



## Can an Islamic model of housing finance cooperative elevate the economic status of the underprivileged?

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### ABSTRACT

A formal home loan is onerous to subprime borrowers in efficient markets. This can deter homeownership for financially strapped individuals, leading to a market failure. This paper proposes a special form of cooperative mortgage financing (practiced in Oman) to overcome this market failure. We integrate the literature of mortgage design with that of informal savings schemes (i.e., ROSCAs/ASCRA) to illustrate that this mode of financing dissipates credit risk better than the formal mode of financing. It is also resilient to volatility of interest rates and allows prepayments without any additional charges. Finally, we verify the assertions of Besley et al. (1994) and Hart and Moore (1998) that cooperative mortgages are *pareto-superior* to formal mortgages in special cases.

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### 1. Introduction

The profound argument made by Stiglitz (1994) is that market failure is a fundamental cause of poverty and financial market failures, which mainly arise from market imperfections, asymmetric information and the high fixed costs of small-scale lending, limit the access of the poor to formal finance, thus pushing the poor to the informal financial sector or to the extreme case of financial exclusion. In addition, it is argued that improving the access of the poor to financial services enables these agents to build up productive assets and enhance their productivity and potential for sustainable livelihoods (World Bank, 2001). Hence the bottom line argument is that improving the supply of financial services to the poor can directly contribute to poverty reduction (Jalilian and Kirkpatrick, 2002) (Green et al., 2005, p. 19)

Housing plays a vital role in the economy (see Sheng, 1997). This is due to its following attributes. First, a home is both consumption good as well as an investment (see Malpezzi, 1990). The investment aspect of homeownership helps to increase

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wealth (i.e., reduces poverty—see Buckley, 1994; Englehardt, 1994; Sheng, 1997; Haurin et al., 2002). Second, homeowners support their neighborhood more than renters, as they participate in crime prevention and support public schools. They are better citizens and vote at a higher rate (see Haurin et al., 2002). Homeownership fosters investment in local amenities and social capital, thus enhancing the status and quality of the community (see DiPasquale and Glaeser, 1999). Policy makers therefore have an obligation of ensuring access to this indispensable asset through an efficient financial intermediation system.<sup>1</sup>

The ongoing subprime mortgage crisis (emanating from the U.S.) constitutes a financial market failure.<sup>2</sup> This is because financing a home for a subprime borrower poses a dilemma in an efficient capital market (see Fama, 1970, 1991). The ingenious mortgage bankers figured out an innovative way (which turned out to be disastrous as explained below) to get financially strapped individuals to qualify for a home loan using lax underwriting standards.<sup>3</sup> This innovative way was through the use of “exploding” adjustable rate mortgages (ARMs) with unusually low introductory (i.e., “teaser”) rates, which reset to higher rates at the expiration of the introductory ones (see Gapper, 2007).<sup>4</sup> This was supposed to facilitate access to a home for borrowers and to help them establish some credit history before qualifying for refinancing with a fixed rate mortgage. The implicit assumption was that the eventual appreciation of the home would bail out the borrower prior to the expiration of the “teaser” rate as he/she would be able to refinance and not be exposed to the shock of higher mortgage payments. Unfortunately, the opposite happened, and not only did payments increase drastically (with the termination of the teaser rate) but home prices fell too. This made it difficult for borrowers to keep up with their payments. Also, they could not refinance (or sell) their homes, as their values were significantly below their mortgage balance (leaving them with negative equity). They had no option but to default. It is estimated that more than 2.4 million American families have lost their homes through foreclosures (see Economist, 2007a; Ip and Paletta, 2007; Mason and Rosner, 2007). This number is expected to go up to 9 million, as a second wave of defaults (stemming from the above exploding ARMs, along with negatively amortizing ARMs, which increase principal at the end of the low teaser, or optional payment periods) work their way through the system (see Wachter, 2008; Ward, 2009). This crisis has drastically impacted the global economy as elaborated below.<sup>5</sup>

The repercussions of the subprime “woes” are being felt (in both the real, as well as the financial sectors of the economy) globally. In the case of the real sector, the crisis has led to: (i) an increase in supply of homes for sale (due to repossessions), thereby depressing their prices and negatively impacting the construction sector, sales of durable goods, and thus the manufacturing sector (see Economist, 2007b, 2009a; Spector, 2007); and (ii) an economic contraction (in the U.S.) impacting the economies of its trading partners through decreases in trade, investment and remittances, thus leading to a backlash against globalization (see Economist, 2009b). In the case of the financial sector, the reduction in value of underlying collateral of mortgages (i.e., homes) has resulted in: (i) a loss in market value of more than \$290 billion of bonds associated with subprime mortgages, devastating the capital base of major financial institutions on both sides of the Atlantic (see Economist, 2008; Barkley, 2008); (ii) the failure of more than 40 subprime lenders (see Authers, 2007); (iii) the inability of the U.S. government sponsored agencies (such as Fannie Mae and Freddie Mac) to provide some relief (in the crisis), as they themselves have been placed under conservatorship (see Crutsinger, 2008); (iv) the scrutiny of the remaining subprime lenders from state and federal regulators (see Ip and Paletta, 2007); (v) the tightening of credit to firms (in other industries, hedge funds, private equity groups, etc.) is anticipated to lead to a severe recession in the U.S. and a decline in value of American assets (see White

<sup>1</sup> The financial intermediation system has the capacity of rendering the economy vulnerable to risk, as it connects real estate prices with the macroeconomy (see Glaeser, 2000). This is because:

(i) Regional home bubbles have negative impact on residential investment, and thus aggregate output (see Higgins and Osler, 1998).

(ii) A sharp fall in house prices leads to a reduction in consumption (through the *wealth effect*—see Case et al., 2005).

(iii) A significant decline in home prices leads to foreclosures and losses for lenders, thus straining the banking system (see Case, 2000).

(iv) Endogenous developments in the credit markets are amplified and transmitted to the macroeconomy (through the *financial accelerator effect*—see Bernanke et al., 1999; Aoki et al., 2004).

It is therefore imperative to design an efficient housing finance system to mitigate the vulnerability of the economy to risk (as discussed above). It also leads to a reduction in home prices relative to income, and bestows numerous economic benefits (see Malpezzi, 1990; Renaud, 2009).

<sup>2</sup> Note that subprime loans imply loans to borrowers who have sketchy credit history and are financially strapped or lack adequate income to qualify for a standard mortgage. They are thus lower in quality to prime loans.

<sup>3</sup> The lax underwriting standards probably stem from a corner solution derived under the assumption of housing prices following a Log-Normal Random Walk (see the solution to Eq. (5b) in Sections 2 and 3 in the form of Eqs. (5d) and (11) respectively. This issue is reiterated by Jaffee and Stiglitz (1990) in terms of the ad-hoc loan-to-value (LTV) ratio.

<sup>4</sup> In general, ARMs are not appropriate for households with a large mortgage, volatile income, high default cost or low moving probability (see Campbell and Cocco, 2003).

<sup>5</sup> Moral Hazard on the part of mortgage originators played a key role in the ongoing crisis. This is attributed to two major weaknesses of securitization. First, it encouraged careless lending (using ad-hoc standards based on loan-to-value ratio, payment-to-income ratio and credit guarantees). This allowed originators to conceal and convey the risk of the underlying properties to the lenders. The rating agencies, who were supposed to confirm the inherent risk of the mortgages, failed to do so due to the conflict of interest. This is because they were paid by the sellers of the securities as opposed to the buyers. Second, securitization allowed mortgage originators to get around their reserve capital requirements. This allowed them (and their off-balance-sheet vehicles) to lever up (see Crook, 2008).

Furthermore, in some cases, real estate professionals in the mortgage supply chain (such as real estate agents and appraisers to underwriters, lenders and lawyers) colluded to defraud the system. The FBI has launched an investigation dubbed as “Operation Malicious Mortgage” and has indicted 406 defendants in 144 cases involving \$1bn in losses (see Kirchgaessner and Weitzman, 2008).

Finally, the credit guarantees also evaporated when the insurers themselves bought “tainted” assets like Collateral Debt Obligations (CDOs) backed by subprime loans (see Kroft, 2008).

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