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Chinese Dragon vs. Indian Tiger:

Developments in variable annuities

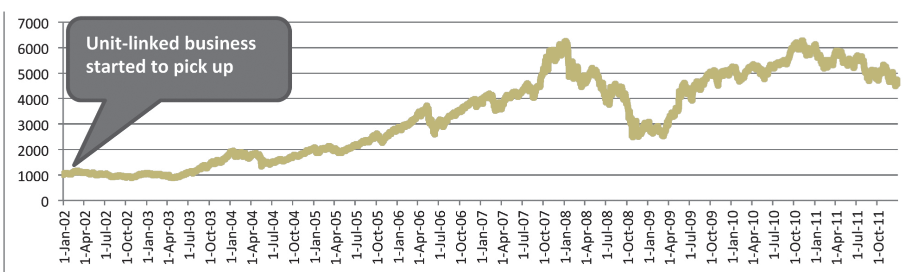
By Sharon Huang

According to Swiss Re's Economic Research & Consulting, by 2021 Asia will be home to two of the world's five largest economies. China will remain the second largest and India will become the fifth largest. China and India are currently the second and fourth largest life insurance markets in Asia measured by premium volume. For many years, the two countries have been key drivers of the growth of life insurance in Asia and have been a major focus of many multinationals due to their large population and low insurance penetration.

In May 2011, the China Insurance Regulatory Commission (CIRC) released details of the pilot program for variable annuities (VA) which are—according to the regulatory definition—unit-linked products with guarantees in the form of Guaranteed Minimum Maturity Benefit (GMMB), Guaranteed Minimum Accumulation Benefit (GMAB), Guaranteed Minimum Death Benefit (GMDB), or Guaranteed Minimum Income Benefit (GMIB). Unlike the VA markets in the United States, Europe or Japan, where life insurers mostly use hedging to manage the underlying risks of the business, China will take a different approach, as the financial derivative market here is underdeveloped and insurers are restricted in the use of derivatives. Constant Proportion Portfolio Insurance (CPPI) and internal synthetic hedging are the two risk management mechanisms that life insurers can use per the rules from CIRC. CPPI is relatively easy to implement, making it the preferred choice for most insurers to enter the VA sector at current stage.

FIGURE 1

India S&P CNX NIFTY



Source: National Stock Exchange of India

In India, the unit-linked products with guarantees are referred to as Net Asset Value (NAV)-guaranteed Unit-Linked Insurance Plan (ULIPs). The most commonly sold version of those ULIPs calculates the fund value at maturity on the basis of the highest NAV registered by the fund during the tenure specified by the life insurers. Similar to the situation in China, most of these plans work on CPPI to provide the guarantee. According to the Life Insurance Council in India, the highest NAV plans contribute around 20 percent of Indian life insurer's ULIP business. These products have become the largest selling ULIPs since September 2010 when the Insurance Regulatory and Development Authority (IRDA) introduced new charge-capping regulations for ULIPs.

Can we expect the success story of the highest NAV plans in India to be reproduced in China soon? Here are several factors we think that need to be considered.

1. The current importance of unit-linked business in the overall life insurance market

For many years, the two countries have been key drivers of the growth of life insurance in Asia ...

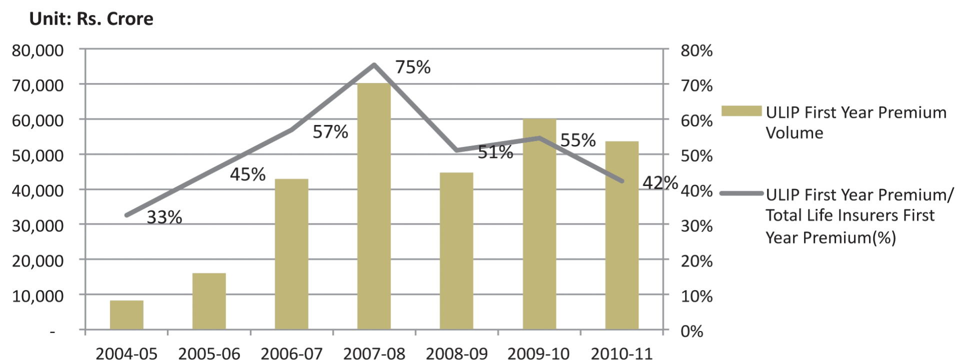
should be considered. In India, unit-linked business has dominated the Indian life insurance market for nearly a decade. Unit-linked business emerged at a good time, just as the stock market was starting one of the biggest bull market runs in recent history. (see Figure 1 on page 20)

The product quickly became one of the most popular investment products for individuals and is perceived as the single largest innovation product in India. The past decade witnessed its significant growth in premiums. However, new business volume declined, in recent years during the financial crisis of 2008-2009 and the stringent regulation on ULIPs since September 2010.

During the equity market crash in 2008, investors of unit-linked business had seen reductions in their fund value, as ULIPs at that time did not provide any guarantees and the major portion of their investments are in equity portfolios. Post financial crisis, capital preservation became a much more important investment objective for most people. Thus, many investors quickly accepted the highest NAV guaranteed plans which give the policyholders the potential to earn market upside with downside protection.

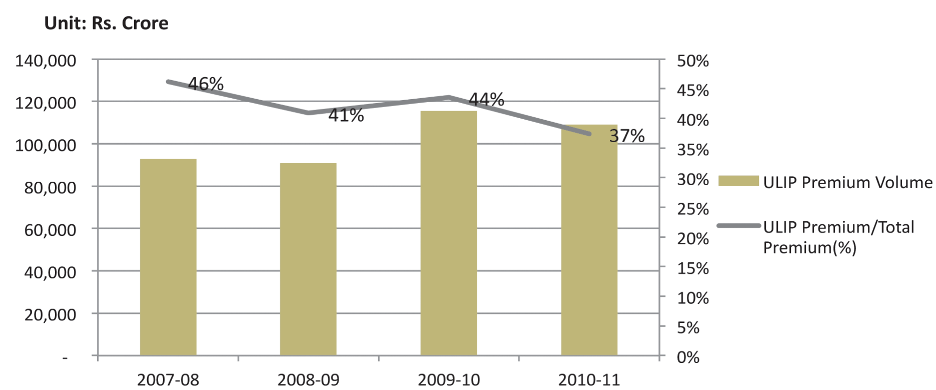
In China, the first unit-linked product was launched by Ping An Insurance Company in October 1999. The product attracted many investors by its transparency, flexibility and most importantly the potential to earn market upside and the sales volume picked up rapidly from 1999 to 2000. However, the equity market headwind quickly suppressed the momentum.

FIGURE 2
ULIP First Year Premium



Source: IRDA Annual Report

FIGURE 3
ULIP Total Premium



Source: IRDA Annual Report

As figure 4 (page 22) shows, China's stock market went through a prolonged bear market phase from 2001 to 2004. Investors lost money, surrenders soared and regulators were overwhelmed by complaints of policyholders about

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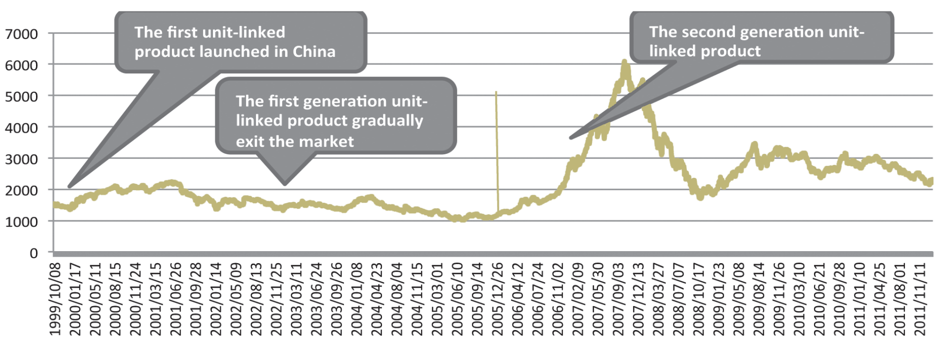
the mis-selling. Insurance companies had to stop selling this product. From 2002 to 2005, unit-linked business contracted, and in 2005 the share of unit-linked business in the total premium of life insurers was less than 2 percent.

FIGURE 4
China's Shanghai Composite Index (SCI)



Source: Shanghai Stock Exchange

The first generation unit-linked product gradually disappeared from the market.

In order to promote the healthy development of unit-linked business, CIRC released several rules on it to regulate the product charges, reserves and sales behavior. Unit-linked products were reintroduced again in 2006 when the stock market began to rise rapidly. In 2007, the share of unit-linked business reached its record high of 8.82 percent. This quickly decreased during the capital market turmoil in 2008. The attractiveness of selling unit-linked business has been further diminished after CIRC released the new accounting rules in 2010, according to which, most of the unit-linked premiums are not counted as premium income in financial statements. By the end of 2010, the share of unit-linked products was only about 1 percent.

We expect it would take more time on market education for Chinese investors to shift from non-linked life insurance products to VA than for Indian investors to shift from unit-linked business to highest NAV guaranteed plans.

2. The incentives for insurers to introduce the product. The Indian life insurers introduced the highest NAV plans against the backdrop of the sudden decline of ULIP's share in first-year premium and total premium. The slowdown of the ULIPs further dragged down the total life insurance premium growth rate from 29 percent in 2007-08 to 10 percent in 2008-09.

Insurance companies wanted to reignite the growth. They came up with a new type of ULIPs, which are called highest NAV plans, to appeal to those cautious investors who would like to have some form of capital protection and at the same time do not want to lose the opportunity to participate in the growth of the stock market. This product quickly became popular in the market and most life insurers in India offer at least one NAV-guaranteed ULIP as part of their product suite.

In China, participating insurance was first introduced into the market by China Life in 2000. It has become the most important life insurance product since 2008, accounting for 71 percent of the total premium income of life insurers in 2010. The number jumped to 91.6 percent by the end of June 2011. Both the regulators and life insurers have been trying to diversify life insurance portfolios and VA is considered to be such an alternative.

Currently, the two life insurers who have already launched VA products in China are foreign insurers and for those who are actively preparing for this new product, most of them are also foreign insurers. For them, VA is considered to give them a chance to differentiate themselves from their dominant local competitors, who are not so sophisticated in risk management, and to enlarge their business scale.

Unlike the situation in India where almost every insurer goes for the highest NAV ULIPs, Chinese insurers' opinion on VA varies from company to company. Thus the sales volume is not expected to blow out.

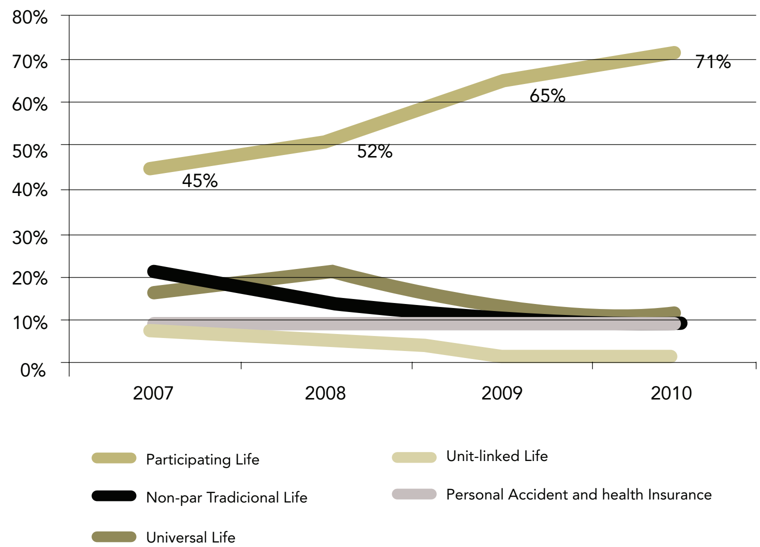
3. The foreign insurers' market share. Foreign insurers are the main driving force of launching VA and highest NAV ULIPs in China and India respectively. Compared with the domestic players, foreign companies have an advantage as they have immediate access to VA product expertise overseas, allowing them to pick up the know-how in a relatively short period of time.

As the market share of foreign insurers in China and India differed, the impact of the new product introduction on the market varies between the two countries.

Birla Sun Life insurance company was the first to launch a CPPI based NAV guaranteed unit linked plan in 2008. At that time, 20 out of 22 life insurers in India were foreign JVs and foreign insurers' market share in life insurance was more than 25 percent. Birla Sun Life's market share was about 2 percent. (source: IRDA Annual Report 2008-09)

AXA-Minmetals Assurance and Sino-US United Metlife launched the first two VA products in China in 2011. By the end of 2010, 28 out of 62 life insurers were foreign JVs and the market share of foreign insurers in China's life insurance market was only 5.6 percent. In the five cities where pilot VA products can be offered, i.e., Beijing, Shanghai, Shenzhen,

FIGURE 5
Total Life Premium by Product



Source: China Insurance Yearbook.

Guangzhou and Xiamen, foreign insurers' market share is much higher. For example, in Beijing, Shanghai and Shenzhen, foreign insurers' market share was 18.7 percent, 17.2 percent and 10.6 percent respectively. However, until domestic companies join the forces of VA providers, we expect the volumes sold in China to be limited.

4. Competitiveness with investment products offered by other financial institutions. Unit-linked life insurance is in essence a fund management business which should be compared to a mutual fund.

In India, the competition from mutual fund players is relatively small as they are not allowed to incorporate capital guarantees. For a long time, capital protection mutual funds have

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been banned in the India market. In August 2006, the Securities and Exchange Board of India (SEBI) lifted the restrictions and allowed issuers to launch capital protection-oriented funds (CPFs). According to SEBI rules, CPFs are funds where the structure of the scheme ensures protection of the original investment at the scheme's maturity. However, explicit guarantees are prohibited. The CPFs are closed-ended products. Thus, if investors want to exit before the maturity, they will have to sell the units on the stock exchange. As there are hardly any buyers or sellers in this segment, these funds are illiquid. Besides, a precondition to the launch of CPFs is that it must be rated on a quarterly basis by a registered credit rating agency regarding the portfolio's ability to protect the capital invested therein.

Table 1

	AXA VA	Metlife VA	Typical CGF
Premium Payment	Single Premium, minimum RMB100,000	Single Premium, minimum RMB100,000	Single payment, minimum RMB 1,000
Term	7 Years	10 Years	2-3 years
Guarantee Provided	GMMB: 100% of principal at maturity	GMAB: 80% of the highest unit price	100% of principal at maturity
Guarantee Charge	1.5% of Account Value per year	1.2% of Account Value per year	0.2% of Account Value per year (included in the fund management charge)
Guarantee Strategy	Internal Synthetic Hedging	CPPI	CPPI OBPI
Death Benefit	- Death due to illness: Max (105% of Account Value, RMB 1MM) - Accidental Death: Max (110% of Account Value, RMB 1MM)	- Death due to illness: 100% of Account Value - Accidental Death: Max (200% of Account Value, RMB 5MM)	None
Premium Allocation Charge/Initial Charge	2%	For less than RMB 1MM : 2.0% For RMB 1MM – 5MM : 1.5% For more than RMB 5MM: 1.0%	0.2% -1%
Bid-ask Spread	2%	0%	0%
Fund Management Charge	1% p.a.	1.5% p.a.	1.0% -1.5% p.a. (including the guarantee charge) and 0.2% p.a. for trustee fee
Surrender Charge/ Redemption Charge	5% / 4% /3%/ 2% / 1% in the first 5 years. Free from 6th policy year.	2% / 1.5% /1.5% in the first 3 years. Free from 4th policy year.	2%/1.5%/1.2% in the first 3 years.

Capital guaranteed funds (CGF) have been offered in China since 2003. Due to their "underperformance" during the 2006-2007 bull run, capital guaranteed funds have not been very popular among individual investors. By the end of 2010, there were only five capital guaranteed funds operating in China and the total assets under management (AUM) of these mutual funds were RMB22.8 billion (1 RMB ≈ 0.158 U.S. dollars), accounting for only 0.91 percent of the AUM of all mutual funds. The situation changed in 2011 when many investors suffered a loss during the capital market downturn. Seventeen new capital guaranteed funds were introduced last year and the AUM of CFGs more than doubled to reach RMB 51.5 billion, which accounts for 2.35 percent of the total AUM of all mutual funds operating in China by the end of 2011. The CGFs are open-ended with high liquidity. However, there is no capital guarantee for redemptions before the maturity date.

Table 1 compares the two VA products currently offered in China with the typical CGF.

We expect that the current VA offerings in China will meet strong competition from CFGs as the latter fund charges are very competitive and the mutual fund management firms have more flexibility on the choice of investment vehicles, e.g., stock index options can be included in their portfolio while insurers are restricted from access to it.

Different tax treatment among various financial products would be another important factor for investors to consider when making choices.

In India, premiums paid under ULIPs are eligible for tax deductions under section 80C of the Income Tax Act, 1961, subject to certain conditions, and the insurance benefits paid under these plans are tax-exempt under Section 10D of the Income Tax Act, 1961.

In China, there is no tax deduction for premiums paid by individuals for buying commercial insurance including the VA. The insurance benefits under these plans are treated in the same way as other investment products like mutual funds or stocks. As a result, VA products in China have no tax advantage over the investment products offered by other financial institutions.

4. Macro-economic environment which would have an impact on investor's purchase behavior.

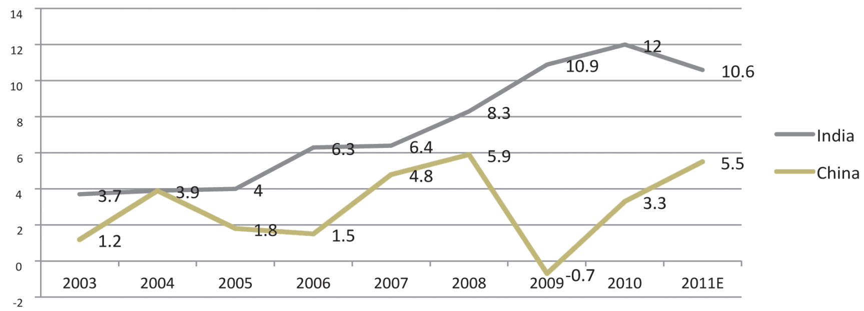
Among so many macro-economic indicators, inflation rate, interest rate and stock market index seem to be the key ones that the retail investors pay most attention to.

Inflation rate:

We see in Figure 6 that India's inflation rate started to pick up from 2003 with the situation worsening until the inflation rate reached 12 percent in 2010. China is also under the pressure of an increasing inflation rate since 2009, though the problem is not as severe as in India.

High inflation rates make the fixed benefits provided by traditional insurance plans depreciate in real value and the aspirations of policyholders are consequently difficult to meet. Investors would be interested in those products which have more of an investment component, including the VA.

FIGURE 6
Annual Percentage Change of CPI



Source: IMF, World Economic Outlook, September 2011

Interest Rate:

We also need to consider the yield of government bonds which is usually used as the risk-free rate to calculate the bond floor (F) in a CPPI strategy. According to the calculation algorithm of CPPI strategies, the exposure to risky assets is determined as a multiplier (m) of the cushion, which is the difference between the portfolio value and the floor.

The higher the interest rate, the lower the floor and the higher the safety cushion could be, which means insurers would have more exposure in risky assets for a potential upside return. Conversely, if the interest rate is quite low, like the situation in Japan, the safety cushion would be very low. A big fall in the stock market could drive the CPPI product into a cash lock[1] position and the upside potential can be lost.

In Figure 7 (page 26), we see that in recent years, the 10 year government bond yield in India has remained relatively high. Although the yield decreased to some extent in 2008 due to the financial crisis, it picked up quickly and has stayed at a high level compared with most other countries. China's government bond yield is lower than India's. However, it still gives

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room for insurers to have a reasonable safety cushion under the CPPI mechanism.

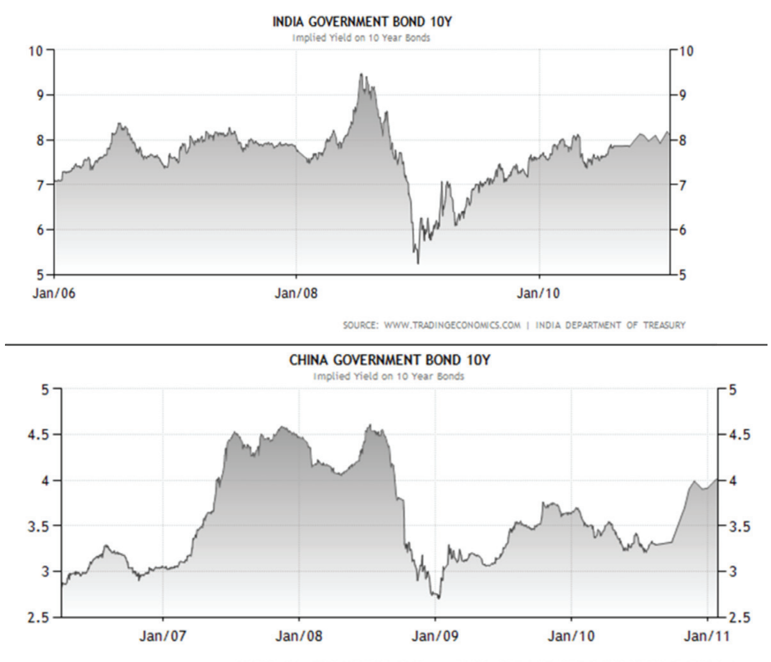
Stock Market Performance

In the past 10 years, China's capital market has been much more volatile than India's. The stock market index in China at the end of 2011 returned to its level of about 10 years ago. More and more investors have become aware of the risks in capital market investments and are interested in those products which can provide certain floor guarantees. CPPI, as a very good portfolio investment strategy, should have a market in China.

Besides those external factors that would influence the development of VA business, the fund performance of the VA product itself would also have impact on investor's choice.

In India, we looked at the performance of the first highest NAV ULIPs, Birla Sun Life's Platinum Plus I.

FIGURE 7
10Yr Government Bond Yield



Key Product Features of Platinum Plus I:

- 10-year benefit period
- 3 years premium paying term
- Guaranteed Maturity Unit Price: Highest unit price recorded on the 88 Reset Dates is guaranteed at Maturity
- Reset Dates are the 15th of every calendar month (or if not open for business, the next business day) till June 2015

We can see in Figure 9 (page 27) that the fund of Platinum Plus I went up and down together with the capital market. When capital market jumped down, the fund value dropped less than the stock index. When capital market picked up, the fund value also increased less than the stock index. By November 15, 2012, the guaranteed maturity unit price is 12.86 which is the highest unit price achieved on the reset date of November 15, 2010. Hence, the fund has provided good downside protection during the big drop of capital market in 2008-09 and also the potential to earn market upside.

In China, as VA was just launched in 2011, there is little historical data to do the analysis. In order to compare with the performance of Platinum Plus, we use a hypothetical product and the stock market index from 17th March 17, 2008 to February 29, 2012 to do back casting to try to provide some insight on how the product would perform.

Key assumptions for the hypothetical product:

- Product Term: 10 years
- Initial Fee: 2 percent
- Bid-Offer Spread: 0
- Guarantee: GMAB, 85 percent of historical highest NAV
- Guarantee charge: 1 percent
- Multiplier 3.5
- Trading Rebalance Tolerance:15 percent
- Trading Cost:

- Risk-Free asset: 0
- Risky asset: Subscription: 1.5 percent; Redemption: 1 percent

- Risk Free Assets: cash with long-term level annual return 3 percent
- Risky Assets: Shanghai Composite Index from 03-17-2008 to 02-29-2012

We see in Figure 10 that China's capital market has not recovered to its level before the financial crisis. When the stock index decreased by 55 percent from March 17, 2008 to November 4, 2008, the NAV of the sample product only decreased by 16 percent and it remains quite stable thereafter.

CONCLUSION

Making an in-depth study and complete analysis of India vs. China's CPPI based unit-linked business with guarantees seems to be a hard task. The ULIPs are under reform in India mainly due to the recent scrutiny from IRDA. The stories are far from complete there. On March 9, 2012, the third VA product and also the second CPPI VA based product was launched in China. It is too early to make prediction about the future development of China's VA business. However, we could benefit by drawing relevant lessons from India.

The author would like to thank Mr. Hart Wang, Deputy General Manager of Actuarial Department, Old Mutual-GuoDian Life Insurance Company, for his great contribution to the hypothetical China VA product performance back cast simulation. The author is also grateful to Mr. Paul Sinnott (Managing Director, Greater China and Southeast Asia Life, Milliman) and Mr. Wing Wong (Principal, Milliman) for their kind contribution to this article.

END NOTES

[1] Cash lock is the situation when the cushion is close to zero, all the investment in risky assets needs to be converted to investment in riskless asset.

FIGURE 8

India S&P NIFTY vs. China SCI

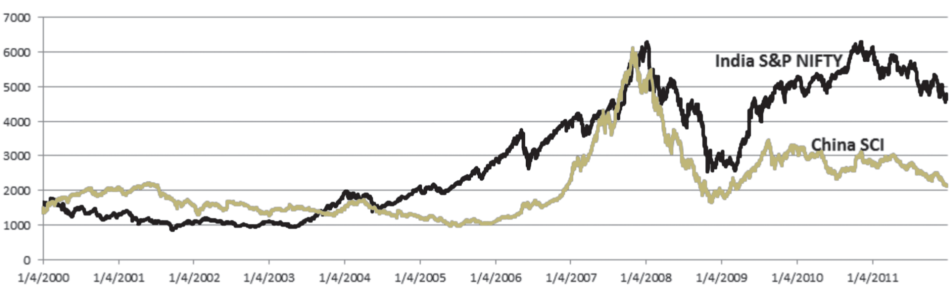
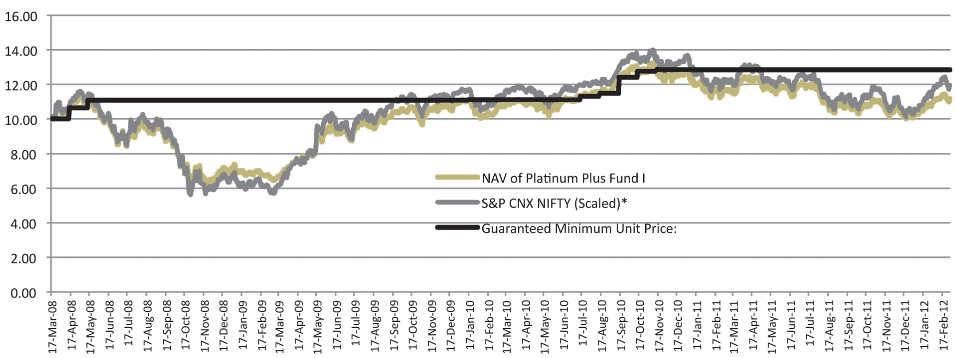


FIGURE 9

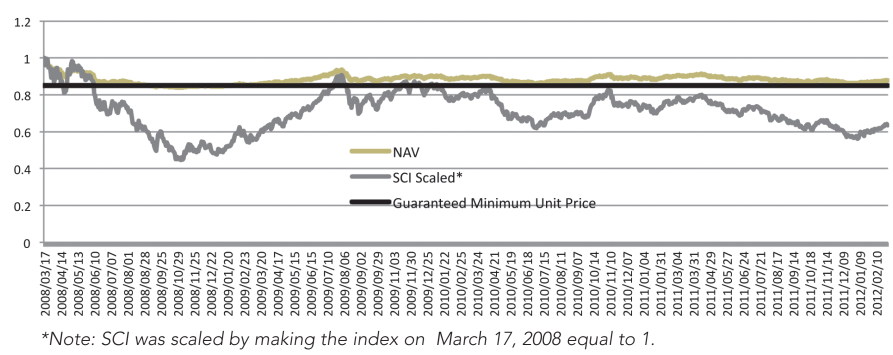
Performance of Platinum Plus Fund I



**Note: S&P CNX NIFTY was scaled by making the index on 17, March 2008 equal to 10.*
Source: Birla Sun Life Insurance, National Stock Exchange of India

FIGURE 10

Performance of Hypothetical VA Product in China



**Note: SCI was scaled by making the index on March 17, 2008 equal to 1.*