

# **Voluntary Health Insurance in Development**

## **Review of Role in Africa Region and Other Selected Developing Country Experiences**

### **Scope of Work and Terms of Reference**

**Alexander S. Preker  
World Bank**

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## OUTLINE

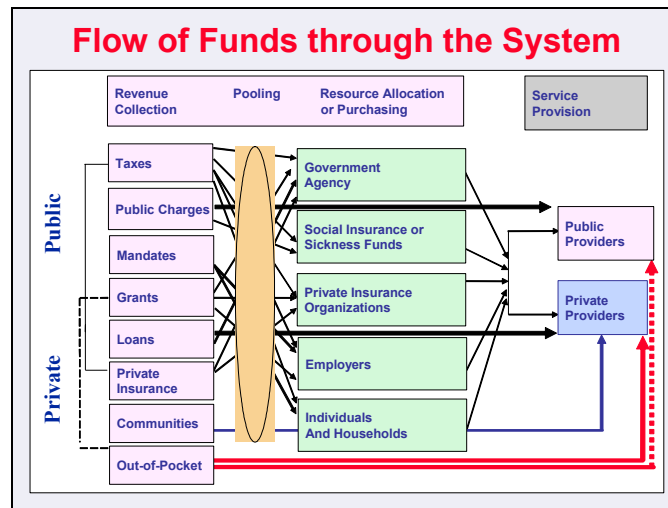
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# I. OVERVIEW

This concept note summarizes the contribution made by voluntary health insurance (background, issues and policy options) to fiscally sustainable financing and financial protection against the cost of illness in the Africa Region. It provides a rationale for Bank/IFC involvement in exploring voluntary health insurance as one of several policy options in health care financing and proposes a work program for FY 05-06 (analytical review in FY05, technical consultation at the Wharton School, March 8-9, 2005 and dissemination of lessons learned in FY06).

The flow of funds through the health care system, and the public/private mix, is complex (see Figure 1). It can be differentiated into three discrete subfunctions: (a) collection of revenues (source of funds); (b) pooling of funds and spreading of risks across larger population groups (risk management); and (c) spending on public and private providers (resource allocation and purchasing).



The proposed study on voluntary health insurance is part of a broader work program on securing fiscally sustainable financing for the health sector in the Africa Region (Table 1). It builds on ongoing work on both voluntary and mandatory financing mechanisms. This includes: (a) other sources of collective financing for the health sector (general taxation, social insurance, community based health care financing, household savings and donor aid), (b) risk management techniques (insurance and subsidies); and (c) spending patterns (resource allocation and purchasing). The full health care financing work program is part of the follow up activities that were recommended by the Strategic Options for the HNP Sector, approved by the Africa Region in FY04.

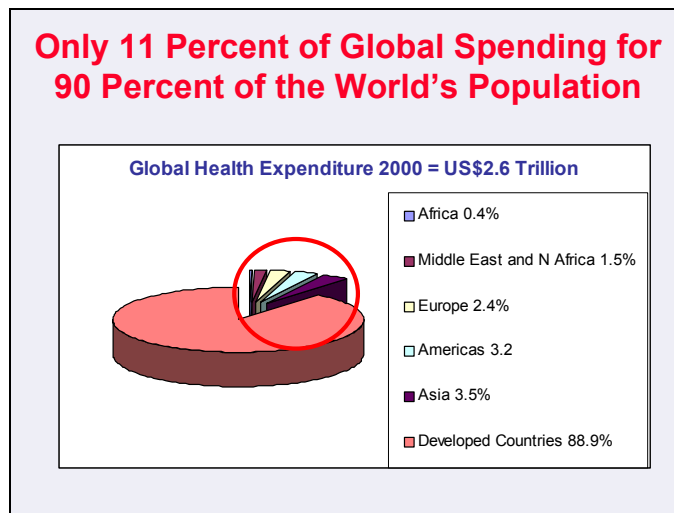
**Figure 2: Range of Voluntary and Mandatory Financing Instruments in Health Sector**

	Subsidies	Insurance Mechanisms			Savings	
	General Revenues	Social Health Ins	Private Health Ins	Community Financing	Household Saving	Donor Aid
Voluntary						
Mandatory						

## BACKGROUND

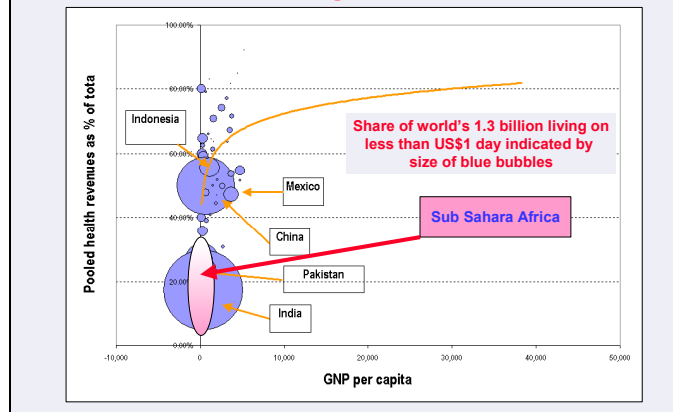
This century has witnessed greater gains in health outcomes than at any other time in history. These gains are partly the result of improvements in income with accompanying improvements in health-enhancing social policies (housing, clean water, sanitation systems, and nutrition) and greater gender equality in education. They also result from new knowledge about the causes, prevention, and treatment of disease and from the introduction of policies, financing, and health services that make such interventions more accessible to the population, including the poor. Improving ways to finance health care and protect populations against the cost of illness has been central to this success story.

Today, global spending on health is about 8 percent of global GDP (US\$2.5 trillion) or 4 percent of the GDP of developing countries (US\$280 billion). Although the Africa region and other low income countries bear the largest burden of illness (90 percent), only 11 percent of total global spending occurs in these countries. And among low income countries, the African region is particularly disadvantaged (see Figure 3).



Furthermore, the majority of people living in developing countries do not have access to insurance coverage at the time of illness. When sick, they either rely on government subsidized health services or out of pocket payments to private providers. This exposes them to the impoverishing effects of illness at a time when ways to manage the financial risks of catastrophic illness are well known even at low income levels. As seen in Figure 4 (Preker and Carrin 2003), the percentage of total health expenditure that flows through some form of risk sharing mechanism (pooled health revenues) is particularly low in developing countries, with the countries in Sub Sahara Africa overlapping at the bottom with India, Pakistan and other South Asian countries.

## Low Income Countries Have Less Pooling of Revenues



## ORIGINS OF RICH-POOR DIFFERENCES IN HEALTH CARE FINANCING

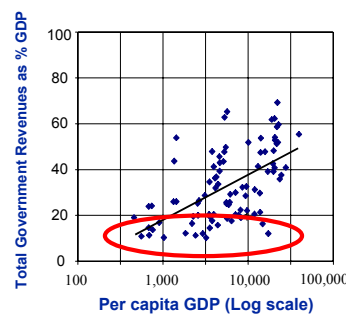
Several factors relating to revenue collection, risk pooling and health care spending make the policy options for financing health care in the Africa region and other low-income countries different from those of higher income countries.

Low-income countries often have large rural and informal sector populations, limiting the ability of their governments to collect significant taxes. When a country's taxation capacity is as low as 10 percent of GDP or lower, it would take 30 percent of government revenues to meet a target of 3 percent of GDP health expenditure target through formal collective health care financing channels. In many countries of Sub Sahara Africa, public expenditure on health care is much lower than this, often not surpassing 10 percent of public expenditure, hence less than 1 percent of GDP of public resources available for the health sector (see Figure 5 — modified from World Bank 1997).

Yet recent analysis of household survey data indicates that, peoples willingness and ability to pay for health care – even the poor – is far greater than their Government's capacity to mobilize revenues through taxation. In much of Sub Sahara Africa and South Asia, the relative share of health expenditures that is financed directly through household is as high as 80 percent.

## Low-Income Countries Have Weak Capacity to Raise Revenues

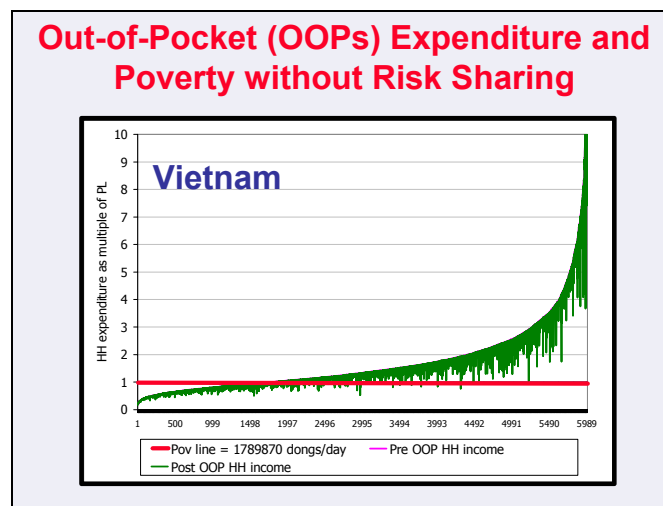
- Governments in many countries often raise less than 20% of GDP in public revenues; and
- The tax structure in many low-income countries is often regressive.



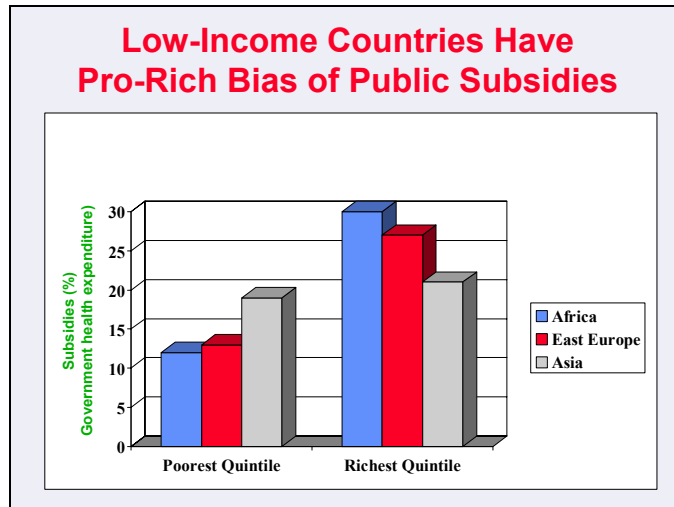
A related set of problems is faced during the pooling of financial resources at low-income levels. Pooling requires some transfer of resources from rich to poor, healthy to sick, and gainfully employed to inactive. When tax evasion by the rich and middle classes is as widespread as it is in Sub Sahara Africa and other low-income countries, higher-income households do not contribute their share to the overall revenue pool. And low-income households do not trust central governments or national social health insurance programs, even when there are exemptions or their premiums are subsidized by the government.

Without such pooling of revenues and sharing of risks, households across a larger income range – not just low-income populations – are exposed to serious financial hardship at times of illness. Figure 6 (Wagstaff et. al. 2001) indicates households whose income drops below the poverty line (horizontal bar indicating poverty line) due to out-of-pocket expenditure on health care (vertical drop bars on the income distribution curve).

Yet, there is now good empirical evidence in the micro finance literature that with appropriate instruments even the poor in rural and informal sector settings are insurable. They can benefit from micro loans and savings, crop insurance, burial insurance and community health insurance. Low-income workers in urban but formal employment settings can benefit from similar types of voluntary health insurance coverage. In many low-income countries, even the poor often turn to such informal voluntary health insurance mechanisms sometimes to complement government financing of health care but often as an alternative to perceived failure of government run insurance programs.



Finally, benefit incidence studies of health care spending at low income levels is often pro rich, even in countries where significant efforts are made to target public spending to the poor. The supply side subsidies and nonspecific global budgets used to pay for public providers, often leads to serious understaffing, drug shortages, equipment breakdowns, capital stock depreciation, and lowering of quality standards by providers who faced with overwhelming demand and limited public funding. Without recourse to insurance, their only means of increasing revenues is user charges. *De facto*, this gives higher income groups better access to publicly subsidized facilities. The Africa region has the most severe pro rich (Figure 7 — Gwatkin 2001), despite its limited public resources.



### FUTURE POLICY OPTIONS AND ROLE OF VOLUNTARY HEALTH INSURANCE

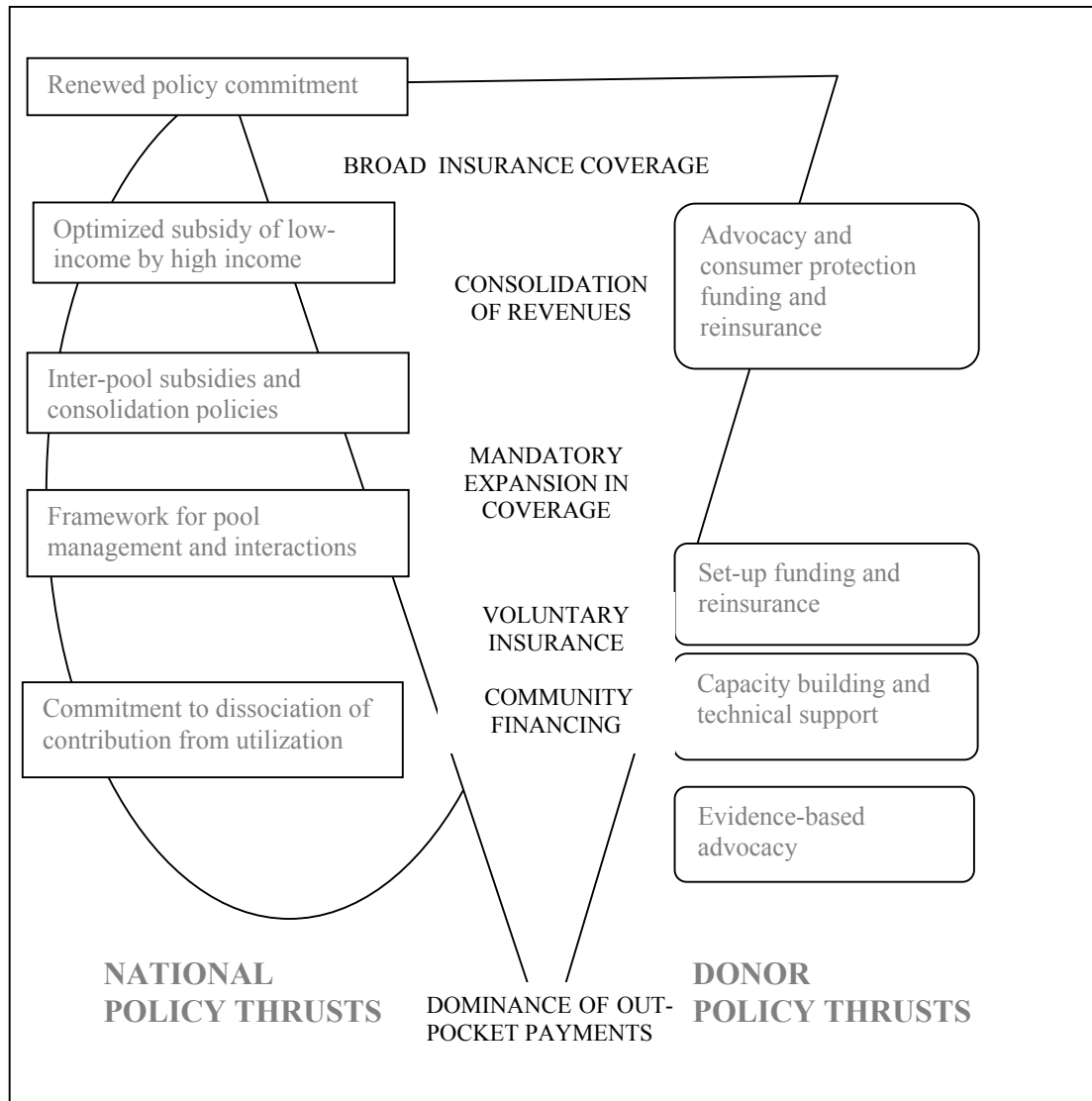
The health financing challenges of low-income countries are unlikely to be solved through a single approach. For years many low-and middle-income countries – with assistance from the international development community – have tried to leapfrog from no collective financing to full reliance on general taxation or social health insurance. In many countries this has led to mandatory public financing in the form of supply subsidies to public providers.

As seen above, many of the countries that have followed this approach face severe economic constraints, political instability, and lack of good governance in the public sector. Government taxation capacity is often weak, formal mechanisms of social protection for vulnerable populations absent, and regulatory oversight of the informal health sector lacking. In this context, public financing. In the Sub Sahara Africa and other low income regions, this has resulted in poor access to underfinanced and low quality publicly financed health services with low-income and other households left exposed to severe financial risk due to the cost of illness. It has also left the health sector highly dependent on donor assistance, especially in the Sub Sahara Africa region.

It is in this context that voluntary health insurance (both community and enterprise based voluntary health insurance) is evolving in developing countries. It may provide a critical *albeit* insufficient first step in the long march toward improved financial protection against the cost of illness, expanded coverage, better access to health care and other benefits such as improved performance of labor markets (see Figure 8).

Voluntary health insurance, therefore, has to be considered as a credible policy option for financing health care especially at low income levels, even if it is not considered the preferred choice in other contexts where there are more resources and institutional capacity in the public sector. Yet it is precisely in this setting that voluntary insurance is often ignored. Worse, in some instances where voluntary health insurance movements have developed spontaneously, there has been a concerted effort by policymakers and the international development community to stifle further development of such programs, even though the evidence base for such action is currently lacking.

**Figure 8. Stages of Financial Protection**



Source: Adapted from (Arhin-Tenkorang 2001)

## II. RATIONALE FOR BANK INVOLVMENT

There are several reasons for Bank involvement in reviewing the potential role of voluntary health insurance in developing countries.

First, the Bank and IFC are committed to helping client countries address poverty and achieve the Millennium Development Goals (MDGs). In many countries, public spending on health care is significantly below the levels that would be needed to achieve the MDG targets over the next decade. More and better targeted spending will be critical to achieving the MDGs. Yet options for funding of health care through general revenues are limited. Contributory health insurance – both mandatory and voluntary – is a potential way to increase total financial resources flowing to the health sector, improve risk management and target the poor through selective premium subsidies. The Bank has already spend the past few years examining the role of community level health insurance and is currently also undertaking a review of the potential role of social health insurance. The proposed study on voluntary health insurance therefore complements and adds to an understanding of other health financing policy options at low income levels.

Second, much has been learned during the past decade about other forms of health care financing (government subsidies, social health insurance, community financing and direct out-of-pocket payments). Furthermore, although financing health care is very different from financing old age security, valuable lessons can be learned about institutional arrangements and risk management techniques from other sectors where the Bank has gained great experience during the past few years. Knowledge of the potential role of voluntary health insurance is much more limited and often tainted by ideological preferences.

Finally, the Bank is committed to supporting countries pursue good fiscal policies that promote growth. This is important for overall economic development but also because ultimately it is economic growth that will lead to higher incomes, better health and more resources devoted to health care. The introduction of contributory health insurance also has implications for the tax burden on low income groups, labor market costs, and international competitiveness. The Bank has an extensive experience in all of these areas which could be helpful to the governments in ensuring the voluntary health insurance schemes responds to desired economic and health policy objectives.

### BENEFITS

Much work has already been done on health insurance in developing countries. There is a need to pull the available material together in a coherent way. Furthermore, there are some important gaps in the current analytical work, notably in the area of voluntary health insurance. The study will concentrate on the neglected issues and integrate insights on these areas into the overall health insurance policy framework.

In addition to reviewing the economics and empirical evidence on voluntary health insurance, the study will focus on practical implementation issues so that the findings can inform policy makers in developing countries.

Many countries are in the process of introducing mixed health insurance programs. Reforms are more advanced in some countries than elsewhere. Many countries are still talking about “what to do” while other are faced with “how to do it”. By examining both of these issues,

there is an opportunity to benefit from the leaders in the field, both in terms of positive and negative lessons learned.

## **RISKS**

Experience in other countries has already demonstrated that voluntary health insurance is associated both benefits and risks. Notably, it is an area where market imperfections are particularly acute and where some of the negative features can have a particularly adverse impact on both patients (adverse selection) and the health system (fragmentation in financing and cost escalation). A better understanding of these aspects of voluntary health insurance at low income levels will allow policy makers to take introducing mitigating policies to deal with these effects.

Voluntary health insurance is often stigmatized ideologically and politically. There is a potential reputational risk of the Bank working in this area of insurance. To mitigate this risk, the study will use senior world class experts and undertake objective country based assessments by independent researchers that have strong reputation in impact evaluation. The findings from the work will present a possible policy options not dictated for reform.

## **III. OBJECTIVES OF REVIEW**

The objectives of this study is to provide an analytical review of the strengths, weaknesses and potential future role of voluntary health insurance at low-income levels. The study will provide:

- a review of the economics of voluntary health insurance at low income levels in terms of supply, demand, market dynamics and insurance market failure;
- empirical evidence on the impact of voluntary health insurance on:
  - financial protection against the cost of illness;
  - insurance coverage;
  - access by households to affordable health care;
  - labor markets; and
  - household consumption patterns;
- explore the characteristics of emerging voluntary health insurance market in developing countries (current trends in terms of policy framework, organizational structure, institutional environment, and management attributes) and prospects for future business development

## IV. SCOPE OF WORK

The work program will have two major components: (a) an analytical review; and (b) dissemination of lessons learned through written material, technical review meetings, stakeholder consultations meetings, and selected country-level dialogue.

### ANALYTICAL REVIEW

The following provides an outline of several studies that will be undertaken during the analytical review of voluntary health insurance at low income levels.

#### Economics of Voluntary Health Insurance at Low Income Levels

**Coordination** – Preker/Scheffler

- (a) Demand for Health Insurance - Pauly
- (b) Supply of Health Insurance – Zweifel
- (c) Market Equilibrium and Insurance Failure – Pauly/Zweifel

#### Impact Evaluation

**Coordination** Preker/Jutting

- (d) A survey of the literature and critique of past studies of the impact, strengths, and weakness of different types of voluntary health insurance – Bassett/Velenyi
- (e) Selected country case studies with a special focus on micro-level household data analysis of the impact of voluntary health insurance on key outcome indicators

	<b>Core Case Studies</b>	<b>Shortlist of Relevant Experiences from Other Regions</b>					
	<b>AFR Region</b>	<b>EAP</b>	<b>ECA</b>	<b>LAC</b>	<b>MNA</b>	<b>SAS</b>	<b>OECD</b>
<b>Countries</b>	South Africa	Thailand	Russia	Brazil	Lebanon	India	USA
	Kenya	Singapore	Turkey	Chile			Switzerland
	Senegal	Philippines					Netherlands
<b>Bank Staff</b>	Picazo	Hawkins	Langenbrunner Chawla	La Forgia Baeza	Raad	Berman	Preker
<b>Consultants</b>	Thiede Carrin Jutting	Supakankunti Phua	Mahal/Özsari/ Tatar	Couttelenc Bitran	Eid	Mehal	Pauly Zweifel Van de Ven Iben

- (f) Impact of voluntary health insurance on fiscal sustainability of other health financing policy options (Gottret), drawing on other regional health financing studies.

#### Characteristics of Emerging Voluntary Health Insurance Market

**Coordination** -- Preker/Bassett/Moriarty

- (g) Global review of Existing insurance market structure – Drechler and Jutting
- (h) Best business practice in OECD (Bowie) and developing countries (TBD)
- (i) Feasibility study of future market opportunities (Moriarty)

	Core Study	Shortlist of Relevant Experiences from Other Regions					
		AFR Region	EAP	ECA	LAC	MNA	SAS
Countries	Nigeria	China	Romania	Columbia	Egypt	India	
			Bulgaria				
Bank Staff	Preker	Lindelov	Hazen/Radulescu Baris	Harding/Escobar	El-Saharty	Berman/Kalavakonda	
Consultants	Onwujekwe	Hu	Fairbanks Nacheva		Nassar	Ahuja	Drechter Jutting

## INFORMATION SHARING AND DISSEMINATION

### Stakeholder Consultation Country Level Dissemination

An effort will also be made to disseminate the findings from the analysis at regional health financing meeting and national policy seminars. Where possible relevant lessons learned would also be integrated into the Bank's client policy dialogue and lending operations.

The initial findings from the study will be presented at a stakeholder consultation at the Wharton School of the University of Pennsylvania on March 15-16, 2005 (See Annex I for a preliminary Agenda for this meeting). The meeting will be attended by policymakers from developing countries, representatives from the insurance industry, international development partners, and academic institutions working on health insurance issues.

### Country Level Dissemination

The main lessons learned from the study will be subsequently integrated into client dialogue on health financing reforms at the regional and country level.

### Synthesis Report

The finding from the study will be summarized in a report on voluntary health insurance published jointly with the University of California at Berkeley, the Wharton School of the University of Philadelphia and the University of Zurich (See Annex II) for a preliminary outline of the report.

The report will have three main section:

- Economics of Voluntary Health Insurance
- Empirical Evidence on the Impact of Voluntary Health Insurance on Outcome Indicators
- Market Analysis of Future Business Opportunities

## V. METHODOLOGY AND TERMS OF REFERENCE (TORS)

The following section provides the methodology and terms of reference for the analytical review. The results from these studies will provide the background material for the client consultation and knowledge dissemination.

### ECONOMICS OF HEALTH INSURANCE AT LOW INCOME LEVELS

#### Coordination – Preker/Scheffler

The following provides Terms of Reference (TORs) for a review of the economics of voluntary health insurance at low income levels. The review will pay special attention to known constraints at low income levels such as:

- Household income (low)
- Formal labor market participation (low)
- Informal labor market participation (high)
- Formal sector contribution compliance (low)
- Social cohesion (low)
- GDP and GDP growth (usually low but sometimes very high)
- Donor funding (high)
- CPI (high)
- Medical inflation (high)
- High morbidity and mortality (high)
- Public sector utilization rates (low)
- Voluntary sector utilization rates (high)

#### Demand for Health Insurance – Pauly

##### Lead Author - Pauly

The demand study will look at the economics of voluntary health insurance at low income levels related to the following issues:

- health needs, revealed preferences, and demand for health insurance
- benefit package and expenditure variance
- willingness and ability to pay
- insurable and non insurable risks and risk aversion
- moral hazard/free rider
- price (loading cost)
- transaction costs

## **Supply of Voluntary Health Insurance**

**Lead Author** – Zweifel

The supply study will look at the economics of voluntary health insurance at low income levels related to the following issues:

- market structure
- competitive environment
- choice and coverage
- benefit package
- price (loading cost)
- transaction costs
- expenditure (level, distribution and variance)
- adverse selection/cream skimming
- legal framework, regulation and administrative procedures
- vertical integration (managed care)
- organizational, institutional and management issues

## **Market Equilibrium in Voluntary Health Insurance and Insurance Failure**

**Lead author** – Pauly/Zweifel

The market equilibrium study will look at the economics of voluntary health insurance at low income levels related to the following issues:

- existence and stability of equilibrium
- coverage
- market and government failure
- performance (efficiency and equity)

## IMPACT EVALUATION OF VOLUNTARY HEALTH INSURANCE IN SELECTED COUNTRIES

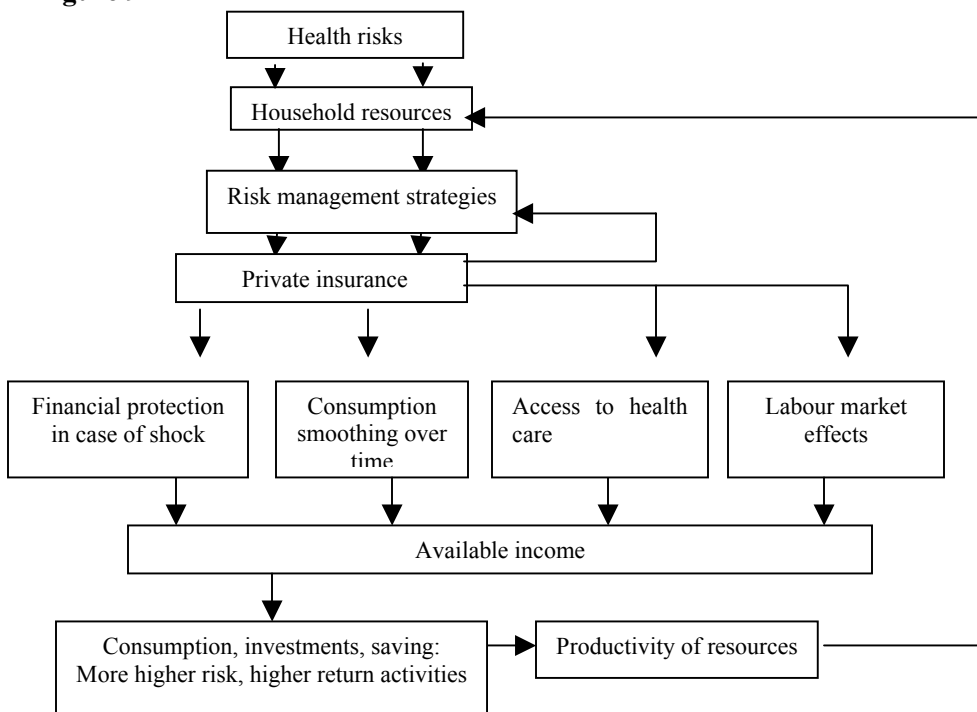
### Coordination – Preker/Jutting

The following provides Terms of Reference (TORs) for a review of the impact of voluntary health insurance on selected outcome indicators at low income levels. Households in developing countries face a variety of covariant and idiosyncratic risks. These risks interact with a household's assets and have an influence on the risk management capacity of the household at the time of illness. Risks are transmitted through a change in the value or productivity of assets and affect the reallocation of resources. There is cumulated evidence, that health risks represent the most important risk for impoverishment of households. In this context, voluntary health insurance can have an impact on:

- financial protection against the cost of illness
- insurance coverage
- non medical consumption
- access to health care
- labor markets

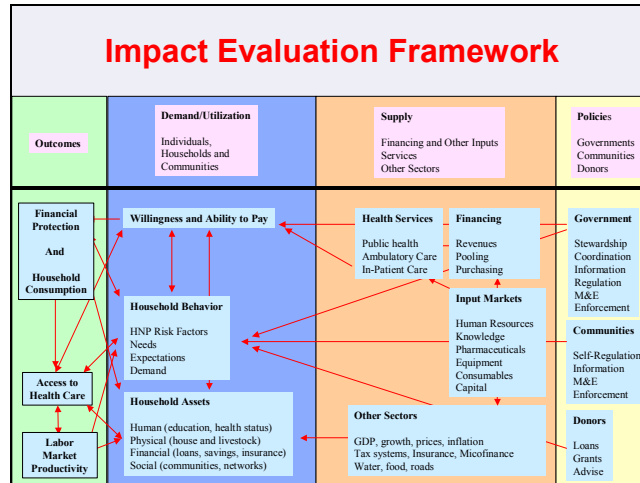
These effects have an influence on the available household income, non medical consumption, saving and investment behavior. With access to insurance, households might engage in higher risk, but also in more profitable production techniques, which in turn have a positive effect on the resources of a household, lowering its vulnerability to risks. This process is not static, but passes through various stages, including a smoothing of disposable household income available for consumption of non medical goods and services, household savings, and individual investment behavior (Figure 9).

**Figure 9**



Source Jutting 2004

Health insurance is of course not the only factor which has an impact on financial protection of households, non medical consumption patterns, access to health care, and labor market productivity (Figure 10). These broader determinants of the key outcomes that will be examined in this study are summarized in the following figure based on a modified version of the Bank’s Poverty Reduction Strategy Paper (PRSP) framework (Claeson et al. 2001). The PRSP framework emphasizes the following causal links: (a) close tracking of key outcome measures; (b) demand and utilization patterns; (c) supply in the health system and related sectors; and (d) policy actions by governments, civil society, the private sector, and donors.



- **Outcome indicators.** Although the original PRSP focused on health outcomes, for the purpose of this study, the focus will be on financial protection, household consumption, access to health care (as a proxy for health outcomes) and labor market effects.
- **Demand and utilization in influencing financial protection.** There is a complex interplay between household assets (human, physical, financial, and social), household behavior (risk factors, needs and expectation for services), ability and willingness to pay, and the availability of insurance or subsidies (Soucat et al. 1997).
- **Supply in health system and related sectors.** There is a hierarchy of interest from non-health sector factors in improving financial protection—such as GDP, prices, inflation, availability of insurance markets, effective tax systems, credit, and savings programs—to more traditional parts of the health system (a) preventive and curative health services; (b) health financing; (c) input markets; and (d) access to effective and quality health services (preventive, ambulatory, and in-patient). In respect to the latter, organizational and institutional factors contribute to the incentive environment of health financing and service delivery systems in addition to the more commonly examined determinants such as management, input, throughput, and output factors (Harding and Preker 2001).
- **Policy actions by governments, civil society and the private sector.** Finally, through their stewardship function, governments have a variety of policy instruments that can be used to strengthen the health system, the financing of services, and the regulatory environment within which the system functions (Saltman and Ferroussier-Davis 2000). This includes regulation, contracting, subsidies, direct public production, and ensuring that information is available. In countries with weak government capacity, civil society and donors can be encouraged to play a similar role.

## **Methodology for Review of Literature on Impact of Voluntary Health Insurance**

The following provides Terms of Reference (TORs) for a review of the literature on the role of voluntary health insurance in low income countries, using an adaptation of the methodology developed for community financing (Preker, Carrin et al).

Although voluntary health insurance has been extensively studied in developed countries, there is a paucity of systematic evidence regarding the performance of such schemes in developing countries in terms of their impact on broad outcome goals such as health, protection against impoverishment, and combating social exclusion in low income countries where out of pocket expenditure is often the predominant source of financing of health care even for the poor. In particular, little is known about their objectives in terms of: financial protection against the cost of illness; insurance coverage; non medical consumption; access to health care; and labor markets. And, despite progress made through the World Health Report 2000, experts are still debating which indicators best capture progress toward achieving these goals.

### *Assessment of Internal and External Validity of Past Studies*

The literature review will look at any past studies whose main focus was to examine voluntary health insurance in developing countries. The literature review will use a similar approach to that used in assessing the role of community health financing (Preker et al. 2001; and Jakab and Krishnan 2001). It is well known that methodological rigor in the area of research on voluntary health insurance is heavily influenced by the ideological bias of researchers. Any literature review of voluntary health insurance therefore has to include an assessment of the internal and external validity of research methodology, not just accept the findings at face value. Conclusions from studies that fail to meet high standards will not be given serious attention

### *Assessment of Overall Performance*

Since past research on voluntary health insurance varies considerably both in the issues examined and methodologies used, a standard set of questions will be asked in terms of a review of both impact and determinants of voluntary health insurance on key health financing indicators (strengths and weaknesses).

The literature review will examine what and how robust the evidence was on

- providing financial protection against the cost of illness;
- expanding coverage and including a wide range of client groups.
- increasing disposable income and household consumption smoothing.
- increasing access to affordable health care;
- improving labor market participation

### *Assessment of Institutional Determinants of Performance*

The direct and indirect determinants of improved health, financial protection against the cost of illness, and social inclusion are complex. As described earlier by the PRSP framework, policy actions by governments, civil society, and the private sector are mediated through supply and demand factors related to both the health sector and other sectors that affect the outcome measures that are being examined. This would include indicators of the service delivery system (product markets), input generation (factor markets), the stewardship or government oversight

function (policymaking, coordination, regulation, monitoring, evaluation) and market pressures. The current body of literature on voluntary health financing in low income countries is not comprehensive so the analysis can only look at factors directly related to health care financing.

Table 3 below provides a list of the core policy variables, and the management, organizational, and institutional characteristics health care financing in general. The literature review will assess the role, strengths, and weaknesses of health insurance in each of these areas.

### Framework for Analyzing the Policy Options for Voluntary Health Insurance

Key Policy Options	
<b>Policy framework</b>	<ul style="list-style-type: none"> <li>• <b>Revenue collection mechanisms</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Level of prepayment compared with direct out-of-pocket spending</li> <li><input type="checkbox"/> Extent to which contributions are compulsory compared with voluntary</li> <li><input type="checkbox"/> Degree of progressivity of contributions</li> <li><input type="checkbox"/> Subsidies for the poor and buffer against external shocks</li> </ul> </li> <li>• <b>Pooling revenues and sharing risks</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Size</li> <li><input type="checkbox"/> Number</li> <li><input type="checkbox"/> Redistribution from rich to poor, healthy to sick, and gainfully employed to inactive</li> </ul> </li> <li>• <b>Resource allocation and purchasing (RAP) arrangement itself</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> For whom to buy (demand question 1)?</li> <li><input type="checkbox"/> What to buy, in which form, and what to exclude (supply question 2)</li> <li><input type="checkbox"/> From whom - public, private, NGO (supply question 1)</li> <li><input type="checkbox"/> How to pay – what payment mechanisms to uses (incentive question 2)</li> <li><input type="checkbox"/> At what price – competitive market price, set prices, subsidized (market question 1)</li> </ul> </li> </ul>
<b>Institutional Environment</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Legal framework</li> <li><input type="checkbox"/> Regulatory instruments</li> <li><input type="checkbox"/> Administrative procedures</li> <li><input type="checkbox"/> Customs and practices</li> </ul>
<b>Organizational structures</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Organizational forms (configuration, scale, and scope of insurance funds?)</li> <li><input type="checkbox"/> Incentive regime (extent of decision rights, market exposure, financial responsibility, accountability, and coverage of social functions?)</li> <li><input type="checkbox"/> Linkages (extent of horizontal and vertical integration or fragmentation?)</li> </ul>
<b>Management attributes</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Management levels (stewardship, governance, line management, clinical management)</li> <li><input type="checkbox"/> Management skills</li> <li><input type="checkbox"/> Management incentives</li> <li><input type="checkbox"/> Management tools (financial, resources, health information, behavior)</li> </ul>



Possible Benefits	Efficiency	Equity (mainly poverty impact)
Financial protection		
Coverage		
Household consumption		
Access to health care		
Labor market effects		

*Modified from Preker, Carrin et al. 2001.*

## Methodology for Country Case Studies

This section provides Terms of Reference (TORs) for the country case studies that will be used to examine the impact of voluntary health insurance in achieving the following clearly specified objectives:

The case studies will use both quantitative analysis of micro-level household survey data and qualitative analysis of key policy, management, organizational and institutional determinants of good outcomes (using an adapted version of the methodology developed for earlier work on community financing (Preker, Carrin et al, Arhin-Tenkorang 2001, and Hsiao 2001).

### *Qualitative Description of Scheme Characteristics*

The case studies will describe the key scheme characteristics in terms of policy variables, institutional, organizational and management attribute which may lead to strengths and weaknesses similar to the framework used for the review of literature described above (Table 4).

**Table 4 Description of Scheme Characteristics**

Scheme Characteristics	
<b>Policy framework</b>	<ul style="list-style-type: none"> <li>• <b>Revenue collection mechanisms</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Level of prepayment compared with direct out-of-pocket spending</li> <li><input type="checkbox"/> Extent to which contributions are compulsory compared with voluntary</li> <li><input type="checkbox"/> Degree of progressivity of contributions</li> <li><input type="checkbox"/> Subsidies for the poor and buffer against external shocks</li> </ul> </li> <li>• <b>Pooling revenues and sharing risks</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Size</li> <li><input type="checkbox"/> Number</li> <li><input type="checkbox"/> Redistribution from rich to poor, healthy to sick, and gainfully employed to inactive</li> </ul> </li> <li>• <b>Resource allocation and purchasing (RAP) arrangement itself</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> For whom to buy (demand question 1)?</li> <li><input type="checkbox"/> What to buy, in which form, and what to exclude (supply question 2)</li> <li><input type="checkbox"/> From whom - public, private, NGO (supply question 1)</li> <li><input type="checkbox"/> How to pay – what payment mechanisms to uses (incentive question 2)</li> <li><input type="checkbox"/> At what price – competitive market price, set prices, subsidized (market question 1)</li> </ul> </li> </ul>
<b>Institutional Environment</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Legal framework</li> <li><input type="checkbox"/> Regulatory instruments</li> <li><input type="checkbox"/> Administrative procedures</li> <li><input type="checkbox"/> Customs and practices</li> </ul>
<b>Organizational structures</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Organizational forms (configuration, scale, and scope of insurance funds?)</li> <li><input type="checkbox"/> Incentive regime (extent of decision rights, market exposure, financial responsibility, accountability, and coverage of social functions?)</li> <li><input type="checkbox"/> Linkages (extent of horizontal and vertical integration or fragmentation?)</li> </ul>
<b>Management attributes</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Management levels (stewardship, governance, line management, clinical management)</li> <li><input type="checkbox"/> Management skills</li> <li><input type="checkbox"/> Management incentives)</li> <li><input type="checkbox"/> Management tools (financial, resources, health information, behavior)</li> </ul>

*Modified from* Preker, Carrin et al. 2001.

### *Quantative Analysis of Mico-Level Household Data*

The aim of the micro-level household survey analysis is to shed light on five possible benefits of voluntary health insurance. Possible market indicators for each of the major benefits are indicated in the Table below.

Dependent Variable	Possible Marker Indicators	Independent Variables
Financial Protection		All policy, organizational, institutional and management variables and factors seen in PRSP framework.
Consumption smoothing	Non medical consumption	
Access to Care	Service utilization	
Labor	Labor market and productivity	

Various household budget surveys, Living Standard Measurement Surveys (LSMS) and Demographic and Health Surveys (DHS) will be screened for voluntary health insurance data. Most surveys do not allow an identification of households with access to voluntary health insurance so the subset of countries that can be examined using this methodology will be small.

i) and ii) Impact of voluntary health insurance on financial protection and consumption smoothing

*Premise:*

Protection against high medical expenses is desired both privately and socially

*Desiderata:*

We seek a measure with the following properties

1. given income, premiums, and the distribution of medical spending, the measure **rises** when insurance coverage increases
2. given income, premiums, and insurance coverage, the measure **falls** when the distribution of spending becomes more variable (higher relative probability of high cost)
3. given income, insurance coverage, and the distribution of medical expenses, the measure **falls** as paid premiums rise (paid by household)
4. given insurance coverage, premiums, and the distribution of medical expenses, the measure **falls** as income falls

*Proposed measure:*

$$\wp = \overline{NMC} / (\sigma_{NMC}) = \text{Inverse of Coefficient of Variation of NMC}$$

Where

$\wp$  = Financial Protection

$\overline{NMC}$  = Average of non medical consumption

NMC = Non medical consumption

Oops = Out-of-pocket spending

$\rho$  = Premium

$\sigma$  = Standard deviation

Y = Household Income

and

$$NMC = Y - (\rho + Oops)$$

*Definitions:*

HEX = health expenditure

Oops = out-of-pocket expenditure by individuals or household for health care

Premiums = amount spent by individuals or households

Income = total revenues of households from formal and informal sector sources

Insurance coverage = ratio of (total household HEX) – Oops/total household HEX

*Assumptions:*

1. Increases in insurance coverage reduces some values of Oops and so reduces  $\sigma_{NMC}$
2. Increases in variance of medical spending increases  $\sigma_{NMC}$
3. Increases in paid premiums reduce  $\overline{NMC}$
4. Increases in income increases  $\overline{NMC}$

*Comments:*

- If the distribution of medical expenses is independent of income and insurance coverage (i.e., no income effect; no moral hazard), increase in coverage will increase financial protection
- If spending rises with insurance coverage (i.e., moral hazard), increase in insurance coverage (over some range) may not increase financial protection
- If there is an agreed-upon definition of “critical consumption or income level – amount needed for purchased food, basic education, etc – the coefficient of variation at each income level can be used to estimate the probability that medical spending will cause consumption to fall below the critical level
- What this measure leave out: effects on utility or health of greater access to or use of medical care if there is moral hazard (see note two)

Corollary

Increased insurance coverage that increases access to a greater extent may reduce financial protection.

*Example:*

*Context:*

- Insurance pays 70 percent of health care costs (30 percent co-insurance)
- 90% subsidy to actuarially fair insurance premium
- income held constant

	Case A Easy Access	Case B Difficult Access
1. No insurance (average medical consumption)	100	100
2. Post-coverage (average medical consumption)	300	150
3. Premium paid (0.1 x row 2)	30	15
4. Average out-of-pocket expenditure	90	45
5. Premium + out of pocket	120	60

*Conclusion:*

Easier access, put person at greater financial risk (if there is co-payment with insurance)

*Comments:*

- In this example, a person is at higher financial risk in Case A than in Case B and may be at higher risk with subsidized insurance in Case A than without insurance
- But the person gets more access/use of health care in case A than either in case B or no insurance
- The “Paradox” (more insurance leads to higher financial risk) is more likely the greater the “effective demand elasticity
- As coverage approaches 100 percent, the paradox disappears with linear demand curve

iii) Impact Voluntary Insurance on Access to Health Care

To assess the impact of scheme membership on access to health care, a two-part model will be used.<sup>1</sup> The first part of the model analyses the determinants of using health care services. The second part of the model analyses the determinants of health care expenditures for those who reported any health care use.

There are several reasons for taking this approach. First, using health expenditure alone as a predictor of financial protection does not allow capture of the lack of financial protection for people who choose not to seek health care because they cannot afford it. As the first part of the model assesses the determinants of utilization, this approach allows us to see whether membership with voluntary health insurance reduces barriers to access to health services. Second, the distribution of health expenditures is typically not a normal distribution. Many non-spenders do not use health care in the recall period. The distribution also has a long tail due to the small number of very high spenders. To address the first cause of non-normality, the study restricted the analysis of health expenditures to those who report any health care use. As the first part of model assesses determinants of use, we will still be able to look into whether scheme membership removes barriers to care. To address the second part of non-normality, a log-linear model specification is used.

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<sup>1</sup> This model is similar to the two-part demand model developed as part of the Rand Health Insurance experiment to estimate demand for health care services (Duan et al. 1982; and Manning et al. 1987). For a recent application of the model that analyses the access impact of school health insurance in Egypt, see Yip and Berman 2001.

Part one of the model is a binary logit model for the Rwanda, Thailand, and India (other countries will also be considered) data sets and a probit model in the Senegal model (other countries will also be considered). The model estimates the probability of an individual's visiting a health care provider. Formally, part one of the model can be written as follows:

$$Prob(\text{visit} > 0) = X\beta + \varepsilon \quad (2)$$

Part two is a log-linear model that estimates the incurred level of out-of-pocket expenditures, conditioned on positive use of health care services. Formally, part two of the model can be written as follows:

$$Log(\text{out-of-pocket expenditure} \mid \text{visit} > 0) = X\gamma + \mu \quad (3)$$

where X represents a set of individual and household characteristics that are hypothesized to affect individual patterns of utilization and expenditures.

$\beta$  and  $\gamma$  are vectors of coefficient estimates;  $\varepsilon$  and  $\mu$  are error terms.

The two variables of primary interest are scheme membership status and income. Other control variables were also included in the estimation model to control for the differences in need for health care (e.g., age, gender); differences in preferences toward seeking health care (e.g., gender, religion); and differences in the cost (direct and indirect) of seeking health care (e.g., distance).

#### iv) Impact of voluntary health insurance on labor market productivity

The assessment of the impact of enrollment with voluntary health insurance on labor market productivity will look at the actual days at relative to the total number of days that the person would have worked if they had not been on leave due to illness.

The hypothesis to be tested is that members who have access to voluntary health insurance are more likely to seek care for medical illnesses earlier and therefore require less time off work due to illness than those that do not have access to voluntary health insurance or other forms of community financing, social insurance and subsidized care.

#### **1) effect on labor productivity of household members (household surveys)**

The following assumptions were made about the impact of insurance on labor productivity related variables. The hypothesis that will be tested is that insured persons will:

1. *lose less days of work due to illness*: An insured person seeks health care earlier than somebody without insurance and hence might require less time off work. This has then an impact for the sick person himself as well as for the person who looks after the person.

Model: Either a binominal model (BMI) or OLS with the same structure

Dependent variable to be looked for: absenteeism of work due to illness

Independent variables: the commonly control variables + membership of health insurance

$$Prob(\text{absenteeism of work} > 0) = X\beta + \varepsilon$$

2. *be more productive while at work*: One example would be farmers in rural Malaria prone areas. Malaria infections reduce substantially the ability to work leading to a lower productivity. We assume that persons with insurance have a better access to drugs as well as appropriate protection schemes (bed nets) and by this effect work more productively in the physical demanding agricultural activities. This holds true for other activities as well.

Model: Either BMI or OLS

Dependent variable: Income/Labour (input, e.g. man work days etc.); Alternative BMI  
Independent variables: the commonly control variables + membership of health insurance

$$Prob(\text{worked hours/man day per given activity} > 0) = X\beta + \varepsilon$$

3. *have a higher probability of hiring in/ or hiring out labor*: There is evidence from household surveys on cost of illness which suggests that households that are better protected against health shocks have a higher probability of joining the labor force. This has important impact on the household welfare as well as on the local economy.

Dichotomous variable: is the household hiring labour in/is he hiring out labor  
Independent variable: the commonly control variables + membership of health insurance

$$Prob(\text{hiring labor, in or out} > 0) = X\beta + \varepsilon$$

4. *take on more riskier jobs*: People having a health insurance are willing to take a more riskier jobs with a better pay, but also to invest in more high risk, high return activities.

Dependent variable: What kind of activities does the household head undertake (differentiated according to risk profiles and income earning possibilities)

## **2) labor market effects (more relevant for middle income countries)**

The following assumptions were made about the impact of insurance on labor markets. The hypothesis that will be tested is that voluntary health insurance coverage has an impact on:<sup>2</sup>

1. *wages*. Higher aggregate cost of labor may shift to workers in form of lower individual wages.
2. *labor force participation*: The extension of subsidized health insurance to the non-working population (e.g. married women), led to a decline in their labor market participation (this effect would be most pronounced in low-income households).<sup>3</sup>

<sup>2</sup> For details and methodology see: Thurston, N.: Labor Market Effects of Hawaii's Mandatory Employer-Provided Health Insurance. In: Industrial and Labor Relations Review, Vol. 51, No. 1 (Oct, 1997), 117 - 135

<sup>3</sup> Chou, Y. J. and Staiger, D. (2001): Health insurance and female labour supply in Taiwan. Journal of Health Economics, Vol. 20, Issue 2, March, pp. 187 – 222.

3. *employment pattern*: Labor demand may shift toward exempted sectors, primarily low-hours or low-wage sectors.
4. *coverage*: Double coverage of dependents might be reduced by discouraging unneeded dependent coverage.

v) Determinants of enrollment with voluntary health insurance

To assess the determinants of enrollment with voluntary health insurance, it is assumed that the choice of whether to enroll is influenced by two main determinants: (i) individual and household characteristics and (ii) community characteristics. Individual and household characteristics influence the cost and the benefit calculation of the rational individual decision maker.

This choice is moderated, however, through certain social characteristics of the member households. The individual rational choice model of weighting costs and benefits of joining a prepayment scheme is altered by the social values and ethics of the local culture. For example, two individuals with similar individual and household characteristics (e.g., income, household size, assets, education level, health status) may decide differently about joining or not joining a prepayment scheme depending, for example, on encouragement from community leaders, availability of information, ease of maneuvering unknown processes.

To estimate the weight of these determinants, a binary logit model was applied to four of the data sets and a binary probit was applied to the Senegal data set. The model can be written as follows.

$$Prob(enrollment > 0) = X_1\beta_1 + X_2\beta_2 + \varepsilon \quad (1)$$

The independent variable takes on a value of 1 if the individual belongs to a voluntary health insurance scheme and 0 if s/he does not.  $X_1$  represents a set of independent variables that are characteristics of the individual and the household such as income, gender, age, marker on chronic illness or disability.  $X_2$  represents a set of independent variables that approximate the social values in the communities: religion, marker on various communities where appropriate. Other variables specific to the surveys as well as interaction terms were included where appropriate.  $\beta_1$  and  $\beta_2$  are vectors of coefficient estimates and  $\varepsilon$  is the error term.

The two variables of primary interest are income (measure of social inclusion) and a marker for community factors (dummy variable). Control variables also included gender, age, disability or chronic illness, religion, and distance to the health center under the scheme. Some of these variables are important to control for the different probability of health care use (e.g., age, health status, distance from provider). These variables also allow us to test the presence and importance of adverse selection that all voluntary prepayment schemes are subject to. Others variables included control for the different individual and household attitudes toward investment in health at a time when illness is not necessarily present (e.g., gender, religion). Literature has shown that the distance to the hospitals and local health centers and existence of outreach programs influence the decision to purchase membership to the scheme.

## Methodology for Macro-Level Cross-Country Analysis

The following provides the Terms of Reference (TORs) for macro-level cross country analysis of the role voluntary health insurance in expanding health insurance coverage in low income countries, using an adaptation of the methodology developed for community financing (Preker, Carrin et al 2001, and Carrin 2001). It will assess the effectiveness of voluntary health insurance compared with other financing policy options.

For the dependent variables of the macro-level country analysis, the study will use the standard indicators proposed by WHO for health systems performance (WHO 2000). These are the disability-adjusted life expectancy (DALE), the index of level of responsiveness (IR), the index of fairness of financial contribution (IFFC), the index of distribution of responsiveness (IRD) and the index of equality of child survival (IECS). Only the observed data for these indicators will be included in the analysis.

For the independent variables of the macro-level analysis, countries will be divided into three groups based on the extent of their risk-sharing arrangements. Countries will be assigned to the *advanced risk-sharing* category when they have either a social health insurance scheme or a health financing scheme based on general taxation, and when these two schemes are associated with the principle of universal coverage. Second, there are countries with no explicit reference to overall coverage of the population. They usually have mixed health financing systems, with some part of the population partially covered via general taxation and specific population groups covered by health insurance schemes. These countries will be associated with *medium risk-sharing*. Finally, there are countries with general taxation systems but that incompletely cover the population; these will be associated with *low-risk sharing*. This classification will allow the assignment of two organizational dummy variables: DARS = 1 when a country belongs to the set of advanced risk-sharing systems and 0 otherwise; DMRS = 1 when a country belongs to the set of medium risk-sharing systems and 0 otherwise.

The methodology for this analysis is described by Carrin et al. 2001. The objective of the analysis will be to examine the degree to which risk sharing has a beneficial impact on the five indicators of health systems performance.

The analysis will use the following specification for the impact of risk sharing on the level of health:

$$\text{Ln}(80 - \text{DALE}) = a_1 + b_1 \text{Ln HEC} + c_1 \text{Ln EDU} + d_1 \text{DARS} \quad (1)$$

HEC refers to the health expenditure per capita (in U.S. dollars). EDU refers to the educational attainment in society and is measured by the primary enrolment. The dependent variable is the logarithm of the difference between the observed DALE and a maximum. Several alternative models were also tested. The hypothesis is that advanced risk sharing (among indirect determinants such as education) is associated with a better definition of the benefit package of health services to which citizens are entitled, which translates into increased overall level of health.

The analysis will use two alternative functional forms to assess the impact of risk sharing on responsiveness;

$$\text{Ln}[\text{IR}/(1-\text{IR})] = a_{21} + b_{21} \text{HEC} + c_{21} \text{EDU} + d_{21} \text{DARS}$$

And

$$\text{Ln} [\text{IR}/(1-\text{IR})] = a_{21} + b_{21} \text{HEC} + c_{21} \text{EDU} + d_{21} \text{DARS}$$

The hypothesis to be tested is that advanced risk-sharing systems are associated with a larger degree of stewardship. The latter, in turn, is likely to positively influence the mechanisms and incentives that entail a greater responsiveness.

The analysis will use three measures for distributional impact. This includes: an index of equality of child survival (IECS), an index of fairness of financial contribution (IFFC), and an index of distribution of responsiveness (IRD).

Several models will be tested. A model will be developed that will examine the impact of the dummy variable (DARS) on the distributional variables for health, fairness, and responsiveness. The same functional forms will be used as in equations 2a and 2b:

$$\text{Ln} [I_j/(1-I_j)] = a_{31} + b_{31} \text{DARS} \quad (3a)$$

and

$$\text{Ln} (1-I_j) = a_{32} + b_{32} \text{DARS} \quad (3b)$$

where  $I_j$  ( $j=1, \dots, 3$ ) refers to the three above-mentioned indices, respectively.

The effect of DARS on the indicator of *fair financing* is expected to be positive when using the logit form of the equation. The hypothesis to be tested is that in countries with advanced risk sharing, more so than in other systems, people pay financial contributions according to their capacity to pay. This would be associated with a higher IFFC. Second, systems with universal coverage generally pay more attention to the objective of equal treatment for equal need. It is therefore assumed that such systems also respond to people's expectations as to the nonmedical aspects of health care in a more equal way. Hence, the effect of DARS on the distribution of *responsiveness* is anticipated to be positive as well. Third, it is assumed that universal coverage systems are more likely to provide people with a similar benefit package than in other systems, irrespective of their socioeconomic background, with a resulting positive impact on the distributional aspects of *child health*.

### **Methodology for Regional Reviews**

The following provides the Terms of Reference (TORs) for regional reviews of the role of voluntary health insurance in expanding health insurance coverage in low income countries, using an adaptation of the methodology developed for community financing (Preker, Carrin et al., Preker, Carrin et al. 2001, Arhin-Tenkorang 2001, and Hsiao 2001).

The main objective of the regional reviews is to provide additional insights about several key issues from the perspective of the two regions of the world that carry the heaviest burden of mortality and morbidity, that have the weakest risk-sharing arrangements to protect their populations against the impoverishing effects of illness, and that have the greatest number of poor living in absolute poverty and social exclusion. In addition to contributing to an understanding

about the current roles of voluntary health insurance, the regional reviews also focused on future policy options. Key questions asked include the following:

- Using the same framework described under the survey of the literature, what are the main characteristics of existing voluntary insurance in financing health care in the regions examined in terms of impact, strengths, and weaknesses of existing schemes (describe successful and unsuccessful features)?
- To what extent does voluntary health insurance achieve the objective of securing financial protection, increased insurance coverage, access to care, labor market participation and increased household consumption?
- What are the main challenges and obstacles to improving voluntary health insurance in achieving these objectives in the Africa and other regions?
- Are there other viable alternatives to voluntary health insurance in the country settings where they exist today in the different regions examined?
- In the context of these study findings, what role could governments and the international donor community play to improve expansion of health insurance coverage (public, private or NGO) in the regions examined?

## REVIEW OF BUSINESS DEVELOPMENT OPPORTUNITY FOR EXPANDING VHI

### Coordination – Preker/Bassett/Moriarty

The following provides Terms of Reference (TORs) for a review of business development opportunities for expanding voluntary health insurance in low- and middle-income countries. This part of the study will: (a) review the evolution of voluntary health insurance markets at the global level; (b) summarize the essential pre requisites for good business practice in voluntary health insurance; and (c) conduct feasibility studies for expanding voluntary health insurance in selected countries where market conditions are favorable.

### Global Review of Voluntary Health Insurance Market

#### Proposed Authors – Drechsler and Jutting

This part of the study will review the empirical evidence on the supply, demand, market equilibrium, and market imperfections of voluntary health insurance in developing countries as well as the role and effectiveness of public policy instruments such as regulations, subsidies and taxes.

#### *Investment Climate*

The first part of the market analysis will examine the ***investment climate and institutional setting*** under which voluntary insurance exist today. Are there any characteristics that seem to foster or inhibit there existence of a voluntary insurance market? The investment climate would include and assessment of: (a) *political orientation* – market economies, transition economies, welfare states, and socialist economies; (b) *economic variables* – economic stability and growth, inflation, debt, and competitive environment; (c) *income levels* – low-income, middle income, high income; (d) *geographic location* – regional distribution, north vs south, etc; (e) *labor market participation* – urban vs rural, formal vs informal, industrial vs agricultural, employment rate vs unemployment; (f) *tax structure* – level, progressivity, exemptions, payroll taxes, etc; (g) *regulatory environment* – insurance law, anti trust, competition law, health legislation; (h) *social cohesion* – tribal, traditional, modern nuclear, etc; (i) *corruption* – CPI; and (j) *characteristic health sector (public vs private) and health expenditure trends* – factor markets (labor, pharmaceuticals, medical equipment, consumables, etc) and product markets (hospitals, clinics and diagnostics).

#### *Supply of Voluntary Health Insurance*

This part of the market analysis will look at empirical evidence on the supply side of voluntary health insurance. It will conduct an ***inventory*** of voluntary health insurance, looking at a variety of data sources, including: (a) country-level data bases (statistical year books); (b) insurance rating agencies (e.g., Moody's and others); (c) actuarial firms (Milliman and Roberts, etc); and (d) global presence of major insurance firms that also deal in health (e.g., AIG, AETNA, United, Lloyds, Munich Re, etc). What is the maturity of the existing health insurance market

The analysis of supply will summarize the main characteristics of existing schemes in terms of: (a) *coverage*: full, partial, level of co-payments, exclusions; (b) *choice*: mandatory, compulsory, etc.; and (c) *benefits*: range of included benefits and level of interventions offered under included benefits.

Finally, the supply side of the study will develop a *topology* for voluntary health insurance based on the following dimensions:

- Ownership arrangements: private profit (commercial), private non-profit (NGO), community-based, employer based, foreign involvement (international vs domestic)
- Degree of market concentration: size and distribution
- Linkages, particularly when it exists in a role of secondary funder under a mandated national or government system: relations to other insurance instruments (life, casualty, accident, death etc), to overall health financing system (complementary, supplementary, substitutive); integration (horizontal and vertical – HMOs)

#### *Demand for Voluntary Health Insurance Coverage*

The second part of the market analysis will look at empirical evidence on the demand side of voluntary health insurance. Under this part of the study, the following issues will be examined:

- health needs;
- revealed preferences in terms of demand for health insurance;
- willingness and ability to pay for health care and health insurance, including benefit incidence analysis;
- insurable and non insurable risks
- degree of risk aversion
- access to providers;
- expenditure variance;
- moral hazard/free rider behavior
- consumptions taxes on insurance
- subsidies and/or tax exemptions

#### *Market Structure and Dynamics of Voluntary Health Insurance*

The third part of the market analysis will look at empirical evidence on the extent to which supply, demand and competition leads to an functioning voluntary insurance market. This part of the market analysis will look at evidence on extent to which well known market failure in voluntary health insurance exist at low income levels. This would include moral hazard, adverse selection, free rider behavior, insurance premium escalation, etc. The analysis will also look for evidence on the extent to which known mitigating public policy instruments such as taxation, subsidies, tax credits, exemptions have either improved or worsened such market failure.

#### *Development Path for Growth in Voluntary Health Insurance*

This part of the market analysis will examine historical context in which voluntary health insurance markets have evolved in both developed and developing countries. It will try to answer the following questions: Is voluntary health insurance part of a critical development path in achieving financial protection against the cost of illness? What were some of the problems encountered in countries with more mature markets today? Which public policy instruments and business strategies were successful in addressing these problems and which were less successful – taxation, subsidies, tax credits, exemptions, etc

## Best Business Practice in Voluntary Health Insurance

### Proposed Authors – Bowie

This part of the study will review the essential elements of best practice in managing voluntary health insurance – financial management and other business practices – both in developed and developing countries and make recommendations about lessons learned that may be relevant to countries where voluntary health insurance is becoming more active.

The first part of the review will summarize financial and management practice of voluntary health insurance in selected developed countries – UK, Australia, New Zealand, Ireland – and emerging market economies – Israel and South Africa. It will cover the following major topic areas:

#### **The Company, Sponsors and Management.** Who owns, controls, and runs the company?

- History
- Shareholders
- Organization chart
- Management team
- Scope of business or current operations (beds, services offered etc.)

#### **Strategic Plan.** Where the Company wants to be in 10 years and how it plans to get there?

- New strategy and goals (target markets, customers, cost reduction, repositioning...)
- Capital investment strategy
- Company strengths (strategic fit of company mission/skills with potential market)
- Company weaknesses (misalignment of company mission/skill with potential market)

#### **Financial Performance.** What is the financial history of the company?

- Revenues, main product groups
- Variable cost structure (expenditures), main elements
- Fixed cost structure (expenditures), main elements
- Capital structure (own and borrowed) and cost
- Return on capital (own and borrowed)
- Audited financial statements past 3 years including bottom line (profit or loss)

#### **Financial Projections.** What is the financial future of the company?

- Actuarial analysis of anticipated revenues and expenditures under different scenarios
- Solvency

#### **Management capacity.** What is the ability of management to run a health insurance firm

- Financial management, personnel management, underwriting, account management, etc

#### **Benefits and Risks.** What are likely future opportunities and risks

- Assessment of opportunities and risks in both the investment climate and firm

Based on this information, this study will summarize the key characteristics of best business practice in voluntary health insurance in developed and developing countries (virtuous cycle of activity to ensure the sustainability of a voluntary health insurer). It will provide guidelines on questions and issues for further study in determining to what extent lessons learned can be translated and/or resolved in setting up regulatory and institutional frameworks for better business practice in voluntary health insurance in low- and middle-income countries

## Country Level Feasibility Studies

### Proposed Authors – (see matrix)

The following provides the Terms of Reference (TORs) for a feasibility study of business development opportunities for introducing voluntary health insurance in two low-income countries. Feasibility studies of business development opportunities will be developed for Nigeria, India, China, Egypt, Columbia and Romania.

The feasibility studies will build at the country level on the methodology described above for analyzing (a) the global voluntary health insurance market in terms of supply, demand, market dynamics; (b) best business practice; and (c) public policy instruments for addressing market failure.

Using existing household health expenditure and other data, the study will *inter alia*:

- Undertake an assessment of willingness and ability to purchase voluntary health insurance (survey or focus groups)
- Assess affordability and design of benefit package
- Obtain feedback from local officials on political feasibility of introducing voluntary health insurance
- Identify potential insurance carriers.

In addition, the feasibility study will also explore opportunities for identifying a pilot site where one could collect and analyze the following in the context of expanding voluntary health insurance programs:

- household income distribution, household expenditures distribution (including health/medical care), household health services utilization pattern, and household health insurance participation and premium expenditures
- current public insurance program, benefit coverage, premium, population coverage, and organizational structure
- current health care services provider distributions (inpatient and outpatient)
- household survey on willingness and ability to pay for voluntary health insurance
- potential institutional arrangement and legal regulations for setting up voluntary health insurance program

## VI. TIMELINE

The proposed ESW will span a period of 18 months (July 2004 to December 2005). Phase I of the ESW will be completed by March 2005 prior to the technical consultation at the Wharton School. Phase II of the ESW will be completed by December 2006 in time for a end of FY06 publication.

### PHASE I

During Phase One of the study, three background papers on the economics of voluntary health insurance will be completed as well as a global overview and critical review of the literature. During Phase I, several of the case studies will be initiated with an aim to complete 3 or 4 in time for the technical consultation at the Warton School.

This phase of the work will attempt to shed light on the benefit and risks of the various policy options outlined in the previous section.

### PHASE II

During Phase Two of the study, the remainder of the background papers and case studies will be completed as well as revisions of the early work based on feedback from the technical consultation at the Wharton School. During this phase all the papers will be peer reviewed and compiled into a synthesis report.

During this phase of the work, an attempt will be made to identify one or two potential pilot sites for implementation.

## VII. RESOURCE REQUIREMENTS

### STAFF INPUTS

During Phase I, the team will use technical staff from each region who will supervise the country impact evaluation case (1 sw per case study). Time commitment from anchor staff will be mainly in terms of time from the health insurance fellow (Table 5).

	AFTH2 SW	Other regions	Fellows SW	Total SW
<b>Phase I</b>				
	6	6	NC	12
<b>Phase II</b>				
	6	6	NC	12
<b>Total</b>	16			24

## VARIABLE BUDGET

Most of the variable cost will be spent on impact evaluation and feasibility studies at the country level. Detailed cost breakdown by individual tasks available on EXL spreadsheet (Table 6).

	<b>Base US\$</b>	<b>Budget</b>	<b>Trust US\$</b>	<b>Funds</b>	<b>Other US\$ Sponsors</b>	<b>Total US\$</b>
<b>Phase I (FY05)</b>		<b>20,000</b>		<b>100,000</b>	<b>50,000</b>	<b>150,000</b>
Initial Analysis						
-Economic reviews				30,000		30,000
-Case studies x 6				30,000		30,000
-Topical Reviews				20,000		20,000
Travel		20,000				20,000
Wharton Meeting					50,000	50,000
<b>Phase II (FY06)</b>		<b>20,000</b>		<b>80,000</b>	<b>50,000</b>	<b>130,000</b>
Further Analysis				30,000		30,000
Travel		20,000				20,000
Report				30,000		30,000
Dissemination				20,000	50,000	70,000
<b>Total</b>		<b>40,000</b>		<b>160,000</b>	<b>100,000</b>	<b>300,000</b>

## NON BASE BUDGET SPONSORS

Trust Funds and Direct Sponsors

## VIII. TECHNICAL REVIEW PROCESS

Given the potential impact of the work on voluntary health insurance in developing countries and its political sensitivity, a special effort will be made to put the work through a process of due diligence in terms of the quality of the evolving work. The analytical work will be reviewed both internally within the World Bank Group and by senior external experts who are familiar with both the technical contents and political economy of voluntary health insurance. The following lists reviewers who have been asked to contribute to the work.

### TASK TEAM LEADER

Alexander S. Preker (AFTH2)

### INTERNAL PEER REVIEWERS

Mukesh Chawla (HNP), Richard Hinz (SP), Emmett Moriarty (IFC), Robert Taylor (IFC), Vijaysekar Kalavakonda (OPD)

### EXTERNAL PEER REVIEWERS

Alan Fairbank (US), Pere Iben (Spain), Philip Musgrove (US), Wynard Van de Ven (Netherlands)

### ECONOMIC STEERING GROUP

Mark Pauly (Wharton), Richard Scheffler (Berkeley), Peter Zweifel (Zurich)

### INDUSTRY CONSULTATIVE GROUP

Ladi Awosika (CEO Total Health Trust Ltd. Nigeria),  
Macdonald Chaora (Chief Executive CIMAS, Zimbabwe),  
Robert Crane (VP Kaiser),  
Kabelo Ebineng (Managing Director Botswana Public Officers Medical Aide Scheme and Pula Medical Aide Scheme, Botswana);  
George Halvorson (CEO Kaiser ),  
Cleve Killingsworth (CEO BCBS Mass),  
Bafana Nkosi (CEO, Bonitas Medical Fund, South Africa),  
Nimish Parekh, (CEO, United Health Care, India)  
Penny Tlhabi (CEO, Board of Healthcare Funders Southern Africa),

## IX. COLLABORATING PARTNERS

The World Bank Group (AFTHD, FSVP, HNP Anchor, IFC, OPD, WBI) is undertaking this study in consultation with several collaborating partners. Groups consulted include:

**International organizations:** WHO, OECD

**Associations:** International Federation of Health Plans (iFHP), Association of Health Insurance Plans (AHIP), Association Internationale de la Mutualité (AIM)

## **X. SPONSORS**

**World Bank Group:** AFTHD, HNP Anchor, IFC, OPD, WBI

**Associations:** International Federation of Health Plans (iFHP)

**Industry Sponsors:** Blue Cross Blue Shield (Massachusetts), BUPA, Kaiser, United Health Care, Merck, Novartis, Pfizer

**Bilaterals:** CIDA, SIDA, USAID

## ANNEXES

**ANNEX I. WHARTON CONFERENCE**

**Voluntary Health Insurance in Developing Countries**

Wharton School of the University of Pennsylvania, Philadelphia PA  
March 15-16, 2005

See Agenda for Speakers and Participants

**ANNEX II.**  
**DRAFT OUTLINE OF MAIN REPORT**

Outline  
Foreword  
Preface  
Acknowledgements

Section I.       Economics of Voluntary Health Insurance Revisited

                  Overview  
                  Supply  
                  Demand  
                  Equilibrium

Section II.       Empirical Evidence

                  A Critical Review of the Literature  
                  Past, Present and Future Development Paths  
                  Regional Reviews of Links to Mandatory Insurance  
                  Impact Evaluation Studies (4-6)

Section III.      From Theory to Practice

                  Public Policy and the Private Sector  
                  Regulations, Subsidies and Taxes  
                  Global market analysis  
                  Feasibility Studies (4-6)

Annexes

Data

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