

# YEOMAN 3-RIGHTS VALUE ASIA FUND

(Co. Regn: 53979 C1 GBL; Fund Business Licence: C1/04/01282)

At 31 Dec 2009

NAV/Share:

**\$158.79**

## Performance Figures for Month of Dec 2009

Dec 2009 **+3.20%**

Full year 2009 **+61.31%**

Cumulative 12 yr 2mo performance **+346.61%**

Implying a compounding rate of return of **+13.09% p.a.** over the 12 yr 2mo period.

(Nett of all fees, with dividends re-invested and in SGD terms)

### Equities/Cash Allocations

Equities 99.71%

Cash 0.29%

### Country Allocations

Hong Kong 34.13%

Singapore 24.06%

Malaysia 20.45%

Korea 18.87%

Thailand 2.20%

### Portfolio Valuations (trailing)

PE 17.64x

P/NTA 0.67x

Dividend Yield 3.13% p.a.

ROE 5.56% (1 yr)

9.78% (5 yrs average)

Weighted Ave Mkt Cap S\$216.2m

## General Information

Fund Address:

C/o Multiconsult Ltd.

Rogers House, 5 President

John Kennedy Street,

Port Louis, Mauritius

Manager:

Yeoman Capital Management

Pte Ltd

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Website: [www.yeomancap.com](http://www.yeomancap.com)

Total Value of Fund:

**\$75,526,728.93**

Total Number of Shares:

**475,646.47**

Management Fee:

**1% p.a.**

Performance Fee:

**15% High Water Mark**

Sales Charge:

**2.5% of NAV** (payable to Distributor if applicable)

Manager Subscr Charge:

**\$2,500** (one-time fixed sum payable to Manager)

Fund Subscription Charge:

**1% of NAV** (payable to Fund)

Fund Redemption Charge:

**1.5% of NAV** (payable to Fund)

Subscription Frequency:

**Monthly**

Redemption Frequency:

**Quarterly**

Investment Horizon

Recommended:

**3-5 years or more**

Minimum Investment:

**\$250,000**

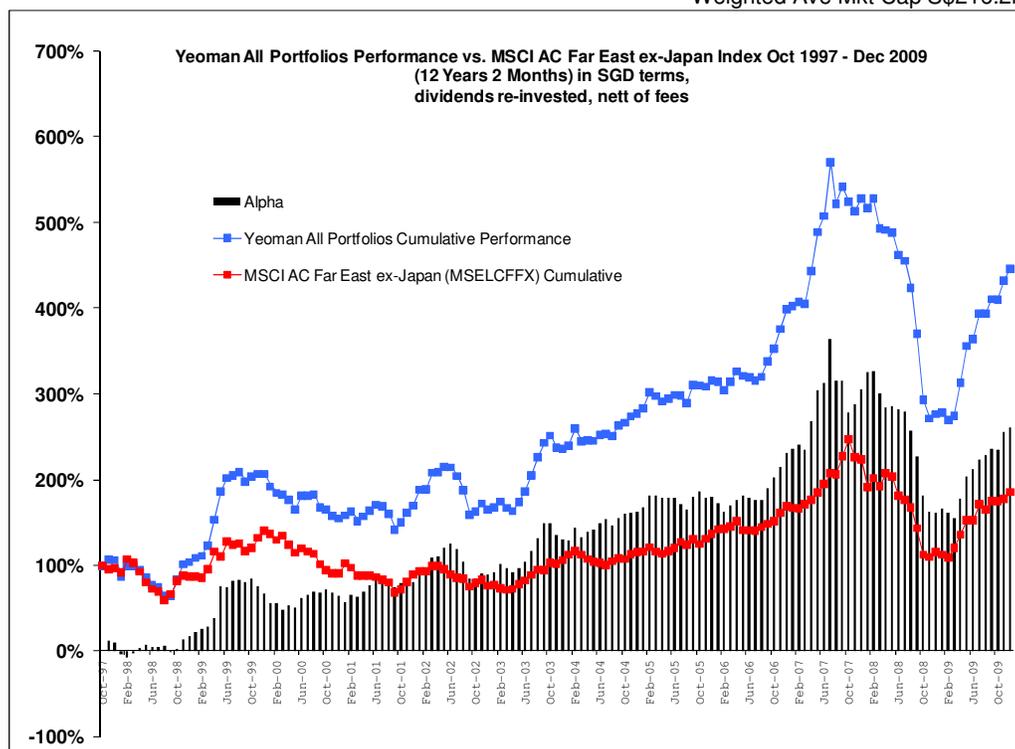
Custodian:

**British and Malayan Trustees Ltd,**

**Deutsche Bank**

Auditor:

**KPMG**



## Yeoman All-Portfolios Performance: 12yr 2mo ending 31/12/2009

| Period                         | Yeoman-All Performance | MSCI AC FE x Japan Performance |
|--------------------------------|------------------------|--------------------------------|
| Oct 97 to Dec 97               | 6.60%                  | -2.90%                         |
| Jan 98 to Dec 98               | -2.50%                 | -10.70%                        |
| Jan 99 to Dec 99               | 99.30%                 | 61.40%                         |
| Jan 00 to Dec 00               | -25.10%                | -35.20%                        |
| Jan 01 to Dec 01               | 9.50%                  | -1.60%                         |
| Jan 02 to Dec 02               | -2.60%                 | -14.50%                        |
| Jan 03 to Dec 03               | 42.90%                 | 39.20%                         |
| Jan 04 to Dec 04               | 17.50%                 | 8.80%                          |
| Jan 05 to Dec 05               | 13.60%                 | 18.10%                         |
| Jan 06 to Dec 06               | 27.60%                 | 23.50%                         |
| Jan 07 to Dec 07               | 32.28%                 | 32.48%                         |
| Jan 08 to Dec 08               | -47.62%                | -48.16%                        |
| YTD 09                         | 61.31%                 | 60.32%                         |
| <b>Cumulative Performance</b>  |                        |                                |
| From 10/97 to 12/09 (12Yr 2mo) | <b>346.61%</b>         | 85.36%                         |
| <b>CAGR</b>                    | <b>13.09%</b>          | 5.20%                          |

Note: In SGD terms, nett of all fees, dividends re-invested and calculated according to CFA(AIMR) PPS standards.

Complete information on the Fund and the latest updates are available from the manager Yeoman Capital Management Pte Ltd or from the Custodian. This document constitutes neither a recommendation nor an offer to buy or sell, is not a solicitation to invest in the Fund, neither does it constitute an investment contract. Please be aware that past performance is not indicative of future results.

## Absolute Performance

Measured at 31Dec09, the numbers are:

For month of Dec09, we were up **+3.20%**

For the full year 2009, we were up **+61.31%**

For the 12 years 2 months to end Dec09 on all-funds composite basis, we were up **+346.61%** cumulative which implies a **CAGR of +13.09% p.a.** for the period (a very long term).

[Note: The above and below figures are presented on **net of all fees basis**, in SGD with dividends reinvested.]

## Relative Performance

Our own performance against that of the Index is tabulated below:

| Period                                       | Yeoman (%) | Index (%)<br>(Ticker:<br>MSELCFFX) | Out/under-<br>performance                |
|--|------------|------------------------------------|--|
| 1 month                                      | +3.20      | +4.45                              | (1.25%)                                  |
| Full year 2009                               | +61.31     | +60.32                             | + 1.01%                                  |
| Cumulative 12 years 2<br>months to end Dec09 | +346.61    | +85.36                             | +261.25%<br>(or factor of <b>4.08x</b> ) |
| Annualized 12 yrs 2<br>mo (CAGR)             | +13.09     | +5.20                              | Alpha of<br><b>+7.89% p.a.</b>           |

From the above, it may be seen that we outperformed the market over the time horizons medium and long over which “alpha” generated is **+7.89% p.a.** net of all fees. For further details, please see the table on the lower half of page 1 of this report.

## Review at end 2009 and Prognosis for 2010

Please see the attached article from The Economist dated 30Dec09 entitled “**Counting their blessings**”. We may learn 3 main things from the report:

- The consensus view by all manner of experts adopted at the start of 2009 was not supported by actual outcome at end 2009 in terms of macro economic and financial markets performance;
- The emerging economies markets (once thought to highly dependent on exports to the US and developed world) did not fold but instead have come out fundamentally stronger than ever before;
- Human beings (no matter how smart) cannot reliably foretell the future.

**At Yeoman we did not embrace the consensus view at the start of Jan09 and so did not take the same actions on our investment portfolio as what other market participants were doing or did.** If you wish, you may read our newsletters Jun08 to Dec09 at the bottom of page of our website [www.yeomancap.com](http://www.yeomancap.com) to see what thoughts were running through our heads over the period. We are not the types who change the script every other day, this you will see.

As a result, our **fund shareholders have benefitted** in the way they have as evidenced by the figures on page 2.

We could not foresee that the emerging markets would come out as well as they have but for our line of work this point is not very relevant hence we spent no time on it. **Be aware though that your Fund is fully deployed in the emerging markets of Asia ex Japan** so we are already where other people now want or long to be.

However, we did know that in implementing a value strategy, on valuation terms we had a **“margin of safety”** on our side on stock by stock and on portfolio-wide basis. Having taken compensated risk (in actuarial speak), when the risks appear to subside as they have in recent months, markets being efficient (as they sometimes are) will re-price our assets in our favour which they have.

But not all people can do what we are doing. Please see another article from The Economist dated 30Dec09 entitled **“New-year irresolution – How to combat the natural tendency to procrastinate”**

Be aware that your fund manager does not exhibit this normal human tendency, not when it comes to managing your funds anyway (yes, my wife will tell you that I procrastinate on mowing the lawn and fixing the roof leak but thankfully, that does not impact the portfolio performance). **We have iron stomachs in the face of negative news (also positive news) even when they come in unrelenting waves from 360 degrees.** Not only do we have the mental capacity to implement our investment strategy, we have the detachment, emotional grit and stamina to do so as well.

**What prospects for the forward performance of our Fund?** I suggest you take a close look at the valuation ratios at the top RH corner on page 1 of this report and also think again about what I have said about the “margin of safety” approach and what that might mean for a thoughtful risk-averse person.

Mindful of lesson 3 above (i.e. human beings, even smart ones cannot reliably foretell the future) we stick with our usual practice of not making any forward market comment.

Best wishes for the New Year!

YEO, Seng Chong  
Chief Investment Officer

## Emerging markets and recession

### Counting their blessings

Dec 30th 2009

From The Economist print edition

**Developing countries have come out of the recession stronger than anyone had expected. This will have profound consequences for the rest of the world**

Illustration by Adrian Johnson



THE political and social consequences of the worst economic crisis since the Great Depression have been milder than predicted. In developing countries, at least, governments have not fallen in a heap, as they did after the Asian crisis of 1997-98. They have not battled their own people on the streets, as happened in Europe during the 1930s. Social-protection programmes have survived relatively unscathed. There have been economic-policy shifts, naturally, but no panicky retreat into isolation, populism or foreign adventures. The good news has not been spread evenly, of course: some countries have ridden the storm more successfully than others. And these are only first-round effects: things could still get worse. So far, though, resilience has been the order of the day.

**This was not expected a year ago.** Then, it seemed likely that normal rules would apply—that when the rich world sneezes, developing countries get swine flu. In the fourth quarter of 2008, when rich economies were contracting by 5% to 10% a year, real GDP fell at an average annualised rate of around 15% in some of the world's most dynamic economies, including Singapore, South Korea and Brazil. The fall in Taiwan's industrial output—down by a third during 2008—was worse than America's worst annual fall during the Depression.

Emerging markets seemed likely to suffer disproportionately because of their trade and financial links with the West. Exports in that dreadful last quarter of 2008 fell by half in the Asian tigers at an annualised rate; capital flows to emerging markets went over a cliff as Western banks "deleveraged". The Institute of International Finance (IIF), a think-tank in

Washington, DC, forecast that net private capital flows into poor countries in 2009 would be 72% lower than at their peak in 2007, an unprecedented shrinkage.

As people peered ahead into 2009, no forecast looked too dire. “The end of globalisation” was a common refrain. Some thought emerging markets would turn inward to protect themselves from the contagion of the West. Others forecast that hundreds of millions of people would be tipped into hunger. The IMF’s managing director, Dominique Strauss Kahn, fretted that unless governments did the right things at the right time, there was a “threat of civil unrest, perhaps even of war”.

At the start of 2010 there are indeed a billion hungry people, for the first time in 40 years. But the other forecasts now look excessively gloomy. Whereas the last three months of 2008 saw one disaster after another, the end of 2009 was a period of healthy recovery, as measured by capital, bond and stockmarkets.

**V for vigour**  
Stockmarkets, % change on previous year, \$ terms

|             | 2008 | 2009 |
|-------------|------|------|
| Brazil      | -55  | +142 |
| China       | -68  | +125 |
| India       | -62  | +88  |
| Indonesia   | -57  | +114 |
| Malaysia    | -42  | +46  |
| Mexico      | -40  | +56  |
| South Korea | -56  | +61  |
| Taiwan      | -47  | +78  |

Source: Thomson Reuters

During 2009 the largest developing-country stockmarkets recouped all the losses they had suffered during 2008 (see table). October 2009 saw the largest monthly inflow into emerging-market bond funds since people started tracking the numbers in 1995. Russia’s central bank estimated that the country would attract \$20 billion of capital inflows during the fourth quarter, compared with capital outflows of \$60 billion in the first nine months. The IIF now reckons that net private capital flows to developing countries will more than double in 2010 to \$672 billion (still a long way below their peak). So much new money is flooding into emerging markets that calls for capital controls are echoing around the developing world.

This craze for emerging-market paper could perhaps prove a bubble. But as a measure of reputational change, it is accurate. Countries that were disaster zones at the start of 2009 achieved gold-rush status by the end of it. This turnaround reflects a resilient economic performance during the recession. It also reflects a stunning degree of political and social cohesion.

The most important economic reason for this is that emerging markets were less affected by the rich world’s recession than seemed likely early in 2009. Big populous countries—China, India, Indonesia—did not tip into recession; they merely suffered slower growth. Brazil and the

Asian tigers saw output fall but bounced back. The pattern, though, was variable. The Baltic states endured a depression; Mexico suffered from its dependence on America; eastern Europe was harder hit than Asia; poor African countries suffered more than middle-income Asian ones.



Overall, the loss of output in emerging markets during 2007 was somewhat greater than it had been in the Asian crisis of 1997-98, but less than had been expected and much less than the fall in world gdp (see chart 1). Emerging markets benefited from their own economic-stimulus programmes and from policy activism in rich countries. Rich-country bail-outs and monetary loosening stemmed worldwide financial panic and helped stoke an appetite for emerging-market exports and assets. In addition, some developing countries built up big cushions of foreign- exchange reserves after the Asian crisis which afforded them some protection.

## Surprising stability

This economic resilience has had big political and social benefits. Politically, the most striking feature of the crisis is how little instability it caused. The worst slump in decades has so far led to the fall of just one emerging-market government: Latvia's (Iceland's government also collapsed). Other east-European governments have come under pressure, notably Hungary's.

But two of the biggest emerging markets—India and Indonesia—held national elections in 2009, and both were won by the ruling party. This was unusual in India, which traditionally votes against incumbents. In another emerging giant, Brazil, the outgoing president is likely to leave office in 2010 with poll ratings in the stratosphere (Luis Inácio Lula da Silva's favourability ratings stayed above 60% for most of 2009). The global crisis seems to have consolidated, not undermined, the popularity of large developing-country governments, presumably because the economic crisis was perceived to have begun elsewhere and been dealt with efficiently.

Contrast that with what happened during the Asian crisis of 1997-98. Widespread rioting in the wake of abrupt devaluation led to the fall of Suharto's 30-year dictatorship in Indonesia. Devaluation added to popular discontent in the Philippines, culminating in the overthrow of

President Joseph Estrada. There was mass discontent in Thailand as millions of urban workers lost their jobs and wandered back to their villages. Financial collapse in Russia produced a political crisis and led to the sacking of the prime minister, Sergei Kiriyenko. A couple of years later, Argentina defaulted on its debt and ran through three presidents in ten days at the turn of 2001-02. (“What did you do for Christmas?”, ran the contemporary joke. “I was president.”) In country after country, governments reacted to financial stress and plunging currencies by imposing emergency austerity measures which brought them into conflict with rioters on the streets. That has been much rarer this time.

The second striking feature of the crisis has been that, with one or two exceptions, it seems not to have caused any fundamental shift of popular opinion. There has been no upsurge of angry pessimism, nor any significant backlash against capitalism or free markets. That doubtless explains much of the political composure.



Compared with people in the West, those in big emerging markets seem in almost sunny mood. In China, India and Indonesia, according to the Pew Global Attitudes Project in Washington, DC, more than 40% of respondents say they are satisfied with their lives (in China the figure is 87%). In France, Japan and Britain, the share is below 30% (see chart 2). This is unusual: measures of “life satisfaction” tend to rise with income, so you would expect levels to be lower in emerging markets, as they were in 2002-03. The reversal of that pattern may reflect a sense in those countries of their quick recovery.

It is true that the overall levels hide some disturbing trends. A study of Bangladesh, Indonesia, Jamaica, Kenya and Zambia by the Institute of Development Studies at the University of Sussex found that people there said they were saving less, celebrating together less often and

thought that neighbourly support was declining. People also thought children and old people were being abandoned more often. But, overall, such concerns are as great or greater in rich countries.

The mood in emerging markets is both unusual and consequential. To see how, compare what is happening there with trends in parts of the West. Americans, for example, seem to be hankering for isolationism. According to Pew's polling, 49% of Americans now think their country should mind its own business internationally. That is more than 30 points higher than when the question was first asked in 1964. Jim Lindsay of the Council on Foreign Relations points out worrying parallels between what is happening now and America's reaction to the Great Depression, which sparked a period of introspection that ended only with the second world war. Developing countries are not suffering such anger or frustration.

That same resilience informs their attitudes to markets. Arvind Subramanian, of the Petersen Institute for International Economics in Washington, DC, argues that the recession has set off "no serious questioning of the role of the market" in developing countries. It is true that China has seen a disproportionate rise in lending to state-owned enterprises, but this is not necessarily regarded with favour. China's media have been flooded with reports of abuses by state firms, all featuring a newly popular, negative-sounding term *guojin mintui*, which means "the state advances and the private sector retreats".

Asked "Are you better off under free markets?", people in emerging markets are more likely to say yes than those in rich ones. The share of respondents who think they are better off fell in 2009 by between four points (Germany) and ten points (Spain). In most emerging markets, the share either rose (in India and China) or stayed flat (in Brazil and Turkey). No sign of an anti-capitalist backlash there.

The combination of political stability and popular composure has given emerging markets what might be called "policy space" in which to act. They have used it to the full—and mostly for the better. This, in turn, has enhanced their reputations for economic management.

## Little big spenders

At the start of 2009 falls in foreign-trade taxes, remittances, aid, commodity prices and capital inflows all threatened developing countries' fiscal positions, and their social spending especially. For a few, the threat materialised: 20 countries, many in eastern Europe, signed standby arrangements with the IMF and tightened fiscal policy. But by and large, the slash-and-burn approach to crisis management associated with previous bouts of economic trouble was avoided. For the first time in a global recession, emerging markets were free to loosen fiscal policy.

Some produced big stimulus programmes. China's is the best known, but Russia, Hong Kong, Kazakhstan, Malaysia, Vietnam, Thailand, Singapore, Brazil and Chile also unveiled large anti-crisis budgets or counter-cyclical spending programmes. As a share of GDP, stimulus spending by the emerging-market members of the G20 was larger than spending by the rich members. In that sense, emerging markets did more than their Western counterparts to combat global recession. Even countries that could not afford emergency programmes like China's let their fiscal balances deteriorate as counter-cyclical spending got under way. In Africa, oil importers let their budget deficits rise from 2.2% of gdp in 2008 to 6% in 2009.

By ring-fencing social spending, developing countries managed to protect some of their poorest people. Brazil expanded the coverage of its assistance programme for the poor, called Bolsa Familia, by over 1m households to 12m. India expanded to the whole country a programme

that guarantees 100 days' employment on public works each year to any rural household that wants it. China's massive stimulus programme may have forestalled disaster in the migrant-labour force. Half the 140m labourers working in Chinese cities returned home in early 2009; a fifth stayed there, and another fifth could not find work when they returned to the cities. But as spending on infrastructure started to kick in, employment surged; by the middle of the year, joblessness among rural migrant workers was down to less than 3%. Beyond China, fear of social unrest associated with jobless migrants (as in 1997-98) has not materialised. A forthcoming study of 11 countries by Oxfam, a British NGO, found that migrants took new jobs, often at lower wages or with longer hours. In Vietnam some were even given money to stay in the cities by their families in the countryside—a kind of reverse remittance. But there was no mass return to the villages.

## **Flexibility is strength**

The Oxfam study describes the myriad ways in which countries resisted the recession. Remittances held up better than expected. Parents refused to take their children out of class, or else switched them from private to public schools. Some even cut down on their own food to keep children in education. There were outright job losses in some parts of countries' economies, such as export sectors and mining. But the commoner reaction to falling demand was to cut hours and wages, reduce benefits and insist on more flexible working conditions. In other words, the main result of the slowdown was not unemployment (though there was some) but a move towards more flexible labour markets.

How long this can go on is unclear. Cash-transfer and make-work schemes are expensive: most poor countries cannot afford them. Worse, the poorest were more vulnerable than middle-income countries anyway because of the food-price spike of 2007-08: hence the rise in the number of hungry people to 1 billion, the highest figure since 1970. In general, the informal sector (home workers, ragpickers, street vendors) has been hit harder than the formal sector and is beyond the reach of government anti-poverty programmes. Although developing countries have done what they can, it would be wrong to think their people have escaped the recession entirely.

It is worth adding that not all the actions of developing-country governments have been equally enlightened. Emerging markets have been the worst sinners in a new round of protectionism. Whether you look at the number of new trade-damaging measures tracked by the World Trade Organisation, or the numbers of sectors or trading partners hurt, Russia, China and Indonesia are all among the top five protectionists; Argentina is in the top ten. Rich countries have been slightly less destructive. Still, as Simon Evenett, a professor of trade at the University of Saint Gallen, Switzerland, points out, this is not as dreadful as it might have been, or as it was in the 1930s. Only four countries have implemented restrictions affecting more than a quarter of their product lines: across-the-board tariff barriers are not the fashion. But as growth picks up and fights for market share increase, these restrictions could lay a basis for further trade disputes.

## **The tectonic consequence**

When the Earth's tectonic plates grind against one another, they do not always move smoothly; sometimes they slip. A year after the West's slump began to spread to emerging markets, it has become clear that the recession has been a moment of tectonic slippage, a brief but **powerful acceleration in the deep-seated movement of economic power away from rich nations towards emerging markets.**

Since 2007, according to Goldman Sachs, the biggest emerging markets—Brazil, Russia, India and China—have accounted for 45% of global growth, almost twice as much as in 2000-06 and three times as much as in the 1990s. It used to be said that although emerging markets were contributing an expanding share of world growth, they could not claim to be the real engine for the global economy because final demand for their exports lay in America. But that argument is weaker now that China has overtaken America as the main market for the goods of the smaller Asian exporters. The recession showed that economic power is leaching away from the West faster than was thought.

Illustration by Adrian Johnson



Previous recessions have left most developing countries with their reputations for economic management in tatters, and with credibility to regain in capital markets. This time, it is the rich whose reputations have been damaged. The fiscal response of many emerging markets has enhanced their credibility, and they find themselves with an unexpected reputation for fiscal prudence. The debt-to-gdp ratio of the 20 largest emerging markets is only half that of the top 20 rich nations. Over the next few years rich countries' debt will rise further, so emerging markets' indebtedness will be only one-third of theirs by 2014. Already there are signs that financial markets are rewarding them for good behaviour. Sovereign-risk spreads have been lower in the biggest emerging markets than in some euro-zone countries; in 2009, Hong Kong did more initial-public offerings than New York or London.

At the start of the crisis, a Mexican minister sighed: "At least this time it's not our fault." The comment was laden with sad irony: like everyone else, he expected that Mexico's innocence would make no difference and that emerging markets would be hammered anyway. But they have not been. So far the story of global recession in emerging markets has had that rarest of themes: virtue rewarded.

## Economics focus

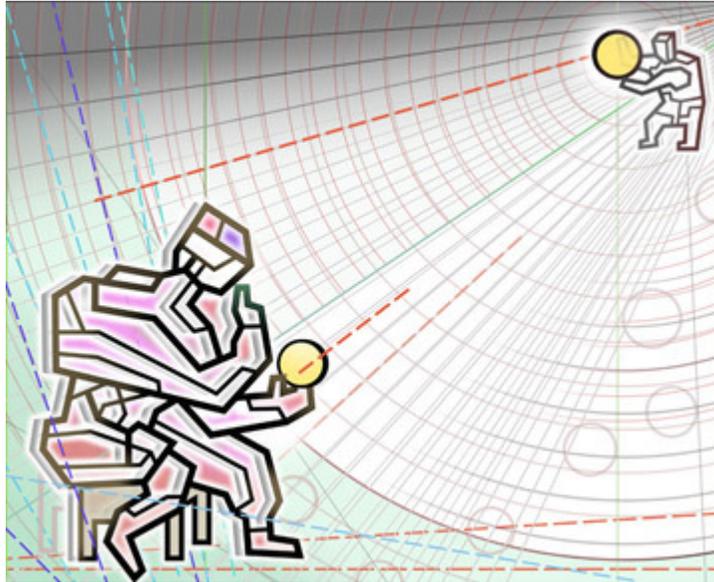
# New-year irresolution

Dec 30th 2009

From The Economist print edition

## How to combat the natural tendency to procrastinate

Illustration by Jac Depczyk



EACH New Year's Day lots of people make plans to do more exercise or give up smoking. But by January 2nd many of them have not moved from the sofa or are lighting another cigarette. Such triumphs of optimism over experience are common enough. But like other examples of repeated procrastination, they are hard to explain using standard economic models.

These models recognise that people prefer to put off unpleasant things until the future rather than do them today. Asked on January 1st to pick a date for that first session in the gym, say, you may well choose to start in two weeks' time rather than tomorrow. But the standard models also assume that your choices about future actions are "time-consistent"—they do not depend on when you are asked to make the choice. By January 14th, in other words, you should still be committed to going to the gym the next day. In the real world, however, you may well choose to delay your start-date again.

In a 1999 paper\* on the economics of procrastination, Ted O'Donoghue and Matthew Rabin pointed out that people are often unrealistically optimistic about their own future likelihood of doing things—such as exercise or saving—that involve costs at the time they are done, but whose benefits lie even further ahead. Mr O'Donoghue and Mr Rabin showed that this sort of behaviour can be explained if people are time-inconsistent. "Present-biased" preferences mean that people will always tend to put off unpleasant things until tomorrow, even if the immediate

cost involved is tiny. As long as they are unsure of the precise extent of this bias, they believe (incorrectly) that they will in fact “do it tomorrow”. But since they feel this way at each point in time, tomorrow never quite comes. Such a model can therefore explain endless procrastination.

It can also suggest ways to change behaviour. A recent NBER paper by Esther Duflo, Michael Kremer and Jonathan Robinson argues that a tendency to procrastinate may explain why so few African farmers use fertiliser, despite knowing that it raises yields and profits. In trials on the farms of maize farmers in western Kenya, the three economists found that using half a teaspoon of fertiliser per plant increased seasonal profits by an average of 36% per acre, even if farmers made no other changes to their farming techniques. Doing so after it was clear that the seeds had sprouted eliminated most of the risk of paying for fertiliser in a year of poor weather. Only 9% of the farmers believed fertiliser would not increase their profits. Yet only 29% had used any in either of the two preceding seasons.

When asked why, almost four-fifths of farmers said that they did not have enough money to buy fertiliser for the land they farmed. Yet fertiliser was readily available in multiples of a kilogram, so even poor farmers earned enough to buy fertiliser for at least a fraction of their fields. Better intentions made little difference: virtually all farmers said they planned to use fertiliser the following season, but only 37% actually did so.

The reason for this gap between intent and action, the economists argue, is that many farmers are present-biased and procrastinate repeatedly. Right after the harvest, when farmers are cash-rich, most can afford to buy fertiliser. But going to town to buy it imposes a small cost: a half-hour walk, say, or a bus ticket. So farmers postpone the purchase, believing they will make it later. But they overestimate their ability to put aside enough money to do that, ensuring that their plans to buy fertiliser meet much the same fate as a typical new-year resolution.

A model of such preferences generates several interesting predictions. It suggests that a tiny discount—enough to make up for the small costs associated with buying fertiliser—should induce present-biased farmers to make the purchase. The model also suggests that a given discount would be more effective if offered immediately after the harvest rather than just before the next planting period, by which time it would be useful only for those farmers who had no problems with saving money.

## **Solving St Augustine**

The economists devised a scheme in which farmers paid the full market price for fertiliser, but had it delivered to their homes by a non-governmental organisation at no additional cost. A subset received this “discount” at harvest time, while another group were also offered free delivery, but only when planting time was imminent. Still others were offered a 50% subsidy on the market price, an approach commonly taken by governments to encourage fertiliser use. As the model of time-inconsistent preferences predicted, the offer of free delivery early in the season pushed up usage of fertiliser by 11 percentage points over a control group who were not offered anything. The same discount late in the season, however, had a statistically insignificant effect. A 50% subsidy later in the season, a much costlier policy than free delivery, pushed up usage by about as much as the early discount.

Interestingly, nearly half of a group of farmers who were offered a choice picked early rather than late free delivery. Early delivery means advance payment, with any interest that might have been earned in the interim being forgone. Many farmers, it seemed, were well aware of their own tendency to procrastinate and were looking for a way to force themselves to buy fertiliser.

Such devices can help other procrastinators, too. In recent field trials in the Philippines some smokers who wanted to quit were offered a “commitment contract”. Those who signed up put money into a zero-interest bank account. If they passed a test certifying that they were nicotine-free six months later, they got their money back. If not, it went to charity. The contract increased the likelihood of quitting by over 30% over a control group. Those new-year resolutions need not turn to ash.