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The Credit Crisis From An Islamic Risk Management Perspective : How The Shariah Can Provide Valuable Lessons For Capitalists

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Abstract:

The recent credit crisis that has caused financial mayhem in several strong economies has caught many people off-guard, except for a handful of observers. From California to Corsica, **Malaysia to Milan and Durham to Duomo**, governments have been humbled by the colossal calamity. While irresponsible financing has been blamed on the catastrophe, a new financial configuration is being sought to ensure that history does not repeat itself. This is where the shariah-based architecture, especially with respect to risk and its management, may be able to provide valuable lessons for bankers and regulators. The paper will take a look at how the shariah standpoint on risks, its prohibition in transactions, guidelines on market conduct and its proactive management may provide useful strategies in avoiding similar economic disasters.

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Areas of Discussion

- Introduction
- Causes of the Crisis
- Risk Management From An Islamic Perspective
- Shariah Lessons For Capitalists
- Conclusion

States where subprime foreclosures are expected to be above national average

	Total of <i>Subprime</i> contrats	Expected <i>Subprime</i> foreclosures 3Q07-4Q09	<i>Subprime</i> expected foreclosures as a percent of total <i>subprime</i> contracts
Ohio	293,566	82,197	28.0%
Michigan	275,931	65,607	23.8%
Minnesota	121,471	27,871	22.9%
Florida	708,195	157,341	22.2%
Arizona	250,799	53,372	21.3%
Nevada	134,528	28,390	21.1%
Illinois	286,246	59,328	20.7%
New Jersey	179,873	35,117	19.5%
Massachusetts	115,780	22,292	19.3%
California	1,030,920	191,144	18.5%
New York	364,433	67,386	18.5%
Total	3,761,742	790,045	21.0%
Percent of US total	51,1%	59,7%	US average: 18.0%

Causes of the Crisis?

exotic new financial instruments (Diamond & Rajan)

Gillian Garcia, Andrew Lo, **investments**
Janet Yellen, Moos, **options**
John Cloke, Wray **derivatives**

securitized bond market (Janszen)...

financial instruments...(Marshall)

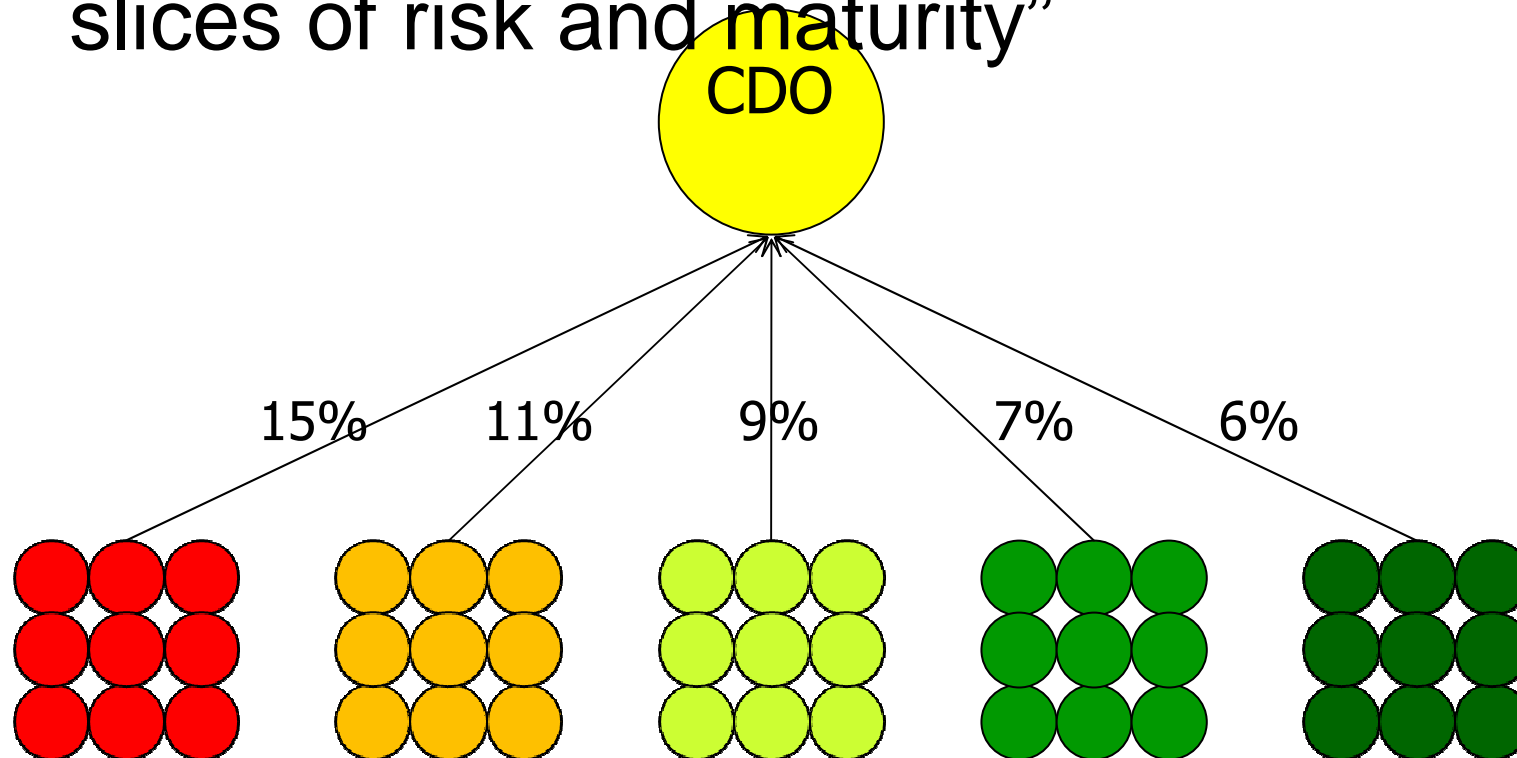
financial instruments .. repackaged & distributed...

Our Position...

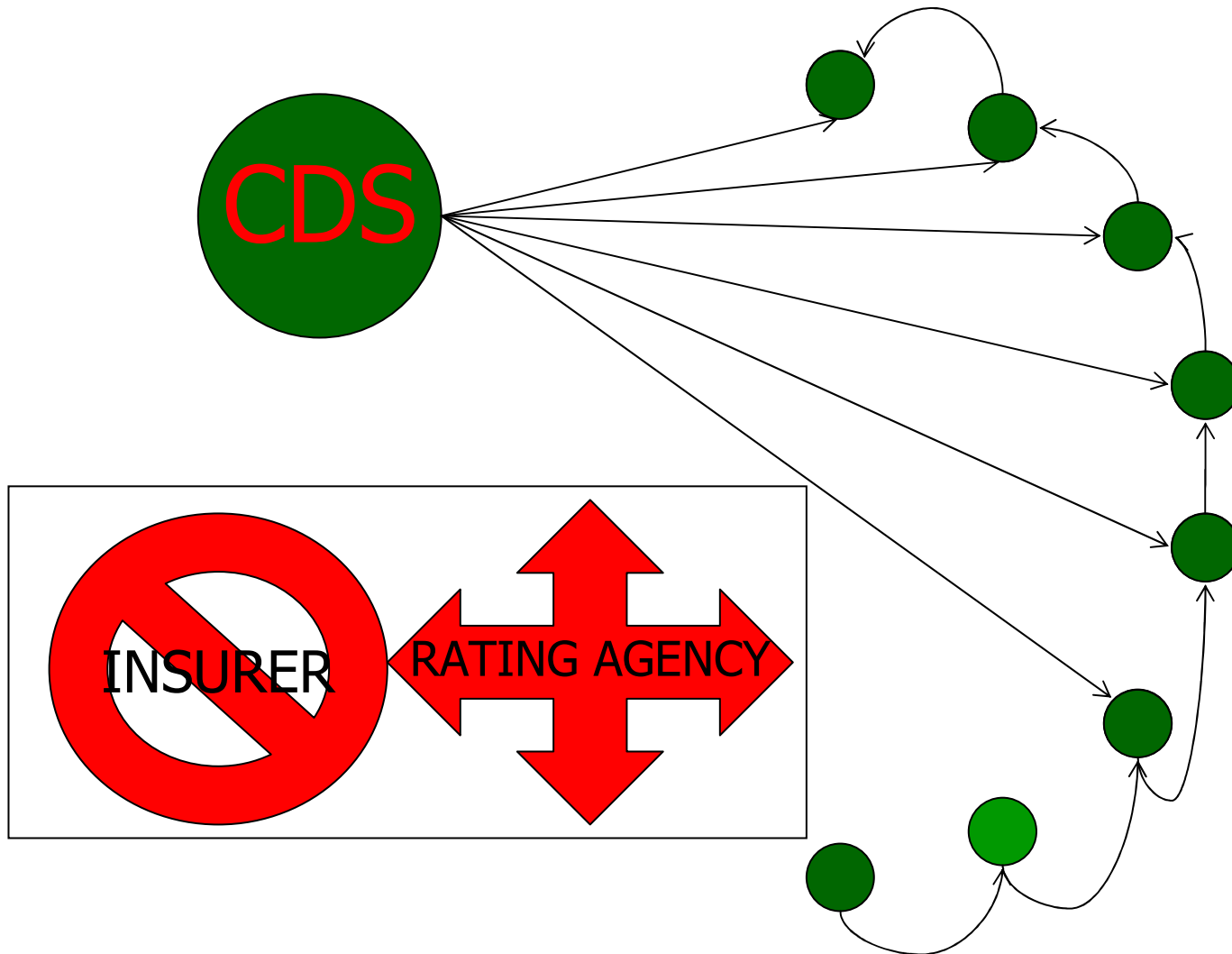
- similar to Chapra, Klimecki and Willmott
 - CDOs and CDS that were central to the credit crisis rather than the subprime lending per se
 - have consistently been blamed for the colossal calamity as one of the main, if not the crucial cause of the meltdown.
 - could be the proximate cause of the financial mayhem afflicting the financial industry

CDOs

- “structured debt security issued against a portfolio of securities or loans by repackaging the portfolio into different slices of risk and maturity”

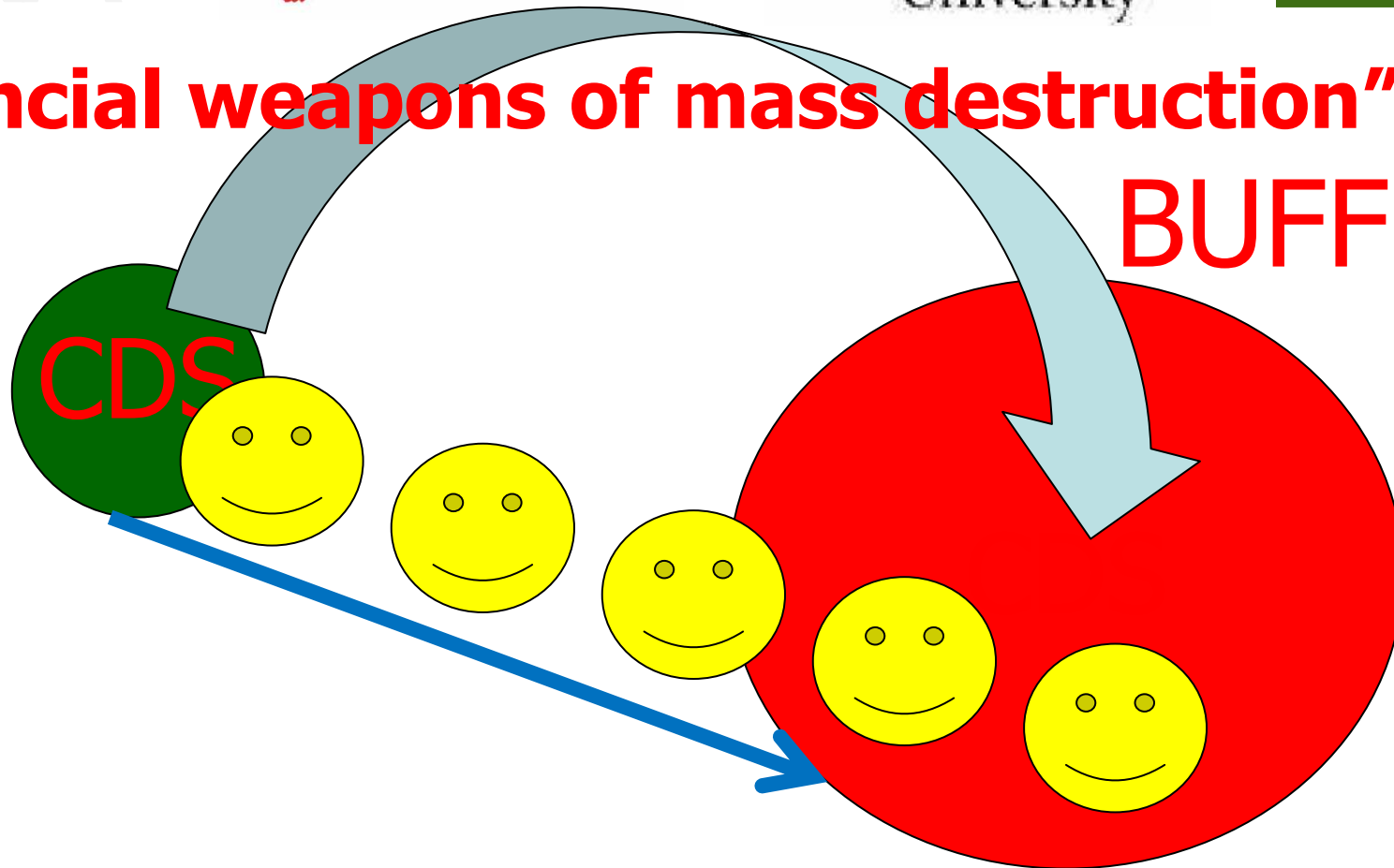


Credit Default Swap (CDS)

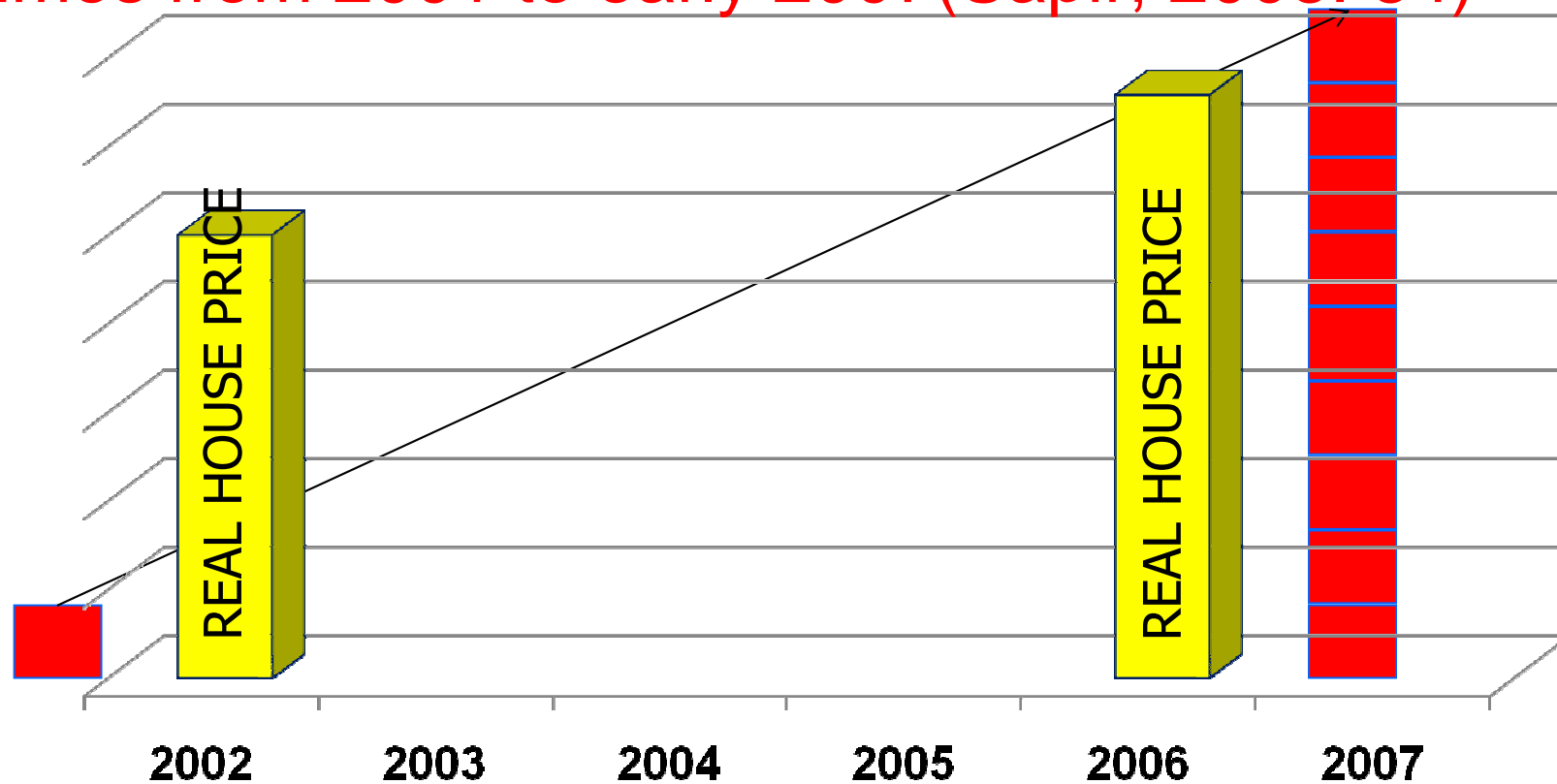


“financial weapons of mass destruction”

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many of the subprime loans ...to refinance homes (Baker, 2008: 79) and that it grew nearly nine times from 2001 to early 2007 (Sapir, 2008: 84)



Variable rate mortgage

- or adjustable rate mortgages (ARM) fueled the housing (Baker, 2008: 74)
- the real culprit of the credit crisis as it attracted customers with “initial low initial payments and refinancing promises” and “when mortgages reset, households faced rates they could not afford; and with no equity in their homes, they could not refinance.” (Pressman)


Why Banks Cannot Renegotiate..

- Banks no longer own the mortgages which have been sold and they only bought back “a package containing parts of individual mortgages” (Pressman, 2009: 160).
- Note :
 - Consumptive loan – bcuz refinance due to higher vslue

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The Culprit?



RISKMETRICS

The RiskMetrics Group
Working Paper Number 99-07

On Default Correlation: A Copula Function Approach

David X. Li

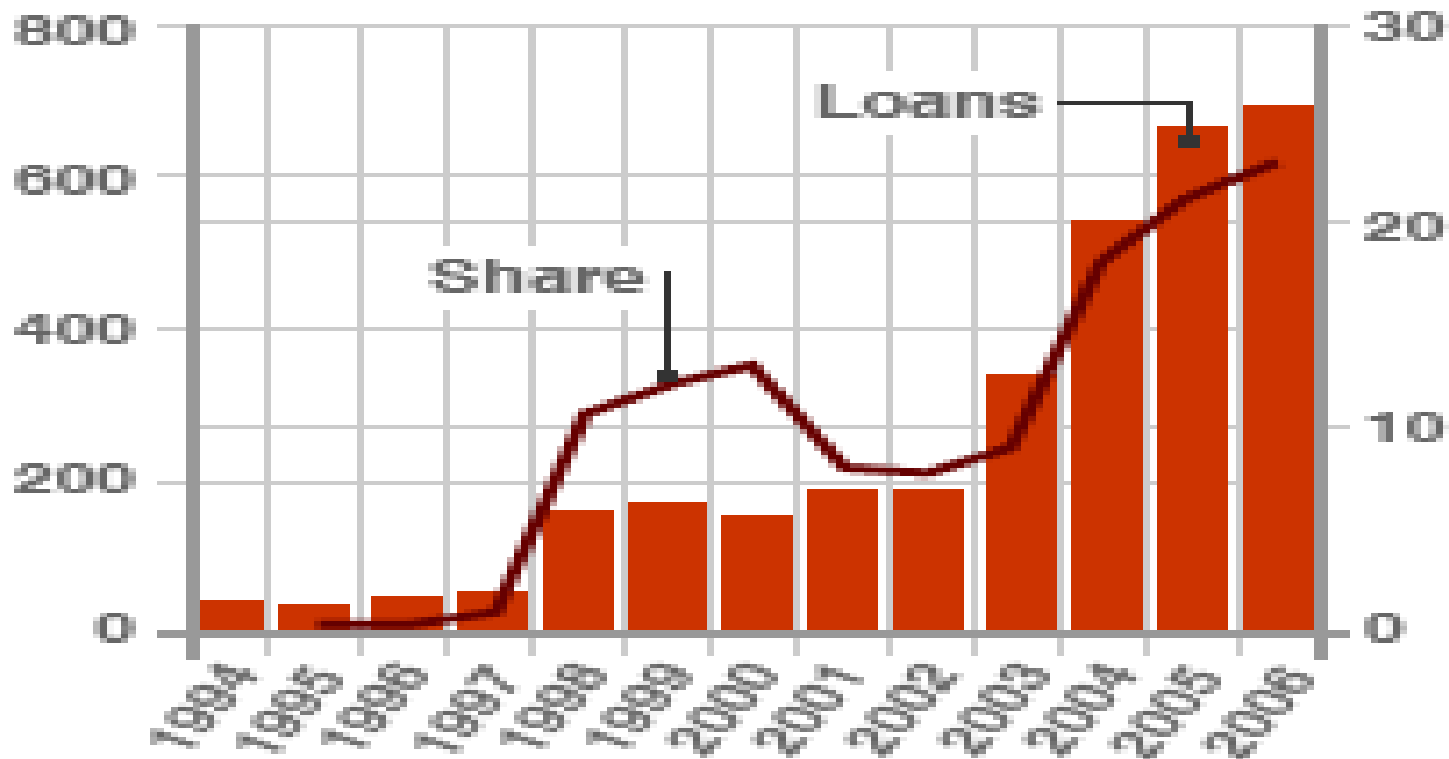
This draft: April 2000
First draft: September 1999

Growth of Exotic Financial Instruments

GROWTH OF SUB-PRIME LENDING

Annual volume of
sub-prime \$bn

% share of
mortgage market



SOURCE: Center for Responsible Lending
/Inside Mortgage Finance

Li's Gaussian Copula

- became an industry standard for the pricing of CDOs (Guillaume, Jacobs and Schoutens, 2008; 2)
- “academicians and practitioners have extensively relied on copula methods” (Luciano, 2007: 450 - 451)
- “default correlation is an important feature of credit derivative pricing and hedging.” (Luciano, 2007: 461)
- Moody's and Standard and Poor had incorporated Li's formula

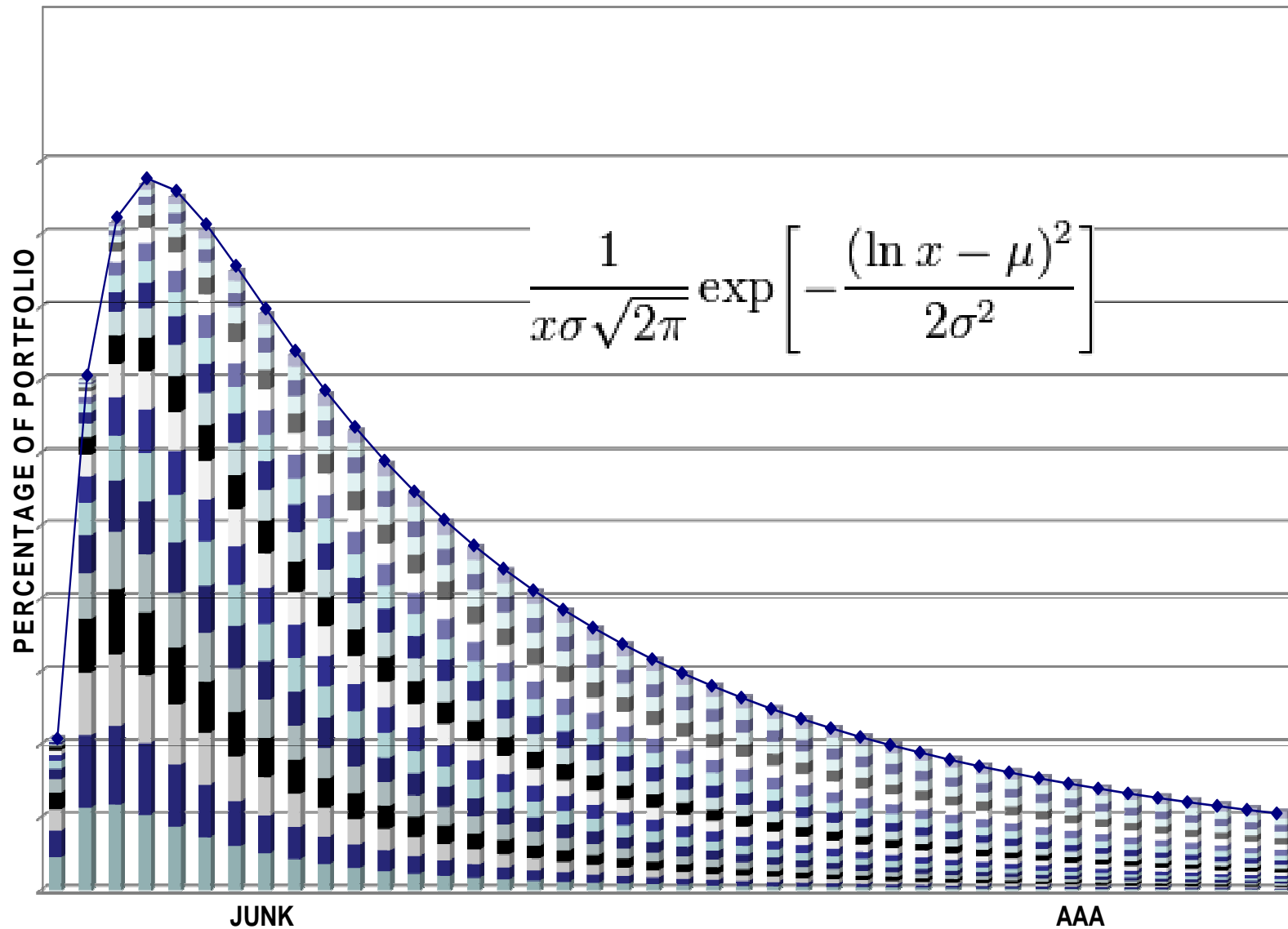
- he equated the “time-until-default” in a given credit risk portfolio with “the survival time of a human being” in a survival function (Li, 2000: 2)
- morbidity of a particular community is more stable, consequently more predictable.
- data available for credits risks is insignificant when compared to the morbidity and mortality distribution, thus bringing with it credibility issues.

- mixed up the statistical theory with its appropriate application
- copula function that he suggested may be appropriate for uniform random variables but he used the bivariate normal copula function to generate survival times of two credit risks (Li, 2000 : 17)
- correlation measurement of normal random variables will have different implications since the areas within a sigma around the mean of the two dissimilar distributions are different

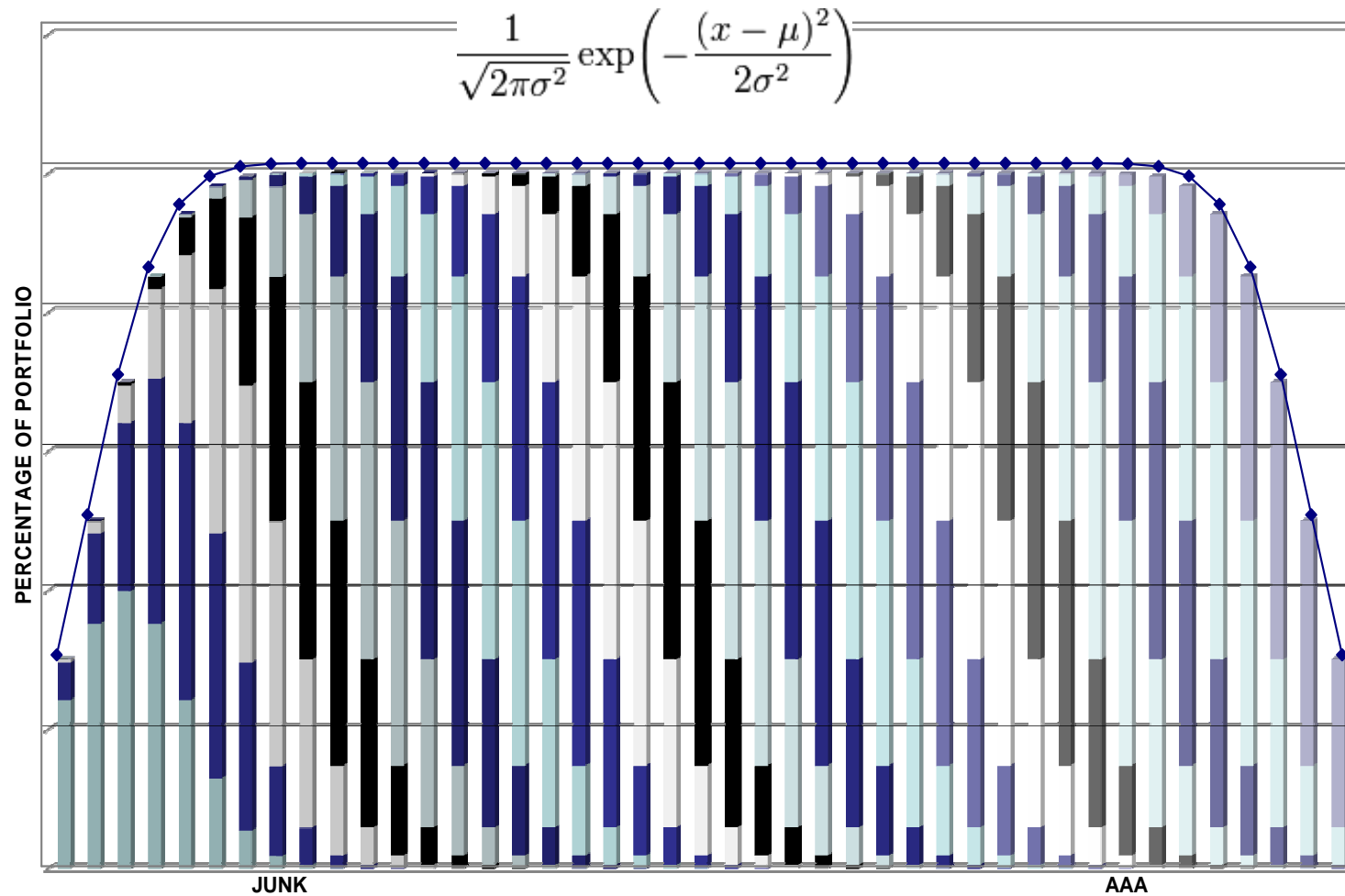
- assumed a perfectly efficient market (Marshall, 2009 : 21) but markets are not always efficient (Reilly and Brown, : 178-179)
- investors tend to migrate from the safe hedge end of the Minsky scale to the uncertain speculative and Ponzi end when abundant funds are accessible (Yellen, 2009: 2).

- “Conveniently, the marginal distribution of any subset of an n dimensional normal distribution is still a normal distribution.” (Li, 2000: 17)
- income distribution is expected to follow a lognormal distribution (Hahn and Shapiro, 1967: 163)

SUMMATION OF TWENTY LOGNORMAL DISTRIBUTIONS WITH SAME STANDARD DEVIATION



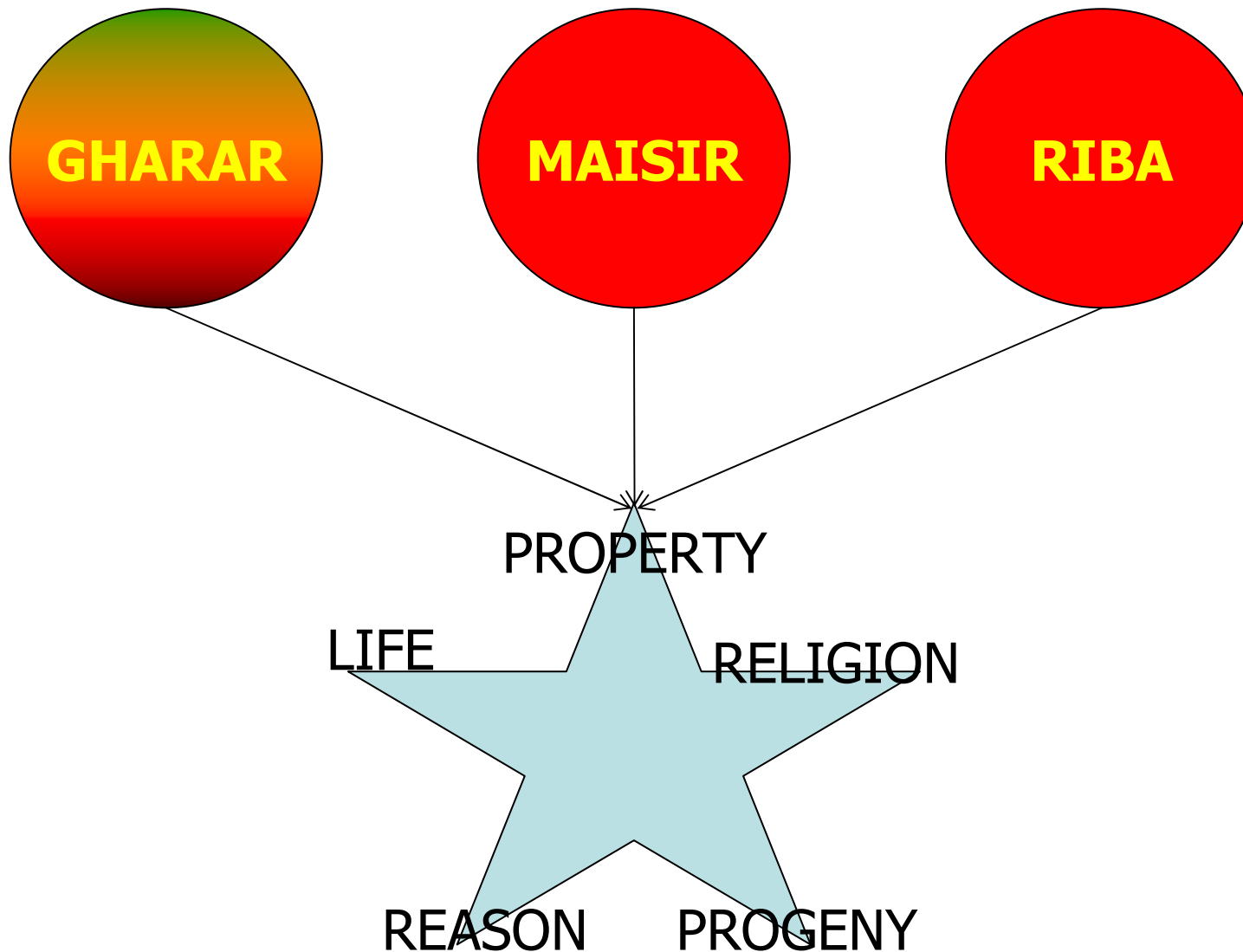
SUMMATION OF TWENTY NORMAL DISTRIBUTIONS WITH SAME STANDARD DEVIATION



The Multivariate Normal Approximation

- leads to inaccurate results (Guillaume, Jacobs and Schoutens, 2008; 8)
- As an alternative,
 - other copula functions should be explored
 - Archimedean copula functions *i.e.* the Gumbel, Clayton, and Frank copula functions which may be more suitable than the Gaussian copula function (Abid and Naifar, 2006: 364)

Risk Management From An Islamic Perspective



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Gharar

- “trading in risk” (Gamal, 2001 : 1-2)
- peril, danger, jeopardy, hazard or risk (Lane, 1984 : VI – 2239)
- deception, delusion (al-Suwailem, 2006 : 69)
- “danger of loss” (Gamal, 2001 : 4)
- risk, speculation (Saleh)
- insecurity (Siegfried)

- “that whose consequences are hidden” (Al-Sarakhsi, Al-Shirazi, Ibn Taimiyyah)
- “the sale of probable items whose existence or characteristics are not certain, due to the risky nature which makes the trade similar to gambling.” (Zarqa)
- “gharar is risk in the sense of lack of certainty regarding the existence of an object and that the gharar sale is that whose measure is not known to be large or small” (Zuhayli)

IFSB Definition

- “... means exposing oneself to excessive or unnecessary risk and danger in a business transaction as a result of uncertainty about the terms of deal, such as prices, quality and quantity of the counter-value, the date of delivery or the ability of the buyer or the seller to fulfill his commitment...”

- activities involving speculative and aleatory contracts (Mohammed, 1988 : 121) - contingent on uncertain events (Vogel and Hayes, 2006 ; 64)
- “refers to items with a likeable appearance and a disliked reality”
- “any sale that incorporates a risk that affects one or more parties to the contract and may result in loss of his property.”

- zero sum game with uncertain payoffs – gambling most reliable measure (al-Suwailem, 2006 : 69 - 71)
- prohibited only if the zero-sum component is greater than the positive component and this is considered “excessive gharar.” (Suwailem, 2006 : 73)
- risk taking would be acceptable if there is a likelihood of more success than failure. ((Suwailem, 2006 : 82)

What is “excessive”?

- the utility theory and regret theory (al-Suwailem, 2000 : 67-79)
- assume normal distribution and applying the utility theory to say, those within two standard deviations
- Alternative
 - risk coefficient $C_r = \sigma / E(X)$

Gambling

- **any activities which involve betting, whereby the winner will take the entire bet and the loser will lose his bet (Shariah, 2002: 104)**
- **“getting something too easily, getting a profit without working for it, hence gambling.”
(Mohammed, 1988: 121)**
- **kind of lottery where numerous participants contributed for a prize to the winner through drawing lots (Mayer, 1979: 554)**
- **games of chance rather than games of skills (Al-Suwailem, 2000: 79)**

Riba

- literally means “increase” (Zuhayli, 2002: 309)
- “usury” (Mohammed, 1988: 118)
- unlawful advantage by way of **excess** or **deferment** (Saleh, 1990: 101)
- **riba al-fadh** and **riba al-nasi’ah** or **riba al-jahiliyyah** (Zuhayli, 2003: 311-351)
- riba al-nasi’ah unanimously haram based on Quran (Quran, 2: 275-280; 3: 130; 4: 161; 30: 39)

Riba al-fadhli (by way of excess)

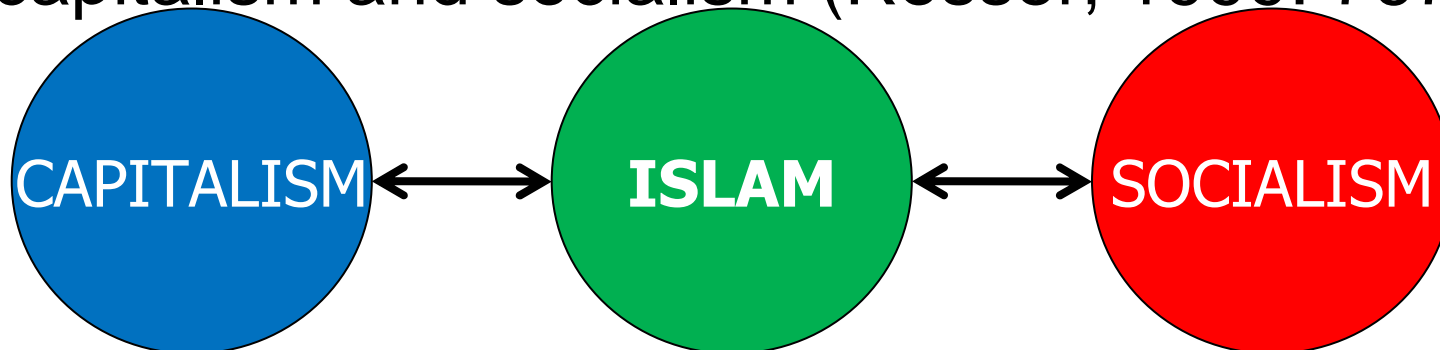
- prohibited by the sunnah by analogy to the former (Zuhayli, 2003: 311)
- as a prudence (Azid and Asutay, 2007: 168)
- is disliked and not prohibited (Abduh and Rida)
- Sanhuri claimed that Ibn Abbas only forbade riba al-jahiliyyah (Zuhayli, 2003: 345)

- there is general agreement that riba al-fadhl should be prohibited although has traditionally been treated as less serious compared to riba al-nasi'ah (Mayer, 1979: 548)
- Fazlur Rahman “forcefully criticizes the sources on which the rules of riba al-fadhl are based” (Mayer, 1979: 549)

Shariah Lessons for Capitalists

- Islam may provide some, if not many solutions to economic problems (Ballantyne, 1988)
 - **West must stop dismissing the Shariah as something unknown that should be feared and resisted and that Arabs must not resent any Western incursion into this field**
 - **dialogue be pursued to determine what is required to not only restructure the shariah to fit Western economic concepts but also the other way round; and “how far Western and Shariah concepts are incompatible in the light of a new ijtiḥad.”**

- A Western court may one day deemed the shariah as the proper applicable law (Ballantyne, 1988 : 327)
- those dealing with Muslim clients should be conversant with contemporary Islamic financial practice (Vogel and Hayes, 2006 : 1)
- comprehensiveness of the Islamic economic system is a potential third way between capitalism and socialism (Rosser, 1999: 767)



Gharar in the EFIs

- “gharar is where the buyer does not know what he bought, or the seller does not know what he sold.”
- Worse, “many of the compensation schemes paid for short term risk-adjusted performance” which “gave traders an incentive to take risks that were not recognized by the system, so they could generate income that appeared to stem from their superior abilities, even though it was in fact only a market-risk premium.” (Diamond and Rajan, 2008:5)

Why “exotic” instruments gharar

- transfer of risk from one party to another which is made more perilous with the riskier underlying loans – intermediaries ignorant or did not bother
- kafalah (guarantee) and hiwalah (transfer of debt) - based on charity and not for a fee
- unrestrained use of the exotic instruments can also go disastrously wrong. (Janabi, 2006 : 154)

- amalgamation and repackaging of low risks securities with higher ones increases the risks of the former
- mean risk would shift and the distribution function would change
- all kinds of credit products around the world were based on risky practices (Yellen)
- sub-prime and other risky mortgages was policy-induced (Rose & Spiegel, 2009: 9)
- deregulation allowed “increasingly risky innovations that made the system more vulnerable.” (Minsky)

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Gambling in EFIs

- derivatives were gambling tools and it was noted that this was the prevailing opinion of the courts in the first half of the nineteenth century (al-Suwailem, 2006: 33)
- Henry Gonzales equated derivatives trading with gambling (1993)
- although there are some benefits in derivatives, the harm is greater and sarcastically pointed out that this is precisely why gambling is prohibited by the Quran (al-Suwailem, 2006: 52)

- there exists gambling in the credit default swap industry (Wong, 2009: 62)
- rapid growth of mortgage backed securities indicates that profits are made based on gambling on market chance (Kelmickaki and Wilmott, :132)

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VRM (ARM) vs FRM

- consider prohibiting the variable mortgage rate and use only the fixed mortgage rate
- authenticity of the ahadith (traditions) relating to the prohibition of riba al-fadhli (due to excess) is questionable

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Conclusion

This paper suggested how the shariah principles of pecuniary risk management that reduces the rudiments of *gharar*, eliminate the elements of *maisir* and removes *riba* from financial transactions may be used by Western regulators and capitalists to develop a new financial architecture. Shariah principles encompass the commands, prohibitions and values prescribed by Allah for humankind through the Quran and Sunnah (the teaching of Prophet Muhammad). It also provides guidelines on market conduct by granting additional instruments such as equity financing and profit sharing mechanisms. The activities in Islamic finance are also founded upon real assets thus operates in the realm of real economic activities. Indeed the proactive management of financial risks from the Islamic perspective may provide useful strategies in avoiding similar economic disasters.

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The challenge that Islamic finance faces is to actualize the concept of risk management within the context of conventional risk management. This demands not only the avoidance of the same crisis happening to Islamic finance but to offer an alternative and viable financial system for mankind. The shariah-based architecture, with respect to risk and its management, may be able to provide valuable lessons for capitalism. In this context, the Islamic *weltenshauung* is deeply ingrained on an unalienable *tawhidiq* paradigm, which constantly and consistently pursues business dealings with ethics and morality. Both the Qur'an and the Sunnah repeatedly stress the importance of moral principles and values in business transactions and dealing. Whatever the reason of the crisis propounded, the root cause reverts back to the moral failure of humankind.

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Thank You