

Health Savings Account – Product design and Pricing Issues in India



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Agenda

- Health Savings Account (HSA) - Introduction
- HSA in USA & South Africa
- Products similar to HSA in India
- Possible product designs of Health Savings Products
- Pricing Issues in Health Savings Products
- Sample Study on HSA with Mediclaim
- Conclusion

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Health Savings Account (HSA)

- Consists of two benefit components:
 - A ‘traditional’ health insurance cover, generally a high deductible health plan to cover medical expenses in excess of deductible.
 - A savings fund, which can be used to pay for ‘non-covered’ medical expenses in future.
- Out of the premium paid, a charge for health insurance cover is deducted and the rest accumulates in the savings fund per year
- Money can be withdrawn from the savings fund only for medical expenses. Other withdrawals may be allowed with tax.
- Product design in a country is greatly influenced by the tax exemptions available.

Health Savings Account- Advantages

- Choice of contribution
- Choice of fund utilization
- Portability of account
- Tax free contributions
- Tax free withdrawal for medical expenses

Health Savings Account- Disadvantages

- Insured may have to bear a part of the investment risk and cost
- Insured needs to shop around to buy care at times of great need
- Accumulated fund may be insufficient for medical needs when needed

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Health Savings Account in USA

- Created as part of Medicare Modernization Act of 2003. These accounts need to be combined with a high deductible health plan to be admissible for tax exemption.
- Limits for tax exempt contributions and the minimum and maximum deductibles on high deductible health plan.
- Limits adjusted annually for inflation based on the Consumer Price Index.
- Withdrawal for non-medical expenses permissible but treated as taxable income with additional 10% penalty.

Health (Medical) Savings Account in South Africa

- No insurance law to dictate HSA design. This resulted in products with varied designs.
- Among the more interesting HSA product innovations are:
 - A wellness program with prizes and bonuses for wellness activities and preventive measures.
 - An information hotline to assist patients in making decisions.
 - A system for electronically verifying HSA balances and third-party liability at the time prescription drugs are purchased.
- Varying deductibles depending upon the type of medical service in South Africa as against an across-the-board deductible covering all medical services in USA.

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Features of Product A

- Policy consists of two components:
 - Hospitalization Insurance Benefit
 - Unit-linked fund
- The premium amount is deducted for:
 - Hospitalization Insurance Benefit,
 - Premium allocation & Policy administration charge
- Fund amount can be utilized for:
 - Medicines and drugs,
 - Diagnostic expenses,
 - Dental expenses,
 - Co-pays or deductibles as part of the medical insurance cover; and
 - Other Medical expenses not covered under hospitalization insurance benefit

Features of Product B

- Policy consists of two components
 - Hospital Cash Benefit & Major Surgical Benefit
 - Unit-linked Fund
- The premium amount is deducted for:
 - Health Insurance Benefits,
 - Premium allocation & Policy administration charge, and
- Fund amount can be utilized for:
 - Domiciliary treatments,
 - Medical expenses incurred over and above the Hospital Cash Benefit/Major Surgical Benefit.

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Options for savings component

- A Unit linked plan with the return on the fund linked to market performance
- A Unit linked plan with a guarantee for the minimum return
- A savings fund where return is not guaranteed but is linked to some index (one year fixed deposit rates or bond yields)
- A savings fund with guaranteed return
- A savings fund where return is totally at the discretion of the insurer (similar to the bonuses declared in Endowment policies)

Options for health cover component

- Traditional Mediclaim plan
- High-deductible health insurance component
- Hospital-cash plan
- Critical-illness plan
- Long-term-care-insurance plan

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Modeling considerations

- Complete modeling for the insurance cover and the savings component should be done
- Modeling with model points at various age points and regions for insurance component
- Stochastic simulations to understand the probability distribution of fund value and return for the policyholder and insurer
- Adequate margin in future medical inflation assumptions and increase in charges for insurance cover
- Profit testing in various scenarios
- Clarity needed on capital requirement for such products if launched by general or stand-alone health insurers

Pricing Issues - Savings Component

- Insurer is subject to investment risk if there is a guarantee component attached to the fund. Cost of guarantee should be loaded to the premium
- In case of unit-linked fund, the charging structure should be in line with IRDA Guidelines
- Long term interest rate to use for pricing for guaranteed fund value accounts
- Method of reserving
- Profit distribution between policy holders and shareholders

Pricing Issues - Traditional Medicaid Insurance

- Incidence rate and average claim cost analysis by various dimensions like age, region, ICD codes etc.
- Analysis of 'claims probability distribution' to analyze the impact of deductibles or sum-insured limits
- Premium loadings in combination with income from savings component
- Final premium charges as compared with rates on standalone health products

Pricing Issues-High-deductible Health Insurance

- Pricing similar to Medicaid component except modeling the impact of deductible on pure premium.
- CPD of gross claims can be used to estimate the impact on claim frequency and the average claim size with the change in deductible amount.
- Impact on claim incidence rate about non-reporting of small claims due to no-claim benefit.

Pricing Issues - Hospital Cash Plan

- Claims incidence rate on Medicaid coverage as a start point
- Claims modeling by International Classification of Diseases (ICDs) for average length of stay and average claim amounts

Pricing Issues – Critical Illness Plan

- Lack of Industry data to price the product
- Use of other countries data after suitable adjustment
- Assistance from reinsurers for pricing
- Consideration to potential future medical advancement
- Definition of critical illness should be simple to understand but tight not to cover illnesses not part of pricing
- Use of waiting period and survival period to limit claim cost

Pricing Issues – Long-term Care Insurance

- Lack of Industry data not even in India but globally
- Claims payment subject to very high uncertainty due to very long time period for the claims to emerge
- Claims uncertainty can be reduced by opting for cash benefits rather than indemnifying the claim
- Reviewability of premium will help in reducing the margin of uncertainty in pricing

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Sample study on HSA with Medclaim

- Complete stochastic modeling to study estimated savings for a health savings account combined with Medclaim coverage
- Study done at three sum assured levels and three age points
- Stochastic simulation of
 - Medclaim loss ratios
 - Other 'non-covered' medical expenses
 - Return on the savings fund

Sample study on HSA with Medicaid-Assumptions

- Assumptions about HSA Fund include:
 - Return on saving fund
 - Distribution of outpatient (OP) claim amount and incidence
 - Distribution of High OP claims (e.g. for radiology diagnosis expenses)
 - Distribution of loss ratio on Medicaid coverage
- Assumptions about Insurer expenses include:
 - Fund Management expenses
 - Policy administration expenses and commission
- Assumptions about Insurer revenue include:
 - Premium on Medicaid coverage
 - Fund management charges
 - Premium allocation charges

Table showing assumptions used in the study

	Parameter	Assumption
Claims	OP claim incidence per year	Poisson (2)
	OP average claim avg amount	Gamma(500,2) with inflation adjustment to mean
	Occassional high claim freq	Poisson(0.10)
	Occassional high claim avg amt	Gamma(250000,0.1) with inflation adjustment to mean
	Loss ratio on Medicaid coverage	Lognormal(75%,10%)
Expenses	Fixed per policy	Y1-900, Y2 onwards - 300 + 5% inflation
	% Premium	Y1-5%, Y2 onwards - 2%
	Commission%	Y1-10%, Y2-5%, Y3 onwards - 2.5%
	% of Account Value	0.5% Per year
Return on Fund	Investment Return%	8% Per Annum
	Increase in contribution	5% Per Annum
Charges	Fund Management charges	1.25% Per Annum
	Premium Allocation charges (1st year)	20% Per Annum
	Premium Allocation charges (Starting 2nd year)	2% Per Annum
Inflation	Claims inflation	5% Per Annum
	Expense inflation	5% Per Annum

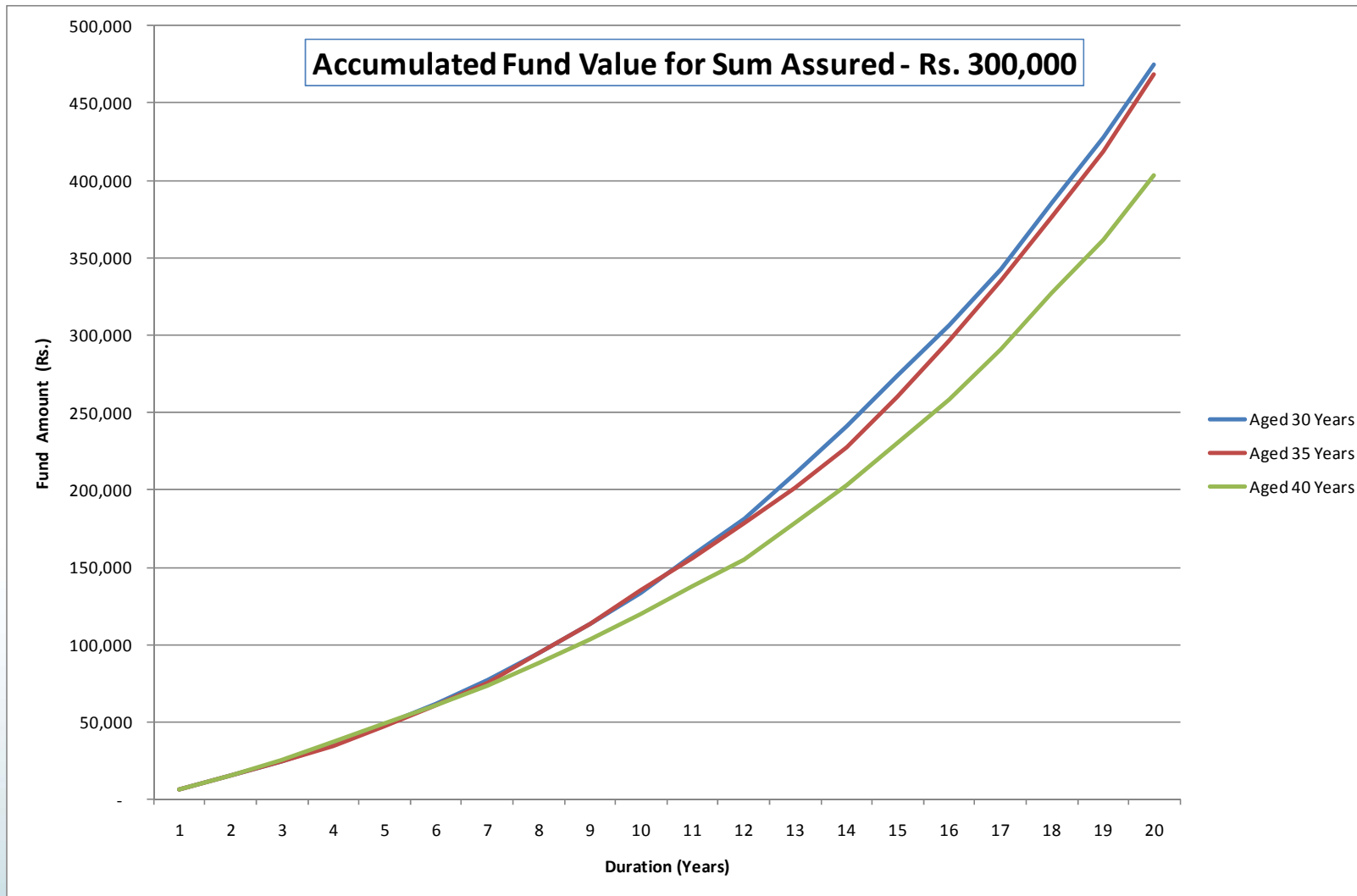
Sample study on HSA with Medclaim – Methodology

- Premium amount on Medclaim coverage varies by sum assured and age of insured
- Premium net of insurer charges is credited to a fund
- Withdrawal from the fund is made for outpatient and catastrophic medical expenses
- Fund balance accumulate at 8% per annum
- Insurer capital requirement calculated at 15% of annual contribution amount
- Insurer profitability calculated on the Medclaim profits and charges on the savings fund

Results of a simulation run

Age at Policy Issue	40				
Sum Assured	500,000				
Year	1	5	10	15	20
Total Premium	15,000	18,233	23,270	29,699	37,904
Premium on Medclaim coverage	6,861	6,861	10,800	13,780	16,000
Premium Allocation charges	3,000	365	465	594	758
Starting Fund Value	5,139	42,217	56,602	137,351	267,246
Claims from the Fund	2,014	3,569	1,566	2,056	69,918
Investment Income on Fund	331	3,235	4,466	10,906	18,583
Year-end Fund Value	3,413	41,359	58,759	144,373	213,213
Insurer Actual Expenses	3,176	1,379	1,773	2,589	3,764
Fund Management charges	43	524	744	1,828	2,699
Claims on MediClaim coverage	5,419	5,021	6,785	11,873	12,556
Insurer Profit	1,445	1,513	3,660	2,007	3,478

Policy taken at an early age can build sufficient corpus for medical needs in old age



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Conclusion

- HSA can be an additional savings vehicle to meet medical cost after retirement/ in old age.
- Significant regulation changes will be needed to bring more clarity to the HSA benefit designs and other aspects (e.g. pricing, reserving)
- Life insurers well equipped to handle the savings part and general insurers well equipped to handle the insurance cover part
- HSA may prove to be an attractive product for Indian population which is more savings (than protection) product 'lover'
- Due to complex and specialized nature of health insurance claims, care should be taken during analysis and modeling of the claims

