rationale

2009
ISSUE 1

The Economics of Organised Crime

Student
Consumer
Price
Index

Also Includes:

FREE Report LSESU
Economics Society
SCPI Research Project

Iain Long : Insight to the LSE PhD Programme

Interview with Dr. Mungo Wilson

What to Expect from Barack Obama

China: Olympic Glory and Financial Turmoil

The Economist

SPECIAL INSET: EXCLUSIVE SAMPLER FROM THE ECONOMIST

FOREWORD
By Sir Howard Davies

It is fair to say that the great majority of the population only take a close interest in economics when things go wrong.

If the economy is ticking along nicely, with low inflation, low unemployment, and a little bit more money for everyone in real terms each year, why bother to enquire to closely into how this trick is being pulled off? For the decade or so up to 2008, that was how things were. We were living through what Mervyn King at the Bank of England has called a "NICE" decade: Non Inflationary and Consistently Expansionary.

That NICE decade has come to an end, and done so with a vengeance. Growth has stalled and we seem set to fair for a sharp and possibly prolonged recession, both here and elsewhere.

But on the sound principle that it is an ill wind which blows nobody any good, there is some upside for the LSE. Our faculty are in strong demand as commentators on the financial crisis and its economic consequences. Interest in the study of economics is on the rise. And it is likely to mean more interest in the school in the output of the economics department, including the thoughts of its students, as set out in this edition of Rationale.

Since economists must learn to communicate their ideas to the rest of the rest of us if they are to be influential, it is excellent that there should be a magazine of this kind which allows students to practice their skills in written communication. I hope the magazine continues to go from strength to strength.

MESSAGE
FROM THE SENIOR COMMITTEE OF THE LSESU ECONOMICS SOCIETY

Dear Reader:

Thank you for choosing to read the 3rd issue of the Rationale! We hope you have all had a fruitful and enjoyable Michealmas term here at the LSE, whether it's your first or your last! Indeed 2008 has been an extraordinary year as we saw the global economy crumble under the most unprecedented Financial Crisis since the Great Depression. But we hope this issue of the Rationale will bring you a breeze of delight, whether from the revelation of discovering the rationale behind the Mafias, or from the consolatory advice for those seeking a career in the City.

Along with this issue comes two special presents from us- a Sampler from 'The Economist', with a collection of intriguing articles specifically assembled for the LSE student body, and the Report on the findings of our very own Student Consumer Price Index (SCPI) project. These inserts are packed with goodies, so please do not throw them away as you do for the Financial Times!

Whilst it may have been the worst year for many, we are proud to say that 2008 has simply been the BEST year for the LSEsu Economics Society. Not only have we more than doubled our membership base to 1200+, we have renewed our ambition and reaffirmed our position as one of the largest and most influential student societies on the LSE campus. Our victories spanned from the renowned 'Economist in Residence' lecture series, to the SCPI Project, to Career events, and to our Bank of England excursion and the Economics Debate Cup with an ever-stimulating-and-controversial motion of 'nationalising all banks', as well as our continuing support for EC102 students with Help Sessions on a thrice a week basis.

On that note, we wish you the very best of luck for the coming term - may you succeed in all your endeavours. We heartily appreciate your kind support for the Economics Society to date, and would like to send our Congratulations for all committee members who have been the driving forces behind all of our achievements.

We wish you a happy reading time!

Sincerely,

LSEsu Economics Society Senior Committee

CONTENTS

2 FOREWORD Sir Howard Davies

2 MESSAGE President of Economics Society

4 MESSAGE Chief Editor

6 ECONOMIC NEWS Food Prices

7 ECONOMIC NEWS Implications of the Credit Crunch

7 ECONOMIC NEWS Japan's Quiet Presence

8 FEATURE What to Expect from Barack Obama

9 FEATURE Carried Away?

11 FEATURE Dr Mungo Wilson

13 FEATURE Interview: Iain Long

14 FEATURE Recruitment to Organised Crime

16 FEATURE No Sex Please, We're Irrational

18 FEATURE Olympic Glory and Financial Turmoil

20 FEATURE The New Financial Paradigm

21 FEATURE Popping Bubbles

24 FEATURE Music For Free?

25 FEATURE Don't Believe the Hype

28 ECONOMICS OF LIFE Antonomics

29 ECONOMICS OF LIFE Behavioural Economics

30 PROFILE Paul Krugman

32 BOOK REVIEWS

MESSAGE
FROM THE CHIEF EDITOR

Dear Reader,

Well done for making the best purchase of 2009. Rationale, the magazine of the LSE SU Economics Society, contains a diverse collection of articles that focus on the topical issues of today that are sure to get the intellectual juices flowing. Ashraf Maniam's book review on Nudge is a fascinating read. In addition, The Economist sample booklet which is included with the magazine also contains informative articles .

I would like to thank Tayyibah, Amanda and Tharshan for their support during the transition . They have been a hard act to follow but their support has enabled Rationale to be more expansive.

I also want to thank all the editors and writers who despite the pressures of problem sets and other commitments , were able to hand in articles of professional standard and therefore making the editing process relatively straight-forward.

Finally, Rationale is constantly looking for talented and enthusiatic individuals to join our team . If you are interested in joining , then please email the following addresses t.fawehinmi@lse.ac.uk or c.b.hodgson@lse.ac.uk. There will be two more issues to follow this one, so this is the time to get involved . My gratitude to Howard Davies and Sophie Geng for writing forewords for this issue.

In addition, Please send your comments about this issue to the email addresses above. We would love to hear your thoughts.

Happy reading and Happy New Year.
Romy Fawehinmi
Chief Editor 'Rationale'

EDITORIAL ACKNOWLEDGEMENTS

Editorial team

Towuromola Fawehinmi: Chief Editor
2nd year BSc Business Mathematics & Statistics

Charles Hodgson: Deputy Chief Editor and In-charge Features
2nd year BSc Philosophy and Economics

Sanjiv Nanwani: In-charge Economic News
2nd year BSc Government & Economics

Rifdi Rafiuddin B-Mohd-Ridwan: In-charge Economics of Life section
3rd Year BSc Economics, from New Delhi, India

Design Team

Amanda Yong: Inside layout and design
2nd year BSc Economics, from Brunei Darussalam.

Kelly Chen: Cover Design

Advisor

Dr Judith Shapiro (LSE PhD, undergraduate at the University of Chicago)
Undergraduate Tutor in the Department of Economics at LSE since 2005.

Economics Society

Sophie Geng: Economics Society President
2rd Year BSc Economics

www.economics-society.com

Contributors

Economic News:

Raj Rabheru
Nishad Majmudar

Features:

Kelly Chen
Iain Long
Romy Out
Radhika Kak
Nishad Majmudar
James Wisson
Jamie Qiu
Jonathan Damsgaard
Bronswe Cheung
Samarth Bhasin
Charles Hodgson

Economics of Life:

Adnan Ahmed
Nabil Cader

Profile:

Sanjiv Nanwani

Book Reviews:

Dan Parisi
Wensi Lao
Ashraf Maniam
Weilong Liang
Adnan Ahmed

ECONOMIC NEWS

Food Prices
By Raj Rabheru

In recent weeks, consumers have enjoyed a period of respite from ever increasing food prices, with official data showing the first monthly decline since April 2007. Is this the end of a speculative bubble that had cumulated as a result of the credit crunch, or is this merely the eye of the storm? If there is, in fact, still worse to come, are there any policies that can be implemented to avoid food shortages on a colossal scale?

The notions of Thomas Malthus have seen a significant revival as economists have battled to explain the recent spikes in food prices. Many have begun to argue that population growth, combined with increased demand from emerging economies, will inevitably lead to food shortages throughout the world. As true as this analysis may be, we must recall traditional criticisms of this theory, which state that an agricultural technology revolution has prevented this phenomenon occurring to date. Those who counter this argument by stipulating that technology in this industry has reached a plateau, forget to consider a key scientific discovery that is yet to be fully integrated into the European economy – genetically modified crops. It is this technology that has the power to revolutionise the agricultural industry to prepare it for an era in which world population is expected to exceed 9 billion by 2050.

To increase cause for concern, the global demand for biofuels is set to grow at an annual rate of 20% to 92 million tons by 2011. The United Nations' Food and Agriculture Organisation (FAO) said in its annual report that "While biofuels will offset only a modest share of fossil energy use over the next decade, they will have much bigger impacts on agriculture and food security." This is advice that the government should heed, as it is the strongest call yet by the FAO to governments across the world for a review of policies that subsidise and support biofuel production and its use.

Politicians must realise that despite the recent dip in food prices, the fundamental long-term trend of these commodities is still in a positive direction – the long run risks to food prices that are present as a result of the ever increasing demand from emerging economies and population growth are still concerns, which are unlikely to disappear soon. They must act now by embracing the scientific discovery of GM crops and ensuring that the biofuel industry does not unnecessarily put the survival of nations across the world at risk.

Competition Implications of the Credit Crunch
By Raj Rabheru

Economists who still predict a rapid recovery for the UK economy are few and far between; even Mervyn King has been forced to publicly admit that the country is entering recession. The term "credit crunch" has become entrenched in the vocabulary of households across every city, town and village throughout the world, although its implications are yet to be fully understood. With the business environment increasingly souring, how far are we going to see consolidation across the UK economy, and what are the implications of this for consumers?

As the decline in equity and housing markets began to take their toll on the balance sheets of financial institutions, the banking industry fell victim to consolidation on an unprecedented scale. The historic movement by the UK government to part nationalise the banking system by injecting £37bn into three of the country's largest banks, has created a new world where the state will be forced to create an illusion of competition between banks in which it holds a significant stake. In fact, if we take into account the state ownership of Northern Rock and Bradford & Bingley, we see that authentic competition will continue to exist only between HSBC, Barclays, foreign-owned banks such as Abbey National, as well as various building societies – this can only be to the detriment of UK consumers. What is increasingly puzzling is the persistence of the government in forcing through

the merger of Lloyds TSB and HBOS despite a significant change in circumstances – the case for allowing the creation of a domestic banking 'superpower' has surely been weakened by its decision to inject public funds directly into ailing financial institutions?

Consumers, however, do have some ground for optimism. All of these institutions will be managed by an "arms' length" body that will monitor their performance on lending to small businesses and the treatment of mortgage holders, but will refrain from intervening in daily operations. If successful this could ease the pain of the credit crunch for homeowners and small businesses, whilst ensuring a continuation in competition between high street banks.

Despite previous hopes of containing the crisis, it is now clear that the credit crunch is likely to have profound implications for the 'real' economy. We have already seen successive failures in the airline industry as companies including XL Airways and Sterling Airlines have followed each other into bankruptcy.

As the domestic market moves deeper into recession the risk that smaller businesses will not survive grows exponentially – it is this danger that could lead to a reduction in competition throughout the UK industry, resulting in larger market shares for a few dominant firms. Whether we are likely to see such a situation develop rests largely in the hands of the government and Monetary Policy Committee in guiding the economy off the slippery slope of recession before it slides into a prolonged depression.

Japan's Quiet Presence
By Nishad Majmudar

There are few phrases more befitting of Japan's economy in recent years than that of the revered Japanese warrior king Tokugawa Ieyasu: "Let thy step be slow and steady, that thou stumble not."

The Land of the Rising Sun may have put its "lost decade" of economic growth behind, but she faces new challenges during a financial crisis that has largely been the result of bad investments in the United States by American and European banks.

Still, Japan has remained mostly quiet during the credit crisis, reflecting its similarly reticent presence on the world diplomatic scene. But the world's second largest economy now has an opportunity to re-emerge as an outspoken global leader.

A financial crisis stemming from a housing bubble not much unlike the current one created a decade-long maelstrom of low consumer confidence and price deflation -- despite interest rates that essentially made credit free of charge. Commercial banks continued to hold bad assets for years until a reformist government in Tokyo enhanced banking regulations and capital adequacy requirements.

At least one scholar indicated that Japan's role on the world stage is still the subject of domestic debate.

"Connected across all of this have been fairly consistent views about whether Japan should be a big nation or a small nation, whether Japan should be a trading nation or a powerful military nation, whether Japan should be a great power or a middle power and so forth," Massachusetts Institute of Technology Professor Richard Samuels told a recent gathering at LSE. "And that's the kind of debate we see now blossoming again in Japan today."

Japan has been through the protracted deflationary struggle that the United States may fall into, and has sounded all the right notes on the international stage.

"We believe that Japan can contribute to the stability of world economy by pursuing to
secure its own growth," Bank of Japan Governor Masaaki Shirakawa told delegates at the World Bank/International Monetary Fund annual meeting in October. "In response to elevated strains in the global financial market, the Bank of Japan, with other central banks, has taken coordinated action to provide U.S. dollar liquidity, and it has supported interest rate cuts implemented by other major central banks."

A big challenge for Japan will be preventing a predicted global recession from eroding domestic confidence. The country's balance of trade surplus dropped markedly in 2008, and Japanese enterprises have a decidedly pessimistic outlook on the future. The yen has also appreciated against the dollar, which could also impact its trade balance with the United States, its top trading partner.

Political instability has also mired Japanese policy programmes. Prime Minister Yasuo Fukuda resigned in September amid a political deadlock. Not since the departure of Junichiro Koizumi from the helm has there been strong national leadership. The longstanding ruling Liberal Democratic Party has been significantly weakened, increasing the chances of further political stagnation should the opposition Democratic Party of Japan move toward parity with the LDP.

While the world watches the United States and Europe respond to the financial crisis, look for Japan to play a quiet, but major role.

A Look Ahead: What to Expect from Barack Obama

By Nishad Majmudar

It all seemed a perfect storm. The most unpopular American president since Richard Nixon begins counting down the days in the White House. A sub-prime mortgage meltdown wipes out trillions of dollars in Americans' retirement savings off the books in a matter of weeks. And along comes a one-term star U.S. senator from Illinois, the first African American to have a real shot at the presidency, clamoring for change.

After an electrifying presidential campaign that set new standards for grassroots politics and campaign financing, it will soon be time for President-elect Barack Obama to get to work on a sweeping agenda amid an international economic crisis that seems to expose new victims every day.
Obama has a tough road ahead. Here's what to expect from his economic policies come January 20 and beyond.

His Economic Team

The power of moving markets has returned to Washington, where regulators, central bankers and politicians respond to crises, while investors watch and hang on every word. As such, the Treasury chief will be Obama's most important cabinet appointment.

During the presidential campaign, Obama rubbed elbows with some of America's best economic minds, from Harvard University president and former Treasury Secretary Larry Summers, to ex-Fed Chairman Paul Volcker and Warren Buffett. At the time of this writing, Summers and Timothy Geithner, president of the New York Fed, are considered the front-runners for the Treasury position. Obama must weigh whether he would like a proven academic in Summers or someone with an in-depth, ground-zero understanding of Wall Street in Geithner.

The structure of the bailout package passed by the U.S. Congress in October is largely in limbo as Treasury Secretary Henry Paulson prepares to empty out his office and make room for Obama's appointee. Paulson has indicated he will aid Obama's transition team, contributing to necessary bipartisan efforts in the face of current unease in the markets. Obama will consider whether to approach economic stimulus through additional capital injections into banks and government-organised mergers, or as tax rebates for consumers.

Fiscal Policy

Perhaps Obama's biggest economic challenge will be managing his promised fiscal policy against current economic realities. While policies for the financial crisis will by necessity be the cornerstone of his economic policies, his hands are tied by mounting public debt, the prospect of price deflation and the likelihood of a contracting U.S. economy, which the IMF estimated in November will shrink next year by 0.7 percent.

Before the credit crunch hit a crescendo late this summer, the Congressional Budget Office estimated that the U.S. would run a budget deficit of $438 billion in 2009 and $431 billion in 2010, or 3 percent of gross domestic product. As the crisis toll mounts, all estimates relevant one day are essentially useless the next. Obama's ability to manage this uncertainty will be crucial.

This will put strain on Obama's health care plans, which the conservative Heritage Foundation estimate - citing independent consultancies - will cost as much as $6 trillion over 10 years. Ending the costly war in Iraq will certainly mitigate the budgetary tightness. Thus, Obama's foreign policy leadership will have indirect consequences

on his fiscal resources; he has an incentive to pass more duties in Iraq to local authorities.

Trade Policy

Supporters of liberal economic policies are undoubtedly wary of Obama's protectionist rhetoric. Obama won the key states of Ohio, Indiana, Michigan and Pennsylvania, each symbolic of America's industrial decline. Michigan, home of the American automobile industry, and Ohio reported September unemployment figures of 8.7 percent and 7.2 percent respectively. Voters there will expect Obama to make good on promises to stem the tide of job losses resulting from globalisation, putting him in a tough spot as he seeks to right the ship.

A key aspect of his policy will likely entail continuing to exert pressure on China to revalue the renminbi closer to would-be market values, boosting the appeal of American exports and mitigating the country's record trade deficits. PresidentBush and his economic advisers were unsuccessful in convincing the Chinese, however, to revalue the currency, and the cost to American consumers would be large. The U.S. has run a trade deficit of an average $472 billion per year since 2001, increasing to more than $700 billion annually in recent years, according to the U.S. Bureau of Economic Analysis.

So, where do we go from here? President Bush was tested early on in his presidency on Sept. 11, 2001, and Obama has the unique opportunity to seize an unprecedented challenge from day one. Americans voted him into office decisively, but will need to temper their expectations. Obama has a broad mandate and a clear vision for his economic policies, but will undoubtedly face obstacles that will bring his meteoric rise to the presidency down to political and economic realities. It will be an interesting four years, to say the least.

Carried Away? An Outlook for the Yen Carry Trade

By Radhika Kak

The currency carry trade is a strategy employed by investors whereby they borrow in a low yielding currency and invest the proceeds in a high yielding currency to make the interest rate differential i.e. an expected positive 'carry'.

The Japanese Yen is the most commonly used funding currency for the currency carry trade, and has been so for the last thirteen years. In 1995, the Bank of Japan lowered interest rates in Japan below 1% for the first time and since then has maintained rates between 0 and 1%. Although the purpose of this low-rate policy was to boost Japan's slowing economy by increasing export revenue, it resulted in the establishment of the yen as one of the world's most frequently traded currencies. Investors realised that they could borrow at practically negative real interest rates in Japan and invest this money in other countries in a variety of assets – from safer US treasury bills to high-yielding Emerging Market Equities – to make a positive return. In fact, there is a high degree of positive correlation observed in yen levels and emerging market equity indices, suggesting that when more investors enter carry trade strategies the yen further depreciates against the dollar, while emerging market equities rise. If you look a chart of the yen/dollar exchange rate against the MSCI emerging markets index this year, the correlation between the two is very striking.

The main risk to the currency carry trade strategy is a sudden un-precipitated adverse movement in exchange rates. For an investor who has borrowed in yen and invested in the dollar, a sudden depreciation of the dollar versus the yen could potentially cause huge losses if the investor is un-hedged. For example, if the investor borrows $1 million when dollar/yen is 120, and it moves to 115 by the time he has to repay, he would already have lost roughly 4.5% of his loan value. Taking into account the fact that these trades usually involve millions of dollars, there are potentially huge losses to be incurred. Further, as these transactions usually involve a large amount of leverage, even small movements in exchange rates may have massive negative implications to investors - unless the trades are appropriately hedged at all points.

Through 1996/97, the combination of high interest rates in Asian money markets, controlled/semi-controlled exchange rate mechanisms employed in Asian economies, and relatively stable Japanese interest rates, caused a surge in popularity of the carry trade. The extent of the usage of this strategy really comes to light when one looks at historical yen levels. From April 1995 to July 1998, the yen went from 80 to 147 to the US dollar. From August 1990 to September 1995 the Bank of Japan had lowered the Official Discount Rate from 6% to 0.5%. At the same time, US 3-month T-Bill rates were between 5% and 6% and longer duration bonds over 7%. Thus began the era of the famous Yen Carry Trade.

Free money?

The no-arbitrage condition in financial markets suggests that investors should be indifferent between investing in bonds denominated in two different currencies i.e. the expected return on equal maturity bonds should be equal, world over. If this were not the case, then forces could be expected to be set into motion to restore equilibrium. For example, if dollar interest rates are higher than yen interest rates, then all investors would logically invest in dollar bonds, thus pushing up the price of these bonds and at the same time, lowering dollar interest rates. Likewise, yen bonds would be sold until yen rates rise – until equality in the expected return yielded from the two bonds is restored. This is exactly what the UIP principle suggests - investing in bonds denominated in two different countries should give you an equal expected return. Thus, if one currency has a higher rate of interest than another, we can expect the former currency to depreciate until expected returns in both currencies are equal. Thus, under UIP, any interest rate differential is offset by currency movements.

In real life, however, the UIP principle fails miserably – at least at short time period horizons. In fact, the relationship between currency movements and interest rates is the exact opposite of what is predicted by the theorem i.e. higher yielding currencies tend to appreciate as capital flows into those currencies causing them to move upwards. One reason that the UIP fails in reality is that the UIP does not take into account differences in risk of investing in different currencies. Risk varies across currencies and should be compensated by different expected returns. 4 Another major reason for the failure of the UIP is that in some countries, interest rates are heavily controlled by the Central Bank, and do not move freely in response to demand & supply conditions. In the case of the yen, the Bank of Japan has maintained artificially low interest rates (below 1%) since 1995. So even though money flows

out of yen denominated bonds, interest rates are not pushed higher as they are controlled. Thus, capital continues to flow out of Japanese securities into higher yielding opportunities, and the carry trade continues to be profitable. One of the reasons that the carry trade has gained so much popularity over the years is the sense of security which investors have that yen rates will remain low and hence currency movements will most likely remain within a certain range.

Empirical Evidence & Downside Risk

In a research study conducted on 10 carry trade strategies which uses the Australian dollar, Indonesian rupiah, Indian rupee, New Zealand dollar and Philippine peso as target currencies and the Swiss franc and Japanese yen as funding currencies, the average yielded returns have been extraordinarily high relative to the risk in terms of volatility of currency movements. However, the return distributions of the strategy show both positive kurtosis (thicker tails) & significant negative skewness. This implies that the strategy is profitable on average, but has crash risk. To capture the true risk of carry trade strategies, one must use measures of risk that focus on downside risk. Using VaR and expected shortfall (two measures of downside risk), it has been proved that expected carry trade returns do, in fact, reflect downside risk.

> "If carry trades bear the potential of such immense downside risk, why do investors continue to indulge in the strategy?"

Downside risk is risk in which there is a small probability of a large loss. This may explain why volatility curves for fx options depict skew (downward slope) when adverse exchange rate movements are perceived. Volatility skew reflects investors' fear of market crashes—which causes them to bid up the prices of options at strikes below current market levels (put options). In times of recession/panic, demand for downside puts on the dollar greatly exceed demand for upside calls on the same, demonstrating that investors tend to have an inordinate fear of making losses. Investors place a higher value on protection because they fear a spiral down of the exchange rate.

Skew has been proved to be most pronounced for carry trades involving the AUD and NZD and less pronounced for currencies under managed floating regimes, as naturally, perceived risk is higher for freely floating currencies.

As investors are aware of this possibility of massive downside risk, uncertainty in the financial markets/fears of a sudden appreciation of the yen, causes rapid unwinding of carry trades. This in turn causes further panic and hence and even faster appreciation of the yen. For example, in July, at the start of the subprime crisis last summer, the yen was ~122 to the dollar. In the space of just 7-8 months, it was down to 100/dollar because of the turbulent and unpredictable nature of the markets, and fears of a permanently weaker dollar.

Reasons for Recent Unwinding

Since mid-2007, widespread unwinding of the yen carry trade has been observed. There are several reasons for that:

The target Federal Funds Rate has been reduced from the 4.75% that it was in October last year to 1.5% that it stands at currently. During this time period, Bank of Japan's basic discount rate has stayed put at 0.75%. This decline in interest rate differential combined with increased volatility in the dollar/yen pair has resulted in investors getting out of their carry trade positions.

Secondly, as we head deeper into the slowdown, assets globally are rapidly declining in value. As a result, invested speculators are cutting their losses, bailing out of their positions, and repaying their yen debts.

Finally, increased volatility in the financial markets in general has created much panic and investors are in general more risk-averse. For example, the Chicago Board Options Exchange Volatility Index, a popular measure of the implied volatility of S&P 500 index options, often referred to as the fear index, which serves as one measure of the market's expectation of volatility over the next 30 day period, has increased 302% since October last year. This has greatly contributed to the unwinding of the carry trade.

Outlook

The yen bounced sharply against the dollar in April this year as the Bank of Japan tightened the money supply, and many carry trade speculators bailed out of their assets to repay debts. In August, however, the carry trade returned with a vengeance as speculators were of the view that the Bank of Japan would let the yen fall further in order to help its exporters. Since then, the yen has once again reversed its course, and now stands at <100 to the dollar. Currency options prices are currently showing unprecedented demand for yen upside.

Carry traders usually use long-dated options (beyond 20 years) to hedge. But because these long-term options markets are highly illiquid, signs of panic are already emerging in options prices and this is ultimately resulting in the sale of dollars in the spot market. In the words of Giovanni Pillitteri, Vice-President on the options trading desk at Deutsche Bank, "As spot dollar/yen falls, the market is looking for protection in long-dated options and is willing to pay a very high price. They will move down the line (from long-end to short-end) and ultimately they will be forced to sell dollar/yen to hedge."

This flow of money back into the yen could continue to boost Japan's exchange rate, regardless of the Bank of Japan's desire to keep the yen cheap to help its exporters. A rising yen would put other carry traders' positions under water, causing them to sell off and head back into yen, and so on in a vicious circle.

Conclusions:

If carry trades make higher than normal returns on average but bear the potential of such immense downside risk, why do investors continue to indulge in the strategy? Nassim Nicholas Taleb would answer this question with his theory on randomness, the essence of which says that being human beings, we tend to consistently underestimate the probability of unlikely events occurring. He refers to it as "our blindness with respect to randomness, particularly large deviations."

But these highly unlikely, highly consequential events that utterly defy human wisdom, do occur, and when they do, have a devastating impact. Example: the first world war, the creation of the internet, 9/11, and even the credit crunch (no one really estimated the extent of the impact that the crisis would cause before it began). Hence, it would make perfect sense for investors to be wary of this 'free money' that they have been raking in through the carry trade strategy over the years. Is the yen carry trade a crisis waiting to unfold itself and cause the next big financial crisis? Who knows. As long as Japan keeps its interest rates low and other countries retain more attractive investment options, I believe that the carry trade will continue. The credit crunch has definitely slowed down carry trade activity as investors prefer to be risk-averse in times like this. But once the effects of the crisis fade away, we can definitely expect a continuation of this trade.

Dr. Mungo Wilson

Interview by Romy Out

Dr. Mungo Wilson lectured the Principles of Finance course during Michaelmas term. He showed students how likely investors deemed the capture of Osama bin Laden, explained the misfortunes of the city with a mischievous grin, and shared numerous interesting facts (apparently interest rates have been pretty constant for the past 3000 years). He certainly kept the Peacock Theatre amused.

Dr. Wilson's route into Finance was rather unorthodox- he studied Law at Oxford and worked as a solicitor for three years, before embarking on a Master's in Economics at LSE and a PhD in Finance at Harvard. Since then, Dr. Wilson has worked at the Hong Kong University of Science and Technology (HKUST).

Why Finance?
"I was inspired by John Moore during my time at LSE. It seemed to be a safe profession."

Well, not anymore!

History aside, he is back at LSE for a year- and, in his own words, is hired or fired for his research.

"One of my more recent papers is with Pavel Savor at Wharton. We showed that on days when any macro-economic announcement is made, stock market returns are about six times higher on average than on the other days."

Favourite sport?

"Cricket- and only cricket"

But how do you know this is not because, on average, there is just more positive news?
"I think of the nature of news as though they are surprises. So on average there can't be more good surprises than bad surprises. Suppose there's an inflation announcement coming out, and prior to that we had an optimal forecast, like an expectation of inflation. Following the announcement, the extent to which our forecast is wrong -the surprise- should on average be zero.

We were quite surprised by this finding. Our explanation is that on days where you've got an announcement, you've got higher risk.

Favourite book?

"Tom Jones, by Henry Fielding"

Some guys in the 60's made this point first by giving an example. They said imagine it's the 18th Century and a cargo ship has gone off on a long voyage to India. You can trade shares in this ship today, but it's not going to come back for two years - therefore you're not going to hear anything about it for two years.One day the ship is seen on the horizon, and you're going to learn how it did. You may have your expectations till then, but that day is when you find out whether you were right.

That day is the high risk day, and all the days before that were very low risk. So you should see a high return and a high risk premium (a high average return on the day the risk was high)."

Are you expecting that once you've published this, people will rush to buy shares just before announcement dates, and thereby drive down the higher returns?
"When you discover something odd about stock market returns, there are two kinds of explanations.
The first is that it's a mistake. If you announce that to the world, people should correct their behavior to exploit the mistake and it will disappear.
The second explanation is that your finding really should be there because it is related to fundamentals. For example, if you know risk is really higher on announcement days. Even if you explain to everyone in the market 'Look guys! Returns are higher on announcement days!', they will reply 'I know, it's because we're shit-scared that stocks will drop on those days!'. We worry more about it, so the return has to be higher. So in equilibrium it doesn't go away, even though everybody knows it's there."

It's clear that Mungo is very excited by his work.

What do you enjoy the most about doing research?

"That you're completely independent and free, doing incredibly interesting work! Plus, you don't have to do lots of paperwork, or meet deadlines. The key to doing research, is that you need to do it with other people. Then you learn more, and get stuff done faster. Whereas otherwise, you could end up just staring right out of the window..."

Mungo's past research includes a paper investigating diseconomies of scale for mutual funds, which he co-wrote with Joshua Pollet from Emory University. They showed that funds, as they grow, behave in a way that you would predict if they suffer from diseconomies of scale.

Favourite music?

"Late Beethoven string quartets... but I like many other things."

He's also examined the relationship between aggregate risk and expected return.

"When systematic risk is high, future average returns should be high. If you do the obvious way of testing that, you find nothing at all.

This is because you can't measure aggregate risk directly. Aggregate risk is the risk of all wealth, namely the variance of the return on a portfolio of all wealth. Normally we treat that variance in exactly the same way as we treat the variance on the stock market return. But that's not exactly right. Real estate, human capital, the present value of all your future income are all part of your wealth- and they are not included. Since you don't observe the variance of all wealth, you can't test these sort of simple theories.

So I showed in a paper with Joshua Pollet, who's at Emory University, that correlation between returns is probably a more reliable indicator of risk. Correlation between returns does forecast future returns very well."

Favourite vacation spot?

"Argentina"

As an academic within Financial Economics, did you see the Credit Crunch coming?
"I didn't see it coming, but Robert Schiller did."

Robert Schiller gave a public lecture 'The Subprime Crisis' on the 26th of November at LSE.

Mungo continues, "I've seen it before- when I was a graduate student. [Schiller] came to Harvard and presented essentially the same picture."
"Once you looked at it carefully, it showed you that a stockmarket crash was going to happen very soon. It was absolutely amazing.

The ratio of Price to Earnings should be stable over the long run because price is basically present value of discounted future earnings. You can see that there's only two massive episodes that stand out from the rest. One of them is 1929, where you've got a huge peak. The other is just at the end of the '90s. Schiller went on to show that when price to earnings ratios peak, it's not because future earnings grow. Rather it is because prices fall.

After he pioneered this kind of analysis of the stock market, he went on to do nearly exactly the same thing for housing. The thing about houses, according to Schiller, is that you can either rent one or buy one. If one alternative becomes vastly more expensive, then that can't go on forever. People will just switch. Take London as an example. You could explain a rise in housing prices, by a general upward trend in demand for living in London. But the point about that kind of explanation is that it should also predict high rent. So it cannot explain why prices relative to rent went so high.

What advice do you have to students wishing to pursue an academic career?

"See Greg Mankiw's blog "

In the housing market, price to rent ratios went to historically unprecedented high levels. You'd have to be an idiot to buy a house rather than rent one, or you'd really have to believe that house prices would continue to go on up - essentially there would be a housing bubble.

Remarkably, this phenomenon was also correlated in all major cities across the world. The same trend was seen in London, Boston, San Francisco, New York and Hong Kong."

I then ask Mungo about a question he posed to the FM212 course.
What is the difference between gambling and investing in shares?

"Ah, yes. This was supposed to be a puzzle. I'll give you a clue. If you look up John Cochrane, at Chicago, I think he has some slides on this. But the essential idea is very simple.

Favourite food?

"Japanese"

Things that do badly when you're doing badly are risky- and things that do badly whenever, are not risky.

Gambling in Macao is, unless you're betting your entire wealth, not systematically risky. Stock markets are systematically risky. When they fall a lot, it tends to be a time when you lose your job, or your house price falls. So you should be paid a lot more for gambling on stock markets than for gambling on playing tables.

Can you apply this more generally?
"You can extend it even to the Credit Crunch.

One of the things people lost sight on in the Credit Crunch, is that there's a big difference between risk and rating. The rating can be absolutely correct and still completely misstate the true risk of the bond. So you can have a AAA bond, which defaults whenever (like gambling in Macao). It's got a very low chance of default, but if it does default, it's not in any particular time. Then you can have another AAA bond, which has the same chance of default, but if it only defaults when the world has gone to hell then it's a very risky bond because it does not offer any kind of diversification.

Securitization of mortgages is a way of creating AAA bonds that are extremely risky. Hence, you would predict exactly what you saw. That is, investment bankers cooking up very smart ways of taking on assets that were extremely risky but still had a AAA rating.

Nobody's made a mistake, except collectively, organizationally, we've had this build-up of toxic assets.

Favourite stock?

"Obviously none"

And this happened either because banks collectively failed to understand the difference between rating or risk. Or, the banks understood this difference, but chose to ignore it- simply because it wasn't in their interest to go against the flow (which I think is more likely)."

If you want to read more about this, there's a paper called 'Economic Catastrophe Bonds' by Coval, Jurek and Stafford.

Phd Profile

Kelly Chen Interviews Iain Long

At the moment, there are about 100 students doing their PhD in the Economics department at LSE. And amongst them, Iain Long is one of the few I've met to have an office that is slightly bigger than a sardine box. It also happens to be quite clean-- with a nameplate, a whiteboard filled with equations, and a large, red and yellow, squiggly-patterned flag hanging on the wall. At first you'd think it's the flag of some remote soccer club-- it's not. In fact it is the flag of Northumberland, a place far up north, near the Scottish border, also known as Iain's home. That is, before he came down to the LSE, and stayed here for the past 6 years.

Now, Iain is finishing off his PhD, due to graduate in 2010. Apart from his research, Iain also teaches, attends seminars, and he is course manager for the vastly popular, award-winning Econ B.

There are two different routes to earning a PhD from LSE. Iain took the one in which you earn two masters degrees along the way, starting straight in from undergrad.

Iain completed his B.Sc. Mathematics and Economics degree with a first class, of course. He then continued on to do M.Sc. Econometrics and Mathematical Economics, completing it with a distinction, before earning just a merit in his M.Res. Economics. I say just because he missed a distinction by a mere 3 points.

Along the way, Iain has produced two dissertations. One is on the economics of peer pressure, more specifically peer pressure and binge drinking. The other looks at the saving-consumption decisions of individuals. His latest research paper, on the recruitment processes of criminal organisations, you can read about in a bit more detail in this issue of Rationale.

When I asked Iain what his graduate courses have been like, the answer was bluntly "It was hard. Very hard."

Coming from someone with a first class degree, that remark made me a bit worried.

Iain elaborates. "Imagine if you had taken all that you've studied till now, and add that to all that you will learn in the next two years. (That is going at the speed you are doing now.) Then compress it into a one year course."

Of course, the intense programme gives you a comprehensive set of skills, knowledge and tools to work with, training and preparing you, and as Iain describes it "puts you right there on the research frontier".

Part of being a PhD student is about staying on that research frontier. Iain shows me the journal articles that he has been reading, or should be reading. They're all neatly printed out, stapled and stacked together-- in a pile taller than all my textbooks combined. Then he gestures to the many folders on the bookshelves, no doubt all filled with similar contents, before pointing at his printer and adding: "oh yeah, one of the benefits of being staff-- free printing".

As Iain talked, it struck me just how much freedom the PhD students have. It seemed as though they chose what they want to do, how they want to do it, and when they want to do it. They work on something they're actually interested in. They can work whenever they want, whether it is from 9 to 5, or noon till late past midnight. They get their weekends completely off. They can work with a purely theoretic model or they can chose to expend some of LSE's vast resources to conduct more empirical data-studies.

Of course, Iain assures me, there is still a large degree of constraint, both regarding the validity of your research topic and the progress you should be making with it. "You meet with your supervisor once a week.. [and] you'd have to have some kind of progress to show him."

As a matter of fact, if you don't, you may end up with homework-- to do certain readings, journal articles and such, although Iain assures me that has never happened to him. Given LSE's very laissez-faire teaching policy with its students, the thought of being given homework at a PhD level is actually a bit mind-boggling.

He adds further "You know, when you're an undergrad and your teacher comes in saying they were too busy to grade your work, you sort of think 'that's bull.' But really we do really have a lot to do. It's quite possible that they have just spent a week away on a conference in the States, or have been working to a journal's submission deadline."

Speaking of teaching, what's one of the weirdest things that has happened to you in class?

" Well, there was once I was waiting outside the classroom for the class before us to finish. I was standing there flipping through the latest edition of The Economic Journal, when one of the girls saw me reading it. 'My God! You're keen!' she said. At which, all the other students sort of turned around and looked at her like..."

Iain made this rather peculiar face, before he continued to act the scene out with a mildly amused grin.

"You are the class teacher, aren't you?"

"Yees..."

".... Oh. Noooo.
It's a compliment.. Really..."

"So, I guess it's pretty weird that I [still] can be mistaken for an undergrad."

Of course, back when Iain actually was an undergrad, Fresh was still Crush, the 4th floor restaurant was still the Brunchbowl, investment banks were still hiring LSE students like they were little money-bags with legs, and Houghton Street was much, much more hideous that it is now. Iain tells of large pot plants, lined up along Houghton street, in big concrete pots containing Inumerous cigarette butts. Ew!

Safe to say a lot has changed over the years, and certainly more will change before I or any of my friends may find ourselves doing a PhD programme at LSE. But nevertheless, it was fun to obtain this little snapshot of what it is like now.

To summarize, what would you say are the best and worst parts of doing the PhD programme?

"The best part is definitely the atmosphere. You can bounce ideas off brilliant people, who really talk to you and get excited by your research... and the worst of it is probably that, I'm 24, I don't have a 'proper' job, and I'm skint."

Recruitment to Organised Crime

By Iain Long

What do criminal organisations and investment banks have in common? One arguable similarity is the high value they both place on their reputation. For an investment bank, a strong reputation ensures a high demand for its services and allows it to attach a premium to its prices. A criminal organisation faces a comparable market structure. A reputation for violence enables the organisation to extort money from local businesses, as well as to provide credible protection to clients. In this short article, I present a much-simplified version of my latest research paper. The model explained below enables criminal organisations to protect its reputation through the use of initiation rituals. These rituals are designed to assess the toughness of potential recruits and, potentially, to prevent weak youths from wishing to join the organisation. One could view the extensive interview process investment banks put candidate employees through (possibly including internships) in a similar light.

This short article is set out as follows. Firstly, I motivate and present a simple model of recruitment to organised crime. I then derive equilibria. Having done this, I return to the internship process at investment banks, and reinterpret the model and results in this light. The article is very informal, for which I make no apology.

Recruitment to Organised Crime

Suppose that a mass of N youths1 are born into a neighbourhood riddled with organised crime. In the neighbourhood, there are two potential career paths. The youth could join the formal labour market. For simplicity, I assume that this pays a fixed rate, w. This would occur, for example, if every youth were homogeneous in economic ability. Alternatively, the youth could try to join the gang. In order to make the model interesting, I let youths vary in their criminal ability. This ability, denoted σ can take two values, H (for 'high') and L (for 'low'), where H > L. The probability that any youth has high criminal ability is

$$\pi \in (0,1$$

π. High ability youths have a natural predisposition towards violence. They may be large and intimidating, or have eyesight suited to being a sniper. Low ability youths, conversely, are incapable of violence. Given a knife, they would hold it by the blade. They are more likely to shoot themselves in the foot than shoot somebody else.2 The gang uses an initiation ritual to distinguish between these two types of youth.

Any youth wishing to join the gang receives the following payoff:

$$\sigma - \frac{I}{\sigma}$$

where σ is the youth's criminal ability, defined above, and I is the cost of initiation, chosen by the boss. In some sense, youth's with a higher criminal ability should find the initiation ritual less taxing. In order to capture this, I use a similar method to Spence (1984). The intrinsic cost of initiation is

$$\frac{I}{\sigma}$$

Given that H > L, it must be the case that

$$\frac{I}{H} < \frac{I}{L}$$

The intrinsic cost is lower for a high ability youth than a low ability one. A youth will therefore join the gang if an only if:

$$\sigma - \frac{I}{\sigma} \geq w$$

i.e. if the payoff from joining the gang is greater than the payoff from joining the formal labour market.3 Is this realistic? Do criminal organisations use initiation rituals? Many of these rituals are performed in secret, so evidence from some organisations is thin on the ground. However, the answer is a tentative yes. The best and most extensive evidence comes from street gangs in the United States. Decker (1996) gives several examples of such initiations. In one case study, the initiate was surrounded by several older members of the gang. The gang members assaulted the initiate, who had to fend off his attackers until the gang leader called the initiation to a close. Clearly this is costly, but better fighters will find it easier. Another example from the Sicilian mafia is set out in Diego Gambetta's classic treatise. He describes a complex ritual involving initiates smearing their blood over a picture of a saint, reciting an oath, and then burning the picture. Although dramatic, this does not seem very costly. In this case the ritual is more closely akin to a graduation ceremony at the end of a period of initiation. In order to be invited to undertake the ritual, one commonly cited condition (Teresa (1973), Capeci (2002), Raab (2006)) is that the initiate must have murdered someone at the mafia's request. Clearly this follows the pattern set out above.

The gang is run by an individual, called the boss. In order to formulate a sensible model of gang recruitment, it is clearly necessary to decide what the boss should care about. That way, we can determine what sort of ritual he will choose. There is much economic, sociological and criminological evidence to suggest that two aspects of a gang are key to its success. First and foremost, as mentioned in the introduction, a reputation for violence is essential to any gang. Gambetta (1993) explains why this is important to any criminal organisation providing protection. A firm will look for protection if its livelihood is under threat, either from rivals, or from other criminal organisations. By paying for protection, the firm employs the mafia to inflict violence upon whoever is threatening them. Now, suppose that it becomes known that a firm is being protected by a highly reputable mafia family. Nobody will threaten the firm. As a result, the mafia get few opportunities to prove their reputation. In fact, Abadinsky (1983) describes an amusing situation of two mafiosi who receive a phone call from a protection client who had been threatened. Themafiosi believed that they were merely extorting money from the client.4 They thought that their reputation would be sufficient to prevent the client being threatened. Fearing the harm that would be done to their reputation by inaction, the mafiosi intervened on behalf of their client.

The importance of reputation is not limited, however, to the mafia. Katz (1990) describes how street gangs in the United States trade on their ability to create, "Dread". In a similar manner to

the mafia, the more profitable street gangs are the ones who can instil fear in their rivals, reducing the competition that they face. The second characteristic that a boss should care about is the gang's size. Recent research by Cook et al (2007) suggests that markets for illegal commodities such as fire arms are thin. Suppliers find it difficult to find buyers, and buyers find it difficult to locate sellers. Trading is fraught with dangers. The other party may be a law enforcement officer. They may try to double-cross you. They may threaten you with violence. Gangs circumvent this problem by bringing buyers and sellers together within the same gang, and vouching for each party's credibility. This, and other network externalities, ensures that gang size is important. For simplicity, I assume that the boss has a transformed Cobb-Douglas utility function, given by:

$$U(\Sigma, N^G) = \alpha \ln(\Sigma) + (1-\alpha)\ln(N^G)$$

Where Σ denotes the gang's reputation, defined as the average criminal ability of gang members5, and G N denotes the gang's size. α is a sensitivity parameter determining how much the boss cares about the gang's reputation relative to its size. The boss chooses an initiation ritual to maximise this utility. By selecting a costly initiation, given the participation constraint above, the boss will only attract high ability youths. However, they comprise only part of the population, so the gang's size will suffer. Conversely, setting a low initiation cost will attract everyone to the gang, but the gang's reputation will suffer.

The timing of the model is as follows:

1. The youths are born and learn their criminal ability.
2. The boss announces the cost of initiation.
3. The youths decide whether to join the criminal organisation.
4. Payoffs are realised.

Equilibrium Results

Depending on the value of α, one of two possible equilibria exists in this model, summarised by the below proposition:

Proposition 1:

There exists an $\alpha^* \in (0,1)$ such that, in equilibrium:

- If α< α* a unique pooling equilibrium exists in which

$$I \leq L(L-w)$$

and all youths join the gang;

- If α> α* a unique separating equilibrium exists in which

$$L(L-w) < I \leq H(H-w)$$

and only high ability youths join the gang; or

- If α = α * both the aforementioned equilibria exist.

Proof:
Available by request. Email i.w.long@lse.ac.uk

Let us interpret this result. If α<α* then the boss cares relatively little for the gang's reputation relative to its size. As such, they set a low initiation cost in an attempt to attract as many members as possible. In fact, every young person in the neighbourhood is attracted to the gang.

$$(N^G = N)$$

However, if α> α* the boss is more selective. The gang's reputation is more important to him. As such, he increases the initiation cost to the point where low ability youths find it more profitable to seek employment in the formal labour market. Only high ability youths are attracted to the gang. The reputation of the gang is very high, $(\Sigma = H)$ but fewer people join.

$$(N^G = \pi N < N)$$

As α* is critical in determining equilibrium in the model, it is worth exploring its properties further.

Proposition 2:

α* :

- is strictly decreasing in H and strictly increasing in L; and
- may be increasing or decreasing in π.

Proof:
The proof is derived by partially differentiating α* with respect to each of the above parameters. When α* is high, it is likely that the pooling equilibrium will be implemented. Conversely, if α* is low most bosses will care enough about reputation to prevent low ability members from joining. The first of these results can be summarised by saying that α* is strictly decreasing in H - L . When this term increases, the difference in reputation between the pooling and separating equilibria increases. Low ability members pull the average down by a larger amount when they join. As such, the pportunity cost of choosing a low initiation cost is high. This makes it more likely that the boss will want to choose a high initiation cost, i.e. implement the separating equilibrium to attract a high reputation.

Consequently, α^* falls.

When π increases, two things happen. Firstly, in the separating equilibrium more people join the gang. As π increases, the number of high ability youths in the population grows. This raises the payoff from a high initiation cost, reducing α^* and making the separating equilibrium more likely. At the same time, however, a larger proportion of high ability youths in the population raises the reputation of the gang when the boss allows everyone to join. There are fewer low ability youths to reduce it. Consequently, the payoff from a lower initiation cost also increases. This tends to increase α^*, making the pooling equilibrium more likely. These two effects work in opposite directions, so it is not possible to determine the exact effect with this level of generality.

Recruitment to Investment Banks

The model can easily be reinterpreted to describe the interview and internship policies of investment banks. Let us suppose that each year a university produces N undergraduates. Each undergraduate has the same outside option upon graduation, which pays a fixed wage w. However, they vary in their IB ability. Work in IB requires a lot of devotion. Hours are very long, and you have to spend a lot of time learning some very technical material. Undergraduates may vary in their willingness or ability to do so. Other factors, such as the amount of time devoted to studies or other extra-curricular activities may be more important to some students. Let us suppose that undergraduates IB ability takes one of two values,

$$\sigma \in \{L, H\}$$

where once again $L < H$. Clearly, investment banks may wish to differentiate between these two types. Now the HR departments in investment banks must try to recruit a certain number of new employees with every intake. However, investment banks trade on their reputation, so HR must also pay attention to the average IB ability of their workers. Projects must be completed promptly. Their preferences could be summarised as follows:

$$U(\Sigma, N^{IB}) = \alpha \ln(\Sigma) + (1-\alpha)\ln(N^{IB})$$

Now, they choose a recruitment policy to maximise this. A lot of IB recruitment processes are long and arduous. Firstly, candidates have to fill in a long application form. They must then attend several rounds of interviews and perhaps an assessment centre. They must do all this whilst juggling their studies and applications for other banks. If candidates get through this, they are rewarded with an internship. During the three months interns spend with a bank, they work very long hours, on a very steep learning curve. Why does the bank do this? They want to filter out low IB ability workers. Graduates could be thought of as having the following preferences:

$$\sigma - \frac{I}{\sigma}$$

Undergraduates willing to very work long hours in a bank find the interview process and internship relatively painless. Others do not. The time taken away from other activities proves too costly. It is clear that the basic structure is identical to that of recruitment to organised crime. So, what can we say about how much investment banks care about reputation relative to size? Anecdotal evidence would suggest that most investment banks are in an equilibrium in which $\alpha^* > \alpha$. They have long recruitment processes, resulting in their cherry-picking the most suitable candidates, and turning down a great many others.

Notes

1
The idea of a mass is to remove the indivisibility of individuals. One can think of the mass as being N individuals, ignoring the fact that the gang may recruit, e.g. 3½ youths.
2
In my full model, I allow youths to acquire skills useful for a life in organised crime.
3
We call this sort of inequality a participation constraint.
4
The people threatening the firm were playing out of equilibrium actions. In the off-equilibrium subgame, the mafiosi were required to act.
5
Arguably, this model falls into the category of psychological games, first described by Geanakopolis et al (1989), in which beliefs enter directly into the payoffs of the players. In this case, the gang's reputation could be interpreted as the belief about criminal ability of a (Bayesian) consumer who demands protection services. Their willingness to pay depends upon how tough they perceive the gang to be.

No Sex Please, We're Irrational

James Wisson explores the economics of sex education

On the 23rd October, the Department of Children, Schools and Families published a press release announcing that Personal Social and Health Education (PSHE) will become a compulsory component of the curriculum for all children between the ages of 5 and 16. The one objective of this policy which everyone in the media has seized upon is the statement that "The Government sees education as key to supporting young people to avoid teenage pregnancy, [and] STIs." While there has been a hugely heated debate on this in the press, this article will use the cool lens of economics to analyse what the key causes of teenage pregnancy are (aside from the glaringly obvious) and ultimately whether the government's policy will manage to achieve its aims.

Firstly, how big is this problem? Readers of the Daily Mail will be familiar with sensational stories damning UK's 'sky-high teenage birth-rate'. There is an element of truth in these reports: the UK has one of the highest rates in Western Europe. Yet, the UK's teenage pregnancy rate has actually been shown to be moderate internationally and declining over time. In "Teenage pregnancy rates: high compared with where and when?", Lawlor and Shaw show that selective comparisons in the media give rise to the conclusion that the UK has high teenage pregnancy rates, when in fact the UK is about middle of the range. The 'live births per 1000 women' rate for

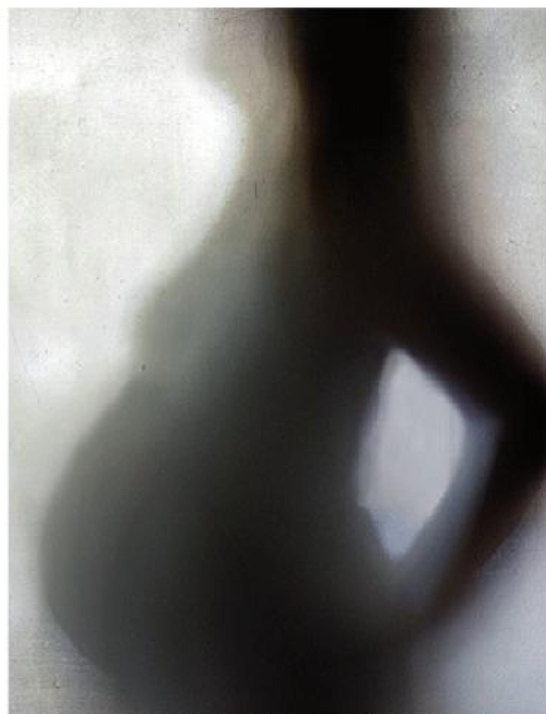
teenagers has fallen substantially since the 1960s. Furthermore, the figure is below 20 births for every year between 1939 and 2000. Hence it is incorrect to argue that the UK's teenage birth rate is high or rising alarmingly. However, the economic costs of teenage pregnancy are substantial both to the mother and the baby. Indeed, in Freakonomics, Steven Levitt cites a study which shows that in the earliest years of legalised abortion in the US (after Roe vs. Wade) an unborn child would have been 50 percent more likely than average to live in poverty – one of the main groups of women that utilised this new legislation were teenagers. Having a child as a teenager may also have a damaging effect on the mother, reducing educational and employment prospects.

So, while concerns about the size of the UK's teenage pregnancy rate might be misplaced, we can say that reducing it would be a positive for the families involved and the economy in general. But is sex education the best way for government to achieve this? In fact, there is not much research backing up the effectiveness of sex education – Douglas Kirby notes that "most studies of school-based and school-linked health centers [sic] revealed no effect on student sexual behavior [sic] or contraceptive use," – and there are at least two ways economics can help to explain this. The first is through a rational choice model of teenagers, as explained by Prof. David Paton of Nottingham University. Essentially, the argument is that teenagers are not a special case, but respond to incentives as we would assume for other economic agents. So when the government uses sex education to increase knowledge of contraception methods and availability of contraception then the marginal cost of sex (the probability of pregnancy) decreases. This will increase the total amount of sexual activity undertaken by teenagers, but will clearly also reduce the number of pregnancies for each instance of teenage sex. So, the overall effect on number of teenage pregnancies is unclear given the reduced probability of pregnancy: it could increase, decrease or remain the same depending on the relative size of the two effects.

> "Increasing the amount of sex education taught in schools is unlikely to make much of an impact in reducing teenage pregnancies."

An alternative model comes from Dan Ariely. In his book Predictably Irrational he discusses research he has undertaken on the effects of sexual arousal on decision making. By asking 35 male students a variety of questions on sexual preferences on two separate occasions, first in a neutral state and the second in an aroused state, he saw that being sexually aroused led to more risky preferences being revealed by the students. For each question the students had to predict how they would respond if they were aroused, on a scale of 0 (no) to 100 (yes) for questions such as:

"Would you tell a woman that you loved her to increase the chance that she would have sex with you?"
"Would it be fun to get tied up by your sexual partner?"
"A condom interferes with sexual spontaneity."
"Would you always use a condom if you didn't know the sexual history of a new sexual partner?"



Ariely's results were "consistent and clear", on questions dealing with desire to partake of "somewhat odd sexual activities" their responses were nearly twice as high aroused as compared to unaroused. Their responses were more than twice as high aroused when considering "immoral activities" and, importantly in the context of teenage pregnancies, they were "25 percent more likely in the aroused state than in the cold state to predict that they would forgo condoms". Of course, this result is doubly vital as condoms are also clearly very important in the ongoing struggle to prevent the spread of STIs. The research is limited by the small number of test subjects, but it is an important reminder that people make different decisions when drunk, emotional or in this case aroused than they would in their 'normal' state. Moreover, it shows that it is hard for somebody in a 'cold' state to predict their choices when aroused – despite the fact that their aroused 'mistakes' were almost always the same (and therefore easily predicted). This builds upon the insights of Thomas Schelling, a Nobel laureate whose work on self-management was a forerunner to much of Ariely's work.

In his famous paper entitled Egonomics, or the Art of Self-Management, Schelling suggests that people sometimes act as if they have a split personality. For example, someone who needs to wake up in the morning might place their alarm clock across the room so they are forced to get up out of bed to turn it off rather than just being able to hit the snooze button, risking falling back asleep. The 'self' that puts the alarm clock out of reach wants her 'future self' to wake up at the specified time the next morning, but knows that the 'future self' will want to stay in bed. Ariely's work on the effect of arousal on decision making is in some sense a special case of this phenomenon: a person will make different decisions at time t when in a cold state compared to time t+1 when in an aroused state. But the crucial difference is that Ariely's research suggests that we do not accurately predict how differently we will react when aroused.

Ariely also suggests that the style of sex education should be changed to make more of an impact. His two key suggestions are firstly that widespread availability of condoms is essential – in the heat of the moment there is "danger of switching from "Just say no" to "Yes!" in a heartbeat, and if no condom is available, we are likely to say yes, regardless of the dangers." Secondly, there must be realisation that people make different decisions when aroused. So the focus of sex education should be providing strategies to cope with the "emotions that accompany sexual arousal".

All of this shows that simply increasing the amount of sex education taught in schools is unlikely to make much of an impact in reducing teenage pregnancies. Moreover, it seems incredibly hard to believe that introducing it to younger students will somehow be the key to making sex educa-

tion effective.

Sex education aside, what are the other factors which explain why some girls have children in their teens but not others? It turns out that there are numerous variables which can predict the incidence of teenage pregnancies. In his 2001 paper, Douglas Kirby noted 43 "particularly important" but different factors including level of education, income, employment and crime in the community, family structure, values and relationships (e.g. the more 'connected' a child feels to his parents the less likely (s)he is to engage in sexual risk-taking) and the social norms of a child's peers and family. The list continues, mentioning the teenager's age and hormone levels, attachment to school and religious institutions and their own attitudes, beliefs and skills. In fact, it is apparent reading this sort of literature that explaining the level of teenage pregnancies is incredibly complex and pinning one's hopes solely on sex education seems foolish.

So the new policy from the Department of Children, Schools and Families is unlikely to reduce teenage pregnancies. But what other effects will it have? There is a certain amount of fear that the increasing extent of government influence in this area actually amounts to attempts at indoctrination in some quarters. Less extreme is the fear that parental authority and choice of how to raise a family is being undermined and lessened by this policy. On the other side of the debate are those who argue that the decline of the stable family unit in our society has led the state to fill a perceived vacuum in providing this basic education. In economic parlance, is this new policy symptomatic of government 'crowding out' parents or correcting a market failure? It's hard to comment on these sorts of questions without bias creeping into the analysis – which do we think is more important: a parent's right to choose how to raise their child or ensuring that every child no matter their background gets taught about safe sex? And this is where the questions become more political or philosophical than economic because without making those sorts of judgements, it is near impossible to answer these questions.

Nevertheless, I am against this new policy. There is clearly very little assertive evidence that sex education is successful in reducing teenage pregnancies. The paper by Kirby illustrates the complexity of this issue and the number of factors that contribute to teenage pregnancy in some groups but not others. Factors such as skills and attitudes to education seemed to be important, suggesting that the government may have more success by aiming to increase economic opportunities and encouraging academic achievement than in increasing sex education. Furthermore, the importance of the family and positive parental role models was emphasised. This would make me uneasy about increasing government involvement in this area. If anything, it seems to me that what is required is less sex education in schools, and encouragement of parents to take a more active involvement in the upbringing of their children.

What is certain, however, as demonstrated by the furore this issue has caused in the press and the airing of programmes on Channel 4 such as The Sex Education Show and Embarrassing Teenage Bodies, is that this issue has pervaded the public consciousness and challenged conventional wisdom: it turns out that, surprisingly, we Brits can talk about sex.

Notes

the press release from the Dept for Children, Schools and Families (released 23/10/08) HYPERLINK "http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn_id=2008_0235" http://www.dcsf.gov.uk/pns/DisplayPN.cgi?pn_id=2008_0235 [Accessed on 27/10/2008]

Doughty, S. UK tops league of teenage pregnancy, Daily Mail (8 March 2001) HYPERLINK "http://www.dailymail.co.uk/news/article-28860/UK-tops-league-teenage-pregnancy.html" http://www.dailymail.co.uk/news/article-28860/UK-tops-league-teenage-pregnancy.html [Accessed on 27/10/2008]

Wellings, K. et al (2001) 'Sexual behaviour in Britain: early heterosexual experience', The Lancet, Vol.358, Issue 9296, December, pp. 1843-1850

Lawlor, D. & Shaw, M. in the Journal of the Royal Society of Medicine, Vol.97, no.3, March 2004, pp.121-123

Levitt, S. & Dubner, S. (2005) Freakonomics, London: Allen Lane

Kirby, D. (2001) Understanding What Works and What Doesn't In Reducing Adolescent Sexual Risk-Taking, available: HYPERLINK "http://www.guttmacher.org/pubs/journals/3327601.html" http://www.guttmacher.org/pubs/journals/3327601.html [accessed on 02/11/08]

Paton, D. (2003) Random Behavior or Rational Choice? Family Planning, Teenage Pregnancy and STIs HYPERLINK "http://www.swan.ac.uk/economics/res2004/program/papers/Paton.pdf" http://www.swan.ac.uk/economics/res2004/program/papers/Paton.pdf [accessed on 24 November 2008]

Ariely, D. (2008) Predictably Irrational, London: Harper Collins

Schelling, T.C. (1978) 'Egonomics, or the Art of Self-Management', The American Economic Review, Vol. 68, No. 2, pp. 290-294

Ariely, D. (2008) Predictably Irrational, London: Harper Collins

Olympic Glory and Financial Turmoil

Jamie Qiu asks whether China can party through the recession

While the rest of the world was spiralling into the despair of financial crisis this summer, China was hosting the biggest party in its history. The Olympics were meant to herald in a new golden era for China, but as the world economy is on the verge of going down the pan, can post-Olympic China can steel itself through the tough times ahead and play a role in bailing out the world?

First and foremost, it was the grandest and most expensive Olympics ever, costing a total of $42 billion to be precise. But that wasn't a patch on what China had been accumulating through its staggering levels of growth in the past few years, which saw real GDP growth rise from approximately 8% in 2000 to a stunning 11.4% in early 2008, translating to many, many trillions.

Preparations for China's big party got under way immediately after winning the bid in July 2001: construction, real estate re-development and media/advertising campaigns that plucked the heart-strings of all those patriotic Chinese around the globe. All fuelled by

substantial amounts of investment into the relevant industries from both the public and private sectors.

Things were looking pretty good for the Chinese economy; investment, production, growth, development, employment, etc. Not to mention the "Olympic Fever" that spread like wildfire.

However, for a lot of nations, the post-Olympic period hasn't lived up to expectations. After Tokyo 1964 and Seoul 1988 the Japanese and South Korean economies, which had been enjoying tremendous growth in the run-up to the Olympics, saw their growth rates decrease by approximately 2% every year, for several years. In fact, the Bank of China recently conducted research into the effects of past Olympics on their host nations. In general GDP growth of host countries tends to slow down by 0.4% to 2.5% in the eight years following, with the largest slowdowns occurring in smaller nations where the city in which the Olympics is primarily held accounts for a relatively large proportion of national growth.

"The rising middle class have only been stalled by the world economic downturn."

Tokyo and Seoul accounted for around 10% of GDP growth for Japan and South Korea, almost twice that of Beijing, which stands at a maximum of 5% of Chinese growth. Surely this should mean that, with the rapidly growing markets in Shanghai, Tianjin, Nanjing and Hong Kong playing increasingly bigger roles in China's growth, a slowdown in Beijing should only have minimal effects. That Japan and South Korea eventually recovered and their economies became the envy of many around the world might be reason enough to relax. After all, investment in infrastructure (Beijing-Shanghai high-speed rail, North to South water project), renewable energy and environmental services industries is still relatively strong. In fact, post-Olympics China is perfectly poised to ride the global wave of interest in renewable energy and environmental services.

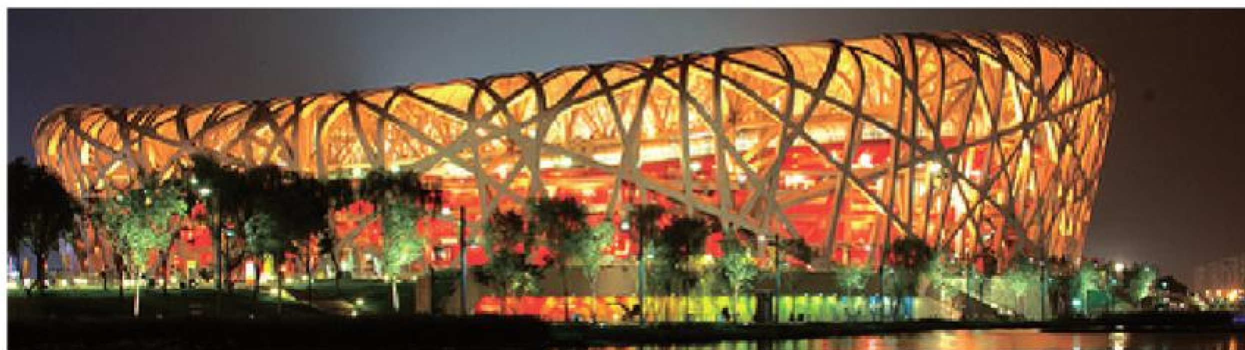
But conditions are different now. There's possibly a world recession around the corner, perhaps as dire as the Great Depression. If key trading partners of China begin to feel the pinch it could seriously affect Chinese export revenues; decreased demand from the U.S., Europe and Japan might take its toll on the growth seen in recent years.

The harsh reality is that U.S. growth is stagnating. At the time of writing, experts don't really expect U.S. growth rates to deviate much from 0% for the rest of 2008. As a result China's exports are also slowing due to decreased demand from the U.S., a main trading partner of China's. For example, 44,000 units of auto exports were sold to markets abroad in August, which was a 22.28% decline from the previous month and down 11.29% compared to August last year, according to statistics released by the China Association of Automobile Manufacturers. What's more, vital venture capital required for budding start-up businesses is in short supply because reliable credit is so hard to come by these days.

Despite these strains on its economy, China has done pretty well so far in the midst of the downturn. Growth rates have slowed, but only from about 11% to 8%, which is still remarkable. Considering the global financial situation and the fact that China just forked out $42 billion to pay for the party that was the Olympics, it's a real wonder how the government can still offer up a $586 billion (¥4 trillion) two year spending plan, which, and I think everyone would agree, is a whopping number, especially for a country whose GDP is currently only about a quarter that of the U.S.. You wonder where China gets all this money from and you start to realise, if it weren't for its export subsidies and tax rebates for exporters, a lot of its $1.9 trillion of safely tucked away international reserves would probably have been lost in the midst of the credit crisis. China's budget surplus is around 1%-2% of GDP while most other large economies are running horrendous deficits. Total public sector debt is at most 20% of GDP, second smallest of the large economies. The main difference is, unlike the U.S. and the UK, China is not up to her eyeballs in debt, which means the government has enough room to manoeuvre. China's growth is in reality less export-led than widely thought. Investment plays a larger role. It's just that a lot of the investment goes into projects involving exports, says Dragonomics, a research firm based in Beijing. The tougher bank lending climate of China has also helped. Most industries have maintained healthy levels of debt and solid profit margins while poorly performing loans now make up only 5% of Chinese banks' assets; a shining and heavenly number, the likes of which the late Lehman Brothers and Bear Sterns could only have dreamed of.

China has been and will probably continue to buy western bonds and securities. This means that, on some level, the recapitalisation of the failing western financial sector might be paid for by China. So for those of you who're wondering whether China can ask for favours from "next door", she probably can. Currently, each U.S. citizen effectively owes each Chinese citizen $4000 according to the trade balance, and the balance is unlikely to change much in the foreseeable future, even if the new American president-elect calls for China to, yet again, revise its foreign exchange policies in a desperate bid to save the U.S. from being engulfed by its hefty trade deficit, which currently stands at an impressively lofty $56.6 billion.

Going into the G20 summit in Washington China can make a credible defence when she is accused of manipulating the Yuan to keep it undervalued. Since 2005 the Yuan has appreciated more than the currency of any large economy: 20% in terms of trade-weight. That exports are still strong may suggest otherwise, but this cannot be solely due to a heavily undervalued (yet gradually appreciating) Yuan, as the U.S. would have everyone believe. Perhaps the world is too dependent on Chinese exports. The focus here on China's part should be to coax the



U.S. into loosening its restrictions on hi-tech (high value-added) produce, which could help the U.S. combat its trade deficit problem while maintaining good trade relations. That China announced its $586 billion economy stimulus package about a week before the G20 summit in Washington sends out a clear message: that of action and responsibility. China is taking measures to make sure it's economy, and in turn the world's economy, does not suffer any further. The ¥4 trillion package will be designed to make sure China's growth rate does not dip far below the 8%, otherwise there might be an onslaught of unemployment and social discontent. The best thing China can do right now will be to "keep its own economy running smoothly", which holds sizeable truth. If Chinese exports do not falter too much then consumers of the West may be able to substitute more towards less expensive Chinese goods and if increased infrastructure spending goes ahead there'll be more demand from China for imported raw materials and machinery; all good for the world.

Spending will be targeted at public projects, social welfare and tax reforms. Infrastructure investment, such as roads, bridges and railways are of high priority and a VAT modification may save firms ¥120 billion on their tax bills. Some say the package will do little in encouraging domestic consumption, which should increase to make for more balanced growth. However, recent surveys indicate falling consumer confidence. Add to that the traditionally high savings rates of Chinese families and you begin to realise that income-tax cuts and higher benefits to encourage consumption would only be saved and not spent. Infrastructure spending is definitely the way forward for a large country such as China.

One spectre hovering ominously over the Chinese economy right now is the property market. But one should understand that China's property market is nowhere near oversupply. Chinese households are traditionally money-prudent and the rising middle class have only been stalled by the world economic downturn, not entirely discouraged. After all, China's 1.3 billion people are nowhere near saturating the housing market. Urbanisation has stayed rapid and there is still an undersupply of adequate housing on a national scale.

Apart from that, stock markets may begin to stabilise now that the ¥4 trillion spending plan has been announced. In fact, the day after the announcement equity markets all across Asia rose sharply, buoyed by the news. It is expected that the package will also have a longer term impact on business confidence, which might see Asian markets begin to stabilise again.

Post-Olympics China, so far, has definitely seemed to have come out of her shell a bit more. That China felt it necessary to announce such a momentous stimulus package (approximately 14% of GDP) so close to the G20 summit about the very same issues may indicate China's growing acceptance of her economic and political importance in the world today. This year's credit, financial and economic crises may mark the beginning of a new era of Chinese cooperation. Whether the west can come to terms with this is another question.

International Capital Markets and the New Financial Paradigm

Jonathan Damsgaard looks to the future of the Global Financial System

An astounding characteristic of the financial crisis has been the international scope of its fatalities. Most analysts initially argued that the fallout from the subprime crisis would be limited to the United States housing market, and the select few international investment banks that had dabbled in mortgage backed securities. However as the crisis has spread, first through the rest of the financial system and then to the fundamentals of the economy, it has become strikingly clear how international capital markets truly are, but more importantly how interconnected they are. Once touted as a major victory of western capitalism, this interconnectedness has proved to be a structural weakness. It is fair to say that the "internationality" of the system played an integral part in the development of the crisis and the extent of the damage. Given the severity of the crisis one has to question to what extent the financial markets will reset themselves at the old equilibrium, or whether we will see a new age of financial protectionism, a policy of 'us against them', with government backed instituions leading the way.

The long term causes of the "Credit Crunch" are not the subprime mortgage securities that wrecked havoc in August last year; the origin of the crisis can be found in a much simpler concept: the Asian Savings Glut.. A combination of traditional factors and a lack of viable financial institutions has resulted in a massive surplus of savings in Asian economies, most notably China with an estimated $1.5 trillion. In search of a higher rate of return, these funds found their way into the Western financial system, which was constantly seeking innovation in financial products. This oversupply of investable funds, furthered by a systematic flaw in risk management, overextended the system. Subprime was, in other words, only the straw that broke the camels back, not the fundamental cause of this crisis.

> "There is a certain possibility that the financial markets will not realign themselves according to the initial equilibrium."

The global reach of the financial fallout, in terms of the collapse of liquidity, is further testimony to the inherent weakness of the international capital markets. The collapse of Bear Stearns, a brokerage firm, is a perfect example of this. Advocates of structured products had asserted that their size and relative liquidity made them useful tools for spreading risk. But as the crisis has shown, spreading risk does not necessarily entail minimising risk. As structured products spread through the system it became evermore difficult to determine the nature and liquidity of counterparties. The level of interconnectivity of Bear Stearns is a case in point. As the status quo deteriorated over the summer, the interconnectivity resulted in extensive exposure and default became evermore probable. This is where we currently find ourselves: there is a chronic lack of trust and an unwillingness to lend, and hence the historically high London Interbank Offer Rates (LIBOR rates).

Yet as we have seen, the solution to the crisis only seems to lie in the international arena. Piecemeal measures from individual countries have been replaced by internationally coordinated interest rate cuts and bailout

packages. The fact is that the "crunch" is a crisis of the system, not in the system. A combination of poor risk management and lack of international regulation allowed the structural flaws of the system to persist.

So what's next? Will the system be able to reassert and realign itself according to initial market fundamentals and price equilibriums? Effectively there are two trajectories that the international financial system can follow. The first, and perhaps more benign course, is an elevation of financial regulation to the international level. As we saw, the only response the markets accepted was the internationally coordinated bailout packages. While the International Monetary Fund (IMF) was notably absent in the corporate bailouts, it has surfaced as the only 'competent' agency to manage the risk of sovereign default. It is only fair to argue that a truly international market requires a global financial regulator, to oversee the massive amounts of unregulated cross-border market transactions. Unfortunately, under its current composition, the IMF surely does not have the 'teeth' necessary for such a task. It lacks the jurisdiction to even consider regulating capital markets on a global scale. Were it to be granted such a jurisdiction its structure would need to be overhauled entirely. The current voting structure is simply not sustainable: a system where Belgium and China have the same voting rights is not an entirely just reflection of the current state of the financial world. Should the financial system 'calm down', a super-regulatory organisation with clout is surely required to prevent a similar crisis in the future.

However, there is a certain possibility that the financial markets will not realign themselves according to the initial equilibrium. With every policy shift implemented by US Treasury Secretary Paulson and UK Chancellor Darling the fundamentals of the markets have changed. We will see crash after crash as the market will attempt to stabilise itself around an equilibrium that does not exist. There is a certain possibility, however remote, that we are entering an age of stagflation. While such a scenario is perhaps too grim, there is a possibility that we are going to experience an Age of Financial Protectionism. The quasi-nationalisation of certain financial institutions has effectively created a centre of 'approved institutions'. An 'us against them' mentality might develop where governments abuse their legislative power and unfairly support corporations with taxpayers' money. Furthermore, as many Asian financial institutions have been left unscathed by the 'crunch' it is possible that they will attempt to raid western financial markets in hopes of a bargain within the next 3-5 years. Should western governments act in any way to thwart this we might see a situation develop where funds are only lent to institutions of the 'centre'. Should certain banks be guaranteed by the state, peripheral institutions, not 'protected' by the government will suddenly by left exposed.

Is this a likely scenario? Probably not; the powers of globalisation have time and time again proven that they transcend domestic borders. Capital has an eerie tendency to always be able to seek out investment opportunities, regardless of nationality, and financial markets will unquestionably remain international in scope. These events are truly historic; the financial markets will recalibrate, eventually, but we are without a doubt witnessing a shift towards a new financial paradigm.

Popping Bubbles

Bronswe Cheung investigates the role of monetary policy in financial stability

Since the current financial crisis unfolded 18 months ago, there have been growing calls for financial regulators to adopt a more systematic approach towards financial misalignments rather than the current 'case-by-case' approach. There is also another growing body of opinion which believes that central banks should take a more active role in financial stability by correcting financial misalignments using monetary policy. Whilst my knowledge of monetary policy is in no way on the same par as these economists, their stance nonetheless struck me as odd. For if indeed there is a strong case for a monetary policy response to deal with financial misalignments or 'bubbles' then world central banks headed by some of the most authoritative economists should have considered this option long ago. It is hard to imagine that this question was not considered at all in the aftermath of the Dotcom Bust, which was blamed on a credit and investment binge that manifested in an equity bubble. It is against this background that I will examine Ben Bernanke and Alan Greenspan's views on this, bringing together the opinions of other prominent academics

on this subject.

As outlined by Charles Bean and Ben Bernanke, there are broadly two main schools of thoughts that argue in favour of a monetary policy role in financial stability and another related school that argues for a stronger financial stability role in monetary policy. The first two consist of people who want central banks to "lean against the bubble" and people who want central banks to engage in active 'bubble-popping'. Put simpler, the former think "the Fed should take account of and respond to the implications of asset-price changes for its macro goal variables… [and] should try to gently steer asset prices away from a presumed bubble path." They believe the Federal Reserve should raise its main policy rate high enough to offset the impact of a bubble on inflation and output and discourage further appreciation of asset prices. The latter group of economists argue that the Fed should actively engage in either preventing bubbles from being formed or popping them before they burst. The third group argue for a more dynamic approach towards inflation measurement and targeting.

"There is no reason to believe the Fed or any other central banks can reach a judgement on equity prices efficient and accurate enough to out-smart the market."

There are broadly four arguments to support their stance. The first is that a bubble is likely to cause inflation to accelerate if it is fuelled by a credit boom, and inflation might quickly give way to deflation when the bubble bursts and credit contracts. This would undermine policymakers' goal of achieving price and growth stability in the long term. The second argues that monetary policy that actively considers asset price misalignment is likely to achieve financial stability as well in the long term. The third is that financial markets contain important information regarding the future path of inflation and output, such as cost of capital, household expenditure and inflation expectations. The fourth argues that benign economic conditions will likely cause inflationary pressure to build up in asset prices rather than food and services inflation, so in order to tackle inflation in the long run effectively both must be taken into account.

The simplest response to these arguments is to allude to the Tinbergen Rule, which states that in order to achieve n macroeconomic policy objectives, n policy tools are required. So monetary policy used to deal with both inflation and financial stability is likely to fail. But this does not really provide us a useful argument, and in any case the Federal Reserve already uses its federal funds target rate to alter the path of both inflation and short-term growth even when there is considerable evidence that shows a very weak correlation between long-run inflation and employment. I shall therefore consider Bernanke's main refutation, namely the "identification problem", and then its implication.

Bernanke's main objection to both active and safe popping is that both are difficult in practice without inflicting serious ramification for the real economy. The first piece of the puzzle is to identify a bubble. Generally, the price of an asset can be split into two parts: a part accounted for by fundamentals such as earnings growth, economic conditions and dividend expectations, and a part that is pure bubble ("air"). But these two parts are difficult to discern. First, it is impossible to judge whether investors' expectations regarding future earnings are well-founded in a boom. Assuming earnings growth is procyclical, central banks would need to be able to foresee a downturn earlier than investors, but as Bernanke contends, this is unlikely since we cannot expect models used by central banks to be any more accurate or sophisticated than those used by market participants.

Other measurements can be used, but again they are not pristine. A high price-to-earnings and low earnings-to-dividend ratio commonly indicate an over-bought market, but they can present very different results given different conditions. An increase in retained profit might increase the earnings-to-dividend ratio, but it might also push up price-to-earnings ratio as investors expect stronger profit in the future and drive up share prices. Quantifying the equity premium presents another problem, which measures the extra returns investors demand to hold equities instead of government bonds. Attempts to quantify this have proved elusive, and history has shown that this premium varies greatly from cycle to cycle between 4% and 12%.

There is no reason to believe the Fed or any other central banks can reach a judgement on equity prices efficient and accurate enough to out-smart the market. Bernanke backs up his stance by pointing to a case in 1996 in which some academic work that claimed the market was overvalued was later proved too pessimistic. Even if a bull market is followed by a bear market, it does not follow from this that the initial boom was purely speculative.

There has nonetheless been academic work that suggests there are signs central banks can pick up on. A paper published by Borio and Lowe (2002) suggests bubbles are merely a symptom of credit expansion and above-average capital expansion, and found that economies with a credit gap (defined in terms of the deviation in percentage points of the actual credit ratio from the trend ratio) with a threshold value of 3 occur in 79% of economies that subsequently experienced a financial crisis in one year. The corresponding percentage when asset price gap is used with a threshold value of 20 is 53%. The implication is that central banks can use measures other then the ones Bernanke discussed to predict the probability of a crisis happening and hence adjust policy rate accordingly. In fact, an-

other paper published by Eichengreen and Arteta (2000) found that every 1% increase in rate of growth of credit increases the probability of banking crisis in the following year by 0.056.

So far, all looks well for a monetary policy response when bubbles form. There is, however, another issue: monetary policy is a blunt instrument.

First, it is difficult to target a specific asset class using monetary policy. A rise in policy rate will affect all assets as well as the real economy, but a bubble normally forms in either one particular asset type or, if it is a housing bubble, one particular area. As Bernanke remarks, a country-wide property boom is rare in history. He also points to the Fed's aggressive bubble popping stance in early 1928 made it raise rates when "the inflation rate was actually slightly negative and the economy was only barely emerging from a mild recession." Deflation then became contagious under the gold standard and the world economy suffered a prolonged depression. NBER data suggest that the U.S. economy was already slowing in the Autumn of 1929 mainly thanks to a hike in interest rates, before direr economic data caused the stock market to crash in October 1929. In other words, instead of the crash causing significant slowdown in economic activities, causality ran the other way round. This argues against active bubble-popping.

"It is unlikely that a rise in interest rate that is small enough not to cause significant slow-down in activities will be high enough to correct market expectations."

Safe-popping is also unlikely to work. If a bubble can be identified, it is normally the case that the market expects far above-trend rate of returns, and it is unlikely that a rise in interest rate that is small enough not to cause significant slowdown in activities will be high enough to correct market expectations of future economic outlook and hence earnings. In fact, as Greenspan pointed out, "experience over the past two decades suggests that a moderate monetary tightening that deflates stock prices without substantial effect on economic activity has often been associated with subsequent increases in the level of stock prices."

This brings me onto another issue raised by Bean, namely the difficulty of predicting when a bubble, if identified, is going to burst. This is a crucial question because a bubble that is going to burst in a quarter is very different from one in two years. In the first case, the suitable policy response is to prepare for the fallout and lower interest rates to allow time for the effects to work through the economy. Tightening may be called for in the second case, but this raises another identification problem. Even if we take Borio and Lowe's finding to be accurate, their indicators register best predictions over a 3-year horizon. It is hence difficult for policymakers to quantify risks arising from financial misalignments in the framework of monetary policy, which normally has a 2-year horizon. Targeting asset price misalignments is difficult, and would in all likelihood undermine central bank credibility and transparency if policymakers over-react.

On the other hand, if policymakers are only dealing with financial misalignments, insofar that they affect future paths of inflation and output by altering credit availability, cost of capital and household expenditure, the same mechanism through which a change in policy rate affects inflation and output, then the time lag for impact in the real economy to be seen is the same for both a change in financial condition and a change in policy rate. In other words, asset price misalignment should be considered in the context of monetary policy rather than a policy objective in itself.

Moreover, just because risks are difficult to quantify does not mean they should be ignored. Risks and uncertainty are both inherent in monetary policy already. As Greenspan pointed out, central banks should adopt a 'risk-management approach', considering policies that are based on extreme cases but will carry benign effects should fear proved unwarranted, rather than those that are based on the most likely scenario but might prove disastrous should events turn out contrary to what standard models predict. Borio and Lowe found that predictions made over a shorter horizon are generally associated with a higher level of false signal. The question then becomes whether central banks should act when they perceive a sizeable risk or only when they are absolutely certain. As argued by Martin Wolf, when an economy faces substantial downside risks, "the risks of doing too little are far greater than those of doing too much." The possibility of overshooting inflation target by doing too much can be easily corrected, but undershooting might plunge the economy into a prolonged recession. The argument that benign economic conditions cause inflationary pressure to build up in asset prices rather than good and services prices also suggests that policymakers that take into account asset prices are more likely to achieve inflation stability in the long run. What this then calls for is not to use monetary policy to target asset prices but to be more dynamic in what we consider 'inflationary pressure'.

It is therefore not a surprise that Ben Bernanke, in his address to the Economic Club of New York on 15th October, said that officials should review how interest rates can tackle the "dangerous phenomenon" of bubbles in housing, stocks and other assets after the current crisis.

Notes:

Add 'financial stability' to the Fed's mandate, Stephen Roach (28 October 2008), Financial Times

Charles Bean (2003), 'Asset prices, financial imbalances and monetary policy: are inflation targets enough?', BIS working paper No. 140

Ben Bernanke, (2002) 'Asset Price "Bubbles" and Monetray Policy', speech to New York Chapter of the National Association for Business Economics, http://www.federalreserve.gov/BoardDocs/Speeches/2002/20021015/default.htm (accessed 3 November 2008)

Charles Bean (2003), 'Asset prices, financial imbalances and monetary policy: are inflation targets enough?', p. 11, BIS working paper No. 140

Pablo Fernandez (2006), 'Equity Premium: Historical, Expected, Required and Implied', p.7, IESE Business School

Claudia Borio and Philip Lowe (2002), 'Asset prices, financial and monetary stability: exploring the nexus', BIS working paper No. 114

Barry Eichengreen and Carlos Arteta (2000), 'Banking Crises in Emerging Markets: Presumptions and Evidence, No C00-115, Center for International and Development Economics Research (CIDER) Working Paper

Alan Greenspan (2004), 'Risk and Uncertainty in Monetary Policy', Speech to the American Economic Association, San Diego, California http://www.federalreserve.gov/boarddocs/speeches/2004/20040103/default.htm (accessed 1 November 2008)

Blomberg News, Bernanke Foreshadows End to Fed's Hands-Off Approach to Bubbles, 16 October 2008, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=apSQDdFroxBs (accessed 16 October 2008)

Music for Free?

Samarth Bhasin examines the industry's changing model

"The recording industry's long-running battle against online music piracy has come to resemble one of those whack-a-mole arcade games, where the player hammers one rubber rodent's head with a mallet only to see another pop up nearby."

Steve Lohr, New York Times

The advent of the internet has changed the music industry forever. Digital music sharing has sparked controversy and Piracy has put record labels on the defensive. As the battle between the pirates and the music industry reaches a head, it is musicians who must ask themselves whether reliance on a middleman (the record labels) is the optimal choice for their future.

Digital media is unlike any traditional economic good in the sense that, once bought, an item can be replicated and re-distributed across a network at virtually no cost. Given that estimates put illegal music sharing at anywhere between 20% and 40% of internet traffic, it is easy to surmise that the notion of re-distribution at no cost and buying at no price has proved an attractive one. And why not? Music is no longer a gamble. There is no risk of having spent £10 on an album only to discover that it was worthless. One simply downloads freely (and illegally), either deletes or keeps. Essentially, illicit file sharing has brought the music industry to the brink of a type of anarchy where the law is disregarded and the regulators are simply overwhelmed by the sheer size of a pandemic that is self-perpetuating – as the number of files shared increases so do the number of people involved, who in turn share these files with an even larger group.

It is remarkable that the collective conscience of tens of thousands of individuals, who are otherwise law-abiding, could be so callously indifferent to something that is fundamentally tantamount to theft. Some think that it is an antagonistic reaction to what is perceived as exploitation by music labels who take advantage of the loyalty of fans for financial gain. While this is certainly the case for a fraction of the perpetrators, a more compelling argument is that they are simply emboldened by ineffective regulators. The benefits of illegally downloading music far outweigh the costs. The Recording Industry Association of America has lost the majority of its cases against file sharers and they simply do not have the wherewithal to muster an army of litigants large enough to tackle all the major criminals.

Musicians have not been recalcitrant. Earlier this year and late last year Radiohead and Nine Inch Nails released their albums (In Rainbows and Ghosts I-IV) online and independently (unassociated with record labels). Users could download the albums and pay any price they chose to (including nothing at all). Individuals, not corporations, set prices for themselves for the same good. Alongside the digital tracks users could also buy boxed sets of the album but these came at a price. While this may not sound like much of a business model it was surprisingly profitable. Radiohead made, on average, $6 per album sold. That is at least $2 an album higher than what they would have got with a label and with 1.2 million albums sold it equates to a healthy profit margin (even after discounting the cost of producing the boxed sets). The rationale was extremely simple: make it legal to download the album freely, publicize this fact and in doing so gain more exposure. For an established band there will always be enough fans in the core consumer base who will buy boxed sets. Add to this an expanding fan base that will pay for concert tickets and other paraphernalia (T-shirts, posters etc.), and the musician actually does quite well. This is especially so since no record labels or retailers have to be paid. In fact, it could be argued that these bands will do exceptionally well by adopting this system because of the goodwill they earn. Music fans see them as rejecting a system that has long been putting its own interests ahead of its customers and will make a point of ensuring that the artist is duly rewarded. Personally, I feel that the bands should jump quickly onto this bandwagon if they want to be profitable; I am sure that a law of diminishing marginal gratitude applies where fans will only be willing to express their gratitude until the model becomes commonplace.

This paradigm shift is not without its downsides. Firstly, only popular bands will be able to make such a venture and emerge profitable. New artists will struggle and probably be better off signing with a label that offers representation. Interestingly, a PhD student from Harvard showed that emerging artists actually benefit from music piracy. Their work is spread over a vast international audience which earns them recognition and the disposable income saved by consumers who reduce spending on well known bands is re-directed into purchasing the work of new artists. Secondly, the number of jobs lost would have a major impact on the economy. The Institute for Policy Innovation published a report stating that in 2007 music piracy cost the US economy $12.5 billion. If the artists were to simply walk out on their labels the industry would be in shambles.

Ever since its peak in 1999 the music industry has been shrinking. Revenues have fallen by 29% (in real terms) over seven years, and this trend is unlikely to change in the foreseeable future. In Britain, pressure has been put on ISPs to monitor the internet usage of their patrons more closely, but this has been met with vehement opposition as it is a breach of privacy. The music industry will have to adapt with changing times. Piracy is an inexorable force against which the efficacy of traditional litigation will be found wanting. A proposed solution is to have consumers pay a monthly fee along with their internet connection in exchange for unlimited downloading. This proposition has been criticized but at least it is a sign that the industry understands that it must evolve or risk losing artists who would be better off operating independently.

Don't Believe the Hype

Charles Hodgson explains why those financial internships might be all in your head

This year, I thought it would be different. I thought the frenzy would have died down, and the students of LSE would have come to their senses. Alas, no. Despite the biggest financial crisis since 1929 having unfolded over the summer, despite the collapse of one of the giants of the banking world and the last minute rescue of numerous others, and despite the widespread popular resentment of the financial sector, the investment banking internship circus at LSE is bigger and louder than ever. Far from retreating to their ivory towers to cut their losses, the big names have been out in force on the LSE campus, and campuses around the country, since the first week of the academic year. Merrill Lynch, a company that would have gone under in September had it not been saved by Bank of America, made its appearance on Houghton Street in the form of a giant inflatable bull. The message was clear: not only are we still alive, we're so alive can afford this enormous novelty item.

Why are struggling banks investing their time and energy in advertising to students? Clearly, it's not because they actually want to employ new interns. Most banks have had to lay off many of their experienced staff members just to stay afloat; surely they would have to be crazy to keep employing cocky, inexperienced students. As many students are rumoured to have discovered, banks often advertise internships that, after the final interview, are mysteriously no longer available. This behaviour may seem counterintuitive, but it can be explained as economic signalling under asymmetric information.

The current climate of suspicion means that banks that do not advertise at all are assumed to be struggling. This is the last thing a bank wants competitors and potential clients to know. In the financial world, prestige and strength are key assets. If a bank is seen to be weak, it will lose all of its business. How does this relate to advertising for internship vacancies? A profitable bank will advertise ('advertise' in this article refers to the advertising of internships and graduate positions) to fill positions it needs filled; however, an unprofitable bank will also advertise because there is an asymmetry of information between it and the rest of the economy. Only the bank knows that it is unprofitable, but it if does not advertise then it will reveal this to potential clients and lose their business. If it does advertise it could potentially attract more investment by creating the impression of profitability and strength and become profitable again. A firm that appears to be searching for a new group of interns or graduates will naturally be assumed to be more profitable than one that doesn't. Advertisement therefore has inherent value as an economic signal whether or not the firm wants to attract new employees, and thus all firms will advertise even when they are making a loss. In order to investigate this behaviour, I have attempted to formalize it in the equation below:

$$P(A) = I + \frac{(A^{\alpha})}{\pi}$$

As an aside, I do not claim to derive this expression from any accepted principles about the behaviour of firms. It is merely based on some common sense observations (I am sure a qualified individual could model these more successfully) which I will now outline, and is in essence, just a bit of fun.

This equation describes the payoff P(A) of advertising to banks. Total payoff is equal to the 'value' of interns required, I, plus a function of advertising, A, corresponding to the inherent payoff of advertising as a signal of profitability and strength.

The 'value' of required interns, I, is an index measured on a scale of 0 to 1. It represents both the number of interns required and the benefit to the firm of employing these interns. The firm gets I even if advertising is equal to zero. This is because there is such a large number of students applying for positions that even if there were none advertised, those that were available would be filled by the significant numbers who would doubtless contact firms without any advertorial prodding.

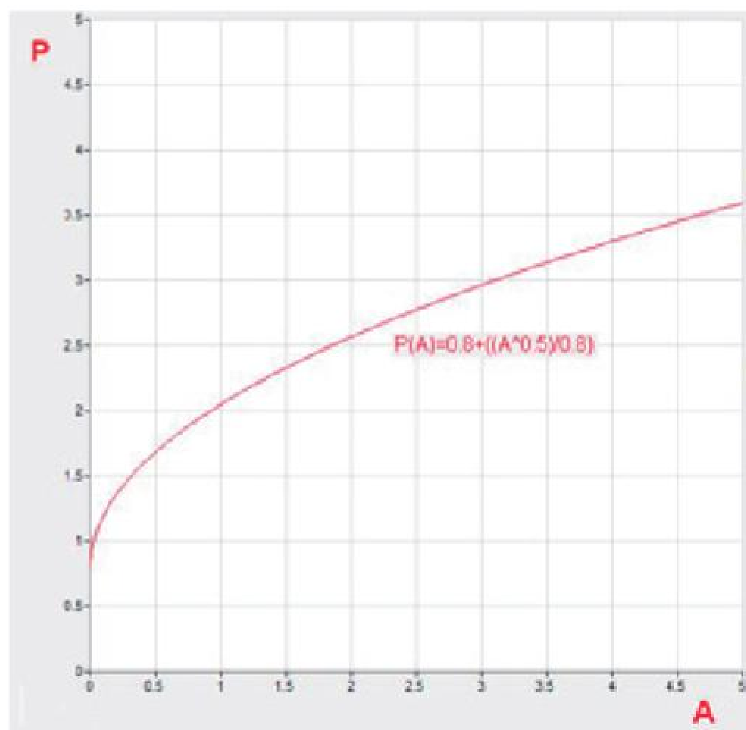
The payoff which comes from the inherent benefit of advertising as a signal is equal to

$$\frac{A^{\alpha}}{\pi}$$

where α is a parameter between 0 and 1 that describes the diminishing marginal benefit of advertising. Obviously if a bank has 500 posters on campus, the marginal benefit of one more is tiny. From here on in, I will assume α to be 0.5. π is an index of 'profitability from 0 to 1'. This means that the lower a bank's profitability, the more important advertising is in the equation compared to I. A bank that is doing well and expanding does not need to prove anything to potential investors, but a bank that is failing must give the impression that it is not. This claim was demonstrated by the previously mentioned Merrill Lynch bull on the LSE campus. If the company had not almost failed in September, it is unlikely that they would have gone to such lengths to draw attention to themselves.

π is proportional to I. Obviously, when the bank is losing money it will not take on as many interns as when in it profitable and the benefit of employing each intern will drop. I assume for simplicity that π=I (it is not the coefficient of proportionality that is important, just the fact that the indices are proportional). As the profitability index increases to a maximum of 1, the value of interns employed index increases to a maximum of 1. Obviously, when the bank is losing money it will not take on as many interns as when in it profitable and the benefit of employing each intern will drop.

Figure 1



Using this relationship, the original payoff function can be rewritten as:

$$P(A) = \pi + \frac{A^{\alpha}}{\pi}$$

Here, payoff becomes a function of advertising with only one parameter: π, profitability (assuming α=0.5). Fig. 1 illustrates a firm's payoff function with π equal to 0.8. The y-intercept is equal to the payoff due to I, the value of employed interns. As advertising increases, the total payoff increases from I at a diminishing rate (α is assumed to be 0.5).

If payoff continues to increase with the level of advertising, when will firms decide not to increase A further? The answer is clearly when the benefit of one more unit of advertising is equal to the cost of one more unit. In other worlds, when the marginal cost of advertising equals the marginal benefit. At this point, the firms will have reached some optimal level of advertising, A*. If we take 'units' to be, say, individual posters then the marginal cost of advertising is constant. The cost of one more unit is constant and equal to some value, c.

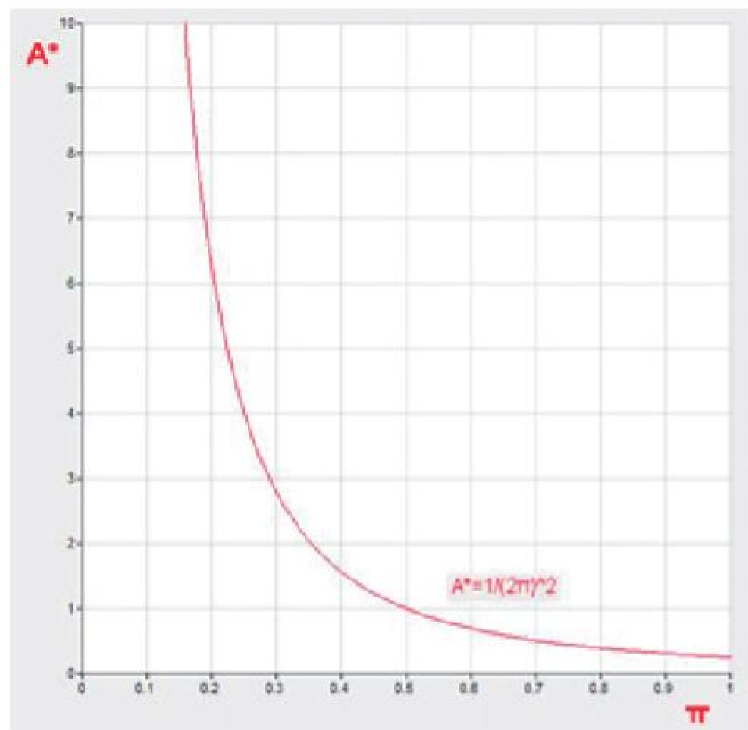


Figure 2

The marginal benefit of advertising (assuming α=0.5) can be expressed as:

$$\frac{0.5}{\pi\sqrt{A}}$$

the derivative of the payoff function with respect to A . If this is equated to c, A becomes A*,and we can rearrange the equation to express the optimal amount of advertising in terms of the index of profitability (using the given value of a). This expression is:

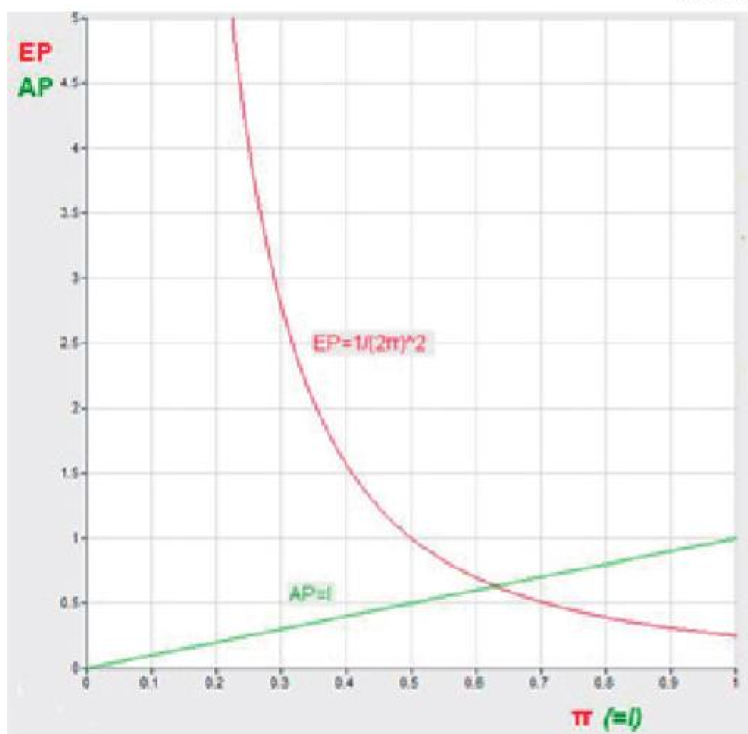
$$A^* = \left(\frac{1}{2\pi c}\right)^2$$

Because, as a matter of empirical fact, firms do advertise, we can assume that c is low enough so that up to a certain point it is less than the marginal benefit. It is for this reason that I will henceforth assume c to be equal to 1. This gives:

$$A^* = \left(\frac{1}{2\pi}\right)^2$$

This implies that as profitability falls, the optimal level of advertising increases, as shown in Fig. 2. During a financial crisis the profits of most banks and other financial institutions are severely reduced; the model suggests that the amount of advertising (in this case careers advertising) will increase. As can be seen in Fig. 2, a slight reduction in π from its maximum value of 1 will only yield a slight increase in advertising. However, once π drops below about 0.4, advertising increases rapidly. This implies that a firm that has been severely affected by the crisis will mount a big campaign while a firm that has managed to largely weather the storm will maintain close to its previous level of advertising. This occurs because the benefit of economic signalling to project strength is vastly higher

Figure 3



How does this affect students? Because of the asymmetry of information, students' only indicator of the number of internships available to them is the amount of advertising firms produce. Clearly, students are being misled. The total expected payoff (EP) for the students as a group is equal to the number of opportunities that are observed to exist. Because of the asymmetry of information, this is not equal to the true number of internships, but to A*, the amount of advertising produced (eg: number of posters on campus). The actual payoff (AP) that students will receive is equal to I, the number of internships available in reality. Expected and actual payoff for a given level of profitability π (using the functions and assumed values above) are plotted in Fig. 3. It is clear that as π drops, actual payoff drops below expected payoff and the gap between expected payoff and actual payoff then increases greatly due to the firms' incentive to advertise more and employ fewer students.

This accounts for the observation I made at the beginning of the article. Even though the financial crisis is crunching down on the profits of firms, the frenzy for internships continues. In fact, my model suggests that the rush for employment will increase because of the credit crunch and the resulting drop in financial institutions' profits. We hapless students can only blindly trust the economic signals issued by banks in the form of careers advertising, as we have no idea whether the firm is actually considering employing us at all.

Students are getting a raw deal here. It is quite clear that the resources students spend on finding a job with these firms is equal to the payoff they expect to receive. The higher the amount of advertising, the more resources students will spend in writing applications, attending networking sessions, and general worrying about getting a job in finance. However, because of the signalling incentives of advertising it is quite possible, as this model predicts, that firms will increase their campus presence while decreasing actual opportunities for students. This amounts to a market failure and a deadweight loss of welfare on the part of students. The resources they spend are not equal to the benefit they receive. It would be much more fruitful for these students to invest their energies in studying or pursuing other careers than applying for internships that may not exist. Resources are not allocated efficiently because full information is not available, and the information that is available is misleading.

How does this conclusion help us students? There is no way to stop the banks advertising other than forcing them to fully disclose their financial status upon request. The only thing we can do is seek out alternative careers. So next time you start panicking, as I am sure many of you will, that you have not yet secured a banking internship for the summer, fear not, you probably never will. The current economic downturn means that career prospects in banking are clearly not what they used to be. Some undergraduates have seen this fact through the haze of advertising, accounting for the recent increase in postgraduate economics and finance students at LSE. However, many more of us are blinded by the bright shiny lights of a financial career that, like it or not, is no longer within our reach. I hope that with this article I have illustrated why the frenzied dance between hopeful students and aloof banks has continued despite the fact that in the back of their minds the banks all know they're just teasing us.

Note: This article relies on various wild assumptions and was written by an economic novice. Please take all conclusions with a grain of salt.

ECONOMICS OF LIFE

Antonomics

By Adnan Ahmed

Ants are small. Life can be tough if you are diminutive. In the immortal words of Skee-Lo 'I wish I was a little bit taller, I wish I was a baller, I wish I had a girl who looked good I would call her. I wish I had a rabbit in a hat with a bat and a '64 Impala.' Ants cant purchase '64 impalas, they probably wont ever be ballers. Making it through each day alive is an achievement for the humble ant.

However as Sam Neil sagely remarked in the 1993 classic Jurassic Park, 'Nature will find always find a way.' Ants have drawn on a wonderful understanding and application of modern day economics to forge a living in a world where everything is bigger than them.

Communism, for example, has its main tenets outlined in two texts, the Communist Manifesto by Karl Marx, first published in 1848 and the Principles of Communism by Friedrich Engels. It is unlikely that any ant has read either, using their antennae to tap over dusty editions, turning to each other to discuss individual epiphanies, congratulating one another on full blown conversions to orthodox leftism, however certain aspects of Ant Society are undeniably communist.

One on the essential planks of communism is the government ownership of agriculture, and this is adhered to by some species in the ant world. For example, ants of the Lasius Flavus species capture and carry aphids to their nests where they care for them, keeping them ready to milk at will, exclusively for the member ants of the nest. The ants flirtatiously touch the end of the aphids abdomens with their antennae, to catalyse the excretion of honeydew and the aphids produce upon demand. In return for the honeydew, the ants protect the aphids from their natural enemies. All food is produced for the good of the community. There is also a species of ants that grows mushrooms for food in their nests. The leaf-cutter ant chews leaf sections, which are then carried back from the trees on the earth into a pulp, which they store in a special chamber underground. In the chamber, the pulp is used as a substrate on which mushroom and fungus can grow.

However in other ways, ants demonstrate a fundamental disregard for their previous Marxist leanings, and display a wholly 'Uncle Sam' capitalist mentality. According to Marxism, capitalism is a system based on the exploitation of the proletariat by the ruling class, who own and control the means of production. The workers, who own no means of production of their own, must seek jobs in order to live. They get hired by a capitalist and work for him, producing goods and services, which then become the property of the capitalist, who sells them for a profit.

The ants have embraced this class ideology with all the strength in their tiny limbs. Ants are highly social insects, living in large colonies and the colony is typically divided up into the following classes, queens , males, and workers. The queens are fed and otherwise tended by the workers. In a spiritually unfulfilling role, the males' only function is to mate with the queens. The workers do the most work carrying out tasks such as enlarging the nest, tending the queen and the younglings, and foraging for food. They also build and repair the nest, and fight off enemies. Unfortunately, despite their unflinching devotion and German work ethic, worker ants usually only live one to five years. Most male ants live only a few weeks or months. They do not work, and they die shortly after mating with young queens. The queens are analogous to the ruling class, whilst not making a profit in the traditional sense from the worker ants, they do after all, only sit around , laying eggs all day, they manage to live between 5 to 30 years, surviving on the general tending of the worker class.

Economics is defined by scarcity of resources; if there were infinite resources there would be no need for systems or methods to decide the best allocation of resources. No one is more cognizant of this law of scarcity than army ants. Mostly found in Africa and tropical America, they move their entire colonies every two to four weeks. For the army ant, ant no mountain high enough, ant no valley low enough and ant no river wild enough. Their foraging party is brutal, with a poisonous sting; they have been known to kill chickens and other small animals. They don't build permanent nests, and just march along carrying their young and looking for food, and exploiting the resources they come across. They are one of nature's premier utility maximisation examples, killing everything in their path; at night they stop to rest, and gather together to form a cluster on a tree branch of in a log. The queen and her young rest deep within the cluster, where they will be protected.

In these times of financial insecurity, fiscal meltdown and the general collapse of the economy systems which have been the backbone of our society, perhaps we should pause for reflection and give a quiet salute with our hearts to natures most effective little businessmen.

Behavioural Economics

by Nabil Cader

What is behavioral economics? In simple terms, it combines psychology and economics to determine why people do what they do. When most of us think of economics, the first things that come to our mind are likely to be books full of complicated graphs, complex mathematical equations and theory which tell us how people and firms behave in the ideal world. The only problem is that this ideal, ultra logical, robot like world appears to be more fiction than fact. The study of behavioral economics, which is a fairly recent concept, aims to explain that rational thoughts by themselves do not explain certain decisions people make. The following paragraphs provide interesting examples of behavioral economics, intended to provide an introduction to the subject, which is more complex than it may seem.

" it combines psychology and economics to determine why people do what they do."

To start off with, consider the problem of binge eating. Why do people sometimes eat till they reach an overwhelming level of fullness, even when the food itself does not taste good? Brian Wansink, professor of consumer behavior at Cornell University, recently wrote an award winning book titled "Mindless Eating," in which he attempted to find the answer. In one experiment he carried out, he gave away for free, stale (apparently stale enough to squeak when eaten),yet hygienic five day old popcorn to unsuspecting movie goers. They were each given large or medium sized buckets, either one of which was too much for one person to finish. He found out that on average, those with the large buckets consumed over 50% more than those with the medium (yet still very big) size. The fact that the popcorn was stale, showed that it was not a matter of tasty popcorn (one person attempted to demand his money back, only to realize it was free), or the fact that the audience was hungry (the show was just after lunch time) which caused people to eat it. Wansink concluded that it was various other factors, such as the size of the bucket, the sound of other people in the theatre eating popcorn, and the movie which was posed a distraction to eating which gave a signal to the audience that they should keep eating, despite the bad tasting food. This is clearly an irrational decision which conventional economic theory may find difficult to explain.

"Why do people sometimes eat till they reach an overwhelming level of fullness, even when the food itself does not taste good?"

In another example, consider the "Ultimatum Game." There are two players in this game. Player 1 (P1) is given a certain amount of money (eg: £10) and has to divide the money up with player 2 (P2). P1 can decide how much he wants to give P2 but if P2 rejects the offer, neither player gets anything.The game is played only once per person and the money has to be divided. Traditional economics says that people are utility maximizers and thus P2 should accept anything he was offered and P1 would want to keep much as possible for himself. Therefore, if P1 were to give 1 pence to P2 and keep the rest, P2 should accept this as this would be better than rejecting the offer and getting nothing at all. However, as it can be imagined, this never occurs. Offers around 40-50% of the total sum of money is usually accepted while those less than 30% of this tends to often be rejected. Why does this happen? There is no exact scientific explanation for this, but one possible reason is that people gain psychological satisfaction by taking revenge on the person who offered the lower amount, even if it means he loses out himself. It could even be that the person refuses to accept such a low offer due to his pride and status in the world. This is again a psychological issue,something which traditional economics does not fully take into account in the theory of utility maximisation.The ultimatum game is similar to the "prisoner's dilemma" situation, which many of you reading this have probably learnt in Economics B by now.

Standard Economics also says that people are better off when they are presented with a greater choice of goods. However some behavioral economists recently carried out an experiment to see if this were true. They set up a booth in a grocery store ,selling bottles of jam. They started out by selling 6 varieties of jam and calculated that 30% of shoppers purchased their jam. They then increased the variety to 24 ,and carried out the same experiment. In this case they learnt that despite a higher percentage of customers tasting the jam, only 3% of them ended up buying it. This shows that too many choices can confuse people and deter them off shopping. This may be a useful concept to keep in mind not just for store owners, but even service providers and financial institutions. Customers may be more satisfied in being able to choose a banking product that they can clearly identify as being better than the rest, rather than having to choose between ten almost identical, good products. In this case, the customer may always feel like he has missed out on what could have been a better deal.

There are plenty more examples of behavioral economics which can be considered, but the purpose of this was to provide an insight into the subject, which has been an increasingly popular area of research amongst social scientists. While traditional aspects of economics can not be disproved, the combination of it with psychology, seems to open up a wider range of problem solving opportunities in the real world. Which component of the economics-psychology mix is more important? That is something which may remain unanswered for years to come.

Paul Krugman: His Nobel Achievement

By Sanjiv Nanwani

On 13th October 2008, Paul Krugman was awarded the the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, otherwise known as the Nobel Prize in Economics, for "his analysis of trade patterns and location of economic activity". Krugman, a professor of economics and international affairs at Princeton University, and a columnist for the New York Times, earned his B.S. in economics from Yale University in 1974 and his Ph.D. from MIT in 1977. He has taught at Yale University, MIT, UC Berkeley, the London School of Economics, and Stanford University.

As a neo-Keynesian economist, Krugman has done extensive work in international economics, including work on international trade, economic geography, and international finance. According to the Research Papers in Economics project, he is among the 50 most influential economists in the world today.

Krugman's receipt of the Nobel Prize is perhaps entirely expected. After all, he has been a winner of the John Bates Clark Medal awarded by the American Economic Association – a medal described by The Economist as "slightly harder to get than a Nobel Prize". Not to be outdone in prestige, the Medal is awarded to "that American economist under the age of forty who is adjudged to have made a significant contribution to economic thought and knowledge". Testament to The Economist's bold statement is fact: following an average wait of 22 years, a heartening 40% of past Medal winners have gone on to win the Nobel Prize in Economics.

As the Nobel Prize Committee explains, Krugman was awarded this distinguished honour for two related things: his work on "new trade theory" and "new economic geography." Prior to Krugman's work, trade theory (advocated by David Ricardo and the Hecksher-Ohlin model) discussed conventional reasons for trade – reasons you would have heard of whilst studying GCSE Economics. In a nutshell: countries are different – they http://farm4.static.flickr.com/3103/3199384520_01951e1a01.jpg?v=0 have different levels of productivity in particular industries, and different resources. They each have a comparative advantage over another country, and this consequentially which drives international trade. Tropical countries grow and export bananas, whilst temperate countries grow and export apples. Countries with highly educated workers export high-tech goods, whilst countries with less educated workers export garments.

Krugman's new trade theory, which he first wrote about in a 1979 paper published in the Journal of International Economics, starts with the observation that while "old trade theory" explains a lot of international trade, it also misses a lot. He questioned: why do France and Germany see an enormous volume of bilateral trade, despite them having similar climates and resources? The same phenomenon can be observed between country pairs like the United States and Canada.

> "Krugman's receipt of the Nobel Prize is perhaps entirely expected."

His answer is a simple but definitive one: there are many goods that aren't like apples or bananas, but are instead like wide-bodied jet aircraft. Only a few places produce wide-bodied jets due to the massive economies-of-scale that can be exploited. Those factories have to be somewhere, and countries that get the factories export jets, while everyone else imports them.

A curious mind then wonders: who gets the aircraft factories, or the plants producing a particular model of car that selected consumers globally demand? The answer of new trade theory – and it is a tremendously liberating answer – is that it doesn't matter. There are many economies-of-scale goods; everyone gets some of them; and the details, which may be largely a story of historical accident, aren't important.

What matters, instead, is the overall pattern of trade: the broad pattern of what countries produce is determined by things like resources and climate, but there is a lot of additional specialisation due to economies-of-scale, and there's much more trade, especially between similar countries, than you would expect from a purely resource-based theory.

When there are economies-of-scale in production, it is possible that countries may become 'locked in' to disadvantageous patterns of trade. Nonetheless, trade remains beneficial in general, even between relatively similar countries, because it permits firms to save on costs by producing at a larger, more efficient scale, and because it increases the range of brands available for consumption.

Someone, even without any acquaintance with economic knowledge, may think of this as obvious, and it is – now. But this wasn't the case before 1980. With the exception of prescient quotes from Paul Samuelson, you would be hard-pressed to find anyone describing trade this way until after the theory had been laid out in mathematical models. The plain English version came later. Indeed, considering that economists have been thinking and writing about international trade for a couple of centuries, Krugman coming along and identifying the half of the story they had been missing was a Pretty Big Thing.

Krugman also won critical acclaim for

his work on economic geography. A decade after writing on new trade theory, he started thinking about what would happen when some (but not all) economic resources, especially labor and capital, could move. In the world of the old trade theory, "factor mobility" is a substitute for trade: if factories and industrial workers could move freely, they would spread out to be close to the farmers, and neither food nor manufactured goods would need to be traded or shipped long distances. However in the economies-of-scale world Krugman had been studying, the "centrifugal" effect of widely dispersed resources, which tends to push economic activity into spreading out, would be opposed by the "centripetal" pull of access to large markets, which tend to promote concentration of economic activity.

For example, Henry Ford could have established many factories, spread across the country, for the production and distribution of his famous Model T. Instead, however, he found that it was worth incurring extra shipping costs to achieve the economies-of-scale of one big factory in Michigan.

Krugman discovered that once firms decide to concentrate production in a limited number of locations, they will choose locations where there's a large market – which will be locations where lots of other producers have also chosen to concentrate their production. If the centripetal forces are strong enough, a cumulative process will begin: regions that for historical reasons may have a head start as centres of production will attract even more producers, becoming the economic "core" while other areas become the "periphery."

Thus for about a century, until the rise of the Sunbelt, the great bulk of U.S. manufacturing was crammed into a fairly narrow belt from New England to the inner Midwest; today, 60 million people live along a narrow stretch of the East Coast. As Krugman notes, those 60 million people aren't there because of the scenery; each of them is there because the other 60 million people are also there.

A similar logic explains why particular industries concentrate in certain locations, except that in such cases the logic involves things like a deep labor market for specialised skills and a good market for suppliers of specialised inputs. What determines which industry locates where? Often, accident: Silicon Valley owes its existence in large part to a couple of guys named Hewlett and Packard, who started some stuff in their garage, New York is New York because of a canal that only pleasure boaters use today.

Again, this may seem obvious, and it is now – but it wasn't before 1991 or so. As with trade, the plain English version was possible only after the mathematical models had been worked out.

So that's what it is all about. Krugman's work has subtle policy morals and implications, but contrary to his reputation on the street, is not driven by a political agenda. Still, Krugman's Nobel victory has not stopped critics from deriding the Nobel selection process as a tool for making a political statement, citing the 2007 Nobel Peace Prize for Al Gore as additional evidence.

BOOK REVIEWS

The Origin of Wealth

By Wensi Lao

Entropy is a good point to start the discussion. Entropy is a quantitative measure of the disorder or randomness in a system and entropy of a closed system inevitable increase. Yes entropy! And readers can be reassured that a Physics book is not being reviewed by mistake. Surely this esoteric word introduced by the Second Law of Thermodynamics has no place in the science of Economics, or has it?

In The Origin of Wealth, Eric Beinhocker has remarkably brought this mysterious concept onto the centre stage of Economics by his insightful analysis of wealth. Self-evident from the title, one theme runs through the writing: what is wealth? A seemingly innocently looking problem, but as history has always shown, the simplest problem might just turn out to be the most difficult one. Over the centuries, this problem has rarely been convincingly solved. Beinhocker is not unreasonable to be critical of the Traditional Economic theory on this front, while the work of Adam Smith, Pareto, Walras and other founding fathers of the discipline is epoch-breaking and has far reaching effects, it also somewhat bypasses this fundamental question all together by take the economy as given.

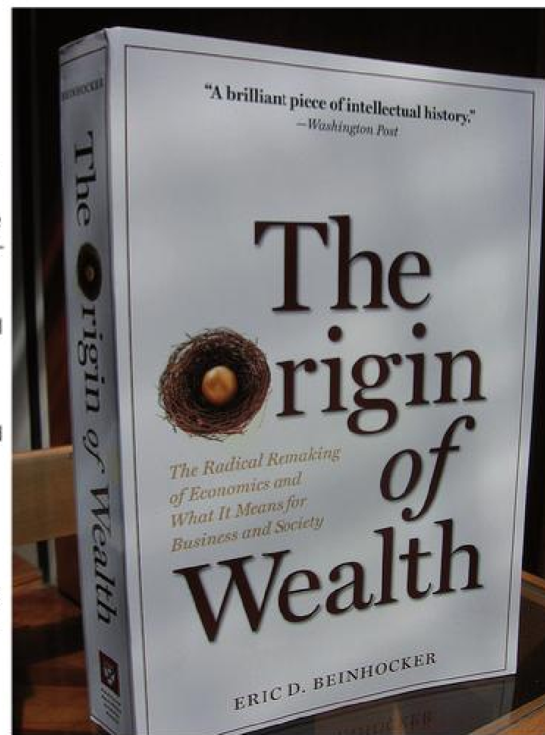
Beinhocker's answer to the problem is that wealth is "fit order", more elaborately speaking, a low entropy state which can serve a demanded purpose. If this proclamation was made in the opening line of the book, I suspect (probably so does Mr Beinhocker) most economic literate people would just snort at the idea, make some sarcastic wisecrack and chuck the book into the popular science/quasi-economics pile. Beinhocker has made sure this is never the case to be and only reveals this holy grail towards the end of the book where somehow miraculously the idea not only made perfect sense, but also displayed supreme elegance and consistency with the nature.

Three questions are raised at the beginning of the book: what is wealth? how is it created? How can it be increased, the rest of the book is Beinhocker's effort to answer the trio and indeed a commendable effort. The following summary presents a general overview of the book and its line of logics, also some of my own perspective on the matter:

Part 1 A Paradigm Shift:

An account of the development of the classical and neoclassical disciplines of economics and the work of a series of major contributors to the field is followed by an array of incisive criticisms to the Traditional Economics model and its theoretical foundation and basic assumptions.

Beinhocker eloquently remarked that the Walras's closed equilibrium model borrowed from physics, albeit mathematically elegant, is in fact a contradiction to the reality. Vigorous and inevitable attacks ensued on the bedrock ideas of neoclassic economics such as perfect rational people, complete information, zero time delay, random walk hypothesis, etc.



The analysis is undeniably objective, well thought through and ultimately correct; however, I feel the linking between ideas seems inadequate. After convincing readers the equilibrium model is irredeemably flawed, Beinhocker somehow failed to explicitly point out how the impact of this failure would spread through the current economic theory and what specific misjudgments in economics is directly caused by the spurious model. I was left with scores of puzzles such as "how is the unrealism of Walras's equilibrium model linked to the shortcomings in the utility theory?" and slightly frustrated when the book did not provide the answers. Nonetheless, the lucid argument put forth by Beinhocker genuinely exposes some fallacies of the traditional economics and provide put some long-standing (but erroneous) ideas in perspective.

On a side note, I was slightly amused by the tinge of pedantry in Beinhocker's writing. Quoting the Oxford Dictionary of Physics and Collins Dictionary of Economics to argue the definition of equilibrium is hardly the approach one would normally expect from a savvy senior business adviser.

Part 2 Complexity Economics

The concept of Complex Adaptive system is introduced in contrast to Walras's Equilibrium system and like its name the idea is a complex one.

Beinhocker proposed that the economy is actually a complex system not just analogous but intrinsically similar to the eco-system. In such a system, stable equilibrium is rarely reached (if ever). Oscillation, non-linear movements and even chaos are the common features of the system's dynamics. The agents in the system, rather than having super computational power and perfect rationality, "use inductive rules of thumb" and are able to gain experience and adapt. Drawing inspiration from the eco-system, evolution process is painstakingly dissected and redefined as an program-style algorithm, which can be summed up in short as "differentiate, select and amplify". In Beinhocker's view the evolution is engine that drives the economic development.

One interesting feature of this part of the book is that a number of simple but none-

theless clever and entertaining computer programs and games (Sugarscape,, Beer game, etc) are unveiled to either simulate a rather crude economy or illustrate the dynamics of the complex adaptive system. The results are surprisingly impressive and have a high degree of realism: phenomena mirroring inequality in wealth distribution and business cycles emerged and dynamics reflecting alternating periods of calm and storm (fancily named punctuated equilibrium a phenomenon that haunts experienced equity traders) appeared.

The mathematical concept of network is also high-lighted and elevated to high importance. By introducing concepts such as random lattice and the tipping point of edge-to-node ratio, coupled with analysis of some of network's mathematical property, Beinhocker shed exciting new lights on phenomena including the dilemma of high wealth creation capability versus high possibility of managerial failure in large organizations, the optimum span of control and the necessity for hierarchy. The little mathmo inside me was simply delighted.

Part 3 How Evolution Creates Wealth

So how exactly does evolution fit into the economy? Beinhocker's answer is by the co-evolution of Physical Technologies (PTs) and Social Technologies (STs) , with Business Plans bridging the two. Generally speaking, Physical Technologies are the technologies. Defining Social Technology is much less straight forward, luckily Mr Beinhocker has provided the perfect definition: The methods and designs for organizing people in pursuit of a goal or goals. The concept of Business Plans (BPs) is slightly broader than that defined in university management books, so not just businesses, every organization will have its own BP. It is essentially a strategic recipe for combining PTs and STs.

The evolution process goes: any entity (either individuals or organizations) must have a specific BP, the entity's actions and existence are the physical representations of their own BP, much like the way a DNA strand codes for the characteristics of an organism. The effectiveness of any BP is differentiated by the well-being of the entity in the physical world and the economy. BP consists of modules that defines various features of the entity in the same way as DNA consists of different genes controlling different characteristics. Hindering and undesirable features are detrimental to the well-being of entities in the economic environment. As a result, some "unfit" entities are simply eliminated while others recognize the harm of the features in question.

Thus the influence of BP modules coding for negative features diminishes as fewer entities are willing to incorporate those modules into their BPs. Carry the argument the other way, beneficial BP modules gain in influence as entities devote more resource to them and more entities add them to BPs. Again this process is analogous to Natural Selection.

BPs, like DNAs, also go through transformations and improvements. Rather than random mutation, BPs evolves through what Beinhocker calls Deductive Tinkering. Deductive Tinkering is the method of exploration by applying both logical deductions based on known knowledge and the pattern recognizing Trial and Error. In the economic system, the resource is limited, in an effort to be gain competitive advantages and obtain more resources, all entities carry out Deductive Tinkering continuously and changes are made to PTs and STs. Not all the changes are for the better and the ultimate judger of that is the economic selection process. Nonetheless, PTs and STs are continuous developing in the positive direction. Just like the biological ecosystem, through evolution, the economic system gains in size, complexity and ultimately wealth creation power.

So if the economy is indeed an evolutionary system inherently similar to the eco-system, then Beinhocker argued, it must have the same thermodynamics feature as the eco-system. Energy flows into the economy, reducing entropy (define in the first paragraph) of the system, induce thermodynamically irreversible transformations and create an order fit for a purpose which is desirable for the entities in the economy. Apologies for the technical languages! To prevent the point from becoming meaningless to the readers, an example i.e. cars will be used. To manufacturing a car, electricity is required, hence energy flows into the system. Readers may think that electricity is generated within the economy, true, but the source of electricity is the energy stored in natural resources i.e. coal, oil, uranium etc, which are external and not generated by the economy. The car in its natural components form would be a mixture of sand iron ore, copper ore, leathers, chemicals extracted from crude oil which has a high entropy; a new car is millions of intricately shaped steel and glass parts, bundles of electronic wires and various interior objects assembled according to a complex plan in meticulous fashion which is a highly ordered structure with a low entropy. Hence the process of manufacturing a car decreases entropy and creates a form of order. Last a car has a purpose which is demanded by people, elaboration unnecessary. As we extend this thinking throughout the economy, every product can fit into the definition of "fit order". Wealth is inherently an abstraction of the material output of the economy, hence can be equally defined as "fit order". The way "fit order" is created is by the correct combination of STs and PTs i.e. BPs. The information carried by STs, PTs and BPs has a rather common name: knowledge. The origin of wealth is knowledge.

This part is without doubt the most intellectually stimulating part in the entire book. The above summary reflects nowhere near the full glory of Beinhocker's exciting ideas, I guess that is the reason why he is the one receiving the royalties.

Part 4 What it Means for Business and Society

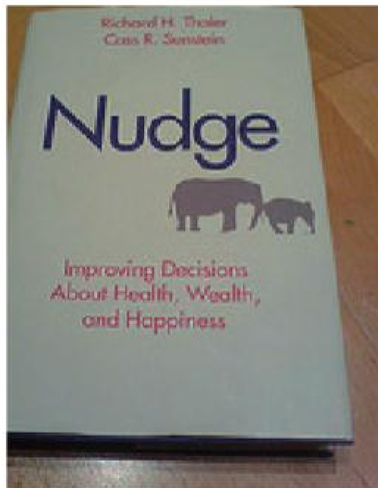
The last part of the book has relatively little relevance to Economics per se. But economics is rarely talked on its own and politics and management have long been economics' good pals.
Along with some inquisitive analysis of matters including corporate compensation, inequality and culture, Beinhocker has offered a series of deeply insightful and constructive advices on many issues of corporate governance and social politics. For the time being, I will refrain from going into details and further spoiling the joy of reading for the readers. This part is a justification for Mr Beinhocker's payroll in McKinsey & Company and is definitely worth an examine for any future business and political leaders.

End: QED

The three questions raised at the beginning of the book have been answered in spectacular style. Wealth is fit order of low entropy, Wealth is created by knowledge. Wealth increases as the economy expands in size and complexity through an evolution process.

Personally the Origin of Wealth has been an fresh and enlightening experience. I believe readers stand not only to gain from his brilliant ideas, but also his conventional approaches to observe and analyze problems. Despite a few minor flaws, the book is written with creativity, clarity and class. So Bravo to Eric Beinhocker and a strong recommend to all you brilliant minds out there.

Nudge



By
Ashraf Hyder Yusoff
Maniam

In this critically acclaimed read, Richard Thaler and Cass Sunstein take you into a whole new realm of behavioural economics. Unlike most conventional books on the matter, the authors seek not only to explain our bounded rationality in everyday circumstances but to offer solutions in the form of subtle nudges as well. They argue that by taking our irrationality as an inherent flaw, we can design choice environments to nudge people along in the right direction.

If you place an imprint of a housefly in men's urinals, it helps men aim and consequently improves the cleanliness of public restrooms. If you adjust the relative position of cooked vegetables in a cafeteria, consumers can be influenced to eat more healthily. These simple yet powerful examples help drive home the point that the way in which we present choices to a person greatly influences their final decisions.

A central focus of the book is the idea of Libertarian Paternalism, which the authors support strongly. With several nudging techniques at one's disposal, the authors suggest that organizations and governments can use choice architecture to nudge people into making better economic decisions. These decisions may concern education, health and finance, and nudging helps people in the decision making process without reducing their freedom to choose.

For example, if you design organ donation forms such that a person opts in by not ticking against an opt out option, organ donations increase drastically as humans have a default bias to 'not tick'. In another study, consumers drastically reduced their energy consumption when they were given reports comparing their energy usage to the social norms, simply due to the fact that humans intrinsically respond to feedback. Here, Pareto Improvements have been arguably achieved since the person or community being nudged has been made better off without anyone else being made worse off.

While Libertarian Paternalism helps people make better decisions without impeding freedom to choose, we still have to understand that not all issues can be solved convincingly just by nudging people. Nudging serves to aid and improve situations in which poor decisions are made, but issues of time lags and comprehensiveness of strategies may render direct government intervention more swift and effective.

Another point to consider is whether we indeed give people the freedom to choose if we subconsciously manipulate their choice making process. While an efficient outcome may be reached, issues of ethics arise when we manipulate a person to behave in a manner which is deemed right (what more if this definition of right is coined by a separate entity and may not be reflective of one's beliefs). The authors argue this point by saying that nudges can be made explicit to the 'nudge-ee' to remove issues of morality, and the desired behavioural effects of a nudge will still take place.

The idea of nudging as a soft policy tool is just off the starting blocks in the race to redefine how governments intervene in markets. To assume it solves all problems would be highly simplistic. To write it off completely would be foolish. Instead, we should do as we have done in all economic conundrums and seek an optimal balance of things. Realising that nudging, laissez faire policies and government intervention are necessary but insufficient methods in isolation could possibly nudge governments in their own right to pursue that elusive balance.

Nudge by Richard Thaler and Cass Sunstein is indeed an insightful book, one that puts forth powerful ideas which will enthrall and captivate even the most learned of readers. Its perspective on nudging as a government tool is refreshing, but at the very least, it presents ideas highly applicable to smaller organizations and individuals alike. When you are at the Brunch Bowl during your next visit to school, do pay attention to the layout of the food on display. The LSE catering committee might very well be nudging us to eat more vegetables. For our own good, of course.

Connected: 24 Hours in the Global Economy

By Daniel E Parisi & Weilong Liang

In Daniel Altman's book, Connected: 24 Hours in the Global Economy, he uses thread, whose colors consist of individual business experiences from a variety of countries, and sews his reader a tapestry of the global economy. This book presents its reader with insightful information from business plans to cultural uniqueness. Altman was able to create a fast moving story based on a 24-hour journey around the world that is unbounded. Whether Altman recounts a telephone conversation that a mother who graduated from the LSE is having with her family in the Middle East, a discussion between Japanese businessmen in Tokyo, or a merger negotiation in Los Angeles, California involving the renowned Napster, the reader is captivated and cannot tear himself away from this book.

Topics that Altman incorporates into this work include the economic and financial realm, consisting of business deals and relationships between companies, more specifically areas of the foreign exchange, the importance of energy sources, mergers, corruption, and international deals, to name a few. Altman's encounters are recounted in a truly brilliant, well-structured, and concise manner. Each arena that Altman illustrates to the reader is sufficiently introduced and leaves one feeling satisfied and enlightened by this new knowledge on the subject covered.

This book caters to one who wants a briefing on a wide range of topics. Although Altman does not go into detail in each subject, he is able to tie together all of the threads of these stories to offer a taste for the globalization that is evolving in the present economy. Altman weaves his thoughts tightly, and in brilliant form, creates a work of art that motivates its audience and invites them to examine their role in society and the world at large.

The Age of Turbulence

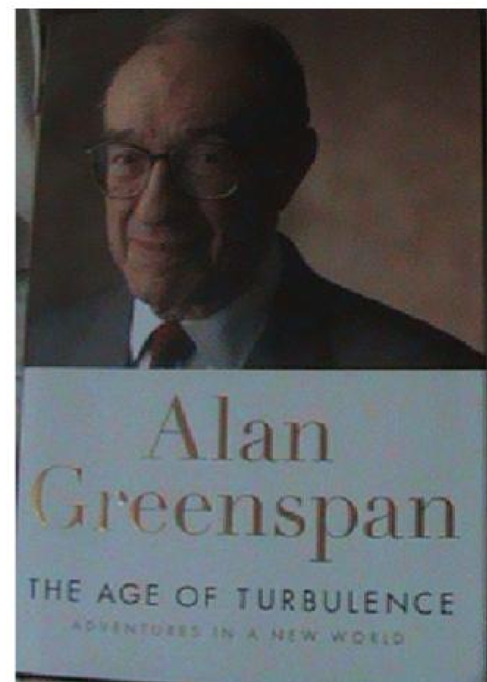
By Daniel E Parisi & Weilong Liang

Many believe him to be the greatest ever Chairman of the US Federal Reserve, and now Alan Greenspan enlightens the world on his distinguished career in his memoirs: The Age of Turbulence.

The book incorporates two sections, the first of which recalls his illustrious life, including keeping baseball statistics as a youngster and running his business 'Townsend-Greenspan'. But the focus is on his career in the public sector, beginning with Nixon's presidential campaign in 1967, and culminating in 19 years as the Chairman of the US Federal Reserve. His memoirs vividly illustrate his experiences of guiding the world's biggest economy through major events like the September 11th terror attacks, the dot-com boom and the fall of the Berlin Wall, which revealed an economic wasteland that even Greenspan admitted he was not anticipating.

Greenspan writes with an honesty that makes the book more engaging He voices his frustration with how bureaucracy and party politics can dominate decision-making and uses the example of Clinton's plan to reduce the fiscal deficit, which took eight months to pass, not because it was perceived as ineffective, but that it aimed at abstract long-term goals which yielded no "lucrative goodies to bring home to constituents."

Greenspan gives an insight into the workings of his economic mind by sharing his analysis of the global economy in the second half of his memoirs. He talks about capitalism creating a "tug-of-war" between the competitive entrepreneurial spirit within us and our desires to live a stress-free life. He goes on to talk about a number of other issues including China and globalisation. A chapter on the current financial crisis is included in the new edition.



The book is by no means a light read, but those interested in economics should find it informative and enjoyable. For those aspiring to fol in his illustrious footsteps this should be your bible.

THE
ECONOMICS
SOCIETY