

In Search of Social Representations of China's Stock Market in Times of Financial Crisis 2008

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An introduction of this research project



Background of China's Stock Market



Chinese financial system and structures of stock market



The impact of global financial crisis on China's stock market



Research progress

General Introduction

- This study is a branch of a large multicultural and multidisciplinary research project coordinated by Prof. Annamaria de Rosa, entitled "Mass Psychology and Stock Market: Heterogeneous Agents, Media, Traders and Investors", in cooperation with a cross-continent research team involving European countries (Italy, UK)and China.
- General hypothesis: Different financial behaviors are strongly correlated with a set of personal psychological dimensions that include specific metaphors and social representations of the stock market.
- Aim: To explore the content and structure of social representation, and the relationship between SR and psychological dimensions.

A Brief History of China's stock market

In 1990 and 1991, China set up stock exchanges in Shanghai and Shenzhen.



- In 2009, GEM (Growth Enterprise Market) has finally debuted in China's capital market-- China's NASDAQ-style market
- In 2010, the first stock index futures were launched in Shanghai-based China Financial Futures Exchange, which marked a watershed in making China's capital market into a new multi-level market.

Chinese Financial System



Chinese Financial System

The Central Bank: The People's Bank of China (PBC), established in 1948

- China's banking system is mainly controlled by the four largest state-owned banks (the national banks), including Bank of China, China Construction Bank, Industrial and Commercial Bank of China, and Agricultural Bank of China.
- Function of the government: not only contributing to facilitate the efficiency of the banking sectors, also made every efforts to avoid the banking system getting involved into the financial and banking crisis.
- Local Banks
- Online Banks

Different Types of Investors

Institutional Investor: some financial companies, which have secured funds from rich individuals and nonstate companies, are concerned as institutional investors that privately raised funds. They aim at long-term investment.

Private Investor: a great proportion of the participants are unemployed or retired people, who earn less money, and have insufficient knowledge.

2

Foreign Investor

3

Participate in the Bshare market
(denominated in RMB, but are subscribed for, bought, and sold in foreign currency)
Qualified Foreign Institutional Investor (QFII)

Different Types of Investors







The Global Financial Crisis in 2008

- In September 15th 2008, the declaration of the bankruptcy of Lehman Brothers marked a fearful financial crisis coming from Wall Street and brought about a tremendous disaster to the global financial markets.
- The financial crisis has brought great fear to the investors from the economic depression, and in the meanwhile, people's faith in economic theory has been doubted. Thus, a psychological mechanisms underlying financial decision making drew more attention, and the irrational economic behaviors started to be analyzed.
- Chinese market index from 6124 points sharply fallen to 1664 points, has become the world's largest stock market decline.

INFLUENTIAL EVENTS FROM 2000 TO 2009

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INFLUENTIAL EVENTS

经济危机/economic crisis 股市大涨/surging of stock market 房价暴涨/house price surged 金融危机/financial crisis 股市大跌/stock market crash 地震/earthquake 奥运会/Olympics 股市套牢/trapped in stock market 国家政策/public policy 投资房地产/investment in real estate 个人事情/personal events 经济复苏/economic recovery 加大资金投入/increased investment 开始进入股市/started to invest in stock... 股市震荡加剧/vibration of stock...



Social Representations of Stock Market

- The social representations serve as the function to perceive and make sense of the reality, on the basis of the communication and are determinant of people's behavior. (Moscovici, 1961)
- Social representations permit to identify the differences that have an effect on behavior and thought. (Roland-Lévy, Boumelki, Guillet, 2010)
- This study aimed at evaluating people's thoughts and perception of the financial crisis, and to make the comparison based on the influence of the social representations on their financial behaviors before and after the financial crisis, so this is an ideal tool to contribute to a better understanding how people behave in the context of the financial crisis.

Research Tool and Samples

Three versions of questionnaires

Samples: N=372

104 for financial advisors

130 for investors through financial advisors

138 for autonomous online investors



Structure of the Questionnaire



Sample Composition of Financial Advisor





Sample Composition of Investors through Financial Advisor





Sample Composition of Autonomous Online Investors





- Results of the polarity indexes of the associative network
- Results of metaphors of Stock Market
- Results of the conceptual network of psychological dimensions
- Results of the conceptual network of Trust/Distrust
- Factor Analysis of Trust/Distrust
- Factor Analysis of time perspective
- Results of Risk Perspective

Results of the polarity indexes of the associative network

AVERAGE INDEXES OF POLARITY VARIABLES



Results of the polarity indexes of the associative network

Variance Analysis by ONE-WAY ANOVA

Dependent Variable	Role	N	М	SD	F	Post-Hoc Multiple Comparisons
INDPOLFAI	FINANCIAL ADVISOR INVESTOR THROUGH FINANCIAL ADVISOR AUTONOMOUS ONLINE INVESTOR	103 130 138	2.628E-1 3.618E-1 1.702E-1	0.451 0.400 0.449	6.562**	INVESTOR THROUGH FINANCIAL ADVISOR > AUTONOMOUS INVESTOR***
INDPOLSCI	FINANCIAL ADVISOR INVESTOR THROUGH FINANCIAL ADVISOR AUTONOMOUS ONLINE INVESTOR	103 130 136	2.380E-1 3.605E-1 1.423E-1	0.433 0.454 0.460	7.823***	INVESTOR THROUGH FINANCIAL ADVISOR > FINANCIAL ADVISOR* INVESTOR THROUGH FINANCIAL ADVISOR > AUTONOMOUS ONLINE INVESTORS***



Results of the conceptual network of FA' psychological dimensions

CONCEPTUAL LINKS BETWEEN MY CLIENT, ME AND STOCK MARKET



Results of the conceptual network of Investors' psychological dimensions CONCEPTUAL LINKS BETWEEN MY ADVISOR, ME AND STOCK MARKET



Results of the conceptual network of participants' psychological dimensions

Paired-Sample Test



After post-hoc test, the result shows the clients consider the past experiences and practices less than their advisor thinks, and they do not care much about consultancy to advisors about the stock market investment, while in the projection of financial advisors, they show the tendency of overestimating of themselves.

Results of the conceptual network of participants' psychological dimensions

Paired-Sample Test



Post-hoc test reveals that financial advisors have a more positive attitude to the past, norms, security and past than what their clients think of them, however, they perceive gambling as the negative part of financial activities, while the clients think it would be positive.

Results of the conceptual network of Trust/Distrust of FA

TRUST/DISTRUST OF HETEROGENEOUS AGENTS BETWEEN MY CLIENT, ME AND CAPABILITY OF MANAGING THE FINANCIAL CRISIS



Results of the conceptual network of Trust/Distrust of Investors

TRUST/DISTRUST OF HETEROGENEOUS AGENTS BETWEEN MY ADVISOR, ME AND CAPABILITY OF MANAGING THE FINANCIAL CRISIS



Results of the conceptual network of Trust/Distrust



After post-hoc test, the clients show less trust to the national or local economic or political agents, such as government, online banks, the central bank, national ministry of economy, local bank, and national banks. However, as for the evaluation of G7, G8 and G20, clients trust significantly more than what their financial advisor supposed.

Results of the conceptual network of Trust/Distrust



On the contrary, financial advisor thinks they are less trust in national ministry of economy, G8 and G20, but they trust national government, local banks, national banks, international banks, the central bank and federal reserve more.

Factor Analysis of Trust/Distrust

Rotated Component Matrix^a

	Component	
	1. International	2.
TRUST:ME AND G7	Agents 0.822	National Agents
TRUST:ME AND G8	0.814	
TRUST:ME AND G20	0.79	
TRUST:ME AND EUROPEAN BANK FOR RECONSTRUCTION & DEVELOPMENT(EBRD)	0.768	
TRUST:ME AND EUROPEAN INVESTMENT BANK(EIB)	0.765	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: G8	0.747	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: G7	0.737	
TRUST:ME AND EUROPEAN COUNCIL OF MINISTERS OF ECONOMY	0.718	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: EUROPEAN BANK FOR RECONSTRUCTION & DEVELOPMENT(EBRD)	0.707	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: EUROPEAN COUNCIL OF MINISTERS OF ECONOMY	0.706	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: EUROPEAN INVESTMENT BANK(EIB)	0.691	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: G20	0.653	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: EUROPEAN BANK(ECB)	0.641	
TRUST:ME AND WORLD BANK	0.616	
TRUST:ME AND EUROPEAN BANK(ECB)	0.611	
TRUST:ME AND FEDERAL RESERVE(FED)	0.595	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: FEDERAL RESERVE(FED)	0.583	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: WORLD BANK	0.575	
TRUST THE CAPABILITY OF MANAGING THE CRISIS: NATIONAL MINISTRY OF ECONOMY		0.66
TRUST:ME AND NATIONAL MINISTRY OF ECONOMY		0.667
TRUST THE CAPABILITY OF MANAGING THE CRISIS: THE CENTRAL BANK		0.682
TRUST THE CAPABILITY OF MANAGING THE CRISIS: ONLINE BANKS		0.46
TRUST:ME AND ONLINE BANKS		0.43
TRUST THE CAPABILITY OF MANAGING THE CRISIS: LOCAL BANKS		0.714
TRUST:ME AND LOCAL BANKS		0.713
TRUST THE CAPABILITY OF MANAGING THE CRISIS: NATIONAL BANKS		0.766
TRUST:ME AND NATIONAL BANKS		0.688
TRUST:ME AND THE CENTRAL BANK		0.644
TRUST THE CAPABILITY OF MANAGING THE CRISIS: NATIONAL GOVERNMENT		0.73
TRUST:ME AND NATIONAL GOVERNMENT		0.74
TRUST:STOCK MARKET		0.475

Factor analysis has been applied in Trust/Distrust variables, including Trust/Distrust between Me and Heterogeneous Agents, Trust/Distrust of capabilities of Heterogeneous Agents of managing the financial crisis, and Trust of Stock Market

Two Factors:

- International Agents
 - National Agents
 - KMO is 0.918, totally explained 50.723%



Factor Analysis of time perspective

0.651

0.635

0.621

0.522

0.497

0.516

0.447

0.460

0.372

0.365

0.385

0.599

0.521

0.466 0.383 0.367 0.351 0.223 0.160 0.184 0.611

Kotated Component Matrix-				
	Component		Communalities	
	Plan and control	Instant	Past	
(11) I like to work with others in a supportive group.	0.779			
(23) I think that partying with friends is one of the most important pleasures of life.	0.731			
(35) I hate arriving late at appointments.	0.725			
(28) When I want to obtain something, I set goals and think about specific means to reach them.	0.708			
(36) I resist temptations, when I know there is work to be done.	0.687			
(12) Since the past is past, I prefer to ignore it and concentrate on what I can control in my life.	0.683			
(19) I finish work on time, making continuous progress.	0.666			
(37) I continue to work on a hard and boring job, if I know it will be useful for my career advancement.	0.66			
(29) Respecting the deadlines of tomorrow and doing other work is more important than this evening's fun.	0.657			
(27) I like to think about the future.	0.638			
(22) I make lists of things to do.	0.612			
(10) I try to be realistic about what the future has in store for me.	0.58			
(26) If I do not finish what I have to do on time, I get worried.	0.548			
(2) I make a lot of effort to respect deadlines with friends and superiors.	0.545			
(5) I give up small but certain gratifications, hoping to obtain possibly bigger ones.	0.468			
future	0.386			
17) To me it seems that there is no sense in worrying about the future because destiny establishes what will be anyhow.		0.77		
(18) I prefer things that are known and familiar rather than new and changing ones.		0.687		
(15) My life is controlled by my destiny rather than by my actions.		0.67		
(8) I never do things that will be useful for me in the future, if I do not like them now.		0.612		
(33) I think it is useless to plan in the long term because things almost never happen as they were planned.		0.593		
(38) I live to improve the present, rather than caring about the future.		0.586		
(4) The past has too many bad memories. I prefer not to think about.		0.434		
(21) I run risks to make life more exciting.		0.331		
(7) I feel it is important that I like what I am doing, rather than finishing work on time.		0.327		
 I often think of how life was in another era. 			0.708	i

Based on the old version of Zimbardo Time Perspective Inventory with 38 items, after modification, a new version with 28 items have been remained.

Three factors:

- Plan and control
- 🔹 Instant
- Past
- KMO is 0.883, explain 42.929% of the total variance.

Factor Analysis of time perspective

Content Validity Test: the correlation between the scores of subscales and the total scale.

	Total	Plan and Control	Instant	Past
Total	1			
Plan and Control	0.537**	1		
Instant	0.645**	0.055	1	
Past	0.450**	-0.019	-0.049	1

Reliability analysis: tested by Cronbach's a, in order to obtain the consistency of this set of measuring instrument

Consistency Coefficient of Time Perspective Inventory and Related Factors

	Total	Plan and Control	Instant	Past
Cronbach's α	0.844	0.901	0.755	0.511

Results of Risk Perspective

Rotated Component Matrix^a

	Com	ponent	Communa
		2	11163
		Financi	
	1	al	
	Gambl	Investm	
	ing	ent	
	Risk	Risk	
Risk Attitude: Bet a day's pay on lottery tickets	.865		0.784
Risk Attitude: Bet a day's pay on a poker game with high stakes	.918		0.844
Risk Attitude: Gamble at the casino with a week's pay	.891		0.798
Risk Attitude: Bet a day's pay on the result of a sports event	.883		0.780
Risk Attitude: Invest 5% of annual pay in very speculative stocks		.395	0.160
Risk Attitude: Invest 5% of annual pay in very conservative stocks		.505	0.256
Risk Attitude: Invest 5% of annual pay in state obligation bonds		.822	0.676
Risk Attitude: Invest 5% of annual pay in a currency exchange with moderate growth		.772	0.595

Two factors of Risk Attitude:

- Gambling Risk
- Financial Investment Risk

 KMO is 0.711, Total Variance
 Explains
 60.714%

Risk Tolerance of Fluctuations

FA: TOLERANCE OF FLUCTUATIONS



DEGREE OF TOLERANCE

Risk Tolerance of Fluctuations

I: TOLERANCE OF FLUCTUATIONS



DEGREE OF TOLERANCE

Risk Tolerance of Fluctuations

AI: TOLERANCE OF FLUCTUATIONS



DEGREE OF TOLERANCE

Reaction when profits decrease

FA: REACTION WHEN PROFITS DECREASE



I: REACTION WHEN PROFITS DECREASE



AI: REACTION WHEN PROFITS DECREASE



Second Step of Data Analysis: SPAD

Dependent Variable: Free Associations of Stock Market

- Independent Variable:
 - Socio-demographic profile: age/place/gender/education
 - Economic Practice: amount of loss/family savings/future change of income
 - Time Perspective
 - Risk Perspective: tolerance of fluctuation/profit expectation/reaction when profits decrease/index of polarity of risk/conceptual links of risk
 - Trust: stock market/heterogeneous agents
 - Future month of the end of financial crisis

Results from SPAD

 Total number of free associations of Stock Market:
 508

- Words merging into 164
- Top 20 words with high frequencies

risk	134
rise	116
market-index	102
fall	100
profit	85
speculation	54
investment	53
opportunity	52
bull-market	50
fluctuation	48
fanatic	46
loss	45
trapped	43
rebound	42
buy	41
income	40
stimulation	40
slump	39
bear-market	35
trading	33



Risk perspective

Facteur 2



Facteur 1

Facteur 2





Future plans...

Applying SPAD for all the independent variables

- Applying EVOC to test the core and peripheral elements of social representations
- Applying Lisrel to make the confirmatory factor analysis of all the questionnaires
- Some specific hypothesis will be tested, for instance...

Standford time perspective (Q16)

Personal reaction to an imagined Loss (Q42) (Q41)

Risk

Propensity

(Q17)

Foreseeing Of the changes Of Family income (Q21)

> Foreseeing To the Length of the Financial crisis (Q25)

Typologies of

Financial

Investment

(Q19)





Thank You !

