

SEPARATION OF MARKETS AND FINANCIAL INSTABILITY: A CLOSER LOOK TO CLASSICAL DICHOTOMY

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Abstract

Several financial crises occurred over the past three decades have provoked debates in the literature of liberalization and deregulation of financial markets. By surveying the theory of classical dichotomy and its critiques, the notion of “separation” between the financial and real sectors has been introduced in this paper. It argues that the existence and expansion of this separation will lead to financial crisis.

In order to identify the separation “price-to-earnings ratio” index has been proposed. By applying the data of Tehran’s Stock Exchange during 2002:2-2015:1, several episodes of this separation are recognizable. Considering the factors causing the expansion of the separation, it is essential to reestablish regulations and mechanisms of financial markets in a way that reduces the separation and hence lessen financial crises. In this view, Islamic financial rules can provide an economic system with mechanisms bringing harmony between the real and the financial sectors.

Keywords: financial markets, speculation, price bubble, separation, financial crisis

PIYASALARIN AYRIŞMASI VE MALİ İSTİKRARSIZLIK: KLASİK DİKOTOMİYE YAKIN BİR BAKIŞ

Özet

Son otuz yıl içerisinde bir kaç mali krizin meydana gelmesi, mali piyasaların libelleşmesi ve serbestleşmesi literatüründeki tartışmayı ateşledi. Bu makalede mali ve reel sektör ayrışması kavramı klasik dikotomi teorisi ve eleştirileri taranarak takdim edilmektedir. Bu ayrımın varlığının ve ayrımın genişlemesinin mali krize yol açacağı iddia edilmektedir.

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Ayrımı ortaya koymak için Fiyat-Kazanç Oranı indeksi verilmektedir. 2002:2-2015:1 tarihleri arasında Tahran Menkul Kıymetler Borsası verilerini kullandığımızda bu piyasa ayrışmasının varlığına işaret eden bir kaç vakanın olduğu görülmektedir. Mali ayrışmayı azaltmak ve dolayısıyla mali krizlerden korunmak için piyasa ayrışmasına yol açan faktörleri göz önünde bulundurarak düzenleyici kuralların yeniden ihdas edilmesi gerekmektedir. Bu bakış açısıyla, İslami mali kurallar, reel ve mali sektörler arasında ahenk kuran bir ekonomik sistem sunabilmektedir.

Anahtar Kelimeler: mali piyasalar, spekülasyon, fiyat şişmesi, ayrışma, mali kriz

1. Introduction

The recent financial crisis, originated from mortgage loan in the United States and widespread all over the world, has adversely affected many countries through global financial linkages. The world economy is still suffering from the crisis, considered as the most severe since the Great Depression, and many countries across the globe, irrespective of their development level, are still under strain dealing with this crisis (el-Din, 2012). The ongoing financial crisis started in 2007 revealed real challenges for Capitalism. Besides other factors, it has highlighted the importance of appropriate financial regulations in the financial system stability. After three decades of liberalization and deregulation of financial markets which resulted in breakdown of major world stock exchanges, banking sector, housing sector, and hence the loss of billions of dollars, the rethinking of the literature, and their policy implications for the functioning of the economy, would bring us with better understating of the financial sector and its interaction with the real sector. Considering the historical financial crises, it appears that the claim that in free economy growth and stability are simultaneously achievable cannot be confirmed. Since stability is a vital requirement for proper functioning of the financial system and a key factor to its contribution to growth and development (Chapra, 2009), macroeconomics and monetary economics can benefit from these revisions and move toward an approach which is more stable and less prone to financial crises.

In this regard, one of the triggering questions for long times has been about the relation of money to the real economy; i.e. is money merely a means of exchange in the monetary economy and doesn't affect the real economy? Yet, there has not been an unequivocal answer for this questions, and there are different justifications as many as different schools of thought. For example, mainstream economists focus on the classical dichotomy between money and real activities in the economy, but Keynesians focus on the market imperfections to stipulate their theory. These approaches have important implications for a financial crisis and its policy debates.

Considering the repeated occurrence of financial crises, especially since 30 years ago, this paper aims to survey the role of speculation and its relevance for financial crises. Next, given this relation, and also different theories on the role of money in the economy, it introduces a notion of dichotomy, namely "separation", between the real and the financial

sector which may result in financial crisis. Therefore, we address the above issues in the following order. Section II provides a literature review of the subject in details. Section III presents an index for the “separation” and its experimental assessment as well. Section VI discusses Islamic financial principles which contain the separation. Section V concludes by highlighting the relevant implications for the financial stability.

2. Literature Review

The introduction of money into Neo-Classical models, which differentiate between nominal and real variables has had some complexities about general equilibrium theory. It assumes money as a veil and therefore money will not matter for determining real variables, such as production and employment (Lucas, 1972; Patinkin and Steiger, 1989). In other words, since money is demanded merely for transaction motives, and there is no uncertainty in the future, we should not expect any real effects originated from changes in monetary conditions (Becker and Baumol, 1952). This interpretation of money is crucial for classical dichotomy and hence the neutrality of money.

In contrast, Keynes objects the notion of classical dichotomy and relates it to a specific situation, that is full employment. However, it is not a general condition for the economy, and therefore, money may have an active role which affects real variables through via transmission mechanisms (Keynes, 2006). The rationale behind Keynes objection is the existence of speculative motivation for money demand. This is not included in classical paradigm because they assume future without uncertainty. The speculative demand adds additional demand for money which is not used for transactions demands, rather it is hoarded to gain from expected in-profit opportunities in financial markets. Therefore, since the classical unique connection between the demand for money and demand for goods and services is violated, the interest rate is not equal with marginal productivity of capital anymore.

The result is that with speculative motivation, a portion of the money stock, which could be used to buy consumption goods and services or investment goods, withdraws from the real sector and goes toward financial markets. The greater is this motivation, the greater is the fund allocated in financial markets. Hence, the real sector faces the shortage of fund which may affect the real variables through the fall of investment, and therefore growth rate and employment decline. This is the direct effect of speculative demand in the real economy. There is an indirect effect from financial markets as well which might be more severe and pushes the economy into recession. We will discuss it in the following.

2.1. Speculation in Financial Markets

In General Theory, Keynes (2006) has made it clear that entrepreneurs and speculators, also called private investors versus professional investors, are two groups with different concerns and perspectives.

“...the energies and skill of the professional investor and speculator are mainly occupied otherwise. For most of these persons are, in fact, largely concerned, not with

making superior long-term forecasts of the probable yield of an investment over its whole life, but ... with the anticipation of impending changes, in the news or in the atmosphere, of the kind by which experience shows that the mass psychology of the market is most influenced...human nature desires quick results, there is a peculiar zest in making money quickly, and remoter gains are discounted by the average man at a very high rate...If I may be allowed to appropriate the term speculation for the activity of forecasting the psychology of the market, and the term enterprise for the activity of forecasting the prospective yield of assets over their whole life, it is by no means always the case that speculation predominates over enterprise ... the position is serious when enterprise becomes the bubble on a whirlpool of speculation..”(ibid, pp: 77-80)

There are two main advantages in Keynes' view toward speculation. First, He clarified that it has nothing to do with the long-term yield according to the fundamental factors of the real economy. Indeed, speculation is about making an easy profit in a short period and is the main cause of capital flow in financial markets. Second, it highly depends on human psychology which led to the build-up of bubbles and making money quickly before it bursts. Therefore, we have to either change the mind of investor toward long-term prospects or design a contractual framework which acts based on this feature.

Moreover, post-Keynesian theories about business cycles, like Minsky's Financial Instability Hypothesis, are also related to the psychology of financial agents. Minsky (1992) claimed that *“in prosperous times, when corporate cash flow rises, a speculative euphoria develops, and soon thereafter debts exceed what borrowers can pay off from their incoming revenues, which in turn produces a financial crisis. As a result of such speculative borrowing bubbles, banks and lenders tighten credit availability, even to companies that can afford loans, and the economy subsequently contracts”*. The main contribution of Minsky is the introduction of financial cycles as the key factor in business cycles which has given rise to the *“procyclicality of the financial sector”*, discussed in the subsequent research (see for ex. Claessens et al, 2010; Athanasoglou et al,2014; Iacoviello, 2015).

The depth and integration of current structure of conventional financial markets make it much easier to finance speculative motivation than it was before. Therefore, in good times, financial markets absorb credits and funds from the real sector. This increases leverage ratios and inflates asset bubbles without considering their intrinsic values. This procedure finally causes a financial crisis, and due to macro-financial linkages, it affects the real sector. This is the indirect effect of financial markets.

Now we can rethink of classical dichotomy. In classical models, money is neutral because it is said there are not any real changes accounts for monetary expansion. Given the occurrence of financial disturbances, however, in reality, not only the amount of money but also how it goes into different markets matters. In some time, we can see financial market movements are not consistent with real market foundations. In other words, there seems to be a *“separation”* between the financial and real sectors, which is different with classical dichotomy. In this kind of separation, the value of financial assets can increase continuously

without any substantial changes in their future return just because of the demand pressures of greedy speculators to make money as much as possible. But, this cannot last forever and before long the expectations meet the reality of the real sector, and the fall of asset prices begins.

2.2. Separation and Financial Crisis

According to the notion of “separation” presented above, money will go to the financial sector instead of going to the real sector to finance transactions and purchase of goods for consumption or investment, which generates added value and increase employment and overall production. In the financial markets, however, the money is used to invest in nominal values of financial instruments like equities. With the increase in speculative behaviors, equity prices increase rapidly while there have not been any major changes in real sector activities. This expands the separation between the real and financial sectors and will result in asset price bubbles. Although the initial movements of the prices may be due to the surge of expected profit generation in the real economy, the excessive increase of the prices, however, is stemmed from speculative motivations. Since the money has been used in financial markets and not in the real sector, the consecutive rise in the prices of financial assets will stop finally and result in financial crisis.

Like the aforementioned analysis, several authors including Binswanger (1999) and Shiller (2000) have argued irrational exuberance or speculative bubbles as the cause of the financial crisis. Although they rephrase Keynes approach toward “animal spirit”, they don’t explain those factors which make the realization of exuberance possible. With regard to the “separation” notion, we believe that it’s the financial structure as well as the contractual framework which smooth the way for the realization of irrational exuberance and speculative bubbles as a consequence. It will be discussed in the next section.

3. An Indicator for the Separation

3.1. Theoretical Discussion

There are two approaches that we can survey the presence of “separation” in the economy. One way concentrates on the causes or roots of the separation and the other concentrates on the impacts of the separation. Since the purpose of this paper is to show the occurrence of financial crisis due to this separation, we use the latter. In addition, since most of crises are accompanied with fluctuations in stock markets, in nowadays economies, the existence and also the result of the separation can be best seen in stock markets. Therefore, the result indicator in the stock market appropriately clarifies the role of this separation in the occurrence of financial crises. We use “*price-to-earnings*” ratio as a preferred index to show the separation of the economy. In the following, we explain the relevancy of this index with the separation between the real sector and the financial sector.

In normal time, in a sound capital market, the price of an equity is a reflection of its expected profits in the real sector. In other words, its price equates the present value of its future income generating from its operations in the real sector (Campbell and Shiller, 1998).

Market forces suggest higher prices for higher earnings. Therefore, in equilibrium, there would be a reasonable price-to-earnings ratio in the market (Becker et al., 2012). Now we assume a positive shock hits the productivity of production factors in the real sector, which of course would have a positive effect on equity prices because the agents expect higher income generations. But, since it is difficult to estimate the exact effects of this shock, due to avarice or excessive exuberance to make money in short period of time, the prices of shares are overestimated. The growth of equity prices will continue as long as more money is absorbed by the stock market via speculation pressures. This results in the continuous increase of the separation index. At first, it seems rational to see the surge of prices to be consistent with the expected future income, but, after consecutive growths, it will be irrational. Therefore, in such circumstances that prices of equities increase rapidly and indicate the emergence of bubbles, we can use price-to-earnings ratio to show the excessive differences between the intrinsic value of assets and their market values as a sign of separation between the real sector and the financial sector that can result in financial crisis.

3.2. Experimental Assessment

Historical review of the United States macroeconomic data indicates that many financial crises happened in the past. 1837, 1857, 1901, 1929, 1973, 2000 and 2007 are the outstanding examples of this phenomenon (Reinhart and Rogoff, 2009). If we consider the separation index during this period, we see the occurrence of financial crises due to the expansion of separation. As shown in Figure 1, while the historical average of price-to-earnings ratio is about 16, it reached to high levels before the major crises, for example, in 1929 and 2000 it was about 33 and 45 respectively.

Figure 1: Historical Price-To-Earnings Ratio in the U.S. Stock Market

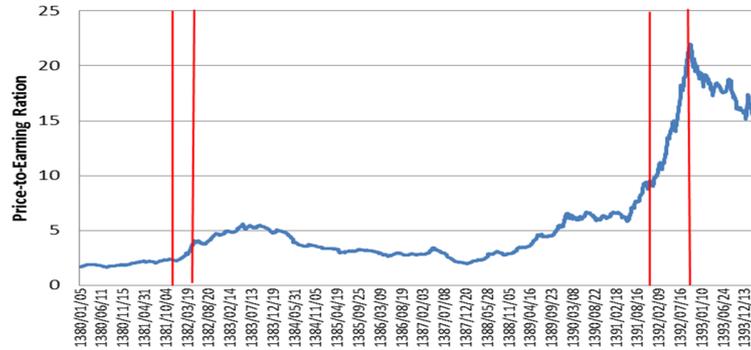


Source: Shiller (2015)

We also used Tehran Stock Exchange data during 2002:2-2015:1 (1380-1393 SH) to survey the separation index in Iran Economy. As presented in Figure 2, the ratio of price-to-earnings has sharply doubled in some periods. Once in 2003 (1382 HD), when the ratio

reached to 4 from 2, and next is in 2013 (1392 HD), when the ratio reached above 20 from 10, during less than a year in both episodes. After these periods, a sharp fall in stock prices has been experienced. But the recent crash has been more severe since the adjustment process has lasted more than a year, and has not come to an end yet.

Figure 2: Historical Price-to-Earnings Ratio in Iran Stock Market

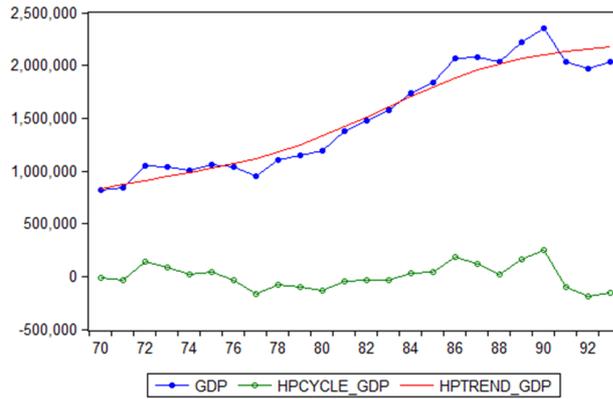


Source: Tehran stock exchange (2015)

As demonstrated in the above figures, the separation index shows episodes in which the separation of the financial sector from the real sector has increased and followed, therefore, by a rapid fall in equity prices. In these episodes, the nominal values of equity prices had steeply increased mainly due to speculative demand pressures, but they eventually met their peak since the real sector did not generate that amount of income expected for the sharply increased prices. In this situation, when the equity prices happen to fall, a financial crisis occurs which can adversely affect the real sector.

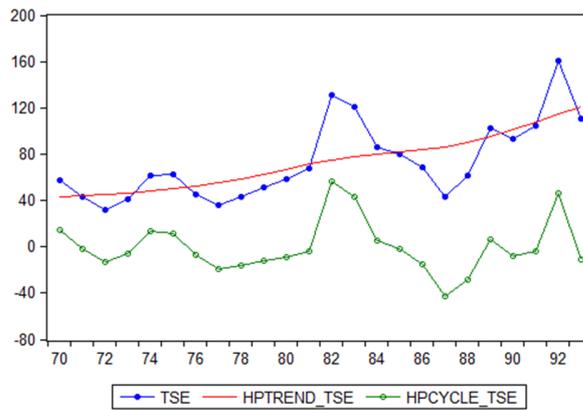
Moreover, by analyzing the real and the financial cycles of Iran economy, the detachment of the nominal value of assets in the financial sector from their intrinsic value in the real sector can be better understood. To do this, we use GDP data of Iran economy as a proxy of real sector activities and Tehran Stock Exchange (TSE) price index as a proxy of financial sector activities. After adjusting both series for the variation in general price level, we apply Hodrick–Prescott filter to extract the trend and cyclical components of these two series in Figure 3&4. Then we compared the cyclical movements of GDP and TSE price index. The result is demonstrated in Figure 5. It shows that there is no co-movement between these two parts. Furthermore, when these two parts start to diverge, it corresponds to the above-identified episodes of the separation, meaning that the separation index, price-to earnings ratio, is a useful indicator which contains information about the possibility of preceding financial crisis.

Figure 3- cyclical and long-run trend of Iran GDP



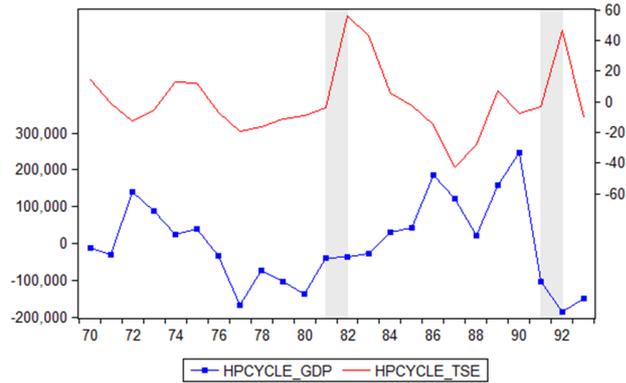
Source: author calculation and Central Bank of Iran

Figure 4- cyclical and long-run trend of TSE price index



Source: author calculation and Central Bank of Iran

Figure 5- cyclical movements of Iran GDP and TSE price index



Source: research findings

The covariance analysis, on the one hand, indicates that the correlation between cyclical part of GDP and TSE price index is -22 percent which indicates stock prices can change against the reality of the economy. Therefore, an increase in price-to-earnings ratio is a good indicator of separation between the real sector and the financial sector. As discussed above, the expansion of this separation may result in financial crisis.

The depth of a financial crisis and the severity of its consequences for the real sector exponentially depends on the extension of financial markets. According to World Bank financial data, during 1993-2012 the average market value of United States' stock exchanges has been 117 percent of its GDP and total value of stock traded has been 190 percent of its GDP. In the case of Iran, these ratios have been 15 percent and 3 percent respectively which are quite low in comparisons to those of the United States. That is why we should expect more and severe financial crises in the United States and comparatively less and minor financial crises in Iran economy.

So far, we have illustrated the incidence of a financial crisis by use of separation index. Hereafter, the pertinent question is about the causes result in the expansion of the expansion. By surveying the background of financial crises and especially the experience of the recent one, we may conclude that the regulations of financial markets and also the contractual relations between savers, intermediate lenders and borrowers have a great role in this kind of separation which its expansion could result in financial crisis. Therefore, these factors should be revisited and constructed in a way which relates the performance of financial sector as a reflection of real sector activities. Studies about a financial market structure with this desired feature should be given a high priority in future researches.

Moreover, since speculation activities inflate asset prices, create bubbles, and therefore intensify the separation, it raises a question of what makes it possible to decrease

speculative motivations in financial markets in order to prevent asset price bubbles and financial crises as well. To provide a solution it is necessary to identify the roots which intensify or make it easy to finance speculative opportunities. This subject of research would provide us solutions to mitigate and avoid separation as well as financial crises. The Islamic financial system has special considerations regarding the speculation activities. We briefly review some of them related to our subject.

4. Islamic Financial Principles

As discussed in previous sections, one of the main reasons which cause the expansion of the separation between the financial sector and the real sector is speculative incentives for making profits in a very short period of time. As the separation index increases, the probability of financial crisis increases which result in devastating consequences in the real sector. Therefore, a financial system that prohibits speculative demands can provide a stable environment which is highly beneficial for the real economy.

By avoiding the major weaknesses of the conventional system, Islamic financial system is capable of minimizing the severity and frequency of financial crises (Chapra 2009). Since realizing a gain from speculation (*Mayseer*) and also indeterminacy (*Gharar*) is not permitted under Shari'a law, Islamic financial system relates the valuation of assets to their profit generation in the real economy. There is, of course, a degree of commercial speculation involved about the future prospects of the company when an investor makes an equity investment, but whether such speculation is permissible or not would depend on the primary intention of the investor, i.e. was the intention to make a quick profit by speculating in the possible fluctuations of the equity price over a very short period of time (as is arguably the case with day trading), or was the decision made on the basis of careful evaluation of the company's past results and future prospects? Moreover, certainty of terms in any transaction is a key requirement under the Shari'a. Again, as with speculation, a degree of commercial uncertainty is acceptable but there must not be any uncertainty about the key terms of the transaction (Hussien, 2010). Also, N. Siddiqi (2008) explains that gambling does not create additional wealth. Games of chance only transfer wealth from its (losing) owners to new (winning) ones. Considering the human resources consumed in the process, wealth transfers through games of chance cannot be considered to be efficient. They do not serve any social purpose.

As U. Chapra (2009) argues condemnation of *Gharar* and *Mayseer* in Islamic financial system not only motivate the creditor to be more cautious in evaluating the credit risk but also prevent an unnecessary explosion in the volume and value of transactions. These principles will prevent the debt from rising far above the size of the real economy and also release a substantial volume of financial resources for the real sector, thereby helping the expansion of employment and self-employment opportunities and the production of need-fulfilling goods and services.

Considering the effects of aforementioned principles in Islamic finance, they are capable of preventing the expansion of the separation and therefore mitigate financial crises.

But, it should be mentioned, as it was said before, that we survey the resulting indicator of financial separation in this paper. Therefore, in order to prevent the separation, it is necessary to survey causes and roots that initiate the separation in the economy. This needs an intensive research which is of high priority to achieve a stable financial system (see Hadian and Davoudi, 2016).

5. Conclusion

Repeated failures of financial markets which adversely affect the real economy indicate inherent weakness in conventional financial system. By reviewing the relevant literature, and the notion of classical dichotomy, we propose a form of “separation” which is prevalent during the preceding periods of crises. The separation takes place when the performance of financial markets is not in harmony with that of the real sector.

Regulations and infrastructures of today financial markets of the conventional system and also the existence of high speculative demands for assets to make money as much as possible within a short period of time have caused the expansion of the separation. In this situation, the money stock is absorbed in financial markets and hence there will be less amount to circulate in the real sector and finance demands for consumption and investment expenditure. As a result, the growth rate and employment decrees. At the same time, as more funds are used in financial markets, by greedy speculators, the price of those assets goes up. In this situation, the valuation of assets will not be related to the process of their income generating in the real sector.

As separation increase, financial assets get higher values which result in price bubbles. By emergence of asset bubbles, new short-term, profitable opportunities are available which intensify the speculative pressures. And, as a result much more money comes into financial markets. With the increase of these demands, asset bubbles expand and separation escalates, therefore. Since the flow of funds used for speculative motivations has not been allocated in production and consumption goods, the expansion of the bubbles can't last forever and it will burst finally. In this stage, the rapidly fall of asset prices will continue so long to clean the artificial values which have been created by psychological behaviors of myopic agents.

One of the useful resulting indices can be applied to show this separation is price-to-earnings ratio. A rapid increase in this ratio means the overvaluation of asset price relative to its earnings and indicate the divergence of nominal value from its intrinsic value in real markets, i.e. the occurrence of the separation. The examination of the above index in the United States and Iran economy show the rise of the separation in preceding periods of previous financial crises.

Regarding the factors which expand the separation in the economy, in order to contain financial crises, it is essential to design rules and mechanisms of financial markets as though they relate the performance of the financial sector to the real sector. Islamic financial principles condemn speculative transactions. Since these motivations result in the

expansion of the separation, Islamic principles can provide human with financial arrangements which contain the separation. Moreover, in order to eliminate financial crises, it is necessary to consider those roots and factor which initiate the separation as well. This is an important issue for future studies.

References

- Athanasoglou, P. P., Daniilidis, I., & Delis, M. D. (2014). Bank procyclicality and output: Issues and policies. *Journal of Economics and Business*, 72, 58-83.
- Becker, G. S., & Baumol, W. J. (1952). The classical monetary theory: the outcome of the discussion. *Economica*, 19(76), 355-376.
- Becker, R., Lee, J., & Gup, B. E. (2012). An empirical analysis of mean reversion of the S&P 500's P/E ratios. *Journal of Economics and Finance*, 36(3), 675-690.
- Binswanger, M. (1999). Stock markets, speculative bubbles and economic growth. *Books*.
- Campbell, J. Y., & Shiller, R. J. (1998). Valuation ratios and the long-run stock market outlook. *The Journal of Portfolio Management*, 24(2), 11-26.
- Central bank of Iran (2016), Economic Trends Report, http://www.cbi.ir/default_en.aspx
- Chapra, M. U. (2009). The global financial crisis can Islamic finance help?. *Insights*, 1(4), 27.
- Claessens, S., Kose, M. A., & Terrones, M. E. (2010, September). Financial Cycles: What? How? When?. In *NBER International Seminar on Macroeconomics 2010* (pp. 303-343). University of Chicago Press.
- el-Din, S. I. T. (2012). *From the Great Depression to the 2008 Global Financial Crisis: Systemic Flaws in Investment Financing*. SABIC Chair for IFMS.
- Hadian, M., Davoudi, P. (2016). Interest rate and financial instability. *Journal of Islamic Finance*, Vol. 5 No. 1, 001 – 011.
- Keynes, J. M. (2006). *General theory of employment, interest and money*. Atlantic Publishers & Dist.
- Lucas, R. E. (1972). Expectations and the Neutrality of Money. *Journal of economic theory*, 4(2), 103-124.
- Minsky, H. P. (1992). The financial instability hypothesis. *The Jerome Levy Economics Institute Working Paper*, (74).

Patinkin, D., & Steiger, O. (1989). In Search of the "Veil of Money" and the "Neutrality of Money": A Note on the Origin of Terms. *The Scandinavian Journal of Economics*, 91(1), 131-146.

Reinhart, C. M., & Rogoff, K. (2009). *This time is different: eight centuries of financial folly*. Princeton university press.

Shiller, R. J. (2000). Measuring bubble expectations and investor confidence. *The Journal of Psychology and Financial Markets*, 1(1), 49-60.

Shiller, Robert (2016), online data, <http://www.econ.yale.edu/~shiller/data.htm>

Siddiqi, M. N. (2009). Current financial crisis and Islamic economics. *Insights*, 1(3), 141.

Tehran Stock Exchange (2015), Market indices, <http://new.tse.ir/en/>

World Bank, (2016), open data, <http://data.worldbank.org/>