td>
</tr>
</tbody>
</table>

Source: American Housing Survey, 2013 (unless otherwise noted).

\(^4\) U.S. Census, U.S. Quickfacts, 2010-2014
\(^5\) Severely and moderately inadequate housing as defined by HUD (See “Appendix A: Subject Definitions and Table Index”).
\(^6\) Average among 24 cities surveyed for 2013 American Housing Survey.
\(^7\) Average taken from U.S. Census of the 75 Largest Metropolitan Statistical Areas: 2015.
\(^8\) This measures the percentage of homeowners, who use the equity in their homes. This shows an association between income and use of home equity. This paper suggests the association is linked to low-income households tending to live in areas with a higher concentration of vacant housing, which lowers property values and equity growth.
\(^9\) “Unbanked” and “underbanked” populations are those who either have no bank account, or have a bank account, but use alternative non-bank financial services to meet needs. See the 2015 FDIC National Survey of Unbanked and Underbanked Households for further definitions and statistics cited in this paper.
\(^10\) Source is from analysis done using 2009 FDIC National Survey of Unbanked and Underbanked Households and American Community Survey data that disaggregates data below the high-level Metropolitan Statistical Area (MSA) used for U.S. Census data. See Corporation for Enterprise Development’s report on Most Unbanked Places in America, 2009.
3.2.1 Interviews

In total, six (6) Baltimore homeowners were interviewed, and four (4) organizations were interviewed: three (3) non-profits and one (1) government entity.

Homeowners. To get qualitative information on Baltimore homeowners, the researcher contacted his immediate network of friends and family members in Baltimore City, and interviewed those who were:

1) Owner-occupied homeowners in Baltimore City, and
2) Willing and able to be interviewed.

Lenders. To better understand the microfinance and housing repair market in Baltimore, the researcher interviewed Baltimore region-based lenders who offer loan products that:

1) Offer loan products accessible to low-income homeowners—especially to those at or below 80% of the AMI of the Baltimore metropolitan region. In 2014, the median percentage of microloan clients—using microloans for small business and housing—with household incomes at or below 80% of the HUD AMI for their location was 70%. Most MFIs use HUD’s metric for reporting (U.S. Microenterprise, 2015);
2) Make housing maintenance and improvement loans up to $25,000; and
3) Generally use microfinance innovations to provide loans accessible to low-income residents.

All interviews were done by phone. This was in part because the researcher did not have a car to interview people in-person, and many of the interviewees did not have computer or limited or no accessibility to Skype. Additionally, the researcher had very limited time during the workday to meet interviewees, since he worked a full-time day job. During each phone interview, the researcher took notes and recorded them, when allowed by the interviewee. While the questions for both homeowners and lenders followed a basic format, they were mostly open-ended and semi-structured. The typical interview ran about 30 minutes, however interviewee engagement often dictated the length and quality of content.

Saunders, Lewis and Thornill (2007) describe a semi-structured interview as one where there is a list of questions, but they might vary between interviews. Depending on the interviewee, some questions can be skipped, re-ordered or even added in order to increase understanding. This is contrasted with standardized, structured interviews, which are used to collect
quantifiable data, and therefore involve much stricter rules for internal validity. The flexible structure allows interviewers to ‘probe’ interviewers, where further explanation is needed, and allows interviewees to “think out loud” and give more information about what they see as important (Saunders, et al., 324). As such, this paper adopts this interview approach into the model. A full listing of interviews can be found in Appendix 2, and the basic questions for each group in Appendix 3 and Appendix 4.

3.3 Frameworks

After the interviews, this paper analyzed the data using two layers of framework:

- **PESTEL**\(^{11}\): Describes the macro-environmental context in the U.S. and Baltimore

- Porter’s Five Forces: maps competition for lenders operating in Baltimore’s market context.

Both frameworks rely on a combination of primary and secondary data. The primary data for Baltimore includes phone interviews with Baltimore lenders and homeowners; secondary data draws heavily from U.S. Census data, and university and private sector analysis on access to credit and housing repair trends. A full listing of who was interviewed is in Appendix 2. The purpose of the frameworks is to develop a deeper understanding of the barriers to scale and fiscal sustainability for both lenders and borrowers in Baltimore and the US.

1) **PESTEL**: General market context is organized using PESTEL analysis, identifying the macro environmental factors (political, economic, social, technological, environmental and legal), which shape the broader HMF context in the U.S., and Baltimore. Companies typically use PESTEL analysis to determine whether they want to enter a particular market given various factors, but PESTEL is also used to define a market itself or feasibility for a specific type of intervention. Shilei & Yong (2009) wanted to analyze the current operating environment that the Chinese government and energy companies faced when it came to improving energy efficiency in housing. They used a PESTEL analysis to map the various challenges that these main stakeholders confronted, using a specific region of the country (the “northern heating region”) as context for analysis. Shilei & Yong called this a “target-oriented obstacle analysis” (2009). Based on this example, this paper leverages the exploratory and descriptive nature of the PESTEL analysis to map the obstacles for and potential of HMF products for both local government and private lending stakeholders, within the market context of Baltimore City.

---

\(^{11}\) PESTEL is a mnemonic for Political, Economic, Social, Technological, Environmental, and Legal.
intent is to draw conclusions on the feasibility for overcoming these challenges to growth and sustainability of HMF products.

2) **Porter’s Five Forces**: The PESTEL analysis will then be used to map the competitive forces shaping the HMF market in Baltimore, using Michael Porter’s Five Competitive Forces. Hill and Jones (2007) explain, “Porter’s Five forces model of competitive analysis is an illustration of how the Five competitive forces can be used to explain low profitability and viable entries to an industry.”

These Five Forces are:
1) Threat of new entrants
2) Threat of substitutes
3) Bargaining power of suppliers
4) Bargaining power of buyers
5) Rivalry among the existing competitors

**Threat of New Entrants.** New entrants to an industry increase product supply, increasing competition on prices, inputs to produce the product, and investment in retaining market share. High barriers to entry reduce the threat of new entrants.

**Threat of Substitutes.** A substitute product performs a similar function as an industry’s product by a different means. When the threat of substitution is high, suppliers tend to keep prices lower and seek product differentiation to remain competitive, at the expense of profitability.

**Bargaining Power of Suppliers.** If there are few suppliers for a larger number of customers with few alternative/substitute products, then the supplier can charge higher prices.

**Bargaining Power of Buyers.** If there are buyers that are large or organized enough to be the main clients for less organized or smaller suppliers, they can demand lower prices, better quality or more service, at the expense of the supplier.

**Rivalry.** Rivalry among existing competitors takes many forms, such as price reductions, new products/services and increased marketing/branding to gain market share. The greater the rivalry, the lower the profitability for the supplier.

McGahan (1997) explains that “the intensity of these forces determines the level of profitability in an industry, and their thorough understanding, both individually and in combination, is beneficial in deciding what industries to enter, and in assessing how a firm can improve its competitive position” [emphasis added].
J. Pringle & J. Huisman (2011) used Porter’s framework to map the higher education market for the first time, in the market context of Ontario, Canada. They wanted to know, “What are the strengths and weaknesses of the current system, and where and how can universities position themselves to be more competitive in the future” (38). The goal was to gain a foundational understanding of both the main stakeholders and how they interacted, in order to provide a basis for recommendations on further research and analysis. Based on this example, this paper also uses Porter’s framework to create foundational mapping of the HMF market’s main stakeholders, and how the “current system” works.
Figure 1. Research Outline

**Qualitative Data Collection**

- Interviews
  - Homeowners
  - HMF Lenders

**Market Analysis**

- Interview Data
- Survey Data
- PESTEL
- 5 Forces
- Findings/Conclusions
3.4 Limitations

3.4.1 Data on “Low-Income” households

HUD uses Area Median Income (AMI) to determine the Family Median Income (FMI) limits for eligibility in its programs. Since this is the framework that housing finance lending institutions use, these calculations are crucial for this paper to compare loan products and determine the level of access homeowners have to these products. Since the U.S. Census is the main institution that collects historical data on home maintenance and improvements, this paper relies on this data to determine current spending habits and potential market demand for certain loan products. Both the U.S. Census and HUD use comparable definitions of “routine maintenance” and “home improvement,” however they use two different calculations for poverty. The U.S. Census calculates what is called “poverty levels” which compares, “pre-tax cash income against a threshold that is set at three times the cost of a minimum food diet in 1963, updated annually for inflation using the Consumer Price Index, and adjusted for family size, composition, and age of householder” (IRP, 2014). This poverty measure does not take into account the cost of housing in determining poverty. Consequently, in the course of research, this paper needed to calculate estimates of 80% AMI for “routine maintenance” and “home improvement” from Census data based on the household income ranges and number of household members it provided. Examples of these calculations are provided in Appendix 1 for reference, however, this is to note that calculations for the amount of spending by households below 80% AMI will be either averages or illustrative ranges.

3.4.2 Geographic boundaries

Both HUD and the U.S. Census use the Baltimore-Towson-Columbia Metropolitan Statistical Area (MSA) as the geographic basis for their data collection for “Baltimore.” Consequently, with Baltimore having a median income 44% lower than Towson, and 58% lower than Columbia, being lumped together with these areas inflates the AMI income limits and dilutes percentages of Baltimore City low-income households relative to population (U.S. Census, 2015). Practically, this means that many households may qualify for assistance that they do not really need, and are taking scarce resources from those who may need it more. In this paper, this means that low-income household spending on routine maintenance and home improvements may appear higher than it actually is.
4 ANALYSIS

4.1 PESTEL

PESTEL is a mnemonic for identifying the Political, Economic, Social, Technological, Environmental, and Legal factors that shape an industry. This PESTEL analysis is used to describe the Housing Microfinance (HMF) industry in the U.S. and Baltimore, and will weave together primary data from the aforementioned interviews and survey, along with U.S. Census data, and secondary data from industry reports.

**POLITICAL.** These factors determine the extent to which a government may influence the economy or a certain industry. The major political events that shape the HMF sector are:

- **1974 Community Development Block Grant:** Ever since President Lyndon B. Johnson’s “War on Poverty” in the 1960s, a number of social programs became targeted at making housing maintenance more affordable for the poor. In 1974 President Gerald Ford signed the Housing and Community Development Act, which created the Community Development Block Grant (CDBG) program. CDBG’s core program guaranteed access to funding to cities and counties based on a need-based formula, for the purpose of “providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons” (*CDBG Entitlement Program Eligibility Requirements*, 2016). While each recipient has great flexibility in determining fund usage in collaboration with the target population, some cities, such as Baltimore, have used it to help low-income homeowners maintain their homes (*CDBG Application and Forms*, 2016). This is a major source of funding for Baltimore lenders, such as Health Neighborhoods.

- **1977 Community Reinvestment Act (CRA):** In 1977, the Community Reinvestment Act (CRA) required federally-regulated banks to extend credit to low-income communities in which they were chartered, leading to a new funding stream for MFIs that included housing repair and renovation purposes (Williams, 1999/2004; Meeks, 2012).

- **1978 Neighborhood Reinvestment Corporation Act (NeighborWorks America):** CRA was followed by the Neighborhood Reinvestment Act (renamed NeighborWorks America in 2005), which scaled up a model of urban redevelopment that trained local stakeholders (public and private) to pool resources to address the housing needs of low-income communities (*FDIC Law, Regulations, Related Acts*, 2016). These branches
span all 50 states, and typically support non-profit chapters that also offer products and programs to help homeowners with repairs and renovations.

While all these actions are legal, they do not directly regulate the HMF market, instead enabling greater access to resources both technical and financial.

**ECONOMIC.** These are factors in the economy that directly impact a HMFIs performance and business model.

**National**

The American economy has largely recovered to pre-Great Recession economic indicators, but with a much tighter credit market, especially for mortgages. Home equity has also been wiped out for many households as a mechanism to finance repairs and renovations, and while foreclosure rates have come down, they are still remain above Pre-Recession levels (Joint Center for Housing Studies, 2016). Spending on home improvement has returned to pre-Recession levels, despite high foreclosure rates, and interest rates set by the Federal Reserve remain at historic lows to spur economic growth. Since the recovery began in 2009, interest rates have slowly increased over the past two years and inflation has remained low (Freddie Mac, 2015), and policymakers have been especially leery of increasing tax burdens (Freddie Mac, 2015; Kiersz, 2015). In this environment MFIs have seen an increased demand for their services, but an overall reduction in their own access to credit (IFC, 6).

The HMF industry also still faces long-term structural barriers. While credit has become more difficult to obtain, credit cards still provide an easier option for Americans to finance small repairs than working with an MFI (Freddie Mac, 2016).

Wage employment is the standard in the U.S., unlike in developing countries where residents may have a larger self-employment and informal sector with irregular cash flow (Fields, 2014). As such, the market is accustomed to a monthly billing structure that fits the cash flow of the average consumer. Loan products that do not conform to this structure may experience higher rates of default as a result.

**Baltimore**

While the city has experienced economic recovery with the rest of the country, it has been slow to regain its labor participation rates relative to others, and continues to combat a very stubborn poverty rate that is concentrated in the region. The poverty rate is at 23% compared to 9.7% in
the State of Maryland, and 13.5% nationally (U.S. Census, 2015). Generally, lower-income homeowners live in older housing, in part because it’s cheaper, but also because older households tend to live on fixed income. Either way, older homes often require more maintenance and renovation than newer homes. Combined with higher likelihood of subprime credit scores, low-income Baltimore homeowners may experience reduced access to credit to finance these home improvements, which HMFIs could provide.

**SOCIAL.** These factors analyze the social environment of the market, and evaluate components like cultural trends, demographics, population analytics, etc.

**National**

Demographic shifts now indicate that Millennials (born between 1980-1999) are now the largest living group, and place the highest value on social responsible investing (U.S. Chamber of Commerce Foundation, 2012; Spectrem Group, 2015) While Millennial distrust of corporations and banks is high, organizations with a social mission, such as impact investing, earn support (Deloitte, 4). Despite this trend, the group spending the most on home improvements is still the elderly. Older homeowners account for a large share of home improvement spending, nearly $90 billion in 2013, and the increasing number of households aging in place will drive up home improvement volume in the foreseeable future (Freddie Mac, 2016).

**Baltimore**

Prospects for scale might be relatively better in the Baltimore City, which has one of the lowest median household incomes in the region ($41,819 in 2014) and also an older housing stock (McDonald, 2014). While Baltimore has seen the most population growth among Millennials, elderly homeowners remain the biggest spenders for homes improvements in Baltimore, as they make up a higher percentage of homeowners and tend to live in older housing stock (AHS, 2013). From homeowner interviews, there is a general cultural preference against bank loans altogether. When asked about taking out private bank loans, one homeowner confessed:

> In my experience, if you can avoid it, avoid it. I still think there are areas...where there is redlining...they’re not going to give you the loan, or the interest rates are going to be so high, based on either your credit score or the area that you live in. And I found that for me to be...a reality. And then the programs that I worked with were just for people in need, and worked out to our advantage. Without these programs, I would be in an entirely different financial situation (Middleton, Homeowner Interview #5).
Middleton went on to explain that having programs designed for people in his situation, who were willing to work with him as far as flexible underwriting and loan terms was critical. Johnson also confirmed that his initial home loan through a Catholic nonprofit called St. Ambrose was fundamental in his ability to secure housing and maintain it (Johnson, Homeowner Interview #1).

This general aversion to taking on debt was echoed through the interviews and heard most loudly by those using their homes as collateral. Jim Hix from Baltimore Housing noted that even more than denying people for low LTV, the top reason for denial is that the applicant—usually elderly—simply did not want to put a lien on their property because “I don’t want the City to come take my house!” (Hix, Lender Interview #3). One resident mentioned that she didn’t want to pass down debt to her children by having a lien on her home (Blanding, Homeowner Interview #7). And yet another resident mentioned that having his home “free and clear” gave him a sense of “freedom” that he and his wife would always have a home (Johnson, Homeowner Interview #1).

**TECHNOLOGICAL.** These factors related to innovations in technology that may affect the operations of the industry and the market favorably or unfavorably.

As mentioned in *Social*, millennials are the largest demographic group in the US. Combined with their heightened social consciousness, they are also the most technologically connected and savvy. This has led to the proliferation of crowdfunding platforms for social good such as Kiva.org and StartSomeGood.com, and the organizing of the industry into the Global Impact Investing Network in 2009. These trends related to millennial preferences make HMF institutions a natural fit for investment and growth, especially if they do a good job making the experience technologically efficient (i.e. an online platform), and personally gratifying (i.e. making the investor feel personally connected to the person or project) (Keng, 2009). This likely means MFIs will need to budget and invest more in technology for the investor, while still providing an accessible community presence for clients; both types of investments can be expensive. Physical presence is essential for the MFI to truly understand the client and offer the right financial products and terms, which are crucial to expanding access to finance to riskier populations. Flexible underwriting, shorter loan terms, lower loan amounts, and frequent payments are microfinance innovations that all require more intense client-lender interaction (Christen, 2004). Furthermore, with increased lending regulation, forcing lending institutions to require greater certainty of borrower “ability to repay,” more documentation will be needed.
Streamlining these processes to reduce the burden on the borrower will be crucial in maintaining competitiveness with credit cards.

**ENVIRONMENTAL.** These factors include all those that influence or are determined by the surrounding built environment.

Since Baltimore’s housing stock is older than other areas of the state, several government programs exist to help low and middle-income homeowners upgrade the energy efficiency of their homes, as well as upgrade core systems such as HVAC and plumbing (Baltimore Housing, 2016). These programs might compete with microloan products for these needs. The city also has a very high vacant housing stock that creates additional structural burdens to neighbors attached to one. One resident, living between two vacant properties, said:

> The house 1917 [next door] porch roof collapse, and it collapsed right onto my porch, and the house at 1913 [rowhouse on other side of resident]...[the City] had to contain the leak that was coming through to my side of the building...the mere fact that the house was vacant causes distress...they [insurance companies] make it impossible for people to get homeowners insurance when they have vacancies right next door” (Robinson, Homeowner Interview #2).

Concentration of vacant and abandoned houses also lowers the value of surrounding homes, impairing the use of homeowner equity for loans. Multiple lenders cited this as an issue in being able to approve loans. This further exacerbates the gap between the need for repairs and access to credit that a HMFI could provide.

**LEGAL.** This section focuses on the legal framework that impacts the business environment within the U.S. and Baltimore, in efforts to highlight areas that MFIs will need to address for successful market entry.

**CDFI Certification & Funding:** In 1994, the Riegle Community Development and Regulatory Improvement Act created a government agency that provides funding to CDFIs and acts as a gatekeeper by providing CDFI certification, required to receive money from the CDFI Fund. CDFI’s are private sector, financial intermediaries with community development as their primary mission—focusing on under-served markets (CDFI Coalition, 2016; Benjamin, L., et al, 2003). Most MFIs are CDFIs, especially since CRA was updated in 1995 to allow loans and investments in CDFIs to qualify as a CRA activity. CDFI certification is regulated by Department of Treasury. Many traditional banks look for CDFI certification to ensure that their donations count towards their CRA requirements. For the MFI this means that in order to
remain competitive for private and government funding, it will need CDFI certification. This increases the barrier to market entry and sustainability.

**Consumer Protection Laws:** At the Federal level, no interest cap exists on loans, however all lenders must disclosure interest rates, and final costs in a clear and transparent manner. This is governed by the Federal Trade Commission through the Truth in Lending Act of 1968. Since the Great Recession, Congress has created the Consumer Financial Protection Bureau (CFPB) in 2011, which has increased regulation of lending practices throughout the U.S. geared at ensuring borrowers have the “ability to repay” mortgage loans, and are generally better informed consumers of mortgages products. While these new regulations are meant to protect the consumer, they may also have a chilling effect even beyond mortgage lending. Omar Marshall, of Neighborhood Housing Services mentioned that:

> We have lower interest rates and have a community mission... but we still have to operate as a lender...if LTV, DTI [Debt-to-Income] aren’t there...and with the new TRID [TILA-RESPA Integrated Disclosure] laws we have to be very careful about creating a loan for someone that isn’t ready for it…The goal isn’t to get them into further debt...[but] to repair their home” (Lender Interview #3).

At the State-level, however, interest rate caps abound and differ by state. Baltimore City, for example, is governed by interest rates set by the State of Maryland through the Commissioner of Financial Regulation. Most lenders are required to be licensed by the Commissioner of Financial Regulation. Annual interest rate caps currently range from 24-33% depending on loan size ("Pay Day" Loans, 2016). Consumer protection has its place, but because the supply of microfinance to the poor costs more than supply of traditional finance to the non-poor, the poor will likely have to pay more, if they are to have sustainable, ongoing access to finance (Schreiner & Morduch, 2002). Many MFIs operating in the developing world have become self-sustaining, and even profitable, organizations. This is largely due to low operating costs and the ability to charge interest rates that fully compensate for risk and the cost of processing the loan. It is not uncommon for interest rates for microloans made in the developing world to reach 100% annually. However, MFIs in the U.S. are subject to high operating costs (driven by labor costs), and legal caps and cultural norms that limit the interest rates that U.S. MFIs are willing to charge. U.S. MFIs typically charge interest rates that are slightly above prime (e.g. in Los Angeles, Accion East and Online Women’s Program interest rates range from 8 to 15%) and use a mix of government, foundation, and private donations to cover operating costs (“Microlending in the United States”, 2016). HMFIs, however, tend to charge below prime
interest rates to ensure “affordability.” In the U.S., interest rate caps vary widely from state to state, ranging from 7% in Michigan to 45% in Colorado (Wharton, 2011). MFIs that want to expand into HMF should be aware of the competition presented by subprime interest rate lending and find ways to compete, if not on interest rate on some other attractive loan feature.

**Zoning Laws:** Microfinance for housing is less common in the U.S., because state and local laws impede progressive home improvements to low-cost, starter homes. Few poor people build their own homes, and small repairs and improvements may be financed by credit cards or home-equity loans. These options exist due to a stable macroeconomy (that assures low, stable inflation over long periods of time), extensive credit bureaus and credit-scoring systems, abundant wage jobs (used as proof of ability to pay), and a legal system that facilitates relatively inexpensive foreclosure (Schreiner & Morduch 2002). For legal reasons, larger home improvements are often left to professionals; for safety and to protect the value of neighboring houses local governments make and enforce building codes and zoning laws. While these laws serve valid purposes, they also constrain access to small, low-cost houses because they increase minimum cost of a house and limit progressive improvements once the home is built (Schreiner & Morduch, 2002). Due to this complexity, MFIs entering the market will need to budget for training costs to help borrowers choose qualified contractors to do work up to housing code.

**Labor Laws:** High wages contribute to costs, and lending is labor intensive, especially given the U.S. focus on training. The U.S. lacks a ready supply of unemployed, college-educated people willing to work with the poor for low wages, producing the inexpensive, high-quality labor that is crucial in the cost structure of the best programs in the developing world. Furthermore, the complexity of microlending in the U.S. has led to a focus on client education and training that is in sharp contrast to the developing world (Schreiner & Morduch, 2002). The Baltimore region has a large college-educated workforce, while maintaining a relatively lower cost of living than neighboring cities (Bernardo, 2016; Baltimore, Maryland Cost of Living, 2016). This might help mitigate the cost structure gap that MFIs generally face in finding an educated workforce that will accept lower wages.

4.1.1 PESTEL Summary

The market for HMF loan products in Baltimore closely matches the academic literature regarding microfinance in the U.S. generally. The same structural costs exist as it pertains to high government regulation costs in labor, zoning and consumer protection laws. Baltimore lenders also share in the trend toward high training and personalization costs. At the same time,
similar market demands exists as it relates to an increasingly aging housing stock, and population. Baltimore’s housing stock tends to be older, and has a greater concentration of poverty, both factors making the demand for HMF products potentially higher than other areas of the country. Lender supply of financing also seems “healthy,” but it is mostly from philanthropic or government sources, not from loan interest, which forces lenders to abide by certain rules that favor “affordability” over financial sustainability.
4.2 FIVE FORCES
This framework uses Porter’s Five Forces that define the health of competition within a particular market. This paper applies the framework to firms operating in Baltimore’s market context for those who provide financing to low-income homeowners for housing repair and renovation.

1. Threat of new entrants

New entrants to an industry bring new capacity and a desire to gain market share that puts pressure on prices, costs, and the rate of investment necessary to compete (Porter, 80). The threat of new entrants in Baltimore is very weak. Restrictive government policy hurts new entrants into this industry. This is because the same regulations that were applied to the large banks that precipitated the Great Recession are also applied to small, community lending institutions. This has been one of the factors that have caused one in four local banks to close since 2008 (Mitchell, 2015). As mentioned in the PESTEL analysis, existing laws capping interest rates, and the new federal oversight of lending through the Consumer Financial Protection Bureau, increase compliance costs, and reduce profitability needed for sustainability.
Baltimore homeowners brought up a couple barriers to entry not mentioned in the literature. One recurring theme was the issue of finding qualified contractors. Often times major renovations or systems replacement (e.g. electrical and HVAC—heating, ventilation and air conditioning—work) require certification to ensure it is installed up to housing code. One resident reflected, “I wanted to do it the right way but….,” His voice trailed off before he explained that he tries to do as much himself as possible, and barter services with neighbors that have certain skills (Johnson, Homeowner Interview #1). Another homeowner who also does housing repair work said that, “Most consumers are not savvy…about what market rates should be for goods and services in the home improvement arena…and I do a lot of consulting in that area that is pro bono” (Batts, Homeowner Interview #6). She goes on to explain that there is not any legal requirement for contractors to provide market education services, nor is there incentive. She suggested that maybe there is a role for the State to add a contract clause requirement for certified contractors to direct homeowners to resources like that before purchase (Batts, Homeowner Interview #6). This confirms HMF literature on the increased complexity of HMF in the U.S. that adds extra costs to borrower and lender alike (Schreiner & Morduch, 2002). It also reveals the reasoning in turning to financial education and training as part of the lending process (Schreiner & Morduch, 2002; Aghion & Morduch, 2005).

Lenders in Baltimore are aware of certified contractor costs. Some organizations like Neighborhood Housing Services (NHS) provide a list of contractors that provide certain repair services to increase borrower knowledge, but cannot themselves guarantee or certify them for quality. Jim Hix, Director of the Office of Rehabilitation Services for Baltimore City government, acknowledged the unique cost burden on low-income households, but also highlighted the City attempts to at least help the most vulnerable population with this issue: senior citizens (Hix, Lender Interview #3). Baltimore Housing provides two different loans, specifically for low-income senior citizens that not only pays for large emergency repairs, but also covers the costs for certified contractors to ensure housing code compliance (Baltimore Housing, 2016).

2. **Threat of substitute products or services**
Credit cards are the biggest substitute for microloan products. Credit card companies can already provide the supply-side economies of scale that microlenders cannot, because they can spread their fixed costs over more clients, develop and use more efficient technology, and command better terms from their suppliers. Since credit cards provide credit to a variety of customers with both good and bad credit, they can spread costs and risks over more people. Furthermore, banks sponsor most credit cards, so they can demand better terms from financing suppliers to be able to reach “down market.” Bank sponsorship speaks to the “demand-side benefits of scale,” which arise where a buyer’s willingness to pay for a company’s product increases with the number of other buyers who also patronize the company (Porter, 81). It is easier to get your credit card from where you bank, since you can manage both accounts in one place. This ease and existing relationship can translate into increasing the costs of switching to a new bank or credit card, making new entrants even less likely. Although switching between banks is relatively easy, due to competition, switching to a microlending institution that needs to get all of your information again and build a new customer relationship can be cumbersome.

3. Bargaining power of suppliers

Powerful suppliers can capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants (Porter, 82). Given the low rivalry between competitors this might not seem to be the case, however there are several factors in favor of greater supplier bargaining power vis-à-vis the borrower.

One of those factors is the increasing age of housing stock. In the U.S., the average age of the housing stock has increased compared with previous years, as new home construction has slowed. According to the latest American Housing Survey that HUD published in 2013, the median age of owner-occupied homes is 37 years old, compared to only 27 years old in 1993 (Zhao, 2015). New home construction (built within past 4 years) made up only 2% of the housing stock in 2013, versus 6% in both 1993 and 2003. While this represents an opportunity for builders and developers, as housing demand is steadily increasing over time, it also represents an opportunity for lending institutions who will need to help homeowners manage the increased maintenance and renovation costs that come with living in older housing stock. This is especially true for lower income homeowners who are more likely to live in older housing stock (Zhao, 2015). These trends are especially acute in Baltimore. While the State of Maryland has a median age of owner-occupied housing stock of 40 years, Baltimore’s median age is 44 years with greater poverty (AHS, 2013). Jim Hix from Baltimore Housing confirmed
this analysis saying that both an “aging housing stock and a good deal of low-moderate household families…lead to major issues” (Hix, Lender Interview #3).

Another advantage for suppliers over borrowers is the relative availability of funds and ability to provide them at favorable rates. Hix from Baltimore Housing confessed that the loan pool that they pass through from the State is plentiful, but there is a lack of City personnel to help households apply for it. Their waiting list is over 270 people, and they only get work through referrals, not through any outreach efforts (Hix, Lender Interview #3). None of the lenders said they had an issue getting capital. Since HMF is seen as charitable work under the Community Reinvestment Act, banks are often looking for places to dump funding. This was the case with Healthy Neighborhoods, where several banks contribute into a loan pool, specifically to offer lower interest rates to needy homeowners (Sissman, Lender Interview #1, 2016). The major caveat, however, is that the lender is not allowed to make direct profit off of the investment. Healthy Neighborhoods, in turn, cannot turn around and charge high interest rates to support its operations (Sissman, Lender Interview #1, 2016).

Furthermore, due to the social mission of nonprofit lenders, they are often obligated to offer sub-market rates to maintain “affordability.” Traditional housing finance lenders often look at credit score (620 or above)—especially for unsecured loans, LTV (not higher than 80%), and debt-to-income ratio (usually 36-43%). Baltimore institutions that lend to low-income clients (between 80-120% AMI), however, are more flexible on credit score requirements (some as low as the 400s) and LTV ratios of up to 125%. The housing products usually add a lien to the house to secure payment in case of default, and provide below-market interest rates.

All these restrictions undercut the power of suppliers to “capture more value” from the borrower. Eric Lin, a Small Business Coach & Trainer, from a Baltimore-area MFI reflects, “Any institution is looking for greater sustainability, but…the amount of technical assistance and care we provide, the very flexible underwriting process can’t be automated. Human analysis will still be needed.” Speaking for himself, “I don’t think that providing microloans in the U.S. at the level of personalization currently provided will ever be profitable” (Lender Interview #4). This perspective further validates existing literature on the barriers to sustainability that the U.S.’s focus on training creates to the financial sustainability of the microfinance sector.

4. Bargaining power of customers (borrowers)
Powerful customers can capture more value by forcing down prices, demanding better quality or more service (thereby driving up costs), and generally playing industry participants off against one another, all at the expense of industry profitability, using their clout primarily to pressure price reductions (Porter, 83).

Since the Great Recession, home equity has taken a hit across the country, and lending regulations have increased, and lenders have been stricter. Americans tend to have low savings, and high consumption habits, which forces them to borrow (Thompson, 2016). The average credit score in the U.S. is 695, but Maryland falls below the average at 667 (Value Penguin, 2016). While the typical cut off for credit is 620, having a lower credit rating relative to the rest of the country still puts Baltimoreans at a disadvantage, as their credit limits might be reduced as a result.

Despite these factors, most American homeowners regardless of income and credit score can finance routine maintenance on their homes through cash and credit cards, spending between $100-500 per year (AHS, 2013). NHS President, Mark Sissman, supported this rationale, when he said:

If you can borrow a modest amount on your credit card, it might be worth it over a loan...You might have a higher interest rate, but if it’s for a small dollar amount, it might not be worth messing around with a lot of applications. Credit cards are easier to borrow. With microloans, you inevitably have more paperwork...we've lost a lot of business to credit cards (Lender Interview #1).

This supports national borrowing trends that show that, after cash, credit cards are the next source of financing for homeowners making home repairs (Freddie Mac, 2016).

The challenging area for borrowers comes with financing larger home improvements, which is where home equity begins to play a larger role. When loans exceed a certain level, most housing finance lenders begin weighing more heavily the borrower’s Loan-to-Value ratio (i.e. mortgage loan to value of home being used as collateral). However, if the mortgage loan already takes up a large part of that value, there is little for the secondary lender to seize after the mortgage lender gets paid. While lower-income families tend to have higher LTV ratios in Baltimore, it is not that homeowners are requesting too much that gets them denied credit, but that their homes are worth too little. The issue of high LTV ratios is not well discussed in academic literature. Private lenders usually prefer LTVs below 80%. All of the lenders interviewed for this paper allow more than that, ranging from 100-125% LTV. Hix mentioned that high LTV was one of the top reasons for Baltimore Housing denying applications. Marshall from NHS
confirmed this issue saying that LTV is the number one reason for them, citing the glut of housing due to vacant houses as a primary cause (Lender Interview #3). This makes sense given that vacant housing consumes nearly 10% of the City’s housing stock, and tends to concentrate in lower-income neighborhoods (McCoy, 2015). Marshall also mentioned that another reason for denying loan applications is related to his elderly applicants using reverse mortgages that wipe out the equity in their home (Lender Interview #3). Reverse Mortgages are only available to homeowners 62 years old and above, and allows them to cash out the equity built up in their house as a loan, and not have to pay it back until they sell the house or pass away. For unsecured loans that do not use the house as collateral, housing finance lending institutions, like Neighborhood Housing Services of Baltimore, begin reducing loan amounts and relying more on credit score and debt-to-income ratios to assess ability to pay. While post-Recession lending practices have tightened to deter predatory lending, it has also chilled willingness by institutions like NHS to offer more favorable terms to low-income homeowners, thus reducing the bargaining power of borrowers (Marshall, Lender Interview #3).

5. Rivalry among existing competitors

Rivalry among existing competitors takes many familiar forms, including price discounting, new product, higher advertising costs, and frequent service improvements. The higher the rivalry, the costlier and less profitable the industry becomes. “The degree to which rivalry drives down an industry’s profit potential depends, first, on the intensity with which companies compete and, second, on the basis on which they compete” (Porter, 85).

Rivalry among mortgage lenders, for example, was a primary cause of the Great Recession, as a desire to extend credit to riskier customers led to deteriorating underwriting practices and predatory lending terms (Inside, 2007). The Great Recession corrected this excessive competition, however home maintenance and improvement spending among low-income homeowners has remained consistent over time, averaging a median of over $1,400 per year (AHS, 2013). Furthermore, credit card debt remains easier to obtain versus bank loans, and historically continues to be used at similar rates regardless of economic situation (Wolff-Mann, 2016). Overall home improvement spending the U.S. has returned to pre-Recession levels, and interest rates set by the Federal Reserve have stayed at historic lows to spur economic growth (Freddie Mac, 2016). While these factors should re-ignite competition, they are doing so under a new regulatory regime as a result of the Recession, producing a more subdued reaction by the lending market.
In Baltimore, these tighter federal regulations contribute to an already low level of rivalry. One homeowner interviewed mentioned how the bank has been asking her for more documentation for a home equity loan than they did the first time before the new regulations:

I’m currently trying to get a home line of equity…I am experiencing some difficulties this time acquiring the loan. It’s not that I don’t have equity in my home, it’s that they are being very picky…in terms of the paperwork they are requesting (Scott, Homeowner Interview #4).

As previously noted, even nonprofit lenders like NHS are weighing the full impact of new consumer protection regulations, before extending credit to risky clients (Marshall, Lender Interview #2).

Baltimore’s lack of rivalry in the affordable lending market also has structural roots. While there is a greater client base of low-income homeowners than other regions of the State, it is still a small and unprofitable base. Interest rates on loans under $5,000 must be competitive with credit cards, and loans between $5,000 and $25,000 are usually not higher than rates on prime loans for social reasons. This forces lenders, like Healthy Neighborhoods, to rely on grants and foundation support for operating, and the charity of local banks for their loan pool. There is no way for MFIs to sustainably compete with government grants or special low-interest loans. Porter argues that rivalry could exist if, “each competitor aims to serve the needs of different customer segments, with different mixes of price, products, services, features, or brand identities” (Porter, 86). So microlenders could tackle low-income homeowners below 620 credit score that most other institutions, including government programs would not serve. This would be a costlier market segment for HMFIs to service given the amount of personalization and training typically required, spread over a small population.

4.2.1 Five Forces Summary
This paper’s analysis suggests there is very little competition between HMF lenders in Baltimore. This contradicts Porter’s model, which argues that profitability is reduced by increased competition, lower barriers to entry, a large number of substitutes, and an increased bargaining power of customers and suppliers (Porter, 1985). The contradiction is a result of Baltimore’s lending market being distorted by government regulation both in interest rates and in availability and use of housing finance.

Low-interest rates. The assumption across the HMF market in Baltimore is that you get capital for loans, and you charge enough to cover risk, but all surpluses go to expanding the loan pool, not to cover operating expenses. It is assumed that if lenders charged higher interest rates,
borrowers would increasingly turn to credit cards for their financing needs, or be pushed into the predatory lending market. Since these organizations have social missions that are undergirded by preventing households from succumbing to predatory lending, the gap between what interest rates cover and operating costs must be filled by ongoing philanthropic and government support. Furthermore, the State of Maryland, whose laws supersede Baltimore’s, caps interest rates to prevent predatory lending. These factors present a stark contrast to the classical microfinance model that uses higher interest rates to cover both operating costs and loan pool expansion.

**Availability and Use of Housing Finance.** All the HMF lenders that this paper researched received loan capital, in large part, through banks looking to meet their federally-required CRA requirements, while lenders used private donors, such as foundations and philanthropies, to cover operating costs. This means that in order to remain competitive, HMF lenders qualify to vie for CRA loan pool financing. While there are not many organizations providing HMF services to compete with for financing, having access to that financing often requires CDFI certification and existing capacity to apply for the grants needed to cover operating costs. This financial model, permanently handicaps industry profitability and scale, as it increases barriers to entry and creates a low-level of rivalry between competitors for customers.

This lack of profitability, and consequently lack of competition, means that the moderate potential demand for HMF products in the Baltimore market is neglected. Baltimore houses are older than state and national averages, and homeowners have a demonstrated willingness to borrow. The question is affordability. Baltimore homeowners can already afford routine house maintenance, through cash savings and credit cards. For larger projects, low-interest loans are available to low-income homeowners who have a credit score above 620 and some equity in their homes. For those who do not have good credit or equity, there is no clear option, unless they are elderly, in which case there are several government programs to help with basic zoning code maintenance repairs and energy efficiency upgrades (Baltimore Housing, 2016). Governmental interventions in this market prevent viable competitors from entering to meet this need.

Figure 5. Porter’s Five Forces for HMF Loans in Baltimore
5 CONCLUSIONS

5.1 Summary

How can microfinance be applied to housing repair in Baltimore?

The main assumption this paper makes is that microfinance for housing repair in the U.S. would be more financially self-sufficient due to its recurring, cyclical need that is unlike microloans to businesses. While there are populations excluded from the home maintenance and improvement markets, and a stable supply of financing for home repair loans, the macroeconomic and industry analyses (PESTEL and Five Forces) demonstrate that there is no financially sustainable model in the current HMF sector in Baltimore.

The qualitative research from Baltimore is consistent with previous academic research about microfinance in the U.S. in that it is not being applied in the classical model, established by Muhammad Yunus. The Baltimore analysis confirms the need for partnership with private and public entities for ongoing capital and operating support, and the greater availability of credit in the U.S. through credit cards that reduces the market size for small-dollar HMF products. What Baltimore demonstrates is that HMF, unlike microloans for businesses, is especially impacted by heavily subsidized interest rates due to government and philanthropic priorities in housing that prioritizes affordability over financial sustainability. Baltimore also demonstrates
the strong impact of high vacancy rates that limits the home equity line-of-credit available for homeowners.

If HMFIs want to enter into this market, they will need to shift their financial model from the classical self-sustaining microfinance model, to one that permanently depends on banking support for loan capital, and philanthropic support for operations. Because HMFIs cannot afford to compete on already low interest rates, a successful new entrant will have to pursue a differentiation strategy, i.e. create a unique HMF product or experience that sets it apart from other providers. Due to the limitations of data collection, and the uniqueness of the Baltimore market, these conclusions cannot necessarily be generalized to other U.S. cities that are structurally different, e.g. have newer housing stock, greater number of financial institutions, or lower rate of vacant/abandoned housing. Nonetheless, some of the structural challenges in the overall U.S. market for microlending for housing, such as the ease of credit cards and other financing alternatives, the government and philanthropic subsidizing of interest rates, and the intensive training requirements for microlending, all make reaching financial sustainability more difficult for HMFIs than for traditional MFIs.
5.2 Further Research

This paper’s research and analysis focused narrowly on owner-occupied homeowners. In talking with Baltimore homeowners, however, many mentioned the impact that poorly maintained rental units have on their home value. In most of the U.S., the poor tend to rent instead of own, meaning that any housing repairs are the responsibility of the landlord or management company. A study done by the Harvard Joint Center for Housing Studies (JCHS) found that 65.4% of the privately-owned rental units are owned by an individual or married couple, who are “ill-equipped” to manage and maintain their units due to lack of credit access (13). The study goes on to explain that, “loans for the acquisition or refinancing of smaller apt buildings…are poor candidates for securitization because of their lack of standardization. As a result, the small rental property market has yet to benefit from the expansion of financing options. Consequently, the “limited availability and higher cost of financing prevents owners from either investing in capital improvements or selling their properties to more capable owners” (JCHS, 9). More recent research is needed into the reasons for continued credit exclusion and the potential role for microfinance to these property owners, who might represent a new market for classical microfinance to play a role in the U.S. economy.
Furthermore, this paper recommends more routine government and private analysis of data at the local, in addition to the regional level. Data on housing and poverty trends at the local level can be lost when aggregated across large regions, and impede meaningful analysis. Much of the data used in this paper relied on university or foundation research that was able to disaggregate federal Census data on home improvement spending, and crosswalk poverty levels used in the Census (via Health and Human Services) with poverty levels used housing (via HUD). A more accurate and timely accounting of local housing trends provides better market analysis for MFIs wanting to enter a local market, and for policymakers seeking to better define and address gaps.
6 REFERENCES


NOTE: While some U.S. Census references are cited in published research, many references in this paper come from the authors use and interpretation of various reports run using the online tool, "American Housing Survey - Table Creator." This is the link provided above.


7 APPENDICES

Table of Appendices

Appendix 1. Calculations to determine 80% Area Median Income in Baltimore
Appendix 2. List of Interviews
Appendix 3: Basic Interview Questions for Homeowners
Appendix 4: Basic Interview Questions for Lenders
Appendix 1. Calculations to determine 80% Area Median Income in Baltimore. Rows outlined in red were added to existing American Housing Survey report. Yellow cells mean that 100% of the households in that cell are considered low-income according to HUD, while orange means only a percentage of those households fall into the below 80% limit. In those cells, the percentage used to calculate the portion of households that fall into HUD’s definition is found by taking HUD’s income limit based on number of people and income, divided by the upper income limit in the “Household Income” range and then multiplying that percentage by the number of people in that cell. For example, 80% of AMI for one person is $46,000 in Baltimore. I would divide $46,000 by $49,999 to get an average percentage of 92% and then multiplied by the number of households between $40,000-$49,999, to get the average percent of people that would fall at or below 80% AMI. NOTE: Without actual data on each individual, this calculation assumes that equal numbers of households fall at every income level within each range provided, i.e. it averages the number of households when multiplied with a percentage.
### Household Income

**Variable 1: Household Income, Variable 2: None**

[Numbers in thousands, except as indicated. Weighting consistent with Census 2010. Blank cells represent or round to zero. "-" represents not applicable or no cases in sample.]

[HYPETELINK("http://www.census.gov/programs-surveys/hh/tech-documentation/def-err-changes-2013.html","Subject Definitions")]

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>Less than $10,000</th>
<th>$10,000 to $19,999</th>
<th>$20,000 to $29,999</th>
<th>$30,000 to $39,999</th>
<th>$40,000 to $49,999</th>
<th>$50,000 to $59,999</th>
<th>$60,000 to $79,999</th>
<th>$80,000 to $99,999</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>687.7</td>
<td>47.9</td>
<td>29.9</td>
<td>38.9</td>
<td>41.3</td>
<td>43.1</td>
<td>42.2</td>
<td>80.8</td>
<td>76.3</td>
</tr>
<tr>
<td><strong>Persons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 person</td>
<td>144.4</td>
<td>23.4</td>
<td>16.9</td>
<td>16.3</td>
<td>18.3</td>
<td>13.3</td>
<td>9.1</td>
<td>20.2</td>
<td>11.9</td>
</tr>
<tr>
<td>2 persons</td>
<td>254.5</td>
<td>12.4</td>
<td>8.7</td>
<td>14</td>
<td>14.1</td>
<td>20.3</td>
<td>20.5</td>
<td>35.9</td>
<td>27.2</td>
</tr>
<tr>
<td>3 persons</td>
<td>111</td>
<td>4</td>
<td>2.7</td>
<td>5</td>
<td>2</td>
<td>4.3</td>
<td>5.6</td>
<td>11.8</td>
<td>16.1</td>
</tr>
<tr>
<td>4 persons</td>
<td>116.8</td>
<td>3.6</td>
<td>0.6</td>
<td>2.2</td>
<td>4.3</td>
<td>4.3</td>
<td>4.8</td>
<td>8.4</td>
<td>13.3</td>
</tr>
<tr>
<td>5 persons</td>
<td>35.9</td>
<td>2.4</td>
<td>0.7</td>
<td>0.9</td>
<td>0.6</td>
<td>0.8</td>
<td>3.2</td>
<td>4.2</td>
<td>1.9</td>
</tr>
<tr>
<td>6 persons</td>
<td>15.8</td>
<td>0.4</td>
<td>0.3</td>
<td>1.1</td>
<td>0.3</td>
<td>1.1</td>
<td>0.9</td>
<td>0.9</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Households</strong></td>
<td>243.1</td>
<td>47.9</td>
<td>29.9</td>
<td>38.9</td>
<td>41.3</td>
<td>42.0</td>
<td>30.5</td>
<td>11.0</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>% of all owners</strong></td>
<td>35.35%</td>
<td>6.97%</td>
<td>4.35%</td>
<td>5.66%</td>
<td>6.01%</td>
<td>6.11%</td>
<td>4.43%</td>
<td>1.60%</td>
<td>0.23%</td>
</tr>
</tbody>
</table>
Appendix 2. List of Interviews

Homeowner Interviews

<table>
<thead>
<tr>
<th>Interview</th>
<th>Date</th>
<th>Person</th>
<th>Voice Recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>09/27/2016</td>
<td>R. Johnson</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>09/28/2016</td>
<td>Z. Robinson</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>09/29/2016</td>
<td>M. Goodman</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>10/03/2016</td>
<td>P. Scott</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>10/11/2016</td>
<td>M. Middleton</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>10/16/2016</td>
<td>L. Batts</td>
<td>Yes</td>
</tr>
<tr>
<td>7</td>
<td>11/06/2016</td>
<td>L. Blanding</td>
<td>No</td>
</tr>
</tbody>
</table>

Lender Interviews

<table>
<thead>
<tr>
<th>Interview</th>
<th>Date</th>
<th>Organization</th>
<th>Person</th>
<th>Position</th>
<th>Voice Recorded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10/04/2016</td>
<td>Healthy Neighborhoods</td>
<td>Mark Sissman</td>
<td>President</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>10/19/2016</td>
<td>National Housing Services</td>
<td>Omar Marshall</td>
<td>Loan Processor</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>11/02/2016</td>
<td>Baltimore Housing, Office of Rehabilitation</td>
<td>Jim Hix</td>
<td>Director</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>11/03/2016</td>
<td>Latino Economic Development Corporation</td>
<td>Eric Lin</td>
<td>Small Business Coach &amp; Trainer</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Appendix 3. Basic Interview Questions for Homeowners

Background House Information
- Are you currently a homeowner? Yes
- How long have you been a homeowner of that house?
- Is your house detached or a row house?
- If row house, do you live next to a vacant house on either side? Do you they cause structural problems?

Personal Experience
- How frequent do you make repairs to your house?
- How do you usually finance those costs?
- Were there any challenges (whether legal, financial, technical) that you encountered in doing these renovations?
- Have you ever sought financial assistance from a bank, moneylender, or government/grant for home repair?
- What sort of things do you consider when you think about taking out a loan?

Wrap-up with open-ended questions asking for your perspective as a homeowner
- Being a homeowner in Baltimore, what is your perspective on some of the common challenges and needs that other homeowners in Baltimore face in maintaining their homes?
- Who do you feel is responsible for these challenges?
Appendix 4. Basic Interview Questions for Lenders

Loan Demand:

- About how many loans do you make per year? What is your loan volume?
  - What is the top reason you deny an application?
- What makes you different than a traditional bank?
  - Do you offer alternative, flexible underwriting for those with poor-fair credit?
  - Other features that traditional lenders don't offer?

Loan Supply

- Where do you get financing for loans you offer?
- How are your operating costs financed?
- Are there other CDFIs or institutions in Baltimore that offer similar services to low-moderate income homeowners?
- Is your organization financially self-supporting or working toward increasing the amount of programming sustained by program revenue?
- What are your greatest challenges to scaling up, reaching more homeowners?