FINANCIAL CRISIS AND USURY IN DIGITAL ECONOMIC : WHY MAJOR RELIGION PROHIBIT USURY? MONETARY STUDIES IN ASIA 5

Bambang Hadi Prabowo, STIE Jaya Negara Taman Siswa Malang, Indonesia
Ema Sulisnaningrum, STIE Jaya Negara Taman Siswa Malang, Indonesia
Sri Harnani , STIE Jaya Negara Taman Siswa Malang, Indonesia

ABSTRACT

This paper investigates the inadequate evidence of usury in the economy in ASIA 5, including Indonesia, Malaysia, Thailand, China, and South Korea, to answer why major religions (Islam, Christianity, Judaism) prohibit usury. We use a qualitative research method of content analysis by collecting several justifiable evidence using source triangulation and method triangulation and combining with quantitative content analysis, which quantifies the qualitative findings and analyzes them quantitatively using Threshold Autoregressive. It is a proxy for forecasting future economic conditions considering each exchange rate regimes and the period of crisis experienced by the five countries. We found that the higher the riba proxied by the interest rate, the more burdening the five countries to recover from the crisis. Moreover, we find that the concept of sharia, which is proxied by direct investment, can boost the economy and can increase economic resilience against the financial crisis, which was evident in three countries, namely Thailand, Malaysia, and China, during the Asian crisis period (1997) to the digital economy era (2020).
Keyword: financial, crisis, digital economic, usury

1. Introduction

The early 19th century financial and economic crises culminated in the Great Depression in the 1930s and the post-Asian crisis (1997) global financial crisis took place from 2007 to 2009 followed by the European debt crisis from 2011 to 2013 and in 2017 interest rate. The economic cycle presents a recognizable pattern of an explosion triggered by artificial money creation followed by a deep crisis in which the distorted structure of production and demand patterns is adjusted according to market needs. Modern monetary and financial systems based on fiat currency and fractional reserve banking are the main causes for the severe economic cycles and world economic drama that have continued until now. This paper aims to clarify the treatment of usury in Islamic, Christian and Jewish theology in free-market economies by investigating five countries in Asia that were affected by the Asian financial crisis, namely Thailand, Indonesia, Malaysia, South Korea and China.

The Asian financial crisis, also called the "Asian Contagion," is a series of currency devaluations and other events that started in 1997 and spread to many currency markets in Asia. The Asian financial crisis was a period of the financial crisis that gripped most of East Asia starting July 1997 and raised fears of a worldwide economic crisis due to the contagion of the financial impact of the crisis (Desai, 2014). The first currency market failed in Thailand due to the government's decision to stop pegging local currencies to the US dollar (USD). Currency declines spread rapidly throughout Southeast Asia, causing stock markets to decline, reduced import revenues and government upheaval (Jackson, 2018). As a result of the devaluation of the Thai baht, most East Asian currencies fell by 38 percent. International stocks also fell by as much as 60 percent. Market decline was also felt in the United States, Europe and Russia when Asian economies declined. Indonesia, South Korea and Thailand were the countries most affected by the crisis. As a result of the crisis, many countries adopted protectionist measures to ensure the stability of their currencies. It has often led to massive purchases of US Treasuries, which are used as global investments by most of the world's sovereigns. The Asian crisis led to much needed financial and governance reforms in countries such as Thailand, South Korea, China, Malaysia and Indonesia (Claessens & Forbes). In the current digital economy era (2018), debt crosses national borders through electronic transfer funds (ETF), which are increasingly growing so that usury is increasingly spreading throughout the world, including Asian countries 5. Since 2009, ETFs based on fiat digital money (Eisenstein, 2011). Digital currency is unlikely to replace fiat paper currency quickly and thus presents minimal risk for monetary policy.

2. Literature Review

The charging of interest is prohibited by both canon law (Christian canon law) and civil law. Since the fourth and fifth centuries, the Holy Fathers (Holy Fathers) strongly opposed the practice of usury as a Christian effort towards spiritual salvation because Riba is a very serious or grave sin, but that does not mean that Christians forbid someone to lend money. Lending money is allowed as long as it doesn't take usury from the lending and borrowing practice (Hall, 2011; Milner, 2011). In practice, charging interest on loans remains a common feature of economic life. However, because the charging of interest must be simulated to overcome obstacles to canon law and civil law, this prohibition has an undesirable effect on lending by some economic actors, especially banks. The practice of usury has been going on since 88 BC, where Roman law legalized usury. More than thousands of years of economic drama between usury and sin took place where theologians both Muslim, Christian, and Jewish opposed Riba and usury, which had been part of the economy for thousands of years, became an inner struggle of devout Muslim, Christian, and Jewish economists (Schoon, 2016; Debergue & Harrison, 2015; Rist, 2016).

Thomas Aquinas explained that money is not obsolete by adopting Aristotle's thinking about money, like clothes or houses. If someone wears clothes for one year, these clothes cannot come back new, such as clothes stored in closed packs in a shop, the clothes worn will become used for clothes. So it is normal to charge rent for clothes. However, it is different when coins are money or money. Banknotes become too shabby; they will be removed from circulation and replaced with newly minted coins or money of the same value (or exchanged into a bank. So it is wrong to charge rent on the money borrowed. It is wrong to collect interest on money. Wrong actions (Decock et al., 2014) Aristotle describes usury as "the birth of money from money" and claims it is unnatural because money is sterile and should not be "reproduced" (Jones, 2014).

Judaism, Christianity, and Islam (the three Abrahamic religions) take a firm stance against usury (Rahman, 2014). Some Christians believe that those who lend should not expect anything in return (Luther, 2015). In the Bible, it is obvious that usury is prohibited and is considered a despicable act. "And if you lend to the ones from whom you foresee repayment, what credit is that to you? Sinners also lend to sinners in such a way that they may receive equal back. However, love your enemies, and do good and lend, expecting nothing, and great will be your reward, and you will be children of the Highest, for he is kind to the unthankful and evil. Be compassionate, just as your Father is compassionate. (Luke 6: 34-36 Palmer, 2018). " Likewise with the Old Testament, the Old Testament condemns the practise of usury, especially when lending to less wealthy people without access to safer means of financing. Kitab Exodus "If thou a lend money to any of my people that is poor by thee, thou shalt not be to him as a usurer, neither shalt thou lay upon him b usury. If thou at all take thy neighbor's raiment to a pledge, thou shalt deliver it unto him by that the sun goeth down. If thou at all take thy neighbor's raiment to a pledge, thou shalt deliver it unto him by that the sun goeth down (Exodus 22: 25-27 King James, 2014). " Not delaying paying a debt is an act that the Bible encourages as a form of kindness. The Bible explains that every human being must help each other with food aid and interest-free loans. It is good to give loans in debt without charging interest and without demeaning the person being loaned. However, it will be a reprehensible bandage if it imposes interest on the debt given. Making loans without interest and voluntarily is highly recommended in the gospel "Give to the one who asks you, and do not turn away from the one who wants to borrow from you. (Matthew 5:42 Palmer, 2016). " Riba is strictly prohibited in the Bible explicitly because it adds to the suffering of those in need and destroys the brotherhood confirmed by the old Deuteronomy Book of agreement "Thou shalt not lend upon usury to thy brother; usury of money, usury of victuals, usury of anything that is lent upon usury (Deuteronomy 23: 19 King James, 2014). "

The Talmud law (Talmud Law) explicitly prohibits usury "Just as it is forbidden to give a loan at interest; so, too, it is forbidden to borrow at interest. Similarly, it is forbidden to act as a broker between the borrower and the lender when interest is involved. Anyone involved, a guarantor, a scribe, or a witness, transgresses a negative commandment, as Exodus 22:24 states: Do not lay interest upon him. It is a warning against the witnesses, the guarantor, and the scribe. Thus, we see that a person who offers a loan at interest violates six prohibitions: Do not act like a creditor toward him. Could you not give him your money with neshech? not put forth your food at marbit. Do not take neshech and tarbit from him. Do not lay interest upon him, and Do not place a stumbling block in front of the blind. Any broker who connects between the lender and the borrower or assists or instructs one of them concerning making the loan transgresses the commandment (Malveh veLoveh 4: 2 Rambam & Touger, 2011) "Talmud Malveh veLoveh very clearly states that usury hurts others. "Neshech and marbit are the same,

as Leviticus 25:37 states: Do not give him your money with neshech and do not put forth your food at marbit. And further on, Deuteronomy 23:20 speaks of Neshech from money, neshech from food, neshech from any substance that will accrue. Why is interest called neshech? Because it bites. It causes pain to one's colleague and consumes his flesh. Why did the Torah refer to it with two terms? So that one would commit a twofold transgression when violating this prohibition. (Malveh veLoveh 4: 1 Rambam & Touger, 2011) ".

The Protestant Reformation of the 16th century distinguished riba (charging high-interest rates) and more good borrowing of money at low interest (Hasty & Elizabeth, 2017; Duffy, 2017). However, Islam is firmly against charging interest; in Islam, the lowest interest rate is still Riba as explained in the Gospel of Luke, the Gospel of Matthew and the Torah (Old Testament), and the Talmud Malveh, in line with what is written in the Qur'an which is very emphatic. Differentiate usury and profit or profit resulting from sales minus production results. Moreover, usury is a sin in Islam. Abandoning usury is highly recommended in Islam and making loans without interest is rewarded with great rewards by Allah, as explained by the Bible, Torah, and Talmud. "Those who swallow usury will not rise, except as someone driven mad by Satan'stouch. That is because they say Commerce is like usury. But God has permitted commerce and has forbidden usury. Whoever, on receiving advice from his God, condemns usury, and He blesses charities. God does not love any sinful ingrate. Lord, refrains, may keep his past earnings, and his case rests with God. However, whoever resumes — these are the dwellers of the Fire, wherein they will abide forever. God condemns usury, and He blesses charities. God does not love any sinful ingrate. Those who believe and do good deeds, and pray regularly, and give charity. They will have their reward with their Lord; they will have no fear, nor shall they grieve. O you who believe! Fear God, and forgo what remains of usury if you are believers. (Quran 2: 275 Itani, 2012) ". However, in economics, interest rates and income on interest are key concepts for economic development (Munk, 2011; Grant & Vidler, 2011). Interest fosters saving and capital accumulation, which leads to higher labor productivity, wages, and living standards. Interest-free market economic ethics is a natural phenomenon that comes from the concept of time preference. Thus, interest is compensation for delaying consumption's natural discomfort.

Interest is the process of transferring value or income from one party to another without an equal match. Interesting transactions result in financial and economic imbalances between individuals, social groups, factors of production, and countries in the process of borrowing or exchanging. Imbalances appear as economic bubbles and financial markets crises when they cannot be sustained (Ozsoy, 2016; Bentham, 2014). In 2007 - 2009, usury was the trigger for the global financial crisis. Today's modern economy is based on fiat money without gold back-up and makes USD as hard money in international finance. , al, 2018). When Greece experienced a crisis in 2010, debt played a central feature of financialization, which gave birth to economic fragility across Europe. Riba, which is used as the basis for handling the crisis, has not been proven to restore the European economy after the European debt crisis until now 2018 (Lister, 2018; Coppola, 2018). The increase in public debt produces destabilizing instability that determines the non-linearity of the convex interest that marks the euro area crisis. Research by Hatgioannides et al. (2018) examined the composition of Greece's soaring debt and the troubling utilization of troika loans for the 2010–15 period. Hatgioannides et al. (2018) found a neo-liberalism from the acute geoeconomic and social crisis that Greece has experienced since 2010 by releasing three consecutive bailout plans and implementing strict austerity policies. Hatgioannides et al. (2018) prove that most of the loans do not benefit the Greek state.

In 1997 the Asian financial crisis was triggered by the fiat currency exchange rate policy that started in Thailand, which spread to Indonesia, Malaysia, China, and South Korea, and other countries in Asia . After the Asian financial crisis, all crisis-hit countries (except Malaysia) announced a change from an exchange rate-based monetary policy framework to the adoption of inflation targeting that uses interest rates as an instrument of monetary policy operation (Raj & Roy, 2014). Stabilizing exchange rates using interest rate instruments in Asia only has a short-term impact.

Malaysia and Thailand became part of the East Asian miracle economic growth and rapidly moved to high-income status after the Asian Financial Crisis (AFC) of 1997 - 1998 (Danju, 2014). The dramatic growth of Malaysia and Thailand's economies after the Asian financial crisis had different attitudes in responding to the IMF offer. Thailand accepted the IMF loan offer by focusing on increasing its production so that economic growth could be greater than the interest rate that must be paid to the IMF, and Malaysia refused debt and focused on stabilizing the country's economy and increasing domestic production (Demiroglu & Karagoz, 2016; Orastean, 2014). The interest to be paid by the debtor country becomes a burden (cost) of economic growth. External debt harms economic growth. Domestic interest rates have a negative impact or become a burden to economic growth. Because the higher the interest rate, the more expensive the cost of capital is. In the current digital period (2018), microfinance or loan-based financial technology services have emerged—usury-based online. Digital payments and financial services are part of the modern economy's vital infrastructure, enabling individuals, businesses, and governments to transact cheaply and efficiently. For a wide variety of companies, including banks, telecommunications companies, payment providers, financial technology start-ups, retailers, and others, the potential business opportunities are huge (Óskarsdóttir, 2018).

3. Theory

The inevitable economic consequence based on usury, of course, depending on whether interest is simple or compound and on the prevailing interest rate, is that economic wealth will gradually pass into the financial controllers (Hudson, 2017). This fact has been known and understood since the system first appeared in ancient Babylon, as documented by Michael Hudson. Hudson explained that the usury-based system saps purchasing power, placing every institution and individual in the economy under constant pressure to produce ever-increasing economic activity to prevent bankruptcy, collapse, and starvation. Historically, the economic system went into chaos when banks were allowed, by law, to lend more than they had in reserve (Fractional reserve banking) (Hudson, 2015). Fractional reserve banking is a banking system in which only a small portion of bank deposits are backed by actual cash and available for withdrawal. The practice or system of fractional reserve banking is permitted due to the assumption that not everyone wants to exchange their notepaper for gold and silver simultaneously (or not everyone withdraws cash simultaneously at the same time) (Huber, 2017). However, the more mature the economy is, the more the economic growth rate will slow down, and the more stressful it is in the simple act of living. To pay off debt, the economy must continue to grow. To make it grow, everything had to be sacrificed. When human values conflict, they must be removed to serve growth. This is one reason "consumerism" is rampant (Vogt et al., 2011).Irving Fisher's theory explains the relationship between the nominal interest rate, inflation, and the real interest rate, where the nominal interest rate and inflation are positively correlated with each other in the short-term and long-term relationships (Fisher, 2012).

4. Research Method

The method used in this study is a qualitative content analysis method combined with a quantitative content analysis method with the Threshold Autoregressive Model (TAR) adopting the model from Irving Fisher. The qualitative method of content analysis is a research technique used to make replicable and valid conclusions by interpreting and encoding textual material. By evaluating texts systematically (for example, documents, oral communication, and graphics), qualitative data can be converted into quantitative data (Krippendorff, 2018; Schreier, 2012). The content analysis method constructs the analyzed data, defines the data, takes the data population, tests the relevance of the context, provides analysis boundaries, constructs the size of the context being analyzed (Neuendorf, 2017; Drisko & Maschi, 2016). A qualitative-based approach to content analysis prepares a list of categories derived from a list of word frequencies and controls the distribution of words and categories over the text. Meanwhile, the quantitative content analysis method changes the quantitative statistical data (Margolis & Pauwels, 2011; Roller & Lavrakas, 2015). The qualitative content analysis focuses more on intentionality and its implications. Quantitative content analysis provides more measured quantitation of data. Combining the two builds strong parallels between qualitative analysis based on data meaning and quantitative analysis based on data size and forecasting based on quantitative statistical data (The riff et al. , 2014; Kuckartz, 2014).

Threshold Autoregressive (TAR) models are usually applied to time series data as an extension of the autoregressive model to allow a higher degree of flexibility in model parameters through parameter switching behavior (Tong, 2012; Rao et al., 2012). Given the time series xt data, the TAR model is a tool for understanding and predicting future values assuming that data movements' behavior changes after entering different parameters. The transition from one parameter to another depends on the past values of the price movement x (Acton, 2011; Mtumbuka et al., 2014)

5. Data and Discussion

China was not directly affected by the 1997 Asian financial crisis and managed to maintain financial and economic stability with moderate financial policies. Exports have been one of the main engines of growth for China's economy since China's economic reforms of 1978. Chinese exports grew by an average of 15% or more every year (Denoon, 2017). The export sector is the most competitive and dynamic part of the Chinese economy. During the economic crisis, most Asian countries had to devalue their currencies against the US dollar. However, the Chinese currency (Renminbi) remains almost fixed against the US dollar. Most Asian currencies depreciate against the Chinese Yuan at the same rate as the US dollar. Most Asian currencies have depreciated in an average proportion of 20-30% against the Chinese Yuan and the US dollar. Except for Singapore, while the Indonesian rupee has depreciated by more than 50%. Another consequence of the crisis was the decline in GDP in most Asian countries in 1998 (Lai, 2012). Almost all countries in East and Southeast Asia experienced a severe recession in 1998. Indonesia was the country that experienced the deepest decline in GDP (-15%). Thailand, Malaysia, and South Korea experienced a decline in GDP of 5% to 8% in 1998. The average GDP growth rate for Indonesia, Thailand, Malaysia, and South Korea in the period 1990-1997 (before the economic crisis) was 7.5%, 7.5%, 8.7, and 7.2%, respectively (Hock, 2011). The impact of the Asian crisis on China's foreign trade stems from the depreciation of the currency and the decline in GDP in countries affected by the Asian financial crisis.

Currency depreciation has two effects on the country's imports: the price effect and the income effect. Currency depreciation in East and Southeast Asian countries makes Chinese goods and services more expensive. The increase in relative import prices makes people in East and

Southeast Asian countries shift their consumption to other goods (substitution effect) and have a negative indirect effect; people have to buy less with the same budget amount. Deep currency depreciation also has a direct income effect (Das, 2011). The total GDP / income value of East and Southeast Asian countries in US dollars or Chinese Yuan also declined sharply. The price effect and the income effect make most countries in the East and Southeast Asia region reduce their imports from China and other countries with stable currencies (Lardy, 2012). A fall in GDP also has a direct income effect on imports. When the economy is in a recession, consumption demand and production demand for goods will decline. China's exports to all major countries in Southeast and East Asia (except the Philippines) decreased in 1998. Exports to Japan decreased by 6.7%, Korea -31.2%, Thailand -23.5%, Malaysia -16.9%, Singapore -5%, and Indonesia () -36.4%. China actively supports and encourages regional and international financial cooperation with related parties during the Asian financial crisis (Hu & Vanhullebusch, 2014; Wu et al., 2014).

China's economic growth, which continues to grow until now (2018), has increased capital demand. There are two possible capital sources in fulfilling the demand for capital: investors and lenders (bank or non-bank) (Shenga & Gu, 2018). There is institutional discrimination against small and medium enterprises (SMEs) by commercial banks and other formal financial institutions. Pawnshops have been used as an additional financing source for SMEs and private entrepreneurs when they do not have access to bank credit or other finance sources such as riba (underground money shop). Pegadaian is a non-bank institution with medium financial instruments to help private or individual households meet their short-term and urgent consumption needs (Liu, 2017). During the global financial crisis, the central government of China (2007 - 2009) reduced borrowing costs (interest rates). It lowered bank credit access barriers, leading to a temporary withdrawal from the fast-growing pawnshop business in 2008 and 2009. However, due to quantitative easing gradually phased out after the global financial crisis, pawnshop activities recovered rapidly, implying that the industry will continue to play an important role in China's economic development given the current financial system, which is still hostile to the SME sector (Nolan, 2015; Ulgen, 2017). The unequal access to bank credit and the increasingly consumptive cost of living is driven by the development of information technology that has entered usury-based financial services along with all its easy facilities giving birth to the phenomenon of nude loans and violence in financial services in China (Sheng, 2016; Li, 2016; Ying, 2017). In China, usury crimes are considered illegal and even criminal practices (Cheng, 2016). Riba has a harmful impact not only on the economy but also socially and morally. Riba, by its nature, is not a debt that helps but drains social productivity and divides people into competitive classes (Raworth, 2017). One of the phenomena of violence in financial services is a murder case in Shandong, China. A widespread murder case was caused by usury in Shandong, China, in 2017. They are involving a young man named Huan Yu, killing one of eleven debt collectors who abuse a young man (Hornby & Zhang, 2017; Zixiong, 2017; Liya, 2018). The case of online riba Jiedaibao, a peer-to-peer lending platform (in the nude loan phenomenon) at the Chinese educational institution in the period 2012 to 2017, was the cause of suicides and prostitution activities of hundreds of students in China. In this case, students used (nude photos) as collateral for loans that plunged their victims into the practice of prostitution due to the accumulation of unpaid debts (Shaocong, 2017; Jin, 2017; Yiming, 2016). Peer-to-peer lending and shadow banking are also present in Malaysia, Indonesia, Thailand, and South Korea (Kaur, 2013). The lower the interest rate, the more it will boost people's purchasing power and economic growth. When the central bank raises interest rates to their optimal levels shortly, the impact is devastating. Shadow Banking and loan shark practices online and directly have worsened the economy (Holland, 2016). Asian financial markets are more affected by developed countries' monetary policies than their own

so that Asia can be disproportionately affected by currency volatility changes, international capital flows, and debt levels. The impact of Riba on the general price level can be seen, which is proxied by inflation. The following is the calculation of the TAR model to see the impact of interest rates and inflation on purchasing power proxied by GDP per capita. The TAR model as follows:

$$Y_t = (y_t(-3) < c_{1t1}) \times \beta_0 + \beta_1 i_{t1} + y(-3) \geq c,(y(-3) < c_{2t2}) \times \beta_2 + \beta_3 i_{t3} + (y(-3) \geq c_{3t3}) \times \beta_4 + \beta_5 i_{t5} + \beta_6 R_{t6} + e_t$$
$$Y = F(i,r,y)$$

Where t is the time period, c is the threshold parameter, Y is the income per capita as a proxy for purchasing power, i is inflation, r is the interest rate, β is a constant, e is the error factor.

China's TAR estimation results:

Y = (Y(-3)<5164.641)*(6301.07659404 - 213.065264637*I) + (Y(-3)>=5164.641 AND Y(-3)<7947.787)*(10723.8558001-659.791683611*I)+(Y(-3)>=7947.787)*(17696.3767813 - 1476.18040661*I) - 448.545129946*R

Table 1
China's TAR estimation results

| Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-3) < 5164.641 -- 10 obs				
C	6301.077	526.4559	11.96886	0.0000
I	-213.0653	177.6498	-1.199356	0.2503
5164.641 <= Y(-3) < 7947.787 -- 4 obs				
C	10723.86	700.3046	15.31313	0.0000
I	-659.7917	175.3115	-3.763540	0.0021
7947.787 <= Y(-3) -- 7 obs				
C	17696.38	776.8393	22.77997	0.0000
I	-1476.180	231.6004	-6.373825	0.0000
Non-Threshold Variables				
R	-448.5451	92.90615	-4.827938	0.0003
R-squared	0.978181	Mean dependent var	7934.012	
Adjusted R-squared	0.968830	S.D. dependent var	4035.311	
S.E. of regression	712.4302	Akaike info criterion	16.23644	
Sum squared resid	7105795.	Schwarz criterion	16.58462	
Log likelihood	-163.4826	Hannan-Quinn criter.	16.31201	
F-statistic	104.6086	Durbin-Watson stat	1.905608	

Source: Data Processed
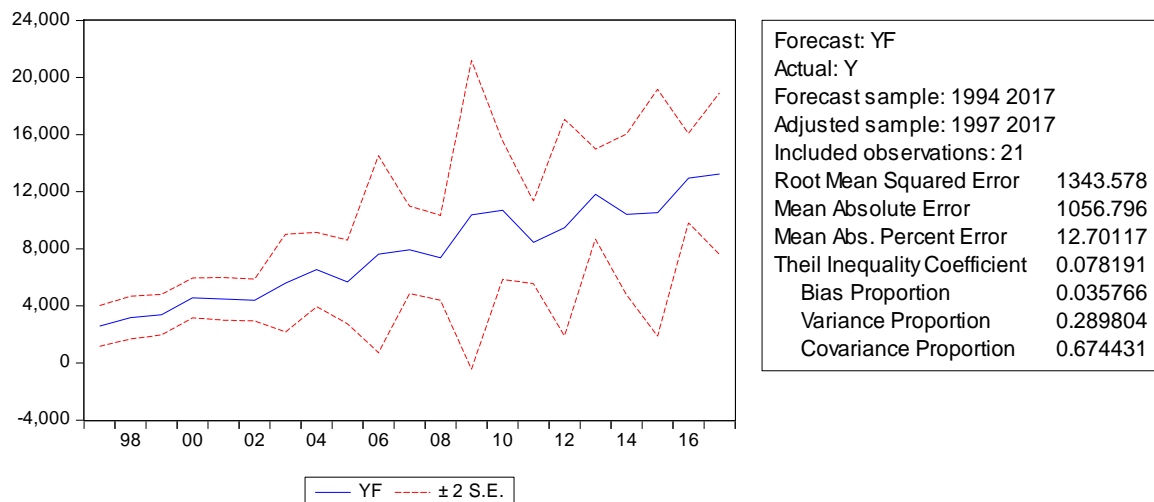
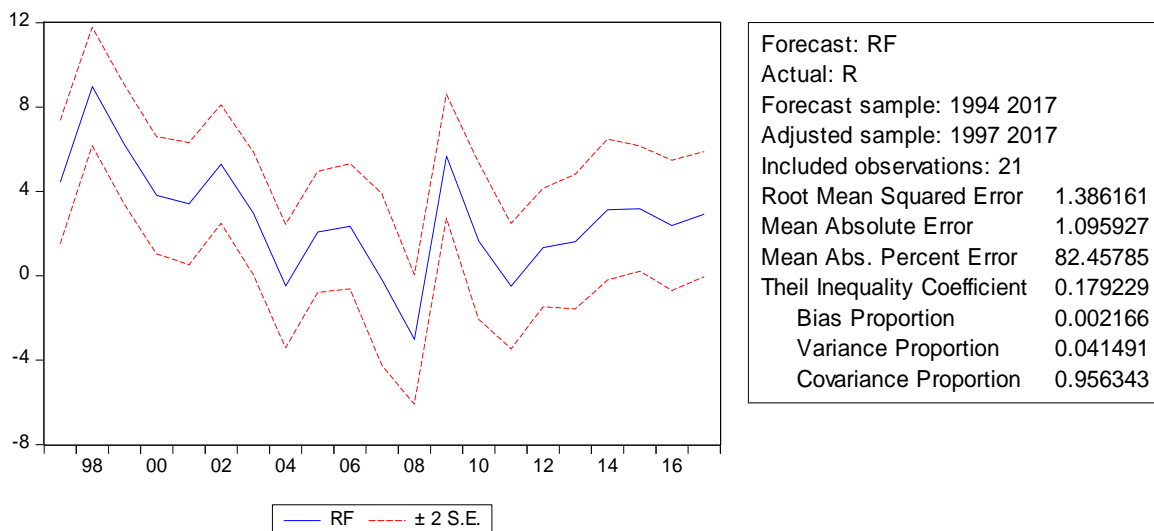Figure 1. Forecast results on China's GDP Per Capita TAR Model

Figure 2. The result of forecasting the real interest rate of China's TAR Model

From the forecast results of GDP per capita and interest rates, there was a sharp shock in 1997 - 2000 and 2008 - 2011, where China's interest rate was inversely proportional to its GDP per capita. This proves that the interest rate is a burden on welfare, as reflected in China's GDP per capita.

TAR estimation results in South Korea

Y = (Y(-3)<22997.18)*(26853.7264635 - 364.464137928*I) + (Y(-3)>=22997.18 AND Y(-3)<28588.37)*(29573.1315105 + 405.279553524*I) + (Y(3)>= 28588.37) *(36170.2863487 - 390.847962677*I) - 730.469235494*R

Table 2
South Korea's TAR estimation results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-3) < 22997.18 -- 8 obs				
C	26853.73	972.7466	27.60609	0.0000
I	-364.4641	194.8096	-1.870874	0.0824
22997.18 <= Y(-3) < 28588.37 -- 6 obs				
C	29573.13	1671.851	17.68885	0.0000
I	405.2796	519.5397	0.780074	0.4483
28588.37 <= Y(-3) -- 7 obs				
C	36170.29	764.5458	47.30951	0.0000
I	-390.8480	371.7237	-1.051447	0.3109
Non-Threshold Variables				
R	-730.4692	102.8854	-7.099832	0.0000
R-squared	0.978640	Mean dependent var		27166.47
Adjusted R-squared	0.969485	S.D. dependent var		5723.061
S.E. of regression	999.7297	Akaike info criterion		16.91405
Sum squared resid	13992432	Schwarz criterion		17.26222
Log likelihood	-170.5975	Hannan-Quinn criter.		16.98961
F-statistic	106.9038	Durbin-Watson stat		2.449289

Source : Data Processed

Forecast: YF
Actual: Y
Forecast sample: 1994 2017
Adjusted sample: 1997 2017
Included observations: 21

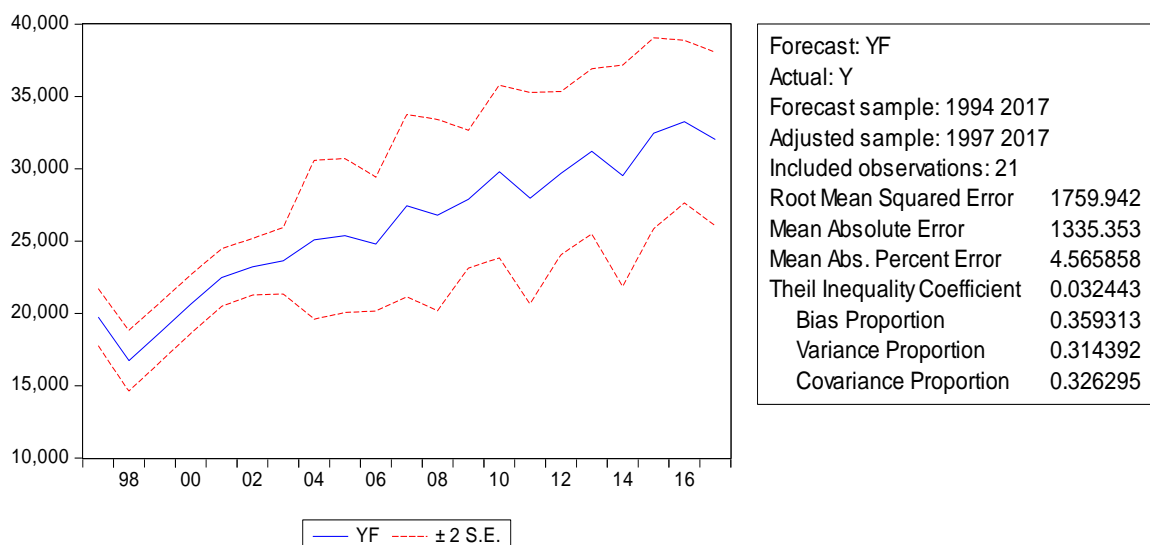|	
Root Mean Squared Error	1759.942
Mean Absolute Error	1335.353
Mean Abs. Percent Error	4.565858
Theil Inequality Coefficient	0.032443
Bias Proportion	0.359313
Variance Proportion	0.314392
Covariance Proportion	0.326295

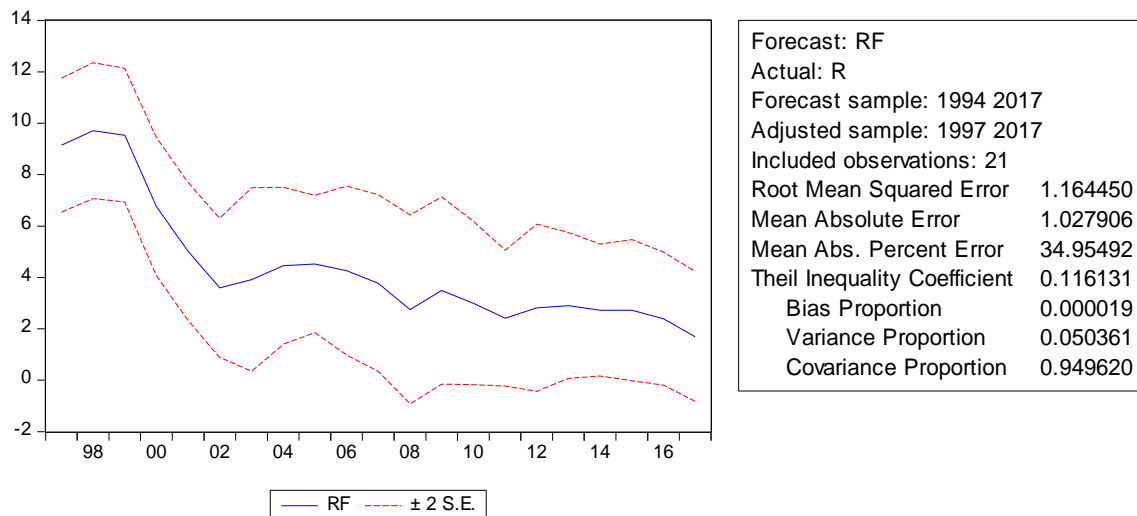Figure 3. Results of forecast GDP per capita TAR model for South Korea

Figure 4. The South Korean Model TART real interest rate forecast results

Similar to China, in South Korea, the relationship between interest and purchasing power, proxied by GDP per capita, is negative, meaning that the higher the interest rate in South Korea, the lower the purchasing power of the South Korean people.

TAR Estimation Results in Indonesia

$$Y = (Y(-3)<7792.629)*(7573.79301853-57.660149142*I)+(Y(3)>=7792.629)*(11802.2863794 - 267.255666084*I) - 58.4566881596*R$$

Table 3
Indonesia's TAR estimation results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-3) < 7792.629 -- 14 obs				
C	7573.793	405.7179	18.66763	0.0000
I	-57.66015	23.02144	-2.504629	0.0235

C	11802.29	1396.155	8.453420	0.0000
I	-267.2557	257.3845	-1.038352	0.3145

Non-Threshold Variables

R	-58.45669	34.42772	-1.697954	0.1089

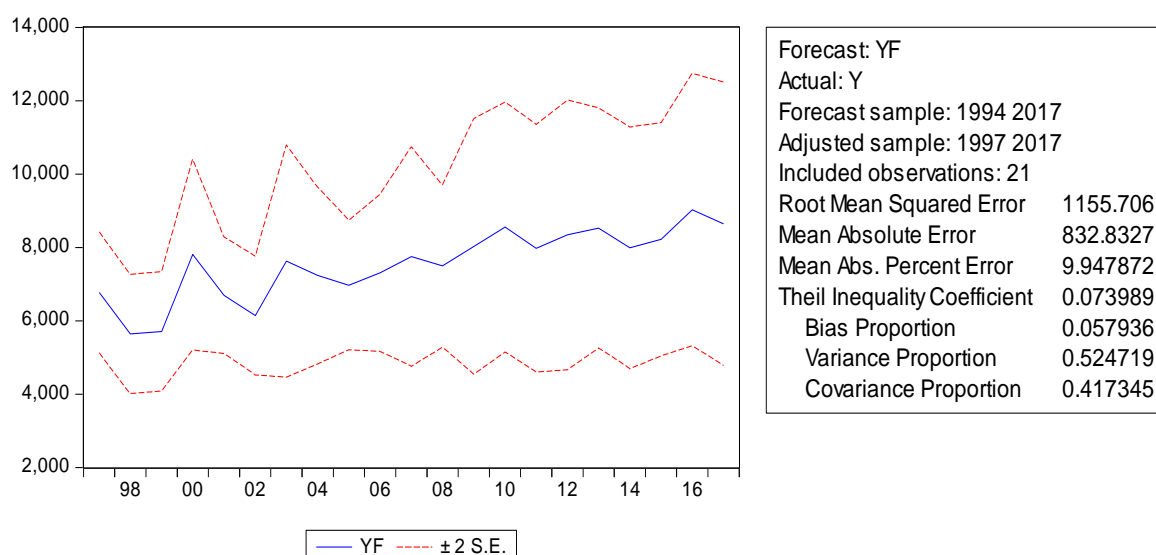|			
R-squared	0.840390	Mean dependent var	7822.679
Adjusted R-squared	0.800487	S.D. dependent var	1806.559
S.E. of regression	806.9326	Akaike info criterion	16.42861
Sum squared resid	10418244	Schwarz criterion	16.67731
Log likelihood	-167.5004	Hannan-Quinn criter.	16.48259
F-statistic	21.06108	Durbin-Watson stat	1.078402

Source : Data Processed

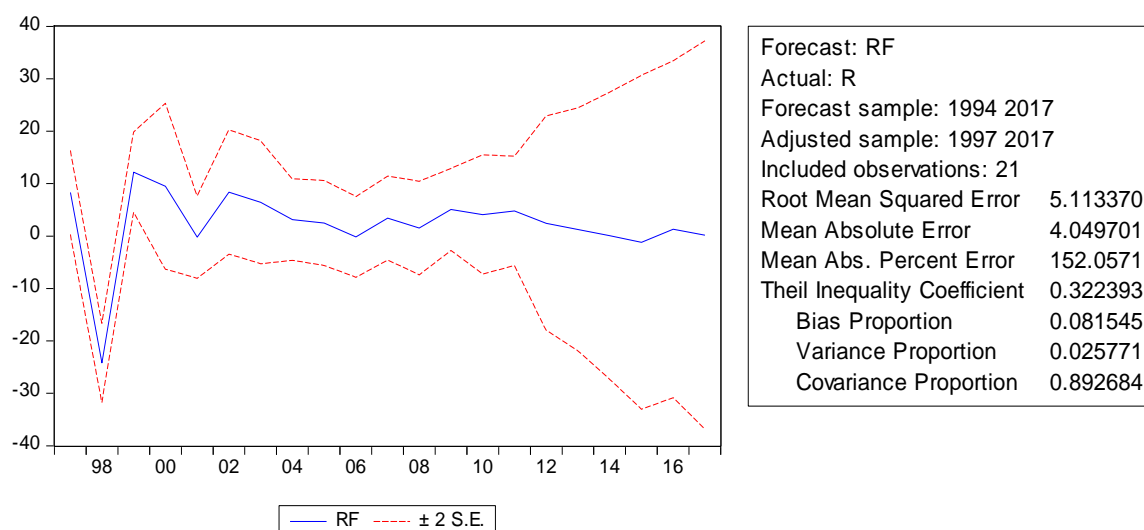Figure 5. Forecast results for Indonesia's GDP Per Capita TAR Model

Figure 6. Forecast results on the real interest rate TART Model Indonesia

There is a bias in Indonesia, wherein 1997 inflation far exceeded the nominal interest rate, which caused negative real interest rates in Indonesia followed by a decline in purchasing power in the form of a recovery crisis in Indonesia, as shown in the letter W illustrated in the 1997 - 2003 forecast graph.

TAR Estimation Results in Malaysia

Y = (Y(-3)<16554.9)*(17457.679033 - 564.340312643*I) + (Y(-3)>=16554.9 AND Y(-3) <20009.19)*(19168.7957699 + 170.211842314*I) + (Y(-3)>=20009.19 AND Y(-3) < 2 2590.79)*(21001.9064333 + 651.510777699*I) + (Y(-3)>=22590.79)*(23435.4780861 + 850.053413161*I) + 31.4477232883*R

Table 4
Malaysia's TAR estimation results

| Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-3) < 16554.9 -- 8 obs				
C	17457.68	702.1063	24.86472	0.0000
I	-564.3403	259.9619	-2.170858	0.0507
16554.9 <= Y(-3) < 20009.19 -- 5 obs				
C	19168.80	1119.875	17.11690	0.0000
I	170.2118	326.7559	0.520914	0.6119
20009.19 <= Y(-3) < 22590.79 -- 5 obs				
C	21001.91	1537.449	13.66023	0.0000
I	651.5108	622.9494	1.045849	0.3162
22590.79 <= Y(-3) -- 3 obs				
C	23435.48	1850.464	12.66465	0.0000
I	850.0534	645.8794	1.316118	0.2127
Non-Threshold Variables				
R	31.44772	70.70900	0.444748	0.6644
R-squared	0.960003	Mean dependent var		19980.74
Adjusted R-squared	0.933339	S.D. dependent var		3612.447
S.E. of regression	932.6912	Akaike info criterion		16.81155
Sum squared resid	10438953	Schwarz criterion		17.25920
Log likelihood	-167.5213	Hannan-Quinn criter.		16.90870
F-statistic	36.00310	Durbin-Watson stat		1.822285

Source: Data Processed
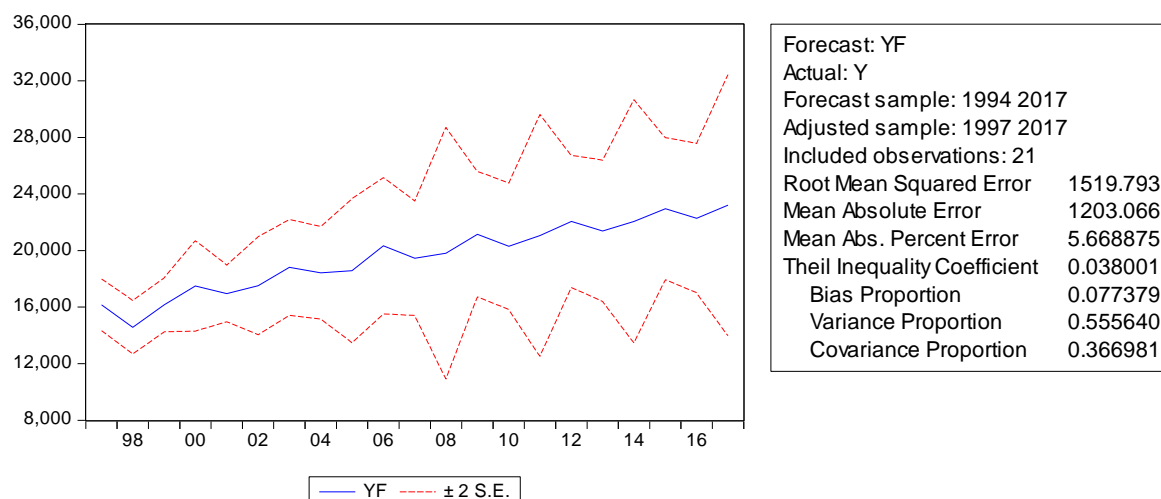
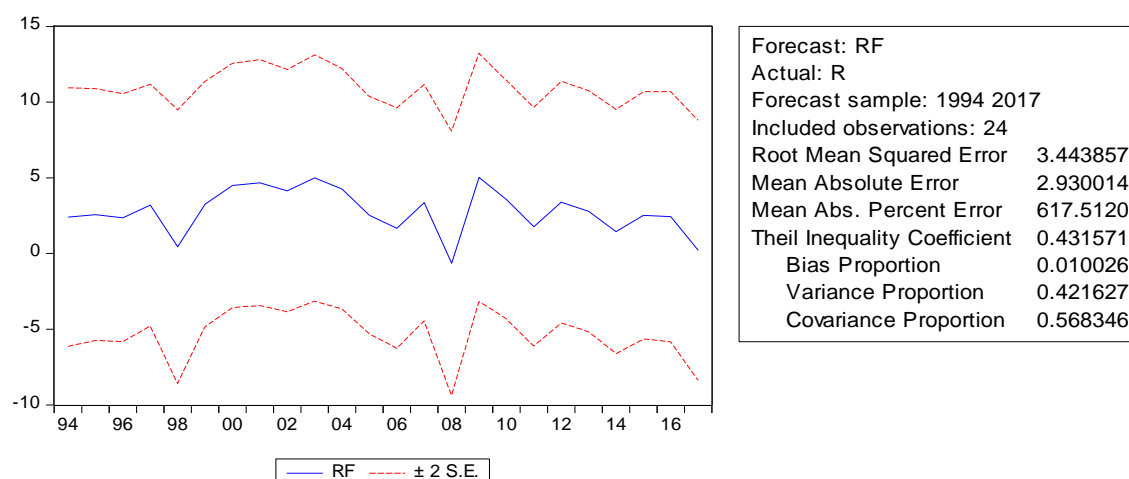Figure 7. Results of forecast GDP Per Capita TAR Model Malaysia

Figure 8. Forecast results on the Malaysian TART Model real interest rate

Malaysian economic growth which tends to be anti-usury tends to be stable with real interest rates that are close to zero and less than 5% with the inflation shocks in 1998 and 2008.

TAR Estimation Results in Thailand

$Y = (Y(-3)<9914.43)*(10323.4030338 - 69.1039480939*I) + (Y(-3)>=9914.43 \text{ AND } Y(-3) <12605.37)*(12991.0592237 - 151.373896702*I) + (Y(3)>=12605.37) * (15977.8174 146 - 526.647799174*I) - 106.336582102*R$

Table 5
Thailand's TAR estimation results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Y(-3) < 9914.43 -- 8 obs				

C	10323.40	415.7251	24.83228	0.0000
I	-69.10395	95.56489	-0.723110	0.4815

9914.43 <= Y(-3) < 12605.37 -- 5 obs				
C	12991.06	565.0728	22.99006	0.0000
I	-151.3739	136.0131	-1.112936	0.2845

12605.37 <= Y(-3) -- 8 obs				
C	15977.82	397.4310	40.20274	0.0000
I	-526.6478	153.9072	-3.421853	0.0041

Non-Threshold Variables				
R	-106.3366	57.11811	-1.861697	0.0838

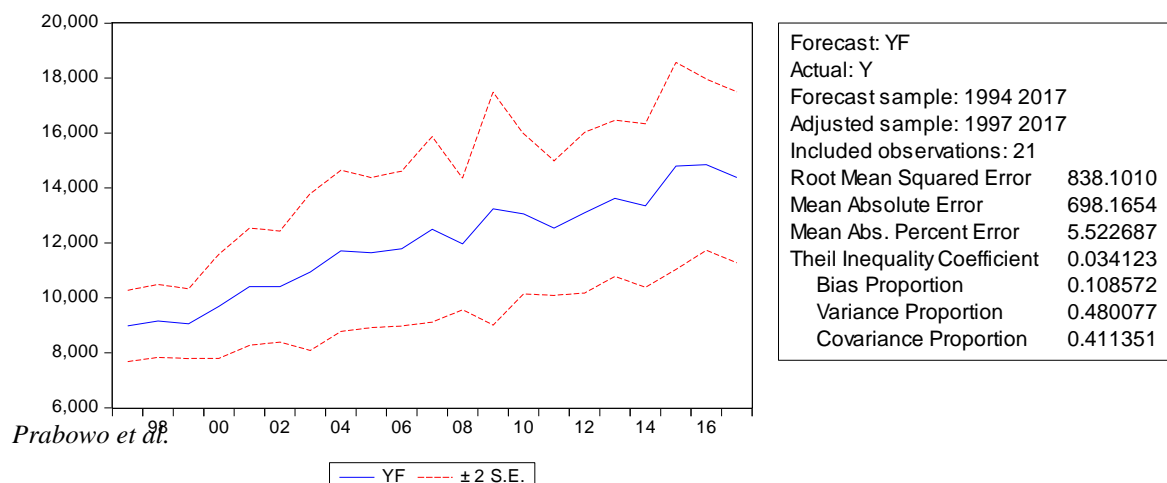|			
R-squared	0.948236	Mean dependent var	12236.48
Adjusted R-squared	0.926051	S.D. dependent var	2439.773
S.E. of regression	663.4609	Akaike info criterion	16.09402
Sum squared resid	6162525.	Schwarz criterion	16.44219
Log likelihood	-161.9872	Hannan-Quinn criter.	16.16958
F-statistic	42.74282	Durbin-Watson stat	1.785902

Source: Data Processed

Forecast: YF	
Actual: Y	
Forecast sample: 1994 2017	
Adjusted sample: 1997 2017	
Included observations: 21	
Root Mean Squared Error	838.1010
Mean Absolute Error	698.1654
Mean Abs. Percent Error	5.522687
Theil Inequality Coefficient	0.034123
Bias Proportion	0.108572
Variance Proportion	0.480077
Covariance Proportion	0.411351

Figure 9. Forecast results for Thailand's GDP Per Capita TAR Model

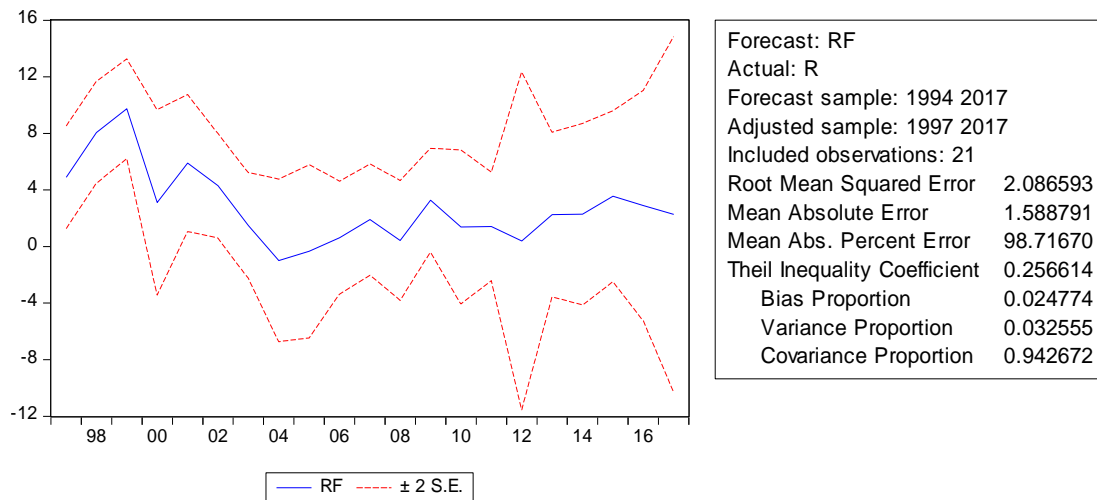| Forecast: RF	
Actual: R	
Forecast sample: 1994 2017	
Adjusted sample: 1997 2017	
Included observations: 21	
Root Mean Squared Error	2.086593
Mean Absolute Error	1.588791
Mean Abs. Percent Error	98.71670
Theil Inequality Coefficient	0.256614
Bias Proportion	0.024774
Variance Proportion	0.032555
Covariance Proportion	0.942672

Figure 10. Forecast results for Thailand's TART model real interest rate

There was a shock in 1997 - 2000 due to the crisis with the form of crisis recovery in the form of the letter V which can be seen from the GDP per capita graph from 1997 to 2010. The behavior of real interest rates shows a burden on interest rates on the Thai economy.

From the forecasting results, it turns out that there is the same behaviour data between GDP and interest rates in five countries where the direction of movement of the GDP data is inversely proportional to the direction of the interest rate. Where the lower the interest, the stronger the economy or GDP. This proves that the interest rate is an economic burden in the five countries in Asia in the research object.

5. Conclusion

The real interest rate, which is the nominal interest rate minus inflation in ASIA 5, has a negative correlation with GDP per capita, which proves that interest or usury is a burden on the economy and has the potential to damage morale with the phenomenon of a scandal loan shark in ASIA 5 and nude loan in China which is an iceberg phenomenon in ASIA 5. This fact answers why the major religions (Judaism, Christianity, and Islam) prohibit Riba because usury is an economic burden and has the potential to damage public morale.

References

Abdul-Rahman, Y. (2014). *The Art of RF (Riba-Free) Islamic Banking and Finance.* Hokoben: John Wiley & Sons.

Acton, A. (2011). *Issues in Environmental Research and Application.* Atlanta: Scholarly Editions.

Bentham, J. (2014). *A Defence of Usury.* Cambridge: Cambridge University Press.

Cheng, H. (2016). *Financial crime in China: Developments, Sanctions, and The Systemic Spread of Corruption.* New York : Palgrave Macmillan.

Claessens, S., & Forbes, K. (2013). *International Financial Contagion.* New York : Springer Science.

Coppola, F. (2018). *The Eurocrisis Is Back And It Could Be Uglier Than The Last One.* Retrieved from https://www.forbes.com/sites/francescoppola/2018/05/31/the-eurocrisis wakes/#46e22bc55791

Das, D. (2011). *The Asian economy: Spearheading The Recovery From The Global Financial Crisis.* New York: Routledge.

Danju, I., Maasoglu Y., Maasoglu N. (2014). The East Asian Model of Economic Development and Developing Countries. *Procedia Social and Behavioral Sciences, 109*, 1168-1173.

Debergue, Y., & Harrison, J. R. (2015). *Teaching Theology in a Technological Age.* New Castel: Cambridge Scholars Publishing.

Decock W., Ballor J.J, Germann M., Waelkens, L. (2014). *Law and Religion: The Legal Teachings of the Protestant and Catholic Reformation.* Gottingen: Vandenhoek & Ruprecht.

Denoon, D.,B.,H. (2017). *China, The United States, and the Future of Southeast Asia.* New York: New York University Press.

Desai, P. (2014). *Financial crisis, contagion, and containment: From Asia to Argentina.* New Jersey: Princeton University Press.

Demiroglu, T., & Karagoz, M. (2016). IMF Stabilization Programs and their Effects on the World Economic Crises. *Procedia Economics and Finance*, *38*, 396-407.

Drisko, J. W., & Maschi, T. (2016). *Content analysis.* New York: Oxford University Press.

Duffy, E. (2017). *Reformation divided: Catholics, Protestants and the Conversion of England.* London: Bloomsbury Publishing.

Eisenstein, C. (2011). *Sacred economics: Money, gift, and society in the age of transition.* Berkeley: Evolver Editions.

Fisher, I. (2012). *The Money Illusion.* New York: Start Publishing LLC.

Grant, S. & Vidler, C.(2011). *Economics in Context.* Oxford: Heinemann Educational Publisher.

Hatgioannides, J., Karanassou, M., Sala, H., Karanasos, M. G., & Koutroumpis, P. D. (2018). The legacy of a fractured Eurozone: The Greek Dra (ch) ma. *Geoforum, 93*, 11-21.

Hall, M., C. (2011). *Martin in the Holy Land.* New York: Lulu.

Hinson-Hasty, E. L. (2017). *The problem of wealth: A Christian Response to a Culture of Affluence.* New York: Orbis Books

Holland, T. (2016). *Why Low Interest Rates Are The Cause, Not The Cure, Of Developed World's Economic Malaise.* Retrieved from https://www.scmp.com/week-asia/business /2026141/ why-low-interest-rates-are-cause-not-cure-developed-worlds

Hornby, L., Zhang, A. (2017). *China Murder Case Shines Spotlight on Loan Sharks.* Retrieved from https://www.ft.com/content/1e0885be-1416-11e7-80f4-13e067d5072c

Hu, J., & Vanhullebusch, M. (2014). *Regional Cooperation and Free Trade Agreements in Asia.* Leiden : Brill Nijhoff.

Huber, J. (2017). *Sovereign money: Beyond Reserve Banking.* Cham: Springer Nature.

Hudson, M. (2015). *Killing the host: How Financial Parasites and Debt Bondage Destroy The Global Economy.* New York: Perseus Books Group.

Hudson, M. (2017). *J is for Junk Economics: A Guide to Reality in an Age of Deception.* Glashütte: Islet-Verlag.

Jackson, K. (2018). *Asian contagion: The Causes and Consequences of a Financial Crisis.* New York: Routledge.

James, K. (2014). *The Old Testament.* Utah: The Church of Jesus Christ of Latter-day Saints Salt Lake City.

Jin, W. (2017). Usurers overrun Chinese university campuses. Retrieved from http:// www.china.org.cn/china/2017-04/26/content_40696797.htm

Jones, D. W. (2014). *Reforming the Morality of Usury*. New York: University Press of America.

Kaur, G. (2013). *Shadow banking: It's a problem*. Retrieved from https://www.thestar.com. my/business/business-news/ 2013/ 07/06/shadow-banking-crisis/

Krippendorff, K. (2018). *Content Analysis: An Introduction to Its Methodology*. Singapore: Sage.

Kuckartz, U. (2014). *Qualitative text analysis: A Guide to Methods, Practice and Using Software*. Singapore: Sage.

Lai, J. (2012). *Financial Crisis and Institutional Change in East Asia*. New York: Palgrave Macmillan.

Lardy, N. R. (2012). *Sustaining China's economic growth after the global financial crisis*. Washington, DC : Peterson Institute For International Economics.

Lister, T. (2018). *Europe is on The Verge of a Big New Crisis, Just Six Years After The Last One*. Retrieved from https://edition.cnn.com/2018/06/02/europe/europe-next-crisis-phigs-lister -intl/index.html

Liu, Y. (2017). *New interpretations on the development of China's non-governmental enterprises*. Singapore: Springer Nature.

Liya, F. (2018). *Ringleader of Shandong Loan Shark Gang Sentenced to 25 Years*. Retrieved from https://www.sixthtone.com/news/1002086/ringleader-of-shandong-loan-shark-gang -sentenced-to-25-years

Luther, M. (2015). *On Commerce and Usury (1524)*. London: Anthem Press.

Margolis, E., & Pauwels, L. (2011). *The SAGE Handbook of Visual Research Methods*. Singapore: Sage.

Milner, J. (2011). *The history of the Church of Christ: The Fourth and Fifth Centuries*. Cardiff: G. Peacock.

Mtumbuka, W. S., Mapemba, L., Maonga, B., & Mwabumba, M. (2014). *Spatial price integration among selected bean markets in Malawi: A threshold autoregressive model approach* (Vol. 7). Intl Food Policy Res Inst.

Munk, C. (2011). *Fixed income modeling*. New York: Oxford University Press.

Neuendorf, K., A. (2017). *The Content Analysis Guidebook*. Singapore: Sage.

Nolan, P. (2015). *Re-balancing China: Essays on The Global Financial Crisis, Industrial Policy and International Relations*. London: Anthem press.

Orastean, R. (2014). The IMF Lending Activity–A Survey. *Procedia Economics and Finance*, *16*, 410-416.

Ozsoy, I. (2016). An Islamic suggestion of solution to the financial crises. *Procedia Economics and Finance*, *38*, 174-184.

Palmer, D., R. (2016). *The Gospel of Matthew*. Utah: The Church of Jesus Christ of Latter-day Saints Salt Lake City.

Palmer, D., R. (2018). *The Gospel of Luke*. Utah: The Church of Jesus Christ of Latter-day Saints Salt Lake City.

Raworth, K. (2017). *Doughnut economics: Seven Ways to Think Like a 21st-Century Economist*. White River Junction: Chelsea Green Publishing.

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A Total Quality Framework Approach*. New York: The Guilford Press.

Riff, D., Lacy, S., & Fico, F. (2014). *Analyzing media messages: Using Quantitative Content Analysis in Research.* New York: Routledge.

Rist, R. (2016). *Popes and Jews, 1095-1291*. Oxford : Oxford University Press.

Raj,J.,F. & Roy, S. (2014). Impact of financial crisis in Asia. *Procedia-Social and Behavioral Sciences*, *133*, 336-345.

Schreier, M. (2012). *Qualitative Content Analysis in Practice.* Singapore: Sage.

Schoon, N. (2016). *Modern Islamic banking: Products and processes in practice*. West Sussex: John Wiley & Sons.

Shaocong, H. (2017). *China Bans Online Loans to College Students*. Retrieved from https://news.cgtn.com/news/3d6b544f314d444e/share_p.html

Sheng, A., Soon, N.C. (2016). *Shadow banking in China: An Opportunity for Financial Reform.* Hoboken : John Wiley & Sons.

Sheng, M., & Gu, C. (2018). *Economic growth and development in Macau (1999–2016): The Role Of The Booming Gaming Industry*. *Cities*, 75, 72-80.

Hock, S.,S. (2011). *Managing Economic Crisis in Southeast Asia*. Pasir Panjang : Institute of Southeast Asian Studies.

Tong, H. (2012). *Threshold models in non-linear time series analysis*. New York: Springer.

Ulgen, F.(2017). *Financial Development, Economic Crises and Emerging Market Economies*. New York : Routledge.

Vogt, C., Leuschel, R., & Weiss, M. D. (2011). *The global debt trap: How to Escape the Danger and Build a Fortune*. Hoboken: John Wiley & Sons.

Wu, Y., Kimura, F., & Shi, X. (2014). *Energy market integration in East Asia: Deepening Understanding and Moving Forward*. New York: Routledge.

Ying, T., J. (2017). China's nude loans fill female students' pockets but suck them dry. Retrieved from https://www.aseantoday.com/2017/06/chinas-nude-loans-fill-female-students-pockets-but-suck-them-dry/

Zixiong, J. (2017). *China Cries Injustice in Case of Usury and Murder*. Retrieved from https://news.cgtn.com/news/3d677a4e78497a4d/share_p.html