

Gonzalez, Eduardo T.; Urquico, Corazon; Luisa, Beringuela. Maria

Working Paper

Medicare I: Evaluation of Alternative Reform Measures

PIDS Discussion Paper Series, No. 1995-17

Provided in Cooperation with:

Philippine Institute for Development Studies (PIDS), Philippines

Suggested Citation: Gonzalez, Eduardo T.; Urquico, Corazon; Luisa, Beringuela. Maria (1995) : Medicare I: Evaluation of Alternative Reform Measures, PIDS Discussion Paper Series, No. 1995-17, Philippine Institute for Development Studies (PIDS), Makati City

This Version is available at:

<https://hdl.handle.net/10419/187291>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Philippine Institute for Development Studies

Medicare I: Evaluation of Alternative Reform Measures

Corazon Urquico

DISCUSSION PAPER SERIES NO. 95-17

The *PIDS Discussion Paper Series* constitutes studies that are preliminary and subject to further revisions. They are being circulated in a limited number of copies only for purposes of soliciting comments and suggestions for further refinements. The studies under the *Series* are unedited and unreviewed.

The views and opinions expressed are those of the author(s) and do not necessarily reflect those of the Institute.

Not for quotation without permission from the author(s) and the Institute.



June 1995

For comments, suggestions or further inquiries please contact:

The Research Information Staff, Philippine Institute for Development Studies
3rd Floor, NEDA sa Makati Building, 106 Amorsolo Street, Legaspi Village, Makati City, Philippines
Tel Nos: 8924059 and 8935705; Fax No: 8939589; E-mail: publications@pidsnet.pids.gov.ph
Or visit our website at <http://www.pids.gov.ph>

Medicare I: Evaluation of Alternative Reform Measures

by

*Corazon Urquico, Ma. Luisa Beringuela
and Eduardo T. Gonzalez*

*Final Report
Submitted to the
Philippine Institute for Development Studies*

June 1994

Republic of the Philippines
PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES
Makati, Metro Manila

FINAL REPORT

I PROJECT TITLE:

MEDICARE I: EVALUATION OF ALTERNATIVE REFORM MEASURES

II NAME AND ADDRESS OF PRINCIPAL INVESTIGATOR

Corazon Urquico
4418 Unit A
Calatagan St.
Palanan, Makati
Metro Manila

III TIMEFRAME

- A. DATE PROJECT STARTED: 1 April 1993
- B. DATE OF COMPLETION: 30 June 1994

IV SUMMARY DESCRIPTION OF PROJECT

A. Brief Description

This study entitled Medicare I: Evaluation of Alternative Reform Measures seeks to provide the Philippine Medical Care Commission (PMCC) with short-run and long-run alternatives aimed at improving the performance of Medicare in terms of efficiency and equity. The overall framework utilized for this study bridges the findings of two previous baseline studies: namely, Administrative Issues of Medicare I and Economic Evaluation of Medicare I.

This is a complementary but different study in that it focuses on equity effects of altering the contribution and benefit structures and explores the impact of these reform measures on the financial structure of Medicare. For this purpose, a simulation model was developed. And in view of the policy shift of the Department of Health (DOH) to primary health care, the simulation model also considered how the Medicare program could help provide primary health care to those not covered by the program. Full Medicare costing in public hospitals was examined using DOH-PIDS survey data and DOH primary health care budget records.

B. Objectives

The following are the objectives of this study:

- 1 Review the major findings of earlier studies on Medicare and specify the problem areas to be addressed.
- 2 Prepare a simulation of several reform packages which address the problem areas discussed in the review.
- 3 Assess the alternative reform packages in terms of administrative and financial feasibility.
- 4 Identify management information requirements including efficiency indicators and measures that will be needed to assist in the monitoring and evaluation of the appropriate cross-subsidization schemes.
- 5 Provide guidelines for implementing agencies on the first steps to be taken in order to implement the feasible reform packages.
- 6 Determine impact on the trust fund over the long term of full Medicare cost pricing in public hospitals.
- 7 Identify possible institutional constraints in the implementation of full Medicare costing.
- 8 Discuss prospects for long run changes in the Medicare program specifically on the (a) feasibility of merging Medicare functions of SSS and GSIS; (b) managing the HIF as a separate health fund; (c) impact of changes in the contribution structure on employment; and (d) the effects of changing the reimbursement scheme (e.g. from itemized cost reimbursement to capitation).

C. Approaches and methodology

Basically, the project is a simulation study on the effects of changes in the current contribution and benefit structure of Medicare. For the former, changing the tax rates for the different income groups requires a recalculation of total contributions for each of the groups.

The simulation model used in this study was based on the model developed by Solon and Capuno (1994) for estimating the cost of a Medicare-based National Health Insurance Plan. Four policy instruments were used to improve the baseline performance indicators in the simulation exercises. These were changes in the income ceiling, tax rate, benefit rate and benefit package.

Changing the benefit ceilings requires estimates of actual costs of hospitalization across different hospital types and disease categories. Again a recalculation of the value of Medicare claims for each group is required and the effects on cross subsidization, using the same method used in the economic evaluation, are analyzed.

As a computational aid in establishing costing patterns among various alternatives, an accounting framework is constructed. It specifies ex ante various benefit and cost components of Medicare. A behavioural framework monitors changes in the accounting parameters as the reforms are simulated. The behavioural parameters include utilization rates, pricing and moral hazard.

The level of costs of future Medicare disbursements, over a relevant period, are calculated, to determine if it is sufficient to support Medicare over the long run. Estimates of adequate balances in the trust fund are made, using insurance industry standards.

In the evaluation of reform alternatives, this study used the following criteria: (1) equitable access to health services; (2) adequacy of benefits; (3) willingness to pay for insurance; (4) administrative feasibility and Medicare fund management; (5) administrative efficiency; and, (6) actuarial fairness.

Full Medicare costing in public hospitals is examined using DOH-PIDS survey data and DOH primary health care budget records. Legal provisions of pertinent laws are also scrutinized.

D. Major conclusions

1 Part I of this study is a review of the strengths and weaknesses of the Medicare I program. The following are its findings on several important aspects of the program:

The adequacy of benefits and equitable access to health services is hampered by low support values. The poorest income group is subsidized by other income groups including the second poorest group. Benefits actually vary due to different policies of SSS and GSIS.

In terms of efficiency of resource use, there is the absence of any real incentive to use medical resources efficiently. Excessive coverage of short hospital stays is likely to persist while the package of benefit does not permit the use of lower-cost alternatives.

As to financial viability and fund management, members below cut-off ceiling pay more compared to those who earn more, suggesting a regressive source of financing. SSS-HIF is better managed compared to GSIS-HIF and benefits payments are the single biggest expense of the program.

In regard to fund utilization and trade offs, the cost of insurance through SSS is much higher than GSIS. SSS, however, gives higher benefits per recipient whereas GSIS gives benefits to a higher percentage of its members. Although the average payment per claim has increased sharply, this is only in nominal terms.

In terms of administrative efficiency, SSS and GSIS operate within the 12 percent cap on administrative expenses to total income set by Medicare law. Personal expenses constitute the main administrative expense.

As regards reimbursement of providers, payment to providers is based on government-established reimbursement levels for all treatments and patient. Reimbursement approach does not tie payment of medical services to control over the cost or quality of services.

As to its delivery and resources, the program is strong in NCR, Central Luzon and Southern Tagalog but weak in other regions. Hence, the goal of providing equal access to services has not been reached.

2 The simulations showed the combinations of contributions and benefit ceilings feasible to the year 2000. Since equity and administrative feasibility are achieved mainly through increases in the income ceiling, SSS appears in a better financial position than GSIS to increase benefits. But even in the case of SSS, the study would not recommend the expansion of coverage to outpatient services. Indications showed it is not feasible in the long run and that administrative efficiency would be compromised.

3 The combined HIF simulations show that providing equal benefits to private and public employees would place a heavy burden on the HIF considering that start-up costs are ignored. The built-up surplus from the SSS would subsidize the greater utilization of benefits by GSIS members. As a result, increases in benefits would become lower for SSS members. Higher benefits for GSIS members are achieved only because the income ceiling is abolished. In the combined HIF package, the P7,000 income ceiling had to be applied to both GSIS and SSS members.

4 In the event that the proposed National Health Insurance Law is passed, the reserves of the combined HIF would be further eaten up (even under the 0 subsidy simulation). Even in optimistic projections, the NHIL would mean very little benefit increases in the future. An increase in income ceiling would not have any remarkable effects.

5 If the higher disbursement costs reflected in the "pessimistic" scenarios are closer to reality, Medicare beneficiaries will have to make do with even lower benefits than what are presented in the simulations.

6 Anecdotal data from 1992 trial balances of undeveloped public hospitals imply that Medicare does well in tertiary hospital services financing. Figures obtained from the DOH-PIDS survey suggest the substantial contribution of the Medicare program in maintaining the financial viability of medical facilities, especially public hospitals.

7 The study however found out that a few undeveloped public hospitals are so heavily subsidized as to be affected by changes in service income levels, such as full-costing Medicare. Without budgetary assistance from the national government, these hospitals would not survive. It is doubtful, therefore, that a full-costing Medicare would appeal to them as a viable alternative to income augmentation.

8 Estimates of Medicare non-availleurs show that nationwide, the number of non-availleurs is 19.52 percent of 1.4 Million recipients or roughly 275,375. Since the benefits foregone only by the poor members is of interest to this study, it is estimated that the value of these benefits not availed by the poor amounts to P 13.7 million. This amount would have gone to the coffers of public hospitals and would have contributed immensely to the Primary Health Care Program.

9 If the full-cost alternative were to be enforced, the simulation result would approximate the results of the simulation of SSS Package 2. Full costing Medicare would not incur more excessive losses than it is now. By the year 2000, the underwriting losses would have gone up a little more but the net losses would have gone down a bit. Government takes a beating in the cost of insurance, which grows lopsidedly in favor of the beneficiaries, but otherwise the administrative efficiency indicators remain unaffected.

10 Institutional capability building is a requisite in the implementation of the preferred reform package. As the "nerve center" of the program, the Philippine Medical Care Commission (PMCC) would have to adopt changes in its structure and system following these prescriptions:

Organizational Principles

- o Functional configuration should complement new responsibilities in light of the Medicare reform requirements.
- o Organizational structure should focus on two key policy functions - program development and research in addition to traditional monitoring and supervision.
- o The structure shall be characterized by checks and balances. The monitoring and control function will be disengaged from planning and development.
- o Building a lean and highly competent professional staff shall be the focus of human resources development.

Major Functions

- o Planning and Development shall set overall directions for Medicare, develop and test new programs, recommend policy changes.
- o Research and Actuarial Services shall collect and organize statistical information, conduct actuarial studies and provide analytic support to planning and development.
- o Accreditation and Supervision shall set provider accreditation standards, screen provider applying for accreditation and make sure accredited providers are complying with the Medicare law.
- o Resource Management shall attend to human resources, accounting, budgeting, information technology, public information, physical facilities, security, procurement and cashing.
- o Hearing and Investigation shall investigate and prosecute cases of violations of Medicare rules and regulations.

11 The study recommends the reorganization of PMCC's research efforts along three groupings: (1) statistics; (2) policy research; and, (3) actuarial services. The development of strong information environment and culture is intended to improve the timeliness and accuracy of data; institutionalize

rigorous data gathering and processing techniques and eventually network PMCC, GSIS, SSS with ECC and HMO's. This way, the crafting of policy recommendations and decision-making is elevated from mere opinions to sound judgment.

12 Changes in the contribution structure can have unintended consequences on the supply of and demand for labor. Increases in premium rates may also affect a worker's willingness to work by imposing high marginal tax rates on additional earnings.

13 Changes in the benefit structure may lead to excessive benefit expenditures because of the cost reimbursement mode of paying providers.

14 The rationale for expanding Medicare coverage must be to eliminate the inequities arising from incomplete coverage.

15 Consolidation of the funds would have to consider whether this would result in the most efficient use of resources, taking into account the equity objectives of Medicare reform and the administrative costs of setting up and maintaining the combined system.

16 Evidence shows a predisposition towards integration because of economies of scale and operational efficiency which would be achieved by combining both the financial and manpower resources of the two (2) systems.

17 This study suggests that before any merger of funds is done, policy corrections will have to be applied to cure the existing disparity in the financial performance of the two funds and to avoid the risk of the SSS fund eventually subsidizing the GSIS fund. For GSIS, both the equity effects and financial viability of its program will be enhanced if the salary-based cap on premium contributions were to be totally lifted and the payroll tax rate adjusted according to the benefits being planned. For SSS, policy adjustments will require increasing the income ceiling and benefit rate, while keeping the tax rate at its present level. At the point of merger, both systems must have a uniform, or nearly identical, benefit and contribution structures.

V TECHNICAL REPORT (Attached)

VI PROBLEMS ENCOUNTERED AND RECOMMENDATIONS

The project encountered a number of problems in the gathering of data on the Medicare program.

When the research portion of the study was underway, the Philippine Data Project based at the PMCC which was a major source of SSS and GSIS data, was not yet ready to provide the project team with its data requirements. Steps had to be taken by the project team to access the data from the available database by making arrangements to allow the team's research assistant to work on the data available in the computers. This required two (2) straight weeks to complete.

Gathering of data on the expenses incurred in the collection of Medicare contributions had been difficult to find. It would have given the team a complete picture of the expenses incurred in administering the program for the purposes of merging the services of SSS and GSIS. It turns out that the financial reports submitted by SSS and GSIS to PMCC cover only expenses for the processing of claims. SSS has a centralized collection department and the Medicare portion of the collection expenses was extracted by using the ratio system. GSIS could not provide any data on the collection of Medicare contributions at all.

For the portion on the full costing of Medicare, initial data committed to the project team by the Dept. of Health on the budgetary requirements of devolved hospitals and their Medicare income, statement of income and expenses, primary health care was never given. The project team had to source the data from other means, specifically the House of Representatives for the budgetary allocations. On the other hand, the financial data on the devolved hospitals was kindly provided finally by the Chief Accountant of DOH when the team's initial source could not deliver.

It was found that devolved public hospitals submit only trial balances to the DOH. These contain the usage of their budgetary allocations. Some hospitals do not provide data on their other sources of revenue and understandably, being trial balances, the expenditures are not fully itemized.

As it turned out, when it came to the point of extracting or searching data from what is available from regular reports or from sources within the agencies, the latter proved unwilling to go a step further from what they routinely did.

In the future, a more research friendly environment can be fostered if the full support of agencies involved in the project especially the sources of data is solicited. A gathering of representatives of these agencies through a workshop specifically explaining the benefits of the research to their institution would be a good incentive in promoting cooperation in the research work. It would also help if a specific contact person is officially assigned by the agency to assist the project team in its data requirements. Providing a financial incentive to this person from the project funds would be justifiable.

CONTENTS

BACKGROUND AND INTRODUCTION	1
OBJECTIVES OF THE STUDY	2
REVIEW OF LITERATURE	3
THEORETICAL FRAMEWORK AND METHODOLOGY	6
THE MEDICARE EXPERIENCE: REVIEW OF STRENGTHS AND WEAKNESSES	9
CRITERIA FOR THE EVALUATION OF REFORM ALTERNATIVES	13
THE SIMULATION MODEL	15
BASELINE VALUES AND OTHER ASSUMPTIONS	20
POLICY INSTRUMENTS	24
SIMULATION RESULTS	25
FULL MEDICARE COSTING	48
BUILDING INSTITUTIONAL CAPABILITY TO SUPPORT THE REFORM	55
PROSPECTS FOR LONG-RUN CHANGES	59
REFERENCES	
APPENDIX A: COMPARING APPLES WITH ORANGES	
ANNEXES	

BACKGROUND AND INTRODUCTION

The importance of Medicare as a health financing scheme could not be overemphasized. Although it currently accounts for only five percent of total health care expenditures in the Philippines, it covers a significant fraction of the whole population. Since it is a promising source of additional finances for health, its role in the Philippine health sector is expected to expand in the future especially if Phase II (for the non-wage sector) will be implemented. Thus, it is imperative that the reform measures be in place before current inefficiencies and inequities cause greater problems in the future.

There are three main component studies on Medicare--including this project--in the Baseline Studies for Health Care Financing Reforms. The first two studies, namely, "The Performance of Medicare I: An Economic Evaluation" and "Evaluation of Medicare I: Administrative Issues" were primarily concerned with the positive aspects of Medicare. Their main purpose was to identify inefficiencies and inequities arising from the current set-up. Their conclusions argue that present policies need to be substantially reoriented. These two recent studies on Medicare economic evaluation and administrative issues have been used as a major basis and rationale for this project.

This study on alternative reform measures suggests options specifically targetted to correct the identified problem areas. It also determines which of these alternatives are administratively and financially feasible. Each of these alternatives is best thought of as a reform package to be implemented in the short run. The centerpiece of each reform option is the cross-subsidization scheme developed in one of the two earlier studies. Also evaluated in this study is the feasibility of full-costing Medicare to lessen public subsidies to government hospitals. In the process, this project provides possible directions which administering agencies could take in order to address the identified problems and move quickly toward implementation. Linkages between the economic and administrative aspects are likewise made.

This project seeks to achieve its objective by undertaking the following activities: (1) identify the problems to be addressed through a review of past studies on Medicare; (2) propose several alternative reform packages using cross subsidies as policy mechanism; (3) simulate the effects of the reform packages; (4) determine the administrative and financial feasibility of the reform packages; (5) suggest initial steps to be taken by the implementing agencies and possible prerequisites to be met in order to execute said reforms; and (6) discuss other changes in Medicare which could only be implemented in the long run.

The initial incremental steps in the reforms can help generate additional data needed in designing subsequent policy measures.

OBJECTIVES OF THE STUDY

This study seeks to provide the Philippine Medical Care Commission (PMCC) with short-run and long-run alternatives aimed at improving the performance of Medicare in terms of efficiency and equity. In line with this, the following activities have been undertaken:

1. Review of the major findings of earlier studies on Medicare specifying the problem areas to be addressed. Since the economic evaluation of Medicare is focused on the cross-subsidization within the covered population, the reform packages consequently focus on this problem.

In addition, the study considers the policy shift of the Department of Health (DOH) to primary health care (PHC). One major constraint faced by the current administration is that the greater portion of the budget of the DOH is tied up with the maintenance of public hospitals. The possibility of using Medicare to free public resources for the PHC is examined.

2. Simulation of several reform packages which address the problem areas discussed in the review. The alternative reform packages consist of changes in the contribution and benefit structures. In order to support the government's PHC programs, the possibility of full-cost reimbursement of Medicare patients confined in public hospitals and the use of Medicare surplus funds to finance PHC and public health programs are investigated. A major part of the study involves the simulation of the possible effects of the reform packages on the problem areas.

3. Assessment of the above-mentioned alternative reform packages in terms of administrative and financial feasibility. An important part of this study is fund management: whether the schedule of contribution rate can produce revenues sufficient to meet all disbursements over a long period and maintain adequate balances in the trust fund. Tradeoffs between feasible cross subsidies and what can be financially supported are identified.

4. Identification of the management information requirements including efficiency indicators and measures that will be needed to assist in the monitoring and evaluation of the appropriate cross-subsidizations schemes.

5. Provision of guidelines for administering agencies on the first steps to be taken in order to implement the feasible reform packages. This includes identification of prerequisites such as changes in laws, identification of additional personnel and their qualifications, and identification of opportunities for research and development (R & D), that is, developing and applying innovations within the Medicare I program.

6. Determination of the impact on the trust fund over the long term of full Medicare cost pricing in public hospitals (tradeoffs are made in selecting the best overall financing structure).

7. Identification of the possible institutional constraints in the implementation of full Medicare costing in the public hospital sector.

8. Discussion of the prospects for long run changes in the program, specifically in the following areas: 1) the feasibility of merging the Medicare functions of SSS and GSIS, 2) managing the HIF as a separate health fund, 3) the impact of changes in the contribution structure on employment, and 4) the effects of changing the reimbursement scheme (e.g. from itemized cost reimbursement to capitation).

REVIEW OF LITERATURE

The literature on health care reform is already voluminous, and still more appear each year in the form of journal articles, books and monographs. There is a relatively smaller, but rapidly growing subset on medical care reform under social insurance (e.g., Goddeeris, 1984; Pauly, 1986; Abel-Smith, 1992; Scanlon, 1992). In the Philippines, the literature that directly address Medicare insurance reform are few, however. Solon and Capuno's (1994) is probably the first study to propose definitive reform packages and actually do a costing simulation of a health insurance plan—including one with Medicare-like features. Baseline assessments with indicative policy reform recommendations include those of Beringuela (1993), Gonzalez, et.al. (1993), Almario, et.al. (1993) and Gamboa (1991).

In designing a social insurance reform package, effectiveness is as important as viability, according to Solon and Capuno (1994), distinctly taking into consideration performance yardsticks such as people's willingness and ability to pay as well as cross-subsidies across income groups. The study seeks to illustrate the usefulness of a financial simulation model in fashioning a health insurance program with design elements that include the cost of services (in-patient and out-patient), the rate of service utilization, and the rate and structure of premium contributions.

Probably the most crucial policy area badly needing improvement is the equitableness of the Medicare program. A social security program, it is often argued, has a generally regressive effect on income equity, thus exacerbating social stratification (De Feranti, 1985). Poor members generally pay an equal or higher percentage of their income in payroll taxes but get less in medical service (with the possible exception of the high income quintile which absorb the tax through decreases in profits and returns on land and capital, as Beringuela (1993) finds out). If the poorest income group in Medicare does indeed receive subsidy, as Beringuela has discovered, it is not from the well-off members but from another poor group. Employing a Computable General Equilibrium model, the Beringuela study likewise shows that payroll taxes are associated with a high deadweight loss, and the burden of such taxes is passed on to agricultural workers via lower wages. Unfortunately, this excluded group has no way of availing of benefits from Medicare.

A possible policy antidote to this inequality is to directly shift a portion of the Medicare fund to subsidize undercovered or uncovered poor segments of the population as De Feranti (1985) suggests. Alternatively, it could finance the country's primary health program. But given the legal complications that this brings--for one, the Medicare fund belongs to private and public workers and this fiduciary nature implies that their consent will have to be obtained before the fund can be diverted for other purposes--other easier options might have to be explored. The entrenched nature of social security programs which have evolved a life of their own, moreover, suggests that "second-best" arrangements might be more practical and feasible, according to De Feranti. In the case of Medicare, one possible response is to lift the ceiling on payroll deductions, so that the richer groups pay the same percentage of their income as the poorer members. As the Solon and Capuno study suggests, the structure of contributions determines not only the revenue-generating potential of the program, but also its ability to ensure sound cross-subsidization. Another possibility is to full-cost Medicare, that is, enforce the availment of Medicare benefits by the poorer or indigent members who are currently subsidized in public hospitals. That would make it possible for government to decrease somewhat the level of public subsidies for hospitals, and free some resources for its primary health care program. These options, among other alternatives, are explored in this paper.

While the Medicare program must secure an equitable access to Medicare, the bottom line is still to keep the program financially viable. The Solon and Capuno study, for example, stresses the need to constantly focus on fund balance, so that the question of how much resources are to be mobilized to support projected costs, is immediately confronted. Although the fund viability indicator the study uses is simply the ratio of program revenues to expenditures, it is calculated across time and involves year-to-year changes in macroeconomic parameters such as inflation and employment rates, and population growth. The general finding from the simulation workouts is that a national health insurance plan is financially supportable, but will involve higher levels of contributions, in order to support higher service utilization rates, higher in-patient services, and the inclusion of an out-patient component.

Perhaps the more interesting part of the simulation, from the perspective of Medicare reform, is Solon and Capuno's replication of the Medicare program with universal coverage. Under a contribution structure in which income ceilings are eliminated, the Medicare-like program "passes the test." Cross-subsidization is safeguarded, only one percent of household income goes to premium payments, and revenues exceed expenditures by 19 percent. That suggests that healthy program reserves are possible. The attractiveness of the package is somewhat diminished if out-patient services are introduced, since the income ceilings have to be removed. Still, the insured will have to pay only 1.4 percent of their incomes as premium contributions, which is still modest by industry standards. The limitation here is that the authors do not differentiate between the wage sector and the self-employed--an important distinction since the self-employed are a loose category and their incomes are often not accurately determined. Solon and Capuno assume that an effective mechanism exists to track down the self-employed, so that collecting premium contributions from them will not be a problem.

Two big predicaments which Solon and Capuno discuss are the regularity of contributions and accruals from surplus funds. Interest income from invested surplus funds is the other main source of Medicare revenues. As the Gonzalez, et.al. (1993) paper indicates, the Medicare experience shows that these two behavioral issues are intimately linked to each other. Remittance rates have been declining in both the SSS and the GSIS, owing to both decreasing collection efficiency and the increasing dependence on investment income. Interest income has in fact exceeded collection income in recent years (which incidentally has allowed SSS to expand risk coverage for the benefit of the private sector workers). For Medicare to be viable, that implies that more than efficient collection procedures, sound investment practices have to be instituted. In the simulations, a 100 percent collection efficiency is assumed, but is admitted to be ideal, and therefore, unrealizable. To improve collection efficiency, Solon and Capuno suggest that premium payments be "piggybacked" to a number of tax collection efforts, including income taxes, residence taxes and business permit fees. They also recommend the adoption of a sensible investment portfolio management. In the light of the Medicare experience, both aspects may need equal attention.

The uneven financial experience of Medicare as a whole and economies of scale problems raise the question of the possible advantages of consolidating the program. Cost overruns, associated with GSIS, are hurting the program, and are triggering debates on the fungibility of the fund. As a World Bank (1987) policy study warns, government-run insurance programs are especially susceptible to political pressure to subsidize the insurance system from general tax revenues. If it happens, the insurance program becomes a benefit for the better-off, paid for in part by the poor. Consolidation may be the way out to avoid both cost escalation and equity problems, although admittedly it will be SSS which will have to bankroll the changes, on account of its better financial capacity.

Apart from financial advantages, there might be planning and management payoffs in a merged structure. Power and authority within the Medicare program, the Gonzalez, et.al. study indicates, are allocated badly. PMCC is the policy-making body of the Medicare program but due to the control of the SSS and GSIS in financial decisions, it has very little power over the overall direction of the program and over the policies of the two systems. One major weakness of the program is that none of the three agencies are involved in research and development.

Gonzalez, et.al. maintain that consolidation could allow Medicare to reclaim many policy initiatives and reverse prevailing trends. The new structure will conceivably remove dualities in benefit payments and administrative expense, reduce adverse selection by distributing risk more evenly, and maintain a better symmetry between the benefit structure and the pattern of premium collections. A cautionary note is also provided by the authors: in making choices, the concern is whether the alternative could upgrade the quality and improve the quantity of service. Each new context (practicality of objectives, political feasibility, ease of implementation, sustainability, flexibility over time, etc.) might call for different handling and must be appraised in its own right. From the perspective of a national health insurance plan, Solon and Capuno argue that the organizational set-up should be considered in relation to administrative costs, including set-up costs. They mention a number of configurations that need serious attention, such

as a centralized system; a two-track system for the employed and the self-employed and a decentralized, federated system.

THEORETICAL FRAMEWORK AND METHODOLOGY

1. Conceptual Framework

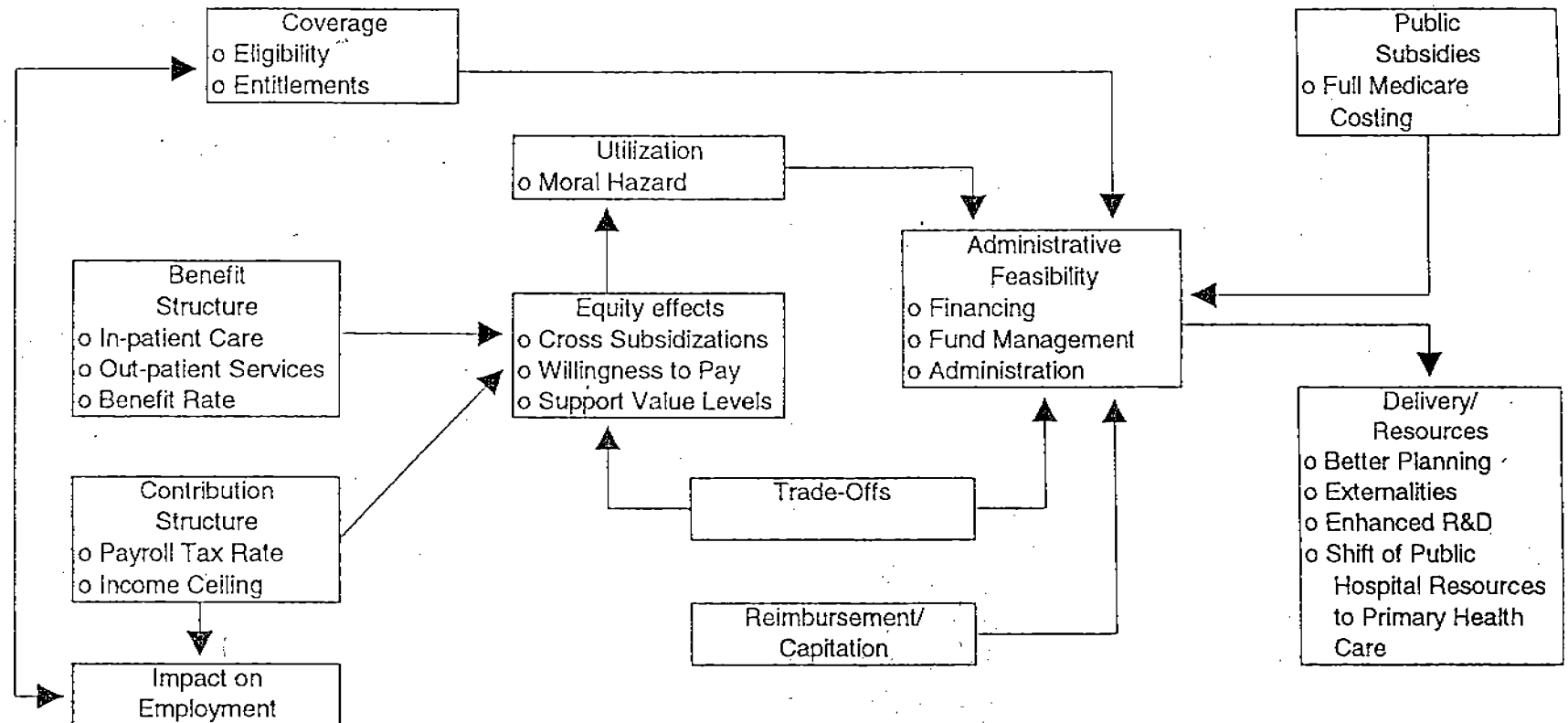
The overall framework of the study bridges the economic and administrative phases of the two earlier baseline studies on Medicare. This "enhanced model" is presented on next page. The left side of the diagram pieces together the economic components of the study. Reform alternatives which focus on the major findings of the Beringuela study, especially on the effects of changing the benefit and contribution structure on cross-subsidizations will be dealt with using this portion of the model. The right side pulls together the administrative components identified in the Gonzalez paper, and is the reference point for determining whether the reform packages are financially and administratively viable. The framework thus clearly defines the linkages between the economic and administrative aspects of Medicare.

As shown in Figure 1, the heart of the reform packages lies in determining the equity effects of altering the contribution and benefit structures. How to ensure cross-subsidization is the most important equity effect. In part, cross-subsidization is derived from the sense that risk-sharing arrangements could be made equitable because a sliding-scale contribution structure could be used to have higher income participants subsidize those with lower incomes. By experimenting with various benefit and contribution patterns, changes in cross-subsidies can be observed. The attractive feature of this simulation is the prospect of achieving appealing combinations of benefit and contribution "pricing" which could support equity objectives and avoid perverse subsidization across income groups, and low support value levels. There are caveats, though. Raising the contribution rates, for example, might conceivably have an adverse impact on employment (with firms avoiding the Medicare tax by substituting capital for labor), and eventually on expanding coverage. Revising the benefit structure upward might also raise utilization levels (since social insurance has a claims-intensive character) to a degree that undermines the financial viability of the program.

Differing cross-subsidy schemes would result in different utilization patterns; in turn, changes in utilization would have a dramatic impact on the financial structure of Medicare. The necessary Medicare revenues may fall short of what is needed to carry out the policy decisions for reallocation of Medicare resources among income groups. Some cross-subsidization schemes could raise costs and augment existing inefficiencies. Nor is the preferred reform policy package itself a simple one to implement administratively. Because of current weaknesses in the administrative structure of Medicare--claims processing inefficiencies, inadequate monitoring and evaluation capacities, lack of development-oriented, forward-looking technical and professional manpower--the introduction of new reforms will take time. Avoiding these pitfalls requires a

Figure 1

Medicare I Reform Analytical Framework



careful examination of the financial and administrative feasibility of the reform measures. That means taking a close look at fund management issues and funding arrangements (including reimbursement/capitation), and at various approaches to administration and management that need to be introduced. Tradeoffs between what is administratively/financially feasible and viable and what is economically efficient and equitable will have to be carefully examined. For convenience, government funds are assumed to be non-fungible. No changes are contemplated which will shift the burden of Medicare financing from the payroll tax.

In view of the policy shift of the Department of Health to primary health care, the simulation model looks at how the Medicare program could assist the uncovered population in securing access to primary health care. One possibility is full-costing Medicare in the public hospital sector. There is a widely-held view--still to be confirmed empirically--that many poor Medicare members do not avail of Medicare benefits, and instead rely on hospital subsidies to cover medical expenses. Full-costing Medicare would free the subsidies for use in PHC activities. Alternatively, a small fraction of the Medicare fund could be diverted for helping provide PHC to the uncovered. In this way, Medicare could subsidize poorer segments of the population, instead of the reverse, as is now the case.

The study relies heavily on the concepts and methodologies used in earlier component studies. The same criteria are used to determine the direction of cross subsidizations among the different groups within the covered population. In lieu of the earlier definition of cross subsidy--for a particular group, the ratio of the percentage share of benefits to the percentage share of contributions--cross-subsidization rate used by Solon and Capuno (1994) is adopted. This cross-subsidization rate across income groups measures how much a member belonging to a specific income group receives from other groups in addition to his own contributions. Additionally, a willingness-to-pay index, also adopted from Solon and Capuno, is used to measure the administrative and financial feasibility of the reform. The study also examines the results, and employs the same standards and in administrative issues.

2. Sources of Data

The study relies on the following information sources: (1) previous Medicare studies, especially the earlier component studies on economic evaluation and administrative issues; (2) secondary data from the PMCC, GSIS and SSS (e.g., membership files and claims histories, financial statements and actuarial studies, and data being consolidated by the AMCRA project); (3) the primary survey of the DOH-PIDS Health Project; (4) Medicare laws and regulations; (5) Department of Health budget and hospital data; (6) DOH primary health care allocation data, and (6) diagnostic interviews with various Medicare stakeholders.

3. Analytical Tools

Basically, the project is a simulation study on the effects of changes in the current contribution and benefit structure of Medicare. For the former, changing the tax rates for the different income groups requires a recalculation of total contributions for each of the groups.

Changing the benefit ceilings requires estimates of actual costs of hospitalization across different hospital types and disease categories. Again a recalculation of the value of Medicare claims for each group is required and the effects on cross subsidization, using the same method used in the economic evaluation, are analyzed.

As a computational aid in establishing costing patterns among various alternatives, an accounting framework is constructed. It specifies *ex ante* various benefit and cost components of Medicare. A behavioral framework monitors changes in the accounting parameters as the reforms are simulated. The behavioral parameters include utilization rates, pricing, and moral hazard.

The level-cost of future Medicare disbursements, over a relevant period, is calculated, to determine if it is sufficient to support Medicare over the long run. Estimates of adequate balances in the trust fund are made, using insurance industry standards.

Full Medicare costing in public hospitals is examined using DOH-PIDS survey data and DOH primary health care budget records.

Legal provisions of pertinent laws also are scrutinized.

THE MEDICARE EXPERIENCE: REVIEW OF PROGRAM STRENGTHS AND WEAKNESSES

1. Adequacy of benefits and equitable access to health services

The primary problem with Medicare is low support values. Inadequate financing has caused a decline in the support value and correspondingly a decline in the access by the poor to high-quality medical care. The maximum benefit that any household could have for physician, accommodation, laboratory, x-ray and drugs combines would be between 30-45 percent of total costs. The low support value has been a deterrent to the use of needed medical resources, especially for the poor members, who have limited access to alternative medical services. In the absence of the alternative health financing schemes to pick up part of the costs of health care, many poor families who are insured under Medicare would still be burdened by inordinately high out-of-pocket expenses.

Viewed from a slightly different perspective, GSIS and SSS data support the conclusion that the poorest income group is subsidized by the other income groups. The second poorest group, which otherwise should receive subsidy, is instead a source of it. Regional cross-subsidization has a mixed record, with the National Capital Region (a rich region) and Region 8 (a poor region) being the primary sources of subsidy. If fraud exists in subsidy-receiving regions, however, then it is the providers rather than the Medicare members themselves who are benefitting.

Medicare has also failed to protect members from the financial consequences of poor health by excluding some benefits from coverage and by setting limits on the maximum amounts that will be paid. In principle, Medicare has uniform benefits, but in practice, there are de facto variations in benefits that now exist because of differing policies adopted by the SSS and the GSIS. The Medicare program provides no remedies for inadequate catastrophic coverage. Higher average Medicare expenditures by the richer quartiles could be partly explained by the prevalence of "expensive" diseases in these groups and in their preference for private higher facilities.

2. Efficiency of resource use

Another criticism levelled against Medicare is the absence of any real incentive to use medical resources efficiently. While it does assist workers and employees who are considered poor health risks and who are unable to obtain private health insurance coverage, the excessive coverage of short hospital stays is likely to persist.

The benefit package does not permit the use of lower-cost alternatives. For example, care might be more efficiently provided on an outpatient rather than an inpatient basis, by GP physicians rather than specialists, and where possible, by paramedical personnel rather than doctors.

3. Financial viability and fund management

Medicare payroll taxes continue to finance medical care under the program. High-income patients covered by Medicare make only small contributions toward the cost of care because of the income ceiling. Members below the cut-off considerably pay more, relative to their incomes. The regressive character of this financing source, except for the highest income range (which absorb the tax through decreases in profits and returns on land and capital) has been already noted. Besides, results from the CGE model developed for the economic evaluation of Medicare have shown that payroll taxes are an inefficient source of revenue owing to the high deadweight loss associated with it. The experiment from the CGE model has demonstrated that the burden of the tax is passed on to agricultural workers in the form of low wages. Ironically, agricultural workers do not enjoy Medicare benefits.

The costs of Medicare for employers are ultimately borne either by consumers, in the form of higher prices, or by workers, in the form of lower wages. Costs here are defined as expenditures under the program, and government budgetary expenditures required by the program. Some of these government expenses, such as those of PMCC, could have been made under the HIF. There are no empirical studies on the impact of Medicare on employment patterns.

The SSS and GSIS have gone to extremes in the management of the HIF. SSS-HIF is too well managed while the GSIS-HIF is poorly managed. Anywhere from two-thirds to three-fourths of the fund is accounted for by SSS, a factor that has allowed it to enjoy economies of scale and post high underwriting gains. In turn, underwriting windfalls have enabled SSS to deepen its investment income base, which now accounts for half of the HIF yearly gross revenues.

The SSS-HIF is also ahead of the GSIS-HIF in terms of other financial indicators such as liquidity, debt-to-assets ratio and return on investment. The GSIS-HIF, on the other hand, was locked in unprofitable investments early on, a factor that led to underwriting losses and a weak investment income buffer. The GSIS fund would not last another year in terms of its reserve capacity. Both Medicare funds have been accumulating large receivables. Collection efficiency for both has been on the decline, especially for the GSIS-HIF.

Benefit payments are the single biggest expense of the two systems, indicating the system's high capability to meet its obligations to its members. This task would be complicated by the proposed expansion of insurance coverage to many outpatient services for which there is little actuarial experience and little economic research on the sensitivity of consumer demand to price changes.

4. Fund utilization and viability tradeoffs

The SSS gives higher benefits per recipient. However, GSIS gives benefits to a higher percentage of its members within its own coverage base. Although the number of members who have availed of Medicare benefits has not greatly increased through the years, average payment per claim has increased sharply in recent years--but only in nominal terms. It actually declined in real terms. The cost of insurance through SSS is much higher than that of GSIS, and SSS members are paying for this through lower benefits.

5. Administrative efficiency

SSS and GSIS have provided the organizational strength in the administration of the program, specifically in the aspects of fund management and processing of claims. The two systems have consistently kept administrative expenses well within the 12 percent cap on total income set by the Medicare law. Such performance has enabled the fund to keep its operational expenses at a minimum and contribute to the realization of income. Administrative costs,

however, have been concentrated on personal expenses (salaries and wages). The program has, by and large, been effective in controlling its operational expenses.

6. Reimbursement for providers

Payment to participating providers is based on government-established reimbursement levels for all treatments and type of patients.

The major disadvantage of the program's reimbursement approach is that it does not tie payment of medical services to control over the cost or quality of services provided. There are no incentives to police the market and weigh the value of various forms of treatment against the resource cost of providing the services. Providers have no motivation to use the lowest-cost combination of resources to provide any given level of care. Physicians might even subvert the restricted fee schedule by increasing the number of services offered (by giving more laboratory tests, requiring repeat visits for patients, limiting length of consultations).

A possible reform measure for controlling costs is reimbursement of institutional providers by prospective payment systems with various incentive features. Physicians could elect to be paid on a capitation, fixed salary, or fee-for-service basis.

7. Delivery and resources

The Medicare program is charged with assuring the availability of medical services in all parts of the country for all insured workers and employees. In this respect, the program is strong in providing services in the National Capital Region, Central Luzon and Southern Tagalog. This is inevitable because most tertiary and secondary hospitals are concentrated in these areas.

The goal to equalize access by making sure there is a sufficient number of facilities and physicians in each region has not been reached. The Cordillera and Western Mindanao regions have lagged behind other regions like the National Capital Region, Central Luzon and Southern Tagalog. The PMCC once assisted in the development of Medicare community hospitals located in poverty and rural areas, by providing financial assistance for development and construction, as well as for operating deficits during the initial phases. But this practice was discontinued because of high capital costs, and the hospitals already built were turned over to the Department of Health.

While the introduction of Medicare caused poor insured workers as a whole to make rapid gains in the use of medical services, rural residents have not experienced substantial gains compared to urban residents.

CRITERIA FOR THE EVALUATION OF REFORM ALTERNATIVES

Evaluating the possible alternative approaches to Medicare requires decisions on a number of issues. Deciding on the many possible features or variants of a social insurance plan is not often a clearcut choice. A set of evaluation criteria is needed to clarify tradeoffs involved in the major features of Medicare. Note that the emphasis of the reform packages is on filling existing gaps in the current system (using feasible policy instruments) and eliminating the most serious shortcomings, rather than on developing an entirely new, comprehensive system. In the light of the Medicare experience discussed in the previous chapter, the following criteria seem appropriate to consider in the design of the reform packages.

1. Equitable access to health services

Since poor health is correlated with low income, Medicare I should be assisting low-income members. The Medicare experience shows that the program tends to assist those with high medical bills (occasioned by "expensive" diseases). Demands on the Medicare by higher-income groups often divert resources away from poor members and dependents. The supply of Medicare resources available to low-income members is thus interlocked with patterns of medical care given to others. Inevitably, although poorer wage-earners are covered, Medicare is not able to offer them adequate protection against the high cost of medical care. *Cross-subsidization* alters this calculation by reducing the net cost of services to the poor but not others. Cross-subsidies are possible only if the salary contribution base of Medicare is changed to make it progressive. Reform of the payroll tax, for example, may make it less regressive than what exists now.

2. Adequacy of benefits

The mandate of the Medicare program is to keep *support value levels* at 70 percent of the cost of eligible services. Based on the Medicare experience, the series of upward revisions in the premium payments have not been adequate to maintain the support value target, since "providers are prone to adjust their fees and charges upward after every increase in the composite support ceiling." (Almario, et.al., 1993). Assuming supplier-induced price increases can be minimized, the support value target can be attained by increasing reimbursable fees and charges, that is, improving the benefit rate. Reimbursable costs currently cover three kinds of benefit services: (1) institutional services: inpatient care up to 45 days; (2) personal services: physicians, laboratory and x-ray; and (3) other services: prescription drugs and medical supplies. It is important that choices be made among alternatives on the basis of expected support levels in relation to cost.

The inclusion of additional types of medical care in the benefit package requires a separate decision criterion. These include items that can be quite costly, other than

hospitalization and specialist physicians' fees, such as lower-cost services that will come in great volume (e.g., outpatient services). In some of the alternatives proposed, the benefit package is enhanced to include outpatient care.

3. Willingness to pay for insurance

Reform in the contribution structure of Medicare is not a simple matter of lifting the income ceiling or raising the payroll tax. The amount of premium paid under a compulsory program is evaluated by the insured relative to the attractiveness of the expected benefits. A Medicare consumer is *willing to pay* for a given set of benefits or services than it is necessary to pay only if he perceives that the expected benefits outweigh the personal costs in the form of higher premiums. At some point, interventions in the contribution base may be desirable, but the key issue is whether Medicare consumers are willing to pay for the new services available to them (this should be somewhat qualified by the fact that employers subsidize half of the premium payment). On another aspect, willingness to pay can be useful in "anticipating" the collection efficiency of the system (Solon and Capuno, 1994).

4. Administrative feasibility and Medicare fund management

As a rule, the basic standard followed in fund management is the ability of the going concern to meet its obligations. In the case of Medicare I this is the ability of the HIF to cover benefit payments and operating expenses at any given time. Any going concern has both short-term and long-term obligations. Benefit payments and operating expenses are the short-term obligations of the program. Medicare, which is not indebted to any financing institution hardly has any long-term obligations.

The management of the HIF is therefore focused on sustaining benefit expenditures (plus administrative costs) through various revenues generated, that is, maintaining a healthy fund balance. Sound fund management is therefore a factor of collection efficiency, effective fund utilization and wise investment decisions. Financial indicators such as *net income*, *underwriting gain*, *reserve capacity*, and *benefit expense per recipient or per capita* serve as useful tools in evaluating fund viability. As will be seen later, many of these fund management indicators are somehow related to the other performance criteria. For example, benefits paid per recipient is a function of the price of medical services and the support value. Underwriting gain and reserve capacity are a function of expenditures, and therefore, of support levels. Necessarily, the financial indicators are affected by changes in the tax rate, the income ceiling, the benefit rate and the benefit package. The exact relationships are discussed in the next chapter.

5. Administrative efficiency

Administrative expenses--processing and other payment related costs, collection costs, administrative overhead--under the reform packages need not be lower than current ones, relatively speaking. The Medicare Law has set the standard for the administrative costs at 12 percent of total incomes for the SSS and GSIS. It has never been exceeded (Gonzalez, et.al., 1993). Low operating expenses do not necessarily imply efficient operation if the reform package is sensitive to the size and frequency of claims and the mix of services insured. Adding outpatient services, for example, would jack up both processing cost and collection cost. Note also that each reform package would inevitably affect the mix of financial responsibility for administering Medicare I between GSIS and SSS. The possibility of unifying Medicare would also mean adding start-up costs, if they can be inferred. Apart from the 12 percent cap, *administrative efficiency* can be measured in terms of operating expenses as a proportion of a number of key variables, including total contributions, total revenues, total number of claims made, and total benefit payments.

6. Actuarial fairness

From an actuarial point of view, the expected benefits accruing to the insured must at least equal the premium he is paying, after factoring in the amount that goes to administrative expenses, investment and overhead. That amount, often called *cost of insurance*, is underwritten by members and should be as reasonably small as possible. The cost of insurance is measured as a percentage of premiums (loading rate). The evidence shows that the cost of insurance for SSS members has been quite high relative to that of GSIS members, suggesting that SSS members as a whole have been bearing a heavier burden in supporting Medicare (Gonzalez, et.al., 1993).

THE SIMULATION MODEL

This section is based on the simulation model developed by Solon and Capuno (1994) for estimating the cost of a Medicare-based National Health Insurance Plan. For the purposes of this study, income groups will be used instead of income quartiles since the Medicare membership is not divided into four equal groups.

1. Total Revenue (TR)

Total revenues (TR) are simply the sum of actual contributions and investment and other income (OY) less collection costs (TA_{2t}). The simulation model covers the period 1993 (t=1) to the year 2000 (t=8).

$$TR_t = AC_t + OY_t - TA_{2t} \quad (1)$$

Allowing for cases where Medicare contributions are not religiously remitted, potential contributions (PC) refer to total contributions which could be collected if there is 100% compliance. Potential contributions (PC) are equal to the number of paying members per income group (N_j) multiplied by the premium rate (R_j) summed over all the income groups

$$PC_t = \sum_j N_{jt} R_j = N_{1t} R_1 + N_{2t} R_2 + N_{3t} R_3 + N_{4t} R_4 \quad (2)$$

Actual contributions (AC) then, are equal to potential contributions (PC) less the amount not yet remitted. The parameter α thus measures the percentage share of receivable contributions to total.

$$AC_t = (1-\alpha) PC_t \quad (3)$$

Total collection costs (TA_2) are the sum of the average collection cost (A_2) times the number of paying Medicare members (N), or

$$TA_{2t} = N_t A_2 \quad \text{where } N_t = \sum_j N_{jt} \quad (4)$$

Other revenues not coming from collection income termed investment and other income (OY) are defined as the sum of interest earnings from reserves (IY) and other non-collection income (O). This year's investment funds (I_t) are equal to investment funds (I_{t-1}) plus the overall balance (SUR_{t-1}) in the preceding year. Finally, investment funds (I) earn an effective interest rate (r) based on the system's track record.

$$OY_t = IY_t + O_t \quad (5)$$

$$I_t = I_{t-1} + SUR_{t-1} \quad (6)$$

$$IY_t = r (I_t) \quad (7)$$

2. Total Expenditures (TR)

Total expenditures (TE) equal the sum of total benefit payments (TB), total disbursement costs (TA_1), and total administrative costs (A_3). Solon and Capuno make a distinction between legitimate benefit payments and fraudulent claims but since claims paid by the systems represent expenditures whether they are legitimate or fraudulent, this paper thus ignores this distinction. Total administrative costs (A_3) refer to overhead costs such as maintenance and other operating expenses not easily related to disbursement or collection costs.

$$TE_t = TB_t + TA_{1t} + A_{3t} \quad (8)$$

Total benefit payments (TB) are equal to the sum across all income groups of the average value of claims paid (AB) multiplied by the number of claims made (S). The subscript $j=5$ refers to retirees who make no contributions but can still claim benefits. The subscript i , on the other

hand, refers to either inpatient benefits or outpatient benefits. Though Medicare currently reimburses medical bills from hospital inpatient care, the simulation model can accommodate expansion of coverage to outpatient benefits.

$$TB_t = \sum_i \sum_j AB_{ijt} S_{ijt} \quad (9)$$

The support value rate (v) is calculated as the percentage of the average price of the service (P) shouldered by Medicare, or

$$v_{it} = \frac{AB_{ijt}}{P_{it}} \quad (10)$$

Total disbursement costs (TA_{it}) are defined as the average cost (A_1) of processing, verifying and releasing the check to the provider multiplied by the number of claims filed summed over the type of service availed.

$$TA_{it} = \sum_i A_1 S_{it} = A_1 \sum_i S_{it} \quad (11)$$

3. Overall Balance (SUR)

Finally, the overall balance (SUR) is just total revenues (TR) less total expenditures (TE). A deficit (or a negative surplus) is incurred when total expenditures exceeds total revenues.

$$SUR_t = TR_t - TE_t \quad (12)$$

PERFORMANCE INDICATORS

The following performance indicators which serve as measures for evaluating the baseline and reform packages are derived from the above simulation model. Indicators 1 and 2 measure the equitableness of the program if the reform packages are implemented while indicators 4 to 10 pertain to administrative feasibility. The latter also refers to the sustainability of the program.

1. **Willingness to Pay (WTP_j)** is an indicator of how much benefit is received by each member (on the average) in a particular income group per peso premium paid to the system.

$$WTP_j = \sum_i AB_{ij} S_{ij} / \sum_j N_j R_j \quad (13)$$

If $WTP_j > 1$, expected benefits exceed the cost of being a member, thus, willingness to pay is high. $WTP_j = 1$ means members in income group j are indifferent whether they are covered by the program or not while $WTP_j < 1$ implies that members in income group j are paying more than what they expect to collect as benefits.

2. Cross Subsidization Index¹ (X-Sub_j) measures whether members of a particular income group receive from or provide subsidy to other income groups.

$$X-Sub_j = (WTP_j / (\sum_{h \neq j} WTP_{h,j} / 3)) - 1 \quad (14)$$

An $X-Sub_j = 1.5$ means that income group j receives P 1.50 more from other groups per peso contribution made. Thus, a negative $X-Sub_j$ means that the group is subsidizing the other groups.

3. Support Value Rate (v) measures the percentage of actual costs borne by the program. The equation for support value rate is given above (Eq. 10). The target support value rate of Medicare is 70 percent.

4. Net Income (NI) is the principal yardstick of administrative feasibility which requires that total revenues is at least equal to total expenditures. In the simulation model, net income is equal to overall balance (SUR) (Eq. 12).

5. Net Underwriting Gain (NG), also called net insurance gain, determines whether Medicare contributions are enough to cover all expenses, including benefit expenditures and administrative expenses. Algebraically,

$$NG_i = AC_i - (TB_i + TA_{1i} + TA_{2i} + A_{3i}) \quad (15)$$

6. Reserve Capacity (RCap) reflects the number of years current reserves can adequately cover Medicare reimbursement. Reserve capacity (RCap) is just reserves or investment funds (I) over total expenditures (TE), or

$$RCap_i = I_i / TE_i \quad (16)$$

7. Benefits Paid per Recipient (ABR) is equal to total benefit payments over total number of claims.

$$ABR_i = TB_i / \sum_{ij} S_{ij} \quad (17)$$

¹This index is used in lieu of Beringuela's definition of cross subsidy. The two indices are related in that if the ratio of the share of benefits to the share in contributions exceeds one, $X-Sub_j$ is positive. On the other hand, if the share of benefits over the share in contributions is less than unity, $X-Sub_j$ must be negative.

8. **Benefits paid per capita (ABC)**, on the other hand, measures the average value of benefits that go to each insured. Thus,

$$ABC_t = TB_t / 5 \sum_j N_{jt} \quad (18)$$

The above equation assumes that each member has four dependents.

9. **Administrative Efficiency** measures operation expenses against several key values in the model.

$$AE^1 = \frac{TA_{1t}}{AC_t} \quad (19)$$

$$AE^2 = \frac{TA_{1t}}{TR_t} \quad (20)$$

$$AE^3 = \frac{TA_{1t}}{\sum_{ij} S_{ijt}} \quad (21)$$

$$AE^4 = \frac{TA_{1t}}{5 \sum_j N_{jt}} \quad (22)$$

$$AE^5 = \frac{TA_{1t}}{TB_t} \quad (23)$$

where TA_1 is total disbursement cost. Collection costs are generally excluded following the pattern used in Gonzalez, et al (1993). An exception is made in the simulation exercises for SSS and Phase 2 to reflect imputed collection expenses. AC is total actual collections, TR is total revenues, $\sum_{ij} S_{ijt}$ is total number of claims made (inpatient and outpatient), $5 \sum_j N_{jt}$ is total number of members plus their dependents and TB is total benefit payments.

10. **Cost of Insurance (CI)** measures the amount that goes to administrative expenses, investment and overhead as a percentage of premiums (loading rate). This "underwriting" cost is borne by the Medicare enrollees. Mathematically,

$$CI = \frac{AC_t - TB_t}{AC_t} \quad (24)$$

BASELINE VALUES AND OTHER ASSUMPTIONS

Tables 1, 2 and 3 present the baseline values for GSIS, SSS and combined HIF which are crucial in determining the results of the simulation model. The tables are an attempt to reconcile data coming from three main sources: (1) the Health Data System (HDS) from PMCC, (2) the Philippine Health Insurance Data (PHID) also from the PMCC, and (3) the DOH-PIDS primary survey.

The HDS is a database of Philippine Health Insurance Data coming from the SSS and GSIS which implement the government's compulsory health insurance program and some participating HMOs. The HDS is a product of the Philippine Data Project funded by the USAID specifically to install the necessary hardware and software required for the said database. The PHID is the product of the general accounting reports submitted to PMCC by SSS and GSIS. It is simply the year-end tally of total coverage, claims made, benefits paid, contributions collected, the amount of reserves, etc. of the Medicare HIF. Finally, the DOH-PIDS Project aims to provide baseline information concerning the Philippine health sector by funding a primary survey on households (medical care users), hospitals and outpatient clinics and research projects on health facilities, manpower and financing (including this paper).

The GSIS baseline values (Table 1) draw heavily from HDS data (Jan. - June 1993). Distribution of members among the different income groups and share in the number of claims as well as average value of claims were processed from this source. The number of members and claims, total benefits and contributions were adjusted using the reported values from the PHID. Since the income data from the HDS are not updated, the members were simply distributed among the different salary grades as provided by the Salary Standardization Law. Contributions are based on the corresponding salaries from each grade. The simulation already takes into account Joint Resolution No. 1 series 1994 which increases the salaries of government employees up to an average of 100% by 1997.

Table 1. GSIS BASELINE VALUES, 1993

Income Groups	I	II	III	IV	Retirees	Total
Salary Grades	1-10	11-16	17-20	21-35		
No. of Members	568,562	319,564	68,257	40,440	103,177	1,100,000
Distribution	51.687%	29.051%	6.205%	3.676%	9.380%	100.00%
No. of Claims	330,192	190,596	31,728	17,004	22,860	592,380
Distribution	55.74%	32.17%	5.36%	2.87%	3.86%	100.00%
Ave. Value of Claims	1,461	1,703	2,149	2,407	2,150	
Ave. Contrib.	648	900	900	900	0	
Monthly Salary Range	2000-3325	3309-5132	5201-7288	7478-25000		

Since the majority of members from the SSS (processed from the HDS) have no reported incomes, the baseline values (Table 2) were adopted from the information in the DOH-PIDS

survey. So, given the number of non-contributing members from the HDS, the rest of the SSS membership were distributed equally among the different income groups. The distribution of claims among income groups was obtained by adding a quarter of claims from those with no reported incomes to each of the four income groups. The average value of claims came directly from the HDS data while potential contributions were calculated from the reported average household expenditures from the DOH-PIDS survey. When this potential contribution was compared with reported collections from the PHID, it was found that actual contributions totalled 83.67 percent of potential contributions which were applied equally across all income groups.

Table 2. SSS BASELINE VALUES, 1993

Income Groups	I	II	III	IV	Non-cont	Total
No. of Members	793,690	793,690	793,690	793,690	357,922	3,532,682
Distribution	22.47%	22.47%	22.47%	22.47%	10.13%	100.00%
No. of Claims	190,357	187,579	186,728	177,186	53,348	795,198
Distribution	23.94%	23.59%	23.48%	22.28%	6.71%	100.00%
Ave. Value of Claims	1,583	1,997	2,421	3,487	2,722	
Ave. Contrib.	437	633	900	900	0	
Ave. HH Exp.	1,456	2,113	3,630	6,598		

For the combined HIF (Table 3), members, claims and reserve funds from GSIS were added to SSS. Subsequent increases in GSIS salaries were ignored so that there would be no switching of income groups. Using information on government employees salaries, members belonging to GSIS income group I were added to SSS group II and so on. Thus, GSIS income groups III and IV were added to SSS income group IV. The average value of claims and contributions was calculated using SSS baseline values.

Table 3. COMBINED HIF BASELINE VALUES 1993

Income Groups	I	II	III	IV	Non-cont	Total
No. of Members	793,690	1,362,252	1,113,254	902,387	461,099	4,632,682
Distribution	17.13%	29.41%	24.03%	19.48%	9.95%	100.00%
No. of Claims	190,357	517,771	377,324	225,918	76,208	1,387,578
Distribution	13.72%	37.31%	27.19%	16.28%	5.49%	100.00%
Ave. Value of Claims	1,583	1,997	2,421	3,487	2,722	
Ave. Contrib.	437	633	900	900	0	
Ave. HH Exp.	1,456	2,113	3,630	6,598		

Aside from the baseline values presented in the tables, the following are a list of the assumptions applied in the simulation model.

1. Average cost of in-patient and out-patient care

Only two cost estimates are made for in-patient care. The low estimate of P 4,000 is based on reported average hospital bills from the PMCC hospital survey (plus inflation). The high estimate, P 8,000 is based on actual hospital billings from the PIDS-DOH survey data. Prices are assumed to increase by 10 percent annually.

For outpatient care, average costs are assumed to equal P 200 (higher than the cost per visit based on the PIDS-DOH survey). Like in-patient care prices, costs increase by 10 percent per year.

No distinction is made between public or private provider care but members availing of public provider care are expected to have higher support value rates (assuming the same severity of illness).

2. Utilization rates

For in-patient care, no changes in utilization rates are assumed when there are no benefit increases and on the initial run of the simulation. In packages where moral hazard is specified, it is assumed that the number of claims will increase by 2 percent for a 100 percent increase in benefit applied equally across all income groups. The moral hazard effect of insurance induces patients and their physician-agents to utilize more health care resources. Aggregate expenditures become greater than they would otherwise be.

Utilization rates for out-patient care is 50 percent of membership. Considering that each member is assumed to have four dependents, this assumption is low. This assumption may be reasonable depending also on how informed the members are and the red tape involved in claiming benefits.

3. Contributions

For GSIS, 100 percent compliance is assumed and contributions are calculated from the income ranges for each salary grade as provided by the Salary Standardization Law. For SSS, contributions are based on the average household expenditure per quartile of the DOH-PIDS survey given in Table 2.

4. Investment and Other Income

Reserve funds from 1992 are obtained from the PHID. Investment funds are assumed to earn 14 percent effective interest for GSIS and 19 percent for SSS, on the basis of the two systems' respective investment track records.

5. Population Coverage

As previously mentioned, each member is assumed to have four dependents. The number of members is based on population coverage from PMCC HIF report.

Due to the Attrition Law, it is safe to assume that the number of government employees will not increase in the future. In the private sector, it is assumed that membership will increase by 3.68 percent per year which is the average increase in the number of SSS membership based on the PHID.

6. Administrative Costs

For GSIS, only disbursement costs are incurred by the system at a low P 15 per claim which is obtained by dividing operating costs recorded in the HIF report divided by the number of claims paid. However, it is noted that unlike SSS, GSIS does not include indirect costs such as electricity, water, rent etc. in its operating expenses. Actual costs may be significantly higher. In a recomputation done by SSS (see Appendix), the disbursement cost for GSIS turns out to be a high P 166.74 in 1991. On this basis, an adjusted figure of P 201.75 disbursement cost per claim (assuming a 10 percent annual increase) was used in a "worst scenario" simulation exercise for GSIS.

Since all reported operating costs are applied to processing of claims, collection costs (A_2) and other administrative overhead costs (A_3) are assumed to be equal to zero. This is especially true of GSIS which incurs almost no collection costs, as premium contributions from public sector employees and employers are kept by the Department of Budget and Management and merely turned over to GSIS. For SSS, collection expense is not really zero. Operating expenditures by its Collection Department amounted to P 5,913,400 in 1993. Since about 10 percent of these costs are attributable to Medicare, collection costs per capita would be close to P 0.20 (after dividing total collection expenditures by the number of private sector members). These figures were likewise used in a pessimistic scenario for SSS.

SSS has a higher disbursement cost per beneficiary set at P 116.25 for the base year calculated from the PHID as of June 1993. From SSS' own figures, total operating costs in 1991 amounted to P 95.665 million. Assuming a yearly 10 percent increase, the disbursement expense in 1993 would be P 115.755 million. The collection costs should be deducted from this amount, so that total disbursement costs would be lower at P 115.144 million.

Administrative expenses are assumed to increase by 10 percent per year.

POLICY INSTRUMENTS

This study makes use of four policy instruments to improve the baseline performance indicators in the simulation exercises below. These are changes in the income ceiling, tax rate, benefit rate and benefit package.

The first two have direct effects on the premium contributions of the members. At present, the tax rate is equal to 2.5 percent of income and the income ceiling is equal to P3,000. Thus, incomes of P1,000, P2,000 and P3,000 imply contributions of P25, P50 and P75 respectively. Due to the income ceiling however, workers with incomes above P3,000 will pay the same amount --- P75. Although it is stipulated in the Medicare law that the employer and employee should equally share the burden of paying for the premium contributions, it is assumed in this study that the full burden rests on the latter.

As has been pointed out in a previous progress report, a uniform tax rate has no effect on the equity of the Medicare program. However, it has an adverse effect on administrative feasibility especially if the reform package increases benefits. Using differential tax rates per income group may improve the equitability of the program. However, given that the income ceiling is raised high enough, lower income groups already pay very low contributions especially in absolute terms.

Many past studies have concluded that it is the very low income ceiling which has made the Medicare contribution scheme regressive. In fact, the simulation results below show that raising the income ceiling achieves two important goals; it makes the system more equitable and it raises collection income so that higher benefits could be sustained in the long run. For the public sector, the income ceiling could be abolished because it is assumed that the government worker cannot evade the Medicare tax and salaries are fixed (and adjusted) by law. On the other hand, the ceiling could not be raised too high for the SSS members as this would encourage further evasion of the tax and underreporting of income.

The benefit rate specifies by how much average Medicare benefits will increase or decrease. The baseline simulations assume benefit rate is unity. A ten percent increase in benefits is assumed to increase the average Medicare reimbursement by ten percent. Thus, if average benefits are higher for wealthier members, then they will enjoy higher benefits in absolute terms using this assumption.

Finally, the benefit package refers to the types of services covered by Medicare. Currently, it only reimburses patients who avail of inpatient care but the benefit package could be expanded to cover outpatient care.

SIMULATION RESULTS

In the simulation tests below, the optimistic scenarios consist of low administrative costs, low hospitalization costs, and the absence of moral hazard. The pessimistic scenarios consist of high administrative costs, high hospitalization costs and the presence of moral hazard.

1. GSIS Baseline and Reform Packages

The results for the GSIS baseline simulation are best summarized using Figure 1. The expenditure line is almost constant throughout the period. Since utilization rates and average value of claims are not changing, benefit payments are constant. But expenditures are actually increasing slightly every year due to inflation of disbursement costs.

There was an increase in revenues from 1993 to 1994 due to the increase in the salaries of government workers. In terms of contributions this affected only the members in income group I whose incomes are below the income ceiling of P3,000. Starting 1994, all government employees pay P900 annually as Medicare contributions. In Figure 1, the

revenue line is increasing faster than the expenditure line. That is because in 1994 surpluses are being generated which will earn additional investment income in the succeeding years. But if benefit payments increase due to an unexpected increase in utilization rates or in the value of claims made, these surpluses could easily be wiped out.

Performance indicators are not very satisfactory for GSIS as shown in Table 4. At the beginning of the period $WTP > 1$ for all income groups because total benefits exceeded actual collections for that year. At the end of the period, only the WTP of the first income group is less than unity. The X-Sub indicator shows that in 1993, the first income group was being subsidized but at year 2000, it would be the opposite.

Since the income ceiling is set at a very low level (P 3,000), increasing the salaries of government employees would have the unintended effect of making the Medicare program more inequitable as shown by both the WTP and X-Sub indicators.

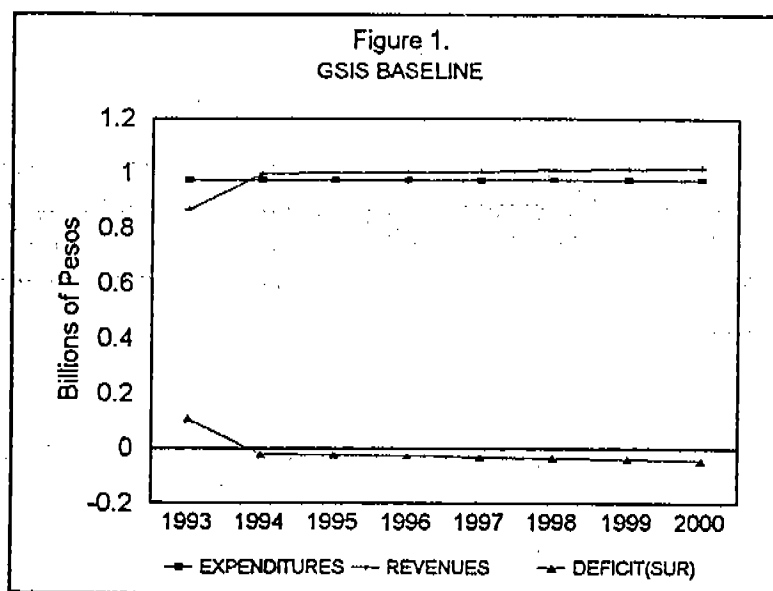


Table 4. GSIS BASELINE

A. ASSUMPTIONS

Benefit Increase per year = 0
 Tax Rate = 2.5%
 Income Ceiling = P 3,000

Ave. Cost of Hospitalization = P 4,000
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P 15 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

		I	II	III	
Willingness to Pay	1993	1.309	1.129	1.110	1.1
	2000	0.943	1.129	1.110	1.1
Cross Subsidization Index	1993	0.168	-0.045	-0.065	-0.0
	2000	-0.159	0.066	0.042	0.0
Support Value Rate	1993	36.525%	42.575%	53.725%	60.175
	2000	18.743%	21.848%	27.569%	30.879

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	866,981,236	1,019,789,236
Contribution Income	753,863,076	897,140,736
Investment and Other Income	113,118,160	122,648,500
TOTAL EXPENDITURES (P)	974,142,300	975,463,400
Benefit Payments	965,256,600	965,256,600
Processing Costs	8,885,700	10,206,800
Collection Costs	0	
NET INCOME (P)	(107,161,064)	44,325,736
NET UNDERWRITING GAIN (P)	(220,279,224)	(78,322,776)
RESERVE CAPACITY (in years)	0.848	0.9
BENEFITS PAID/BENEFICIARY (P)	1,629,455	1,629,455
BENEFITS PAID/CAPITA (P)	175.501	175.501
OPERATING EXPENSE		
As % of Collection Income	1.179%	1.138%
As % of Total Income	1.025%	1.001%
As % of Benefit Payments	0.921%	1.057%
Per Beneficiary (P)	15.000	17.23
Per Capita (P)	1.616	1.8
COST OF INSURANCE	-22.613%	-8.029%

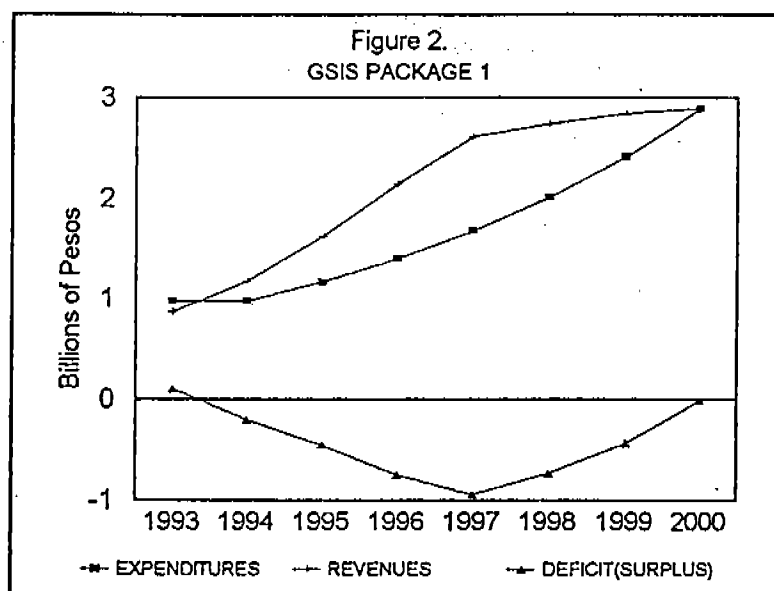
In addition, support values are low especially for the lowest income group. No doubt, benefit increases are necessary to sustain the program's relevance in the face of rising health care costs.

Unfortunately, given the present contribution structure, the GSIS is not in a position to provide higher benefits. Although net income is positive in the year 2000, net underwriting gain is negative, meaning collections are not sufficient to cover benefit payments and disbursement costs (given that disbursement costs are already very low). Reserve capacity is unacceptably low by industry standards. Benefits paid are already low as shown by the low support value rates. The only bright spot is the minimal administrative costs reported by GSIS as evidenced by all the measures of administrative efficiency. The negative cost of insurance also indicates that Medicare members are not paying for overhead costs of maintaining the program. Most likely, overhead costs are eating up the reserve fund or investment income of the HIF.

The reform package for GSIS consists of total removal of the income ceiling, lowering the tax rate to 2 percent starting 1994 and increasing benefits by 20 percent per year starting 1995.

Figure 2 shows that expenditures rapidly increased as a result of the benefit increases, and contributions are increasing more rapidly up to 1997 due to Joint Resolution No. 1 but taper off after that. Table 5 shows the improvement in the performance indicators.

Both the WTP and X-Sub indices indicate that in 2000, the two lowest income groups will be subsidized by the higher income groups. At the low inpatient care cost, overall support value rate is close to 70 percent. There is also some improvement in administrative feasibility - net income is positive in 2000 and reserve capacity is higher at 1.45 years. Benefits paid are, of course, higher while administrative costs are still extremely low. Since the financial indicators are still not up to par, benefit increases must be stopped after the year 2000 to build up more reserves.



Package 2 is actually the same package except that all the higher costs are loaded into this simulation, including the disbursement costs computed from SSS data. Figure 3 shows the same revenue line but the expenditure line is higher and benefit increases have to be stopped by 1999 so as not to worsen the financial indicators.

Table 5. GSIS PACKAGE 1

A. ASSUMPTIONS

Benefit Increase/year = 20% (1995-2000)

Tax Rate = 2.0%

Income Ceiling = None

Ave. Cost of Hospitalization = P 4,000

Constant Utilization Rate

Ave. Cost of Processing/Claim = P 15 in 1993

Collection Cost = 0

B. PERFORMANCE INDICATORS

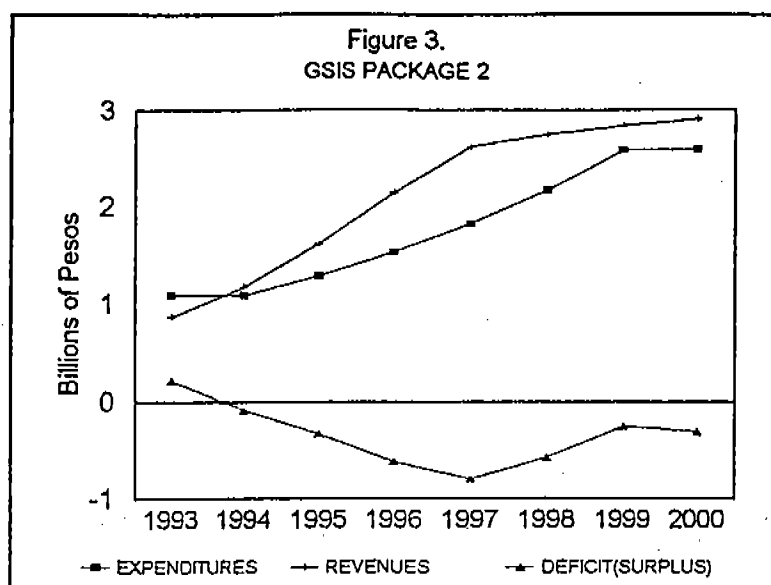
		I	II	III	
Willingness to Pay	1993	1.309	1.129	1.110	1.11
	2000	1.311	1.211	0.871	0.61
Cross Subsidization Index	1993	0.168	-0.045	-0.065	-0.04
	2000	0.444	0.287	-0.174	-0.43
Support Value Rate	1993	36.525%	42.575%	53.725%	60.175%
	2000	55.967%	65.237%	82.322%	92.205%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	866,981,236	2,900,006,711
Contribution Income	753,863,076	2,323,483,831
Investment and Other Income	113,118,160	576,522,880
TOTAL EXPENDITURES (P)	974,142,300	2,892,447,641
Benefit Payments	965,256,600	2,882,240,761
Processing Costs	8,885,700	10,206,880
Collection Costs	0	
NET INCOME (P)	(107,161,064)	7,559,070
NET UNDERWRITING GAIN (P)	(220,279,224)	(568,963,791)
RESERVE CAPACITY (in years)	0.848	1.45
BENEFITS PAID/BENEFICIARY (P)	1,629.455	4,865.52
BENEFITS PAID/CAPITA (P)	175.501	524.04
OPERATING EXPENSE		
As % of Collection Income	1.179%	0.439%
As % of Total Income	1.025%	0.352%
As % of Benefit Payments	0.921%	0.354%
Per Beneficiary (P)	15.000	17.23
Per Capita (P)	1.616	1.85
COST OF INSURANCE (%)	-22.613%	-19.671%

The high costs assumed here are higher inpatient care price at P 8,000, higher disbursement cost at P 201.75/claim in 1993 and moral hazard.

Table 6 shows there is little effect on the equity indicators but the support value rates are very small. Incorporating realistically higher operating costs would worsen GSIS' administrative feasibility picture. Compared to Package 1, net income and reserve capacity are higher now only because increases in benefits are stopped in 1999. All measures of administrative efficiency naturally worsened due to the higher assumed value for average disbursement costs. At year 2000 though, operating expenses as a percentage of collection income and other factors would not be that high.



In sum, the simulations show that benefit increases are possible only if the income ceiling is removed. This policy option also has the added benefit of improving the equity of the program. The tax rate can be adjusted depending on the benefit increases being planned. Package 1 is an "optimistic" forecast while Package 2 is indicative of a "worst case" scenario.

2. SSS Baseline and Reform Packages

Figure 4 provides a good indication of the better financial position of SSS. Without benefit increases, the system will simply generate greater and greater surpluses.

Table 7 though indicates that the program is not as equitable as desired given that the highest income group receives subsidy from the middle income groups. Support value rates are also higher than those for GSIS. Reserve level of 8.9 years is excessive. Compared to baseline GSIS values, benefits paid (per beneficiary and per capita) are higher due to higher

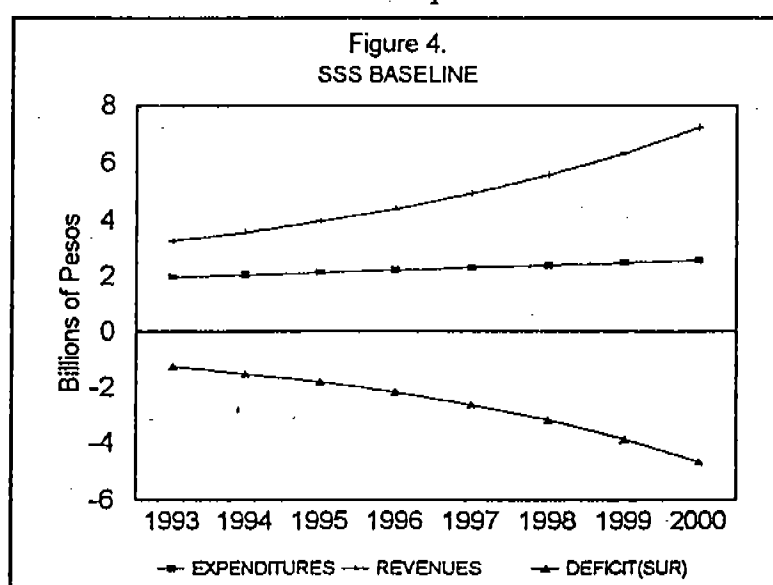


Table 6. GSIS PACKAGE 2

A. ASSUMPTIONS

Benefit Increase/year = 20% (1995-1999)
 Tax Rate = 2.0%
 Income Ceiling = None
 Ave. Cost of Hospitalization = P 8,000

2% Increase in Utilization per
 100% Increase in Benefits
 Ave. Cost of Processing/Claim = P201.75 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.309	1.129	1.110	1.12
	2000	1.114	1.030	0.741	0.54
Cross Subsidization Index	1993	0.168	-0.045	-0.065	-0.04
	2000	0.444	0.287	-0.174	-0.43
Support Value Rate	1993	18.263%	21.288%	26.863%	30.088%
	2000	23.319%	27.182%	34.301%	38.419%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	866,981,236	2,900,006,71
Contribution Income	753,863,076	2,323,483,85
Investment and Other Income	113,118,160	576,522,86
TOTAL EXPENDITURES (P)	1,084,769,265	2,590,340,67
Benefit Payments	965,256,600	2,450,290,48
Processing Costs	119,512,665	140,050,18
Collection Costs	0	
NET INCOME (P)	(217,778,029)	309,666,03
NET UNDERWRITING GAIN (P)	(330,906,189)	(266,856,826)
RESERVE CAPACITY (in years)	0.761	1.62
BENEFITS PAID/BENEFICIARY (P)	1,629,455	4,054,60
BENEFITS PAID/CAPITA (P)	175.501	445.50
OPERATING EXPENSE		
As % of Collection Income	15.850%	6.030%
As % of Total Income	13.780%	4.830%
As % of Benefit Payments	12.380%	5.720%
Per Beneficiary (P)	201.750	231.74
Per Capita (P)	21.730	25.46
COST OF INSURANCE (%)	-30.500%	-10.300%

Table 7. SSS BASELINE

A. ASSUMPTIONS

Benefit Increase per year = 0
 Tax Rate = 2.5%
 Income Ceiling = P 3,000
 Ave. Cost of Hospitalization = P 4,000

Increase in Number of Members/year = 3.68%
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	0.891	0.756	1.034
	2000	0.807	0.692	0.587	0.803
Cross Subsidization Index	1993	0.162	-0.055	-0.234	0.154
	2000	0.162	-0.055	-0.234	0.154
Support Value Rate	1993	39.575%	49.925%	60.525%	87.175%
	2000	20.308%	25.619%	31.059%	44.735%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,256,087,098	6,803,724,873
Contribution Income	1,905,777,998	2,454,354,145
Investment and Other Income	1,350,309,100	4,349,370,727
TOTAL EXPENDITURES (P)	1,983,501,488	2,572,150,026
Benefit Payments	1,891,059,720	2,435,397,910
Processing Costs	92,441,768	136,752,116
Collection Costs	0	0
NET INCOME (P)	1,272,585,610	4,231,574,847
NET UNDERWRITING GAIN (P)	(77,723,490)	(117,795,880)
RESERVE CAPACITY (in years)	3.583	8.8997
BENEFITS PAID/BENEFICIARY (P)	2,378.099	2,378.0996
BENEFITS PAID/CAPITA (P)	107.061	107.0608
OPERATING EXPENSE		
As % of Collection Income	4.851%	5.572%
As % of Total Income	2.839%	2.010%
As % of Benefit Payments	4.888%	5.615%
Per Beneficiary (P)	116.250	133.535
Per Capita (P)	5.234	6.012
COST OF INSURANCE (%)	-3.918%	-4.580%

average value of claims. Although disbursement costs of P 116.25/claim in 1993 are high on a per capita basis, it is not excessively high when considered as a percent of collection income, and others.

Package 1 consists of increasing the income ceiling to P 7,000 and keeping tax rate at 2.5 percent starting 1994. The big jump in revenues from 1993 to 1994 (Figure 5) is due to the increase in the ceiling; the continued increase in revenues is due to the assumed increase in the number of members. Package 1 also increases benefits by 15 percent per year.

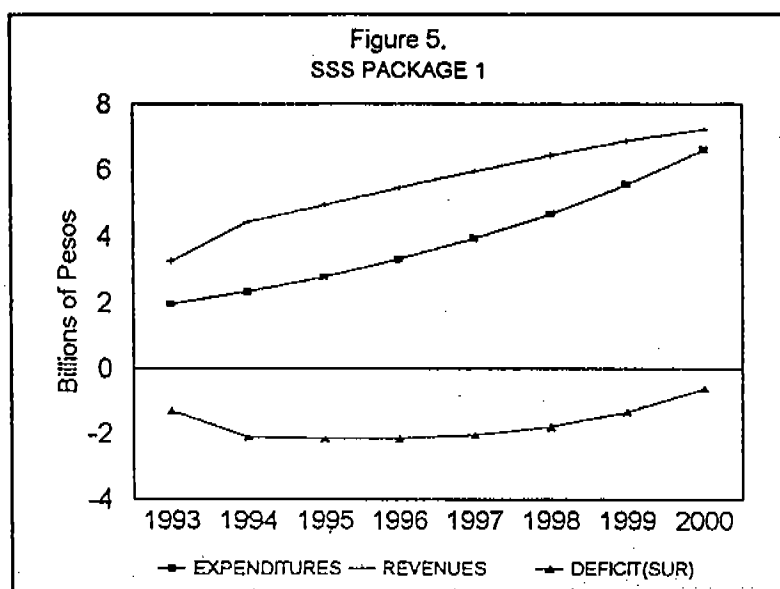
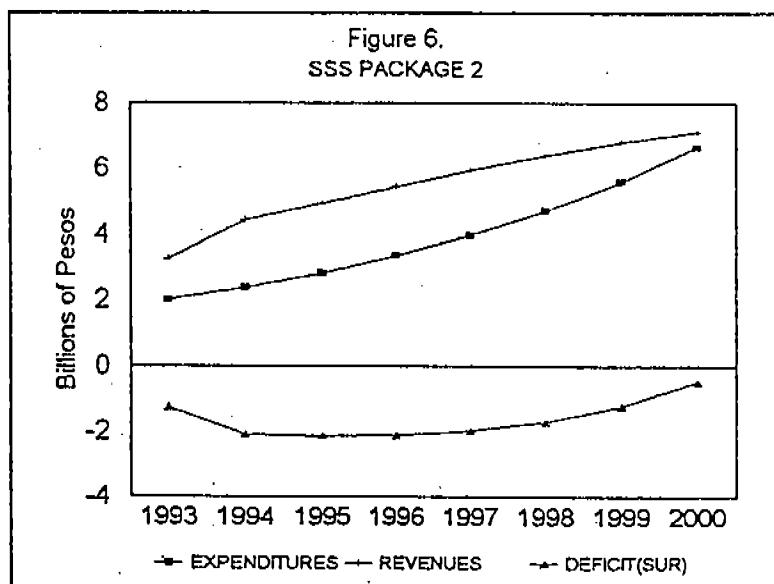


Table 8 shows that there is a very high WTP for all income groups since surpluses generated in the past can cover benefits paid in the year 2000. The X-Sub indicates that the direction of the subsidy is from rich to poor. Reserve capacity is down to a reasonable level. Benefits paid per beneficiary is relatively high. For the low hospitalization cost assumption, support value rate is greater than the one for the highest income group, exceeding the target 70 percent.



Cost of insurance is negative since overhead costs are taken from the reserve fund. But given the surpluses generated in the past, this is not a problem. After the year 2000 though, increases in benefits would have to be moderated or the tax rate might have to be increased due to the large deficit in net underwriting gain. Collections are insufficient to cover all expenses as the reserve fund is rapidly depleting.

Package 2 is the same as Package 1 except for factoring in moral hazard and high inpatient care cost (plus adjustments in the disbursement costs). The results are similar; the expenditure line in Figure 6 just rises more steeply. Table 9 shows lower support value rates, actually being short of the target rate. Higher administrative costs, of course, impose a greater burden on SSS

Table 8. SSS PACKAGE 1

A. ASSUMPTIONS

Benefit Increase/year = 15% (1994-2000)
 Tax Rate = 2.5%
 Income Ceiling = P 7,000
 Ave. Cost of Hospitalization = P 4,000

Increase in Number of Members/year = 3.68%
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	0.891	0.756	1.034
	2000	2.763	2.370	1.663	1.251
Cross Subsidization Index	1993	0.162	-0.055	-0.234	0.154
	2000	0.569	0.253	-0.219	-0.448
Support Value Rate	1993	39.575%	49.925%	60.525%	87.175%
	2000	54.020%	68.148%	82.617%	118.995%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,256,087,098	7,340,409,028
Contribution Income	1,905,777,998	3,538,792,453
Investment and Other Income	1,350,309,100	3,736,764,969
TOTAL EXPENDITURES (P)	1,983,501,488	6,614,958,972
Benefit Payments	1,891,059,720	6,478,206,856
Processing Costs	92,441,768	136,752,116
Collection Costs	0	0
NET INCOME (P)	1,272,585,610	725,450,056
NET UNDERWRITING GAIN (P)	(77,723,490)	(3,076,166,519)
RESERVE CAPACITY (in years)	3.583	2.973
BENEFITS PAID/BENEFICIARY (P)	2,378.099	6,325.792
BENEFITS PAID/CAPITA (P)	107.061	284.784
OPERATING EXPENSE		
As % of Collection Income	4.851%	3.864%
As % of Total Income	2.839%	1.863%
As % of Benefit Payments	4.888%	2.111%
Per Beneficiary (P)	116.250	133.535
Per Capita (P)	5.234	6.012
COST OF INSURANCE (%)	-3.918%	-46.503%

Table 9. SSS PACKAGE 2

A. ASSUMPTIONS

Benefit Increase/year = 15% (1994-2000)
 Tax Rate = 2.5%
 Income Ceiling = P 7,000 (1994-2000)
 Ave. Cost of Hospitalization = P 8,000

2% Increase in Utilization per
 100% Increase in Benefits
 Ave. Cost of Processing/Claim = P144.8 in 1993
 Collection Cost = P0.20 per member

B. PERFORMANCE INDICATORS

		I	II	III	
Willingness to Pay	1993	1.039	0.891	0.756	1.0
	2000	2.972	2.550	1.789	1.3
Cross Subsidization Index	1993	0.162	-0.055	-0.234	0.1
	2000	0.569	0.253	-0.219	-0.4
Support Value Rate	1993	19.788%	24.963%	30.263%	43.58%
	2000	27.010%	34.074%	41.309%	59.49%

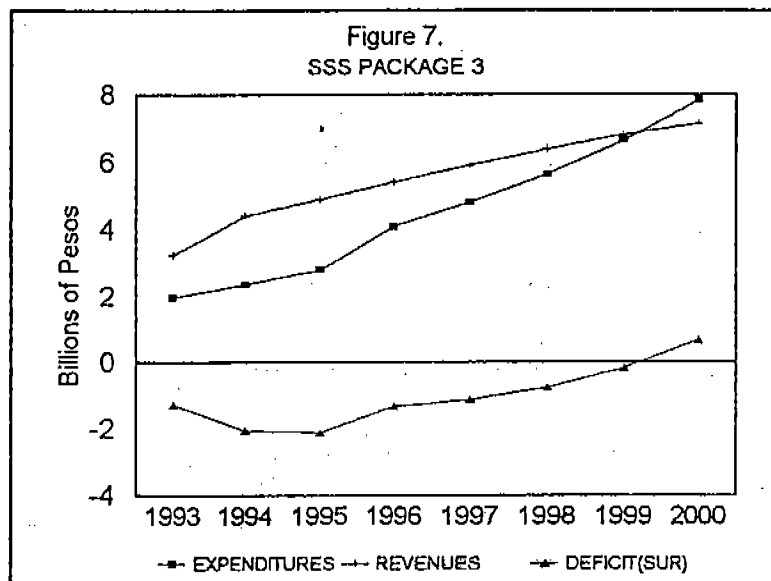
C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,255,452,146	7,254,080,200
Contribution Income	1,905,777,998	3,538,792,400
Investment and Other Income	1,350,309,100	3,716,881,200
TOTAL EXPENDITURES (P)	2,006,204,390	6,668,488,500
Benefit Payments	1,891,059,720	6,497,640,200
Processing Costs	115,144,670	170,848,200
Collection Costs	634,952	1,593,500
NET INCOME (P)	1,249,247,756	585,591,700
NET UNDERWRITING GAIN (P)	(100,426,392)	(3,129,696,000)
RESERVE CAPACITY (in years)	3.542	2.9
BENEFITS PAID/BENEFICIARY (P)	2,378.099	6,325.7
BENEFITS PAID/CAPITA (P)	107.061	285.6
OPERATING EXPENSE		
As % of Collection Income	6.075%	4.87%
As % of Total Income	3.556%	2.37%
As % of Benefit Payments	6.122%	2.65%
Per Beneficiary (P)	145.598	167.8
Per Capita (P)	6.555	7.5
COST OF INSURANCE (%)	-5.006%	-46.93%

finances. The slight difference between Package 1 and Package 2 indicates that the SSS funds can adequately cover benefit increases even under the "pessimistic" scenario.

Package 3 looks at the prospects of the SSS HIF if modest outpatient benefits are provided starting 1996 (the assumptions are already stated above). On top of Package 1, a P 200 (at 1993 values) benefit is provided for SSS members and all claims are assumed to reach the maximum limit. Fifty percent of total membership will claim OP benefit in one year. Figure 7, thus, shows the even greater increase in benefit payments due to the expansion of coverage. Table 10 shows that there is little effect on the equity indicators but the strain on the finances is greater. Definitely, offering outpatient benefits is not feasible in the long run due to the deficit shown in Figure 7 and negative net income in Table 10. The big drain in reserves is evident

when the reserve capacity levels in year 2000 in Table 10 and Tables 8 or 9 are compared. Measures for administrative efficiency worsened due to the greater number of low-value claims processed. Benefits paid per beneficiary is lower in 2000 than in 1993 due to the low value of claims made by the additional claimants. On a per capita basis, benefits are higher since higher benefit payments made are divided by almost the same number of people (members plus beneficiaries).



3. Combined HIF

While there was an attempt to combine the SSS and GSIS HIF, the increases in the salaries of GSIS members could not be incorporated in the simulation because of the difficulty it would entail, so contributions are understated. The framework used is the SSS since majority of the Medicare members belong to this system and because of its impressive financial performance. If the merger of the two funds will require that a new system be organized in a new office, start-up costs must be added to administrative costs. Given the salary scale of government employees, income group I of GSIS was added to income group II of SSS and so on so that income groups III and IV of GSIS were added to the wealthiest group of SSS. The average value of claims and contributions uses SSS baseline values.

It does not come as a surprise that the baseline graph, Figure 8, is very similar to Figure 4. In terms of equity, group II of Table 11 turns out to be a subsidizee since most of the

Table 10. SSS PACKAGE 3

A. ASSUMPTIONS

Benefit Increase per year = 15% (1994-2000)
 Tax Rate = 2.5%
 Income Ceiling = P 7,000 (1994-2000)
 Ave. Cost of Hospitalization = P 4,000
 Cost per Outpatient Visit = P266.20
 in 1996 (1996 onwards)

Increase in Number of Members/year = 3.68%
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = 0
 Utilization of Outpatient Care = 50% of Membership

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	0.891	0.756	1.034
	2000	3.424	2.847	1.953	1.426
Cross Subsidization Index	1993	0.162	-0.055	-0.234	0.154
	2000	0.650	0.256	-0.239	-0.480
Support Value Rate	1993	39.575%	49.925%	60.525%	87.175%
for Inpatient Care	2000	54.020%	68.148%	82.617%	118.995%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,256,087,098	6,426,555,134
Contribution Income	1,905,777,998	3,538,792,453
Investment and Other Income	1,350,309,100	2,887,762,681
TOTAL EXPENDITURES (P)	1,983,501,488	7,825,145,442
Benefit Payments	1,891,059,720	7,384,220,959
Processing Costs	92,441,768	440,924,483
Collection Costs	0	
NET INCOME (P)	1,272,585,610	(1,398,590,308)
NET UNDERWRITING GAIN (P)	(77,723,490)	(4,286,352,989)
RESERVE CAPACITY (in years)	3.583	1.942
BENEFITS PAID/BENEFICIARY (P)	2,378.099	2,236.324
BENEFITS PAID/CAPITA (P)	107.061	324.612
OPERATING EXPENSE		
As % of Collection Income	4.851%	12.460%
As % of Total Income	2.839%	6.861%
As % of Benefit Payments	4.888%	5.971%
Per Beneficiary (P)	116.250	133.539
Per Capita (P)	5.234	19.381
COST OF INSURANCE (%)	-3.918%	-54.777%

Table 11. COMBINED HIF BASELINE

A. ASSUMPTIONS

Benefit Increase per year = 0
 Tax Rate = 2.5%
 Income Ceiling = P 3,000
 Ave. Cost of Hospitalization = P 4,000

Increase in Number of Members for SSS only
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

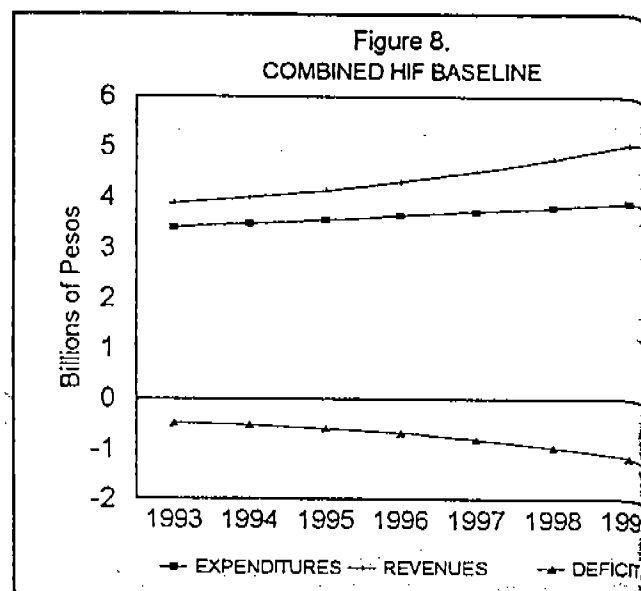
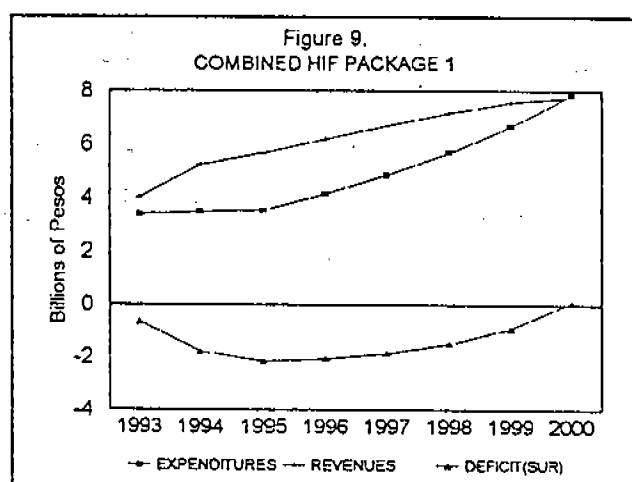
		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.467
	2000	0.807	1.227	0.904	1.171
Cross Subsidization Index	1993	-0.219	0.196	-0.170	0.236
	2000	-0.267	0.278	-0.154	0.195
Support Value Rate	1993	39.575%	49.925%	60.525%	87.175%
	2000	20.308%	25.619%	31.059%	44.735%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,879,708,596	5,521,064,064
Contribution Income	2,529,399,496	3,077,975,644
Investment and Other Income	1,350,309,100	2,443,088,421
TOTAL EXPENDITURES (P)	3,405,345,406	4,004,232,591
Benefit Payments	3,244,039,464	3,788,377,206
Processing Costs	161,305,943	215,855,385
Collection Costs	0	0
NET INCOME (P)	474,363,190	1,516,831,473
NET UNDERWRITING GAIN (P)	(875,945,910)	(926,256,947)
RESERVE CAPACITY (in years)	2.087	3.211
BENEFITS PAID/BENEFICIARY (P)	2,337.915	2,343.605
BENEFITS PAID/CAPITA (P)	140.050	134.112
OPERATING EXPENSE		
As % of Collection Income	6.377%	7.013%
As % of Total Income	4.158%	3.910%
As % of Benefit Payments	4.972%	5.698%
Per Beneficiary (P)	116.250	133.535
Per Capita (P)	9.527	7.641
COST OF INSURANCE (%)	-25.723%	-23.132%

claims of GSIS were added to this income group. Group IV, on the other hand, is a subsidizee due to the high value of claims. Without benefit increases, the HIF can be sustained in the long run even if collections are insufficient to pay for benefits (negative net underwriting gain) primarily because of the high investment income of SSS. However, if the impressive management of the fund is not sustained, the HIF will not last.

Package 1 for the combined HIF shows that only 15 percent increases in benefits from 1996 to 1999 are feasible (Figure 9 and Table 12).



The income ceiling must be set at P 7,000 only since unlike in the GSIS, it could not be raised indefinitely. Any further increase will only encourage members to evade compliance and underreport their incomes. In this case, even the increase in income ceiling is not sufficient in helping achieve the desired cross-subsidies. The lowest income group is still a subsidizer in the year 2000 because of the low value of average claims and low utilization rate. In terms of financing, although reserve

capacity is sufficient, both net income and net underwriting gain are negative. If any further benefit increases are desired, either the tax rate or income ceiling must be raised.

Table 12. COMBINED HIF PACKAGE

A. ASSUMPTIONS

Benefit Increase/year = 15% (1996-2000)
 Tax Rate = 2.5%
 Income Ceiling = P 7,000
 Ave. Cost of Hospitalization = P 4,000

Increase in Number of Members for SSS only
 Constant Utilization Rate
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = 0

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.467
	2000	1.484	2.637	1.375	0.980
Cross Subsidization Index	1993	-0.219	0.196	-0.170	0.236
	2000	-0.108	1.061	-0.191	-0.465
Support Value Rate	1993	39.575%	49.925%	60.525%	87.175%
	2000	40.847%	51.530%	62.471%	89.977%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	4,036,587,796	7,745,505,788
Contribution Income	2,529,399,496	4,190,079,185
Investment and Other Income	1,507,188,300	3,555,426,604
TOTAL EXPENDITURES (P)	3,405,345,406	7,835,635,107
Benefit Payments	3,244,039,464	7,619,779,722
Processing Costs	161,305,943	215,855,385
Collection Costs	0	0
NET INCOME (P)	631,242,390	(90,129,319)
NET UNDERWRITING GAIN (P)	(875,945,910)	(3,645,555,922)
RESERVE CAPACITY (in years)	2.329	2.388
BENEFITS PAID/BENEFICIARY (P)	2,337.915	4,713.828
BENEFITS PAID/CAPITA (P)	183.659	281.116
OPERATING EXPENSE		
As % of Collection Income	6.377%	5.152%
As % of Total Income	3.996%	2.787%
As % of Benefit Payments	4.972%	2.833%
Per Beneficiary (P)	116.250	133.535
Per Capita (P)	9.132	7.964
COST OF INSURANCE (%)	-25.723%	-46.525%

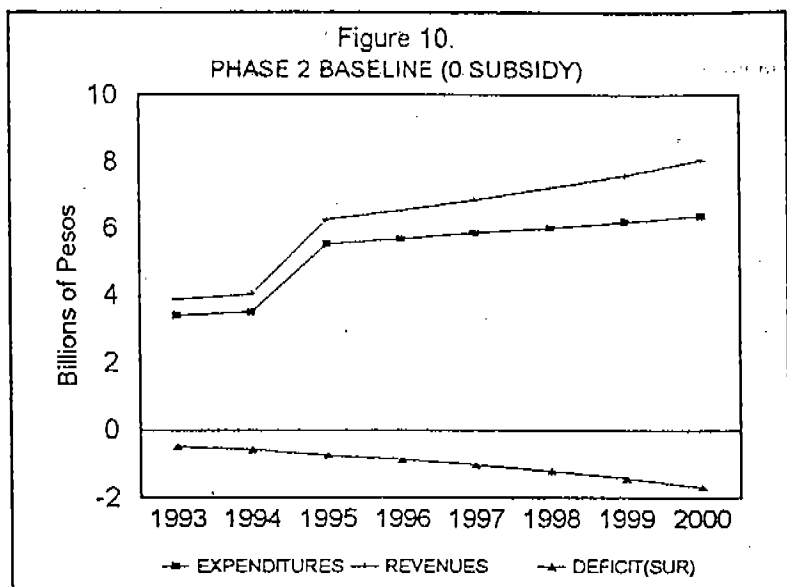
4. Phase 2

At present, several bills are pending in the House of Representatives proposing for a National Health Insurance Law (NHIL) which is actually Phase 2 of the 1969 Medicare Law. Essentially, the proposed law calls for universal coverage. How the implementation of the NHIL would affect the combined HIF given the following assumptions or baseline values (Table 13) is examined in this section.

Table 13. BASELINE VALUES FOR PHASE 2 (1995)

Income Groups	I	II	II	IV	Non-Cont.	Total
No. of members	1,706,361	2,274,923	2,025,925	1,815,058	487,927	8,310,194
Distribution	20.53%	27.38%	24.38%	21.84%	5.87%	100.00%
No. of Claims	409,250	733,470	592,044	429,666	80,207	2,244,637
Distribution	18.23%	32.68%	26.38%	19.14%	3.57%	100.00%
Average Value of Claims	1,583	1,997	2,421	3,487	2,722	
Ave. Contrib	437	633	900	900		
Ave. HH Exp.	1,456	2,113	3,630	6,598		

Since it is assumed that the NHIL will be implemented in 1995, simulations for 1993 and 1994 use Phase 1 combined HIF values. The study also assumes that Phase 2 membership and number of claims are twice those of SSS values, with average value of claims and average household incomes coming from SSS baseline values. One departure from the former assumptions is that collection cost per member is pegged at P 1 in 1993 subject to 10% inflation per year since collection would be more difficult for the Phase 2 population.



Phase 2 Baseline (0 subsidy) as shown in Figure 10 simply doubles the SSS expenditures on benefit payments and collection revenues starting 1995. Without benefit increases, the Phase 2 HIF will generate higher surpluses. Compared with Table 11, Table 14 shows that in 2000, total revenues and expenditures are much higher. Although net underwriting gain is negative, net income is still positive. Reserve capacity is much lower for Phase 2 given that benefit payments are almost twice as those for the combined HIF. Even if there is an added P 1 collection cost per member, measures of administrative efficiency are not greatly affected.

Table 14. PHASE 2 BASELINE (0 SUBSIDY)

A. ASSUMPTIONS

Benefit Increase/year = 0

Tax Rate = 2.5%

Income Ceiling = P 3,000

Ave. Cost of Hospitalization = P 4,000 in 1993

Double number of SSS members (1995 onwards)

Increase in No. of Members for SSS only by
3.68%/yr

Ave. Cost of Processing/Claim = P116.25 in 1993

Collection Cost = P1/member in 1993

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.159
	2000	1.039	1.174	0.913	1.086
Cross Subsidization Index	1993	-0.154	0.308	-0.100	-0.024
	2000	-0.018	0.159	-0.169	0.043
Support Value	1993	39.575%	49.925%	60.525%	87.175%
	2000	20.308%	25.619%	31.059%	44.735%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,875,537,013	8,057,443,720
Contribution Income	2,529,399,496	5,532,330,687
Investment and Other Income	1,350,309,100	2,534,287,080
TOTAL EXPENDITURES (P)	3,405,345,406	6,380,200,176
Benefit Payments	3,244,039,464	6,036,766,798
Processing Costs	161,305,943	343,433,378
Collection Costs	4,171,583	9,174,047
NET INCOME (P)	470,191,607	1,677,243,544
NET UNDERWRITING GAIN (P)	(875,945,910)	(847,869,489)
RESERVE CAPACITY (in years)	2.0870	2.0906
BENEFITS PAID/BENEFICIARY (P)	2,337.9150	2,347.2322
BENEFITS PAID/CAPITA (P)	140.0502	123.9815
OPERATING EXPENSE		
As % of Collection Income	6.542%	6.374%
As % of Total Income	4.270%	4.376%
As % of Benefit Payments	5.101%	5.841%
Per Beneficiary (P)	119.256	137.102
Per Capita (P)	7.144	7.242
COST OF INSURANCE (%)	-25.723%	-13.289%

Assuming that the income ceiling could be raised to P 7,000 in 1995, some benefit increases are possible but as Figure 11 shows, the increases are not sustainable in the long run (benefit increases have to stop after 2000). Table 15 shows that performance indicators are

favorable in the end period. As expected, end period benefits (per beneficiary per capita) are lower than the package for the combined HIF. Even when Phase 2 members pay their own premiums, it is obvious that Phase 1 members are already subsidizing the new beneficiaries of the program.

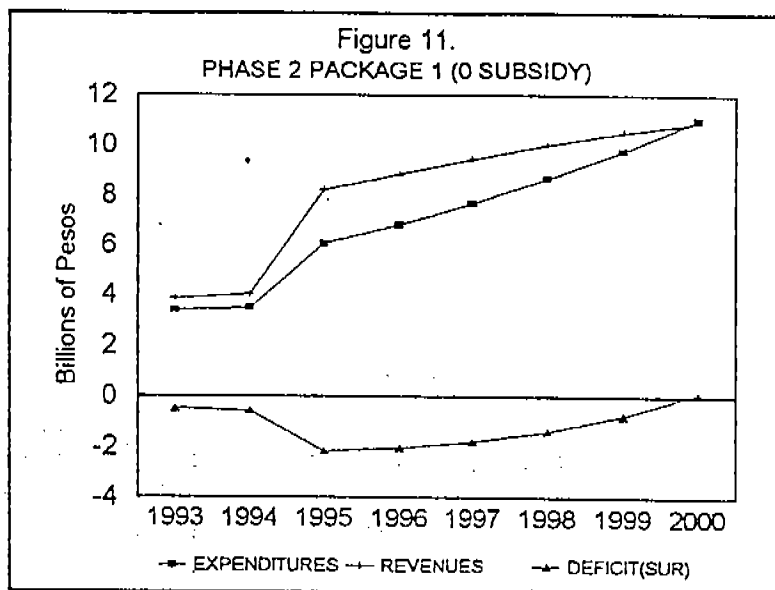


Figure 12 and Table 16 show the possible condition of the HIF if a fourth of the premiums of Phase 2 members are shouldered by Phase 1 members. When there are no increases in income ceiling and benefits, the system will generate

very small surpluses. Reserve capacity is already low and net underwriting gain is below the zero level by more than P 1 billion. Cost of insurance is also negative indicating that expenses are eating up the reserves of the system.

The drain becomes more pronounced as the subsidy is increased to half of premiums of Phase 2 members. Without increases in premiums (by increasing the tax rate and/or income ceiling), the present benefit levels could not be sustained (as shown by the increasing deficit in Figure 13). Table 17 shows that the net income is negative and a reserve level of less than 1 year is unacceptably low.

Figure 14 together with Table 18 looks at the HIF if income ceiling is again raised to P 7,000. A benefit increase of 10 percent is affordable from 1997-2000. Even then, support values do not reach the 70 percent target in the year 2000. Again, reserves are being drained as shown by the

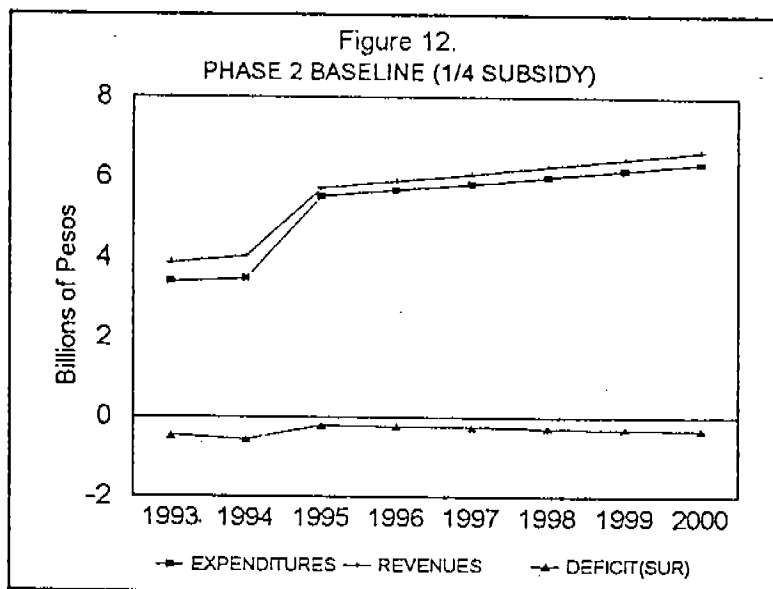


Table 15. PHASE 2 PACKAGE 1 (0 SUBSIDY)

A. ASSUMPTIONS

Benefit Increase/year = 10% (1995-2000)

Tax Rate = 2.5%

Income Ceiling = P 7,000 (1995-2000)

Ave. Cost of Hospitalization = P 4,000 in 1993

Double number of SSS members (1995 onwards)

Increase in No. of Members for SSS only by

3.68%/yr

Ave. Cost of Processing/Claim = P116.25 in 1993

Collection Cost = P1/member in 1993

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.159
	2000	1.840	2.079	1.337	0.875
Cross Subsidization Index	1993	-0.154	0.308	-0.100	-0.024
	2000	0.286	0.539	-0.163	-0.501
Support Value	1993	39.575%	49.925%	60.525%	87.175%
	2000	35.977%	45.386%	55.023%	79.250%

C. FINANCING IMPLICATION:

	1993	2000
TOTAL REVENUES (P)	3,875,537,013	10,910,402,699
Contribution Income	2,529,399,496	7,849,873,944
Investment and Other Income	1,350,309,100	3,069,702,803
TOTAL EXPENDITURES (P)	3,405,345,406	11,037,934,003
Benefit Payments	3,244,039,464	10,694,500,625
Processing Costs	161,305,943	343,433,378
Collection Costs	4,171,583	9,174,047
NET INCOME (P)	470,191,607	(127,531,304)
NET UNDERWRITING GAIN (P)	(875,945,910)	(3,188,060,059)
RESERVE CAPACITY (in years)	2.087	1.464
BENEFITS PAID/BENEFICIARY (P)	2,337.915	4,158.265
BENEFITS PAID/CAPITA (P)	140.050	219.641
OPERATING EXPENSE		
As % of Collection Income	6.542%	4.492%
As % of Total Income	4.270%	3.232%
As % of Benefit Payments	5.101%	3.297%
Per Beneficiary (P)	119.256	137.102
Per Capita (P)	7.144	7.242
COST OF INSURANCE (%)	-25.723%	-28.883%

Table 16. PHASE 2 BASELINE (1/4 SUBSIDY)

A. ASSUMPTIONS

Benefit Increase/year = 0

Tax Rate = 2.5%

Income Ceiling = P 3,000

Ave. Cost of Hospitalization = P 4,000 in 1993

Double number of SSS members (1995 onwards)

Increase in No. of Members for SSS only by

3.68%/yr

Ave. Cost of Processing/Claim = P116.25 in 1993

Collection Cost = P1/member in 1993

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.159
	2000	1.187	1.301	1.024	1.233
Cross Subsidization Index	1993	-0.154	0.308	-0.100	-0.024
	2000	0.001	0.133	-0.174	0.053
Support Value	1993	39.575%	49.925%	60.525%	87.175%
	2000	20.308%	25.619%	31.059%	44.735%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,875,537,013	6,688,965,623
Contribution Income	2,529,399,496	4,918,742,150
Investment and Other Income	1,350,309,100	1,779,397,519
TOTAL EXPENDITURES (P)	3,405,345,406	6,380,200,176
Benefit Payments	3,244,039,464	6,036,766,798
Processing Costs	161,305,943	343,433,378
Collection Costs	4,171,583	9,174,047
NET INCOME (P)	470,191,607	308,765,447
NET UNDERWRITING GAIN (P)	(875,945,910)	(1,461,458,025)
RESERVE CAPACITY (in years)	2.087	1.468
BENEFITS PAID/BENEFICIARY (P)	2,337.915	2,347.232
BENEFITS PAID/CAPITA (P)	140.050	131.692
OPERATING EXPENSE		
As % of Collection Income	6.542%	7.169%
As % of Total Income	4.270%	5.271%
As % of Benefit Payments	5.101%	5.841%
Per Beneficiary (P)	119.256	137.102
Per Capita (P)	7.144	7.692
COST OF INSURANCE (%)	-25.723%	-22.906%

Table 17. PHASE 2 BASELINE (1/2 SUBSIDY)

A. ASSUMPTIONS

Benefit Increase/year = 0

Tax Rate = 2.5%

Income Ceiling = P 3,000

Ave. Cost of Hospitalization = P 4,000 in 1993

Double number of SSS members (1995 onwards)

Increase in No. of Members for SSS only by 3.68%/yr

Ave. Cost of Processing/Claim = P116.25 in 1993

Collection Cost = P1/member in 1993

B. PERFORMANCE INDICATORS

		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.159
	2000	1.385	1.459	1.165	1.425
Cross Subsidization Index	1993	-0.154	0.308	-0.100	-0.024
	2000	0.026	0.101	-0.181	0.066
Support Value	1993	39.575%	49.925%	60.525%	87.175%
	2000	20.308%	25.619%	31.059%	44.735%

C. FINANCING IMPLICATIONS

	1993	2000
TOTAL REVENUES (P)	3,875,537,013	5,320,692,111
Contribution Income	2,529,399,496	4,305,153,614
Investment and Other Income	1,350,309,100	1,024,712,544
TOTAL EXPENDITURES (P)	3,405,345,406	6,380,200,176
Benefit Payments	3,244,039,464	6,036,766,798
Processing Costs	161,305,943	343,433,378
Collection Costs	4,171,583	9,174,047
NET INCOME (P)	470,191,607	(1,059,508,064)
NET UNDERWRITING GAIN (P)	(875,945,910)	(2,075,046,561)
RESERVE CAPACITY (in years)	2.087	0.845
BENEFITS PAID/BENEFICIARY (P)	2,337.915	2,347.232
BENEFITS PAID/CAPITA (P)	140.050	123.982
OPERATING EXPENSE		
As % of Collection Income	6.542%	8.190%
As % of Total Income	4.270%	6.627%
As % of Benefit Payments	5.101%	5.841%
Per Beneficiary (P)	119.256	137.102
Per Capita (P)	7.144	7.242
COST OF INSURANCE (%)	-25.723%	-32.523%

Table 18. PHASE 2 PACKAGE 2 (1/2 SUBSIDY)

A. ASSUMPTIONS

Benefit Increase/year = 10% (1997-2000)
 Tax Rate = 2.5%
 Income Ceiling = P 7,000 (1995-2000)
 Ave. Cost of Hospitalization = P 4,000 in 1993

Double number of SSS members (1995 onwards)
 Increase in No. of Members for SSS only by 3.68%/yr
 Ave. Cost of Processing/Claim = P116.25 in 1993
 Collection Cost = P1/member in 1993

B. PERFORMANCE INDICATORS

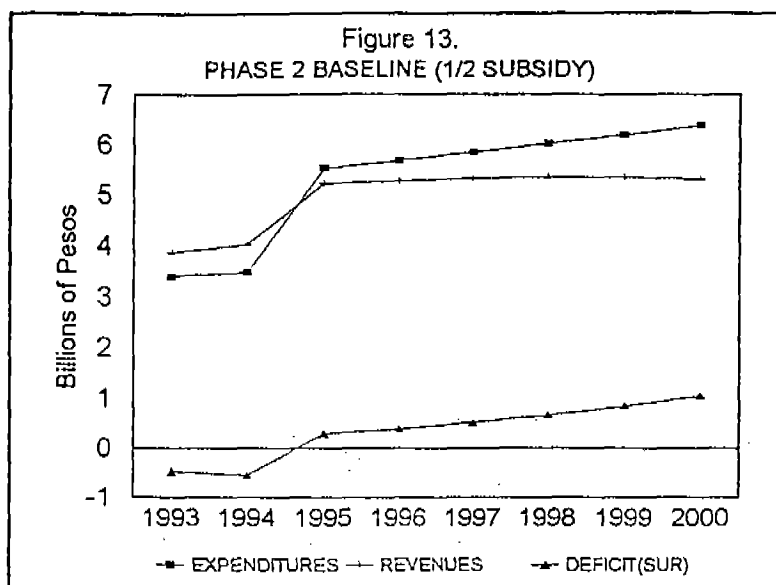
		I	II	III	IV
Willingness to Pay	1993	1.039	1.433	1.090	1.159
	2000	2.028	2.136	1.410	0.949
Cross Subsidization Index	1993	-0.154	0.308	-0.100	-0.024
	2000	0.354	0.461	-0.173	-0.490
Support Value	1993	39.575%	49.925%	60.525%	87.175%
	2000	29.733%	37.509%	45.473%	65.496%

C. FINANCING IMPLICATIONS

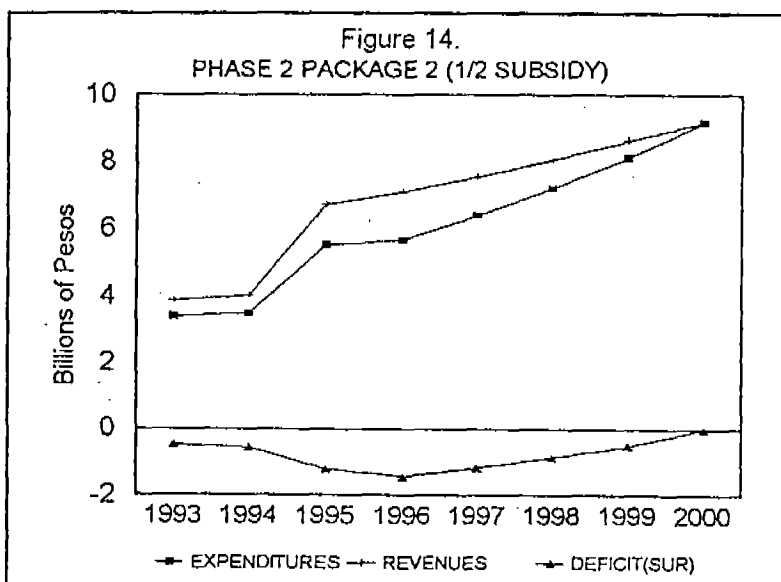
	1993	2000
TOTAL REVENUES (P)	3,875,537,013	8,513,305,463
Contribution Income	2,529,399,496	6,080,477,717
Investment and Other Income	1,350,309,100	2,442,001,793
TOTAL EXPENDITURES (P)	3,405,345,406	9,181,863,646
Benefit Payments	3,244,039,464	8,838,430,269
Processing Costs	161,305,943	343,433,378
Collection Costs	4,171,583	9,174,047
NET INCOME (P)	470,191,607	(668,558,183)
NET UNDERWRITING GAIN (P)	(875,945,910)	(3,101,385,930)
RESERVE CAPACITY (in years)	2.087	1.400
BENEFITS PAID/BENEFICIARY (P)	2,337.915	3,436.583
BENEFITS PAID/CAPITA (P)	140.050	181.521
OPERATING EXPENSE		
As % of Collection Income	6.542%	5.799%
As % of Total Income	4.270%	4.142%
As % of Benefit Payments	5.101%	3.989%
Per Beneficiary (P)	119.256	137.102
Per Capita (P)	7.144	7.242
COST OF INSURANCE (%)	-25.723%	-33.777%

negative net income, net underwriting gain and cost of insurance. Benefit increases are not sustainable after the year 2000.

Overall, the simulations in this section indicate that even when premiums of Phase 2 members are not subsidized, benefit increases can not be sustained. As a result, the relevance of Medicare in the face of rising health care costs will be eroded (support values will remain small). This is true even when the income ceiling is raised to P 7,000. More so when Phase 1 members have to subsidize part of the new members' premiums. Negative net underwriting gain and cost of insurance indicate that benefit payments and administrative costs are draining the reserves. This clearly indicates that in the near future, collection income has to increase for the fund to remain viable in the long-run. But in the face of the higher taxes that the population is being asked to shoulder at present, raising payroll taxes in the future may not be feasible.



This section provides a simple representation of how Phase 2 would affect the HIF. Some assumptions may be questionable. It is highly probable that administrative costs would actually be higher for several reasons. First, the simulations ignore the start-up costs of a combined HIF.



Start-up involves separating the HIF from the SSS and the GSIS and setting up a completely new office. Second, administrative costs are based on SSS's low administrative cost estimates. Third, the P 1 collection cost may be on the low side since it is expected that it would be harder to collect premiums from Phase 2 members. Fourth, the assumption that actual collections of 84 percent of potential for Phase 2 can be generated is rather high. (It is also considered high for Phase 1 SSS members). All the above plus the

assumption of high investment earnings from reserves (19 percent following SSS performance) indicate that the simulations for the Phase 2 HIF are highly optimistic.

5. Conclusions

The simulations show which combinations of contributions and benefit ceilings are feasible up to the year 2000. Equity and administrative feasibility are achieved mainly through increases in the income ceiling. SSS is in a better financial position to increase benefits than GSIS but even with SSS alone, expansion of coverage to outpatient services is not recommended since there are indications that it is not feasible in the long run and administrative efficiency would be compromised.

Finally, the combined HIF simulations show that providing equal benefits for private and public employees would place a heavy burden on the HIF considering that start-up costs are also ignored. Clearly, built up surplus from the SSS would subsidize the greater utilization of benefits by GSIS members. As a result, increases in benefits are lower for SSS members than in the case where the HIF is still divided.² If the NHIL is pushed through, the burden on the reserves of the combined HIF would be even greater (even under the 0 subsidy simulation). This means even under optimistic projections and even if the income ceiling is raised, the NHIL would not be able to provide much benefit increases in the future.

If the higher disbursement costs reflected in the "pessimistic" scenarios are closer to reality, Medicare beneficiaries will have to make do with benefits lower than what are presented in the above simulation.

FULL MEDICARE COSTING

One of the objectives of this project is to investigate if full Medicare costing (i.e., if publicly-subsidized non-availing members were to use their Medicare benefits) would lessen government subsidies to public hospitals and rechannel funds to finance primary health care (PHC) and public health programs. An important step in this investigation is determining rough orders of magnitude of the value of Medicare benefits of poor members who have been hospitalized but did not avail of their Medicare benefits.

²Higher benefits for GSIS members were achieved only because the income ceiling was abolished. In the combined HIF package, the P 7,000 income ceiling had to be applied to both GSIS and SSS members.

1. The share of Medicare in provider income

Table 19 gives an impressionistic account of the importance of Medicare in financing hospital operations. Anecdotal data obtained from the 1992 trial balances of selected hospitals retained by the DOH (i.e., undeveloped) imply that Medicare figures well in tertiary hospital services financing. The Philippine Orthopedic Center, for example, relied on Medicare for as much as 18.7 percent of its generated income in 1992. About 40 percent of the service income of the Jose R. Reyes Memorial Hospital came from Medicare. The National Children's Hospital is obviously a special case, since it depended on Medicare for 99.5 percent of its income in 1992. On the average, the percentage share of Medicare in revenues in all hospitals surveyed is about 29.5 percent. The percentage share is higher in public hospitals at around 39 percent. These figures are taken from the DOH_PIDS survey results. They suggest that the existence of the Medicare program is a significant factor in maintaining the financial viability of medical facilities, especially public hospitals.

2. Public subsidies vs. provider income

Table 20 clearly demonstrates, however, that a few selected hospitals which have not been devolved to local government units are so heavily subsidized that they won't be affected by changes in service income levels, such as full-costing Medicare. Of the 11 retained hospitals, only three--Rizal Medical, Orthopedic, and East Avenue-- have income levels above 10 percent of the utilized allocation. And they are unacceptably low. Most of the hospitals generate less earnings. San Lazaro, Fabella and the National Center for Mental Health have incomes at less than 2 percent of utilized allocation. Without the budgetary assistance of DOH, these public hospitals will find it extremely difficult to survive. The level of expenses needed to run these hospitals makes external sourcing of funds a constant necessity. On the average, the 11 hospitals' income is a low 6.42 percent of utilized allocation. Given the huge losses that these hospitals incur, and the almost insignificant income levels that they generate, it is doubtful that full-costing Medicare would appeal to them as an income augmentation option.

Still, it is possible that a level of subsidy reduction (resulting from avilment of Medicare benefits by poor members) that is relatively small from the providers' and the insured population's point of view (and hence need not arouse insurmountable opposition) might represent a substantial marginal increase in support for primary health care.

3. Estimates of Medicare non-avilers

Table 21 shows the avilment of Medicare benefits by income quartile, with the 4th quartile representing the most affluent among Medicare members. The data were sourced from four regions, namely, Metro Manila, Cagayan Valley, Central Visayas, and Northern Mindanao. From a sample size of 2,798 respondents, about 6.83 percent were hospitalized without availing of Medicare benefits while 34.95 percent were hospitalized and availed of Medicare benefits.

Table 19. Total and Medicare Incomes in 3 Selected Hospitals Retained by DOH, 1992

Hospital	Total Income (million pesos)	Medicare Income (million pesos)	Medicare Income as % of Total Income
Philippine Orthopedic Center	15.376	2.881	18.74%
Jose R. Reyes Memorial Hospital	10.458	4.323	41.34%
National Children's Hospital	0.201	0.200	99.50%

Source: Hospital Trial Balances, 1992

Table 20. Utilized Allocation vs. Operations/Services Income in 11 Selected Hospitals Retained by DOH, 1992

Hospital	Utilized Allocation (Pesos)	Services/ Operations Income (Pesos)	Income as % of Allocation
National Children's Hospital	47,090,777	1,201,131	2.55%
Research Inst. for Tropical Medicine	37,853,672	2,543,343	6.72%
Jose R. Reyes Memorial Hospital	111,030,631	10,457,884	9.42%
Rizal Medical Center	60,977,489	7,120,084	11.68%
San Lazaro Hospital	104,587,107	1,249,959	1.20%
Philippine Orthopedic Center	140,011,783	15,376,082	10.98%
Tondo Medical Hospital	38,041,122	3,119,246	8.20%
Jose Fabella Memorial Hospital	111,251,167	2,054,595	1.85%
National Center for Mental Health	234,553,206	3,157,677	1.35%
East Avenue Medical Center	97,256,710	10,466,938	10.76%
Quirino Memorial Hospital	54,777,846	3,255,210	5.94%
Total	1,037,431,509	60,002,148	
Average	94,311,955	5,454,741	6.42%

The rest, about 58.22 percent, were presumably not Medicare enrollees. (Note that by income quartile, the results validate earlier findings in the Economic Evaluation study that the higher income groups utilize their Medicare benefits much more than the low income groups.)

In 1992, PMCC statistics revealed that there were 1,410,034 Medicare beneficiaries, when P2,108,420 worth of Medicare benefits were disbursed at an average value of P1,715 per beneficiary. This study assumes that the percentages in the four regions combined hold as well for the entire country. The proportion of non-avilers to avilers is approximately 6.83/34.95, or 19.52. Thus, nationwide, the number of non-avilers is 19.52 percent of 1.4 million recipients, or roughly 275,375. At P1,715/beneficiary, the amount that should have been billed to Medicare would be P472 million, had all non-avilers filed their Medicare claims.

Of particular interest in this study is the value foregone by the poor members who in all likelihood are publicly subsidized. Non-avilers in the high income brackets presumably can avail of other health insurance packages (e.g., HMOs) or otherwise should be willing and able to pay their medical expenses without recourse to Medicare. Indeed, in the interest of equity, it would do well for better-off members to take advantage of other health insurance funds so that a bigger than proportionate share of benefits would go to the worse-off members. Table 21 shows that the non-avilers in the 1st income quartile as a percentage of the total Medicare non-avilers is 3.14 percent, or 8,650 out of 275,375.

Assuming that all the non-avilers in the 1st income quartile are publicly subsidized, this means all poor Medicare non-avilers were hospitalized in public hospitals. This is a reasonable assumption, since private providers generally do not offer subsidies and often require advance payments (deposits) for medical services--factors which would discourage poor members from getting hospitalized in private hospitals. It is also assumed that the average value of claims for the 1st income quartile is not significantly different from the average value of claims for the 1st income group of Medicare members in a combined SSS-GSIS setup. At P 1,583 average value of claim for the 1st income group (see Table 3), the amount foregone by poor non-avilers would be P13.7 million. That amount would have gone to public hospital coffers had these poor non-avilers claimed Medicare benefits.

4. Primary health care allocation

Table 22 shows the 1992 budgetary allocation of the primary health care program of the DOH, distributed by region, under the General Appropriations Act. The aggregate for all regions amounted to P88,006,000. The P13.7 million foregone income from Medicare would have been around 15 percent of the total allocation of the PHC. Assuming this will be the percentage in the succeeding years, the amount is a significant one by any standard. The foregone income could easily fund PHC in Metro Manila and the Ilocos Region combined, or it could support 95 percent of the PHC funding requirement of Southern Tagalog. Alternatively, it could take care of three-fourths of the PHC program in the whole Mindanao area.

Table 21. Availment of Medicare Benefits

Availment of Medicare Benefits	All	1st	Quartile 2nd	3rd	4th	Refused
Not Applicable	1629 58.22%	551 91.53%	488 64.38%	305 44.01%	225 35.49%	60 54.05%
Hospitalized without availing	191 6.83%	6 1.00%	39 5.15%	56 8.08%	81 12.78%	9 8.11%
Hospitalized and avail	978 34.95%	45 7.48%	231 30.47%	332 47.91%	328 51.74%	42 37.84%
Total	2798 100.00%	602 100.00%	758 100.00%	693 100.00%	634 100.00%	111 100.00%

Source: DOH-PIDS Survey, 1992

Table 22. DOH Primary Health Care Program
Budgetary Allocation by Region, 1992

Region	Allocation
NCR	6,922,000
I	6,687,000
CAR	2,996,000
II	3,732,000
III	9,800,000
IV	14,347,000
V	4,908,000
VI	7,370,000
VII	6,459,000
VIII	6,513,000
IX	2,946,000
X	5,512,000
XI	5,250,000
XII	4,484,000
Total	88,006,000

Source: 1992 General Appropriations Act

5. Impact on overall equity and administrative feasibility

If the "full-cost" alternative were to be enforced, how would it affect the Medicare program itself? Table 23 shows the full-cost option. Two assumptions are used. First, it was presumed the poor non-avilers, all 8,650 of them, belong to the 1st income group in the simulation model. Second, since the 1st income groups in the SSS and the combined SSS-GSIS setup are the same (see Tables 2 and 3), it is assumed that SSS could support all the poor non-avilers. Hence, Table 23 is similar to Table 9--the high hospitalization SSS package with moral hazard--except that the number of claims in the 1st income group is increased by 8,650. This reform package is chosen in lieu of the SSS low in-patient care cost option because the assumption of higher operating costs comes closer to reality.

Not surprisingly, the results only differs slightly from SSS Package 2. The X-Sub index improves a bit, because the new claimants belong to the poorest income group. Expenditures are slightly higher initially because of the increase in the number of claimants, and rise more gradually because of moral hazard. By the year 2000, the underwriting losses incurred by the program would inch up a little more but the net losses would slide down a little. Reserve levels are only a little lower than those of Package 2. Government takes a beating in the cost of insurance, which grows lopsidedly in favor of the beneficiaries, but otherwise the administrative efficiency indicators remain unaffected.

Overall, the cost pattern does not stray much from that of Package 2. Thus, rough orders of magnitude positively indicate that a full Medicare pricing would not appreciably alter the financial makeup of the program. Full-costing Medicare would not make it vulnerable to excessive losses, any more than it is now. But it should be noted that while start-up costs of a combined HIF could be avoided (only SSS would carry the "full-cost" burden), other non-patient related cost consequences, such as information dissemination to the non-avilers, have not been factored in. If these new transaction costs outweigh the gains associated with the full-cost option, then it goes without saying that the latter should be subjected to further study.

6. Non-avilment and information asymmetries

Arguably, poor members may not have complete information on Medicare, and may need consumer protection to ensure their availment of Medicare benefits. Some forms of intervention (e.g., Medicare promotion program) may be necessary so that non-avilers are compensated for their unfamiliarity with the program. This lack-of-information argument is premised on the proposition that consumers would want to use the service if they are aware of it. What are the costs involved in launching an info drive for the poor Medicare members and can they be kept at reasonable levels? The first problem here is whether the poor members can be isolated from the general Medicare population. If the information "net" is thrown too widely--which is the case if the promotion is centrally organized--the risk is that information would filter through to poor groups at costs that far surpass the expected benefits. To "capture" poor members, perhaps the

Table 23. Full Medicare Costing (Based on SSS Package 2)

A. Assumptions		2% Increase in Utilization per 100% Increase in Benefits Ave. Cost of Processing/Claim = P 144.8 in 1993 Collection Cost = P 0.20 per member			
Benefit Increase/year = 15% (1994-2000)					
Tax Rate = 2.5%					
Income Ceiling = P 7,000					
Ave. Cost of Hospitalization = P 8,000					
B. Performance Indicators		I	II	III	IV
Willingness to Pay	1993	1.086	0.891	0.756	1.034
	2000	2.898	2.378	1.668	1.245
Cross Subsidization Index	1993	0.215	-0.071	-0.246	0.135
	2000	0.640	0.226	-0.234	-0.458
Support Value	1993	19.788%	24.963%	30.263%	43.588%
	2000	27.010%	34.074%	41.309%	59.497%
Financing Implications					
	1993			2000	
Total Revenues (P)	3,255,452,146			7,198,505,497	
Contribution Income	1,905,777,998			3,538,792,453	
Investment and Other Income	1,350,309,100			3,661,306,553	
Total Expenditures (P)	2,021,149,860			6,717,396,163	
Benefit Payments	1,904,752,670			6,544,689,448	
Processing Costs	115,762,238			172,706,715	
Collection Costs	634,952			1,593,509	
Net Income (P)	1,234,302,286			481,109,334	
Net Underwriting Gain (P)	(115,371,862)			(3,178,603,710)	
Reserve Capacity (in years)	3.516			2.869	
Benefits Paid/Beneficiary (P)	2369.516			6303.033	
Benefits Paid/Capita (P)	107.836			287.706	
Operating Expense					
As % of Collection Income	3.332%			4.925%	
As % of Total Income	1.952%			2.421%	
As % of Benefit Payments	3.334%			2.663%	
Per Beneficiary (P)	78.989			167.864	
Per Capita (P)	3.594			7.662	
Cost of Insurance (%)	-5.708%			-47.319%	

most cost-effective way is to make the campaign as close as possible to the place where the poor are serviced: the public hospitals.

7. Is a direct transfer of Medicare funds possible?

A more cost-effective way of getting things done is to directly transfer a small fraction of the HIF to the primary health care program. That would ensure cross-subsidies without adding administrative costs to Medicare. But this option could be mired in legal entanglements because of the fiduciary nature of the HIF. The HIF is presumed to be held in trust by government for workers and employers. Consent by its owners will have to be sought before a direct diversion of the fund can be made.

8. Note on implementing full Medicare costing

At present, both provider and patient see no incentive to avail of Medicare if the subsidies persist at their current high levels. An initial step toward implementing full Medicare costing is for DOH to withdraw proportions of subsidies that can be supplanted by Medicare, and immediately transfer them to the underfunded PHC program. That would create disincentives for public hospitals to continue using their existing allocations to benefit non-avilers. As the study shows, even modest increases in incomes generated through Medicare can cover a substantial portion of PHC costs.

In the short term, there is need to embark on frontline activities (e.g., information drive, assistance in filling out forms, counselling services) to ensure that poor members avail diligently of Medicare. This would be the practical equivalent of decentralizing the Medicare promotion campaign discussed above at the point of health service delivery. In the long run, full Medicare costing should be implemented in the context of a policy of user charges. Public hospitals should eventually move into a willingness-to-pay mode to sustain their own operations and increase both the resources available to the public health sector and access for the poor. Full Medicare pricing would be easier to implement in a regime of user fees.

BUILDING INSTITUTIONAL CAPABILITY TO SUPPORT THE REFORM

One implication of this study is to immediately build Medicare institutional capabilities. This section focuses on the restructuring needed in PMCC, acknowledged as the "nerve center" of the Medicare program despite its limited authority at present. Institutional strengthening is a first step in the implementation of the preferred reform package.

1. Organizational principles

An alternative organizational structure for PMCC should follow certain organizational principles:

1.1 The functional configuration should fit new responsibilities in light of the Medicare reform requirements.

1.2 The organizational structure should focus on two key policy functions--program development, and research--in addition to the traditional monitoring and supervision functions.

1.3 Checks and balances should characterize the structure, by disengaging monitoring and control from planning and development.

1.4 Human resources development should focus on building a lean and highly competent professional staff.

2. Major functions

The following major functions should be indicated in the organizational makeup of PMCC:

2.1 Planning and Development - to set overall directions for Medicare, develop and test new programs, and recommend policy changes.

2.2 Research and Actuarial Services - to collect and organize statistical information, conduct actuarial studies and to provide analytic support to planning and development.

2.3 Accreditation and Supervision - to set provider accreditation standards, screen providers applying for accreditation, and to make sure accredited providers comply with the Medicare law.

2.4 Resource Management - to take care of human resources, accounting, budgeting, information technology, public information, physical facilities, security, procurement, and cashing.

2.5 Hearing and Investigation - to investigate and prosecute cases of violations of Medicare rules and regulations.

This paper does not propose a definitive organizational structure for PMCC. That task is better left to reform implementors. However, whatever organizing pattern PMCC follows should adhere to the principles enunciated and reflect the major functions just mentioned. It is crucial that the Planning and Development function be distinct from the Research function because they are operationally different. While critical policies require research support, strategic planning is clearly a managerial concern. So is program development. While it also needs research support, its execution is not connected to the research function.

Actuarial services have been added to the research function to enable the Commission to come up with its own actuarial findings on Medicare, independent of what the SSS and GSIS are doing (which often yield varying results). This will strengthen the policy-making role of the PMCC, as it can provide a more integrated perspective on long-range actuarial cost estimates for health benefits.

Resource management and development, rather than mere administration and general services, should be the focus of the Resource Management function. It should evolve a human resource development program that can accommodate new skills required by the reform packages. It should also concern itself seriously with information technology, because the performance indices associated with the reform packages require a new management information system.

Accreditation and supervision should be considered a receding function of PMCC. While performing the traditional tasks of accrediting and monitoring providers, PMCC should encourage a transition to self-policing by the providers. Eventually, accreditation itself should be transferred to the different medical associations, which should be held accountable for the performance of physicians and hospitals. That will be consistent with the reform framework of facilitating a less regulatory environment for medical care.

Hearing and investigation should in the meantime be retained in the PMCC, because of the current need to curb widespread fraud and rent-seeking in the provision of Medicare services. The important point, however, is that PMCC should not be saddled with regulatory functions, including quasi-judicial chores, that would dissipate the energies focused on long-term planning and development issues. Eventually, this function should be lodged with a prosecuting agency, such as the Department of Justice, or an expanded Office of the Ombudsman.

3. Organizing for research

Implementing the reform package will require research of a new kind. PMCC will have to organize itself on the basis of the following groupings:

3.1 Statistics - to maintain, develop and implement statistical methodologies to analytically track the progress of the reform; to prepare and compile statistics on coverage, utilization, cross-subsidization, premium collection and benefits, administrative efficiency, and fund viability; to

undertake household surveys when necessary to support the data requirements of Planning and Development.

3.2 Policy research - to analyze developments on compulsory social insurance, focusing on "how things work" and "who benefits, who loses"; examine reform schemes in greater depth than has been possible in this paper, and assess their equity and efficiency consequences; develop econometric models to provide consistent frameworks for analyzing and monitoring Medicare policies; and identify policy impediments and provide policy options.

3.3 Actuarial services - to determine the level-cost of future Medicare disbursements; make long-range actuarial cost estimates, with the end goal of arriving at a contribution structure estimated to support high levels of benefits and to maintain adequate balances in the trust fund; and prepare short-term actuarial forecasts.

These research fields will require new skills. PMCC should recruit an entirely new set of professionals, at attractive salary grade levels. Personnel requirements will include statisticians, policy analysts, health planners, health economists, econometricians, and actuaries, among others. Research should coordinate with Resource Management on how to develop new compensation levels to interest competent graduates and practitioners into joining PMCC. For the current staff, Resource Management should develop training packages that can upgrade existing skills. A training needs analysis will be helpful in this regard.

4. Setting up the information environment

The existing PMCC MIS is largely a mélange of diverse reports emanating from the various services. Each unit maintains its own sources and data files. The reports of the Providers Service (list of accredited providers, monitoring reports) and those of Hearing and Investigation (case decisions, summary report on resolved cases) have evolved out of their own field data gathering. By contrast, the most important report in the existing MIS--the HIF Consolidated Report--is a "borrowed" set of data, sourced from the GSIS and SSS. The Programs Development Service merely consolidates the data from the two systems, which unfortunately, maintain differing information environments. An example of how straightforward consolidation can give misleading information is succinctly illustrated in Appendix A. Here, an SSS paper tried to show how ignoring the two systems' distinct accounting procedures led to erroneous administrative cost figures for Medicare, and therefore to faulty research conclusions.

A key to improving the Medicare MIS is to ensure that PMCC has independent access to SSS and GSIS files and raw data. Recently, the Philippine Data Project, a USAID-assisted technical assistance project, installed a hi-tech computerized data base system in the PMCC headquarters. The new system is capable of directly processing the Medicare data files of SSS and GSIS. With the information data base needed for policy decisions now housed within PMCC, the Commission is in a position to generate various reports independently of the two institutions. That will allow it to crosscheck the validity of the SSS and GSIS reports. That

should likewise set the stage for redesigning the PMCC MIS so that it can analytically track changes in the contribution and benefit structures as reforms in the payroll tax and benefit rates are undertaken. An initial step in that direction would be devising new report formats that incorporate the proposed performance indicators such as willingness to pay, cross-subsidization index, fund viability, administrative efficiency, and cost of insurance--indices which have never been used by either SSS or GSIS. A sustained effort to improve the timeliness and accuracy of the reports by institutionalizing rigorous data gathering and processing techniques should follow.

In the long run, PMCC, SSS and GSIS (or their successors, assuming Medicare will be eventually consolidated), along with the Employment Compensation Program and the HMOs, should be linked together through a computer network. That should strengthen the base of information of Medicare, and make it more flexible and responsive to a wide range of policy initiatives and changes.

PROSPECTS FOR LONG-RUN CHANGES

1. Impact of Medicare reform on employment and coverage base

Changes in the contribution structure can have unintended consequences on the supply of and demand for labor. A private firm may be unable to transfer the employer costs of a hiked premium to its workers if wages are already at the prescribed minimum level. For employers hiring cheap labor, the premium is equivalent to an increase in the minimum wage, thus raising the firm's labor costs. A firm may also respond to the payroll tax hikes by raising wages less than it would otherwise. In the short-run, employers may incur some losses as adjustments in the composition of labor costs are made. If the increase in costs is substantial, the firm may opt to close shop or initiate layoffs. Employers would also be induced to hire part-time, temporary or casual workers who would not be covered by Medicare.

Increases in premium rates may also affect a worker's willingness to work by imposing high marginal tax rates on additional earnings. As incomes rise, reduction in benefits and increase in premiums influence marginal tax rates on income net of Medicare expenses. If the additional earnings (e.g., pay hikes, productivity bonuses) do not compensate for the cutbacks in Medicare benefits and rise in costs, the productivity of workers may actually decline. The tradeoff may lie in lifting the salary-based ceiling on premium rates while lowering the payroll tax. Reasonably good results occurred when these changes were made in the simulation.

The payroll tax is markedly less regressive than a fixed premium per household. But the reform of the payroll tax could moderate its regressive nature. Even if lowered, the tax ought to be made applicable eventually to all earnings. Access to Medicare services also influences the fairness of the reform package. Even when payroll taxes are used, a member living in an

area where medical resources are limited may receive lower benefits than a member with the same income and premiums who lives in an area with adequate and high-quality medical services.

To support provisions that would subsidize the care of the poor more heavily than others, two options are offered. Either the premiums are increased, or the income ceilings are eliminated. Either way, higher costs will be passed on through the form of higher wage bills for employers who provide half of the contributions to the program. In a probable scenario, private employers might substitute capital for labor in order to avoid escalating wage bills. In such a case, coverage will remain static or even decline. Thus, a delicate balance will have to be maintained ensuring that the poor have access to high-quality care *while* avoiding employment backlashes that in effect would reduce the coverage base of Medicare.

(An empirical test concerning the impact of Medicare reform on labor and coverage is not included in this study and will require a separate investigation.)

2. Moderating excessive benefit expense by altering the retrospective pricing system

Changes in the benefit structure may lead to excessive benefit expenditures because of the cost reimbursement mode of paying providers. The current Medicare practice is that providers are reimbursed on the basis of customary or usual fees according to a preestablished fee schedule. Ordinarily, a retrospective payment system pays a provider on the basis of costs incurred, and gives little incentive to weigh costs against patient benefits. The moral hazard effect will hound a retrospective pricing system if length of stay and the deployment of resources in treating the patient are endogenously determined by the hospital (Weisbrod, 1991). In the case of Medicare, reimbursement ceilings on room, board, diagnostic procedures and basic hospital services somewhat act as an extenuating factor, along with weak support levels. But in the main, Medicare too produces an incentive to hospitalize rather than to utilize strategies that involve preventive health care approaches.

Solon and Capuno (1994) grapples with the problem of excessive benefit expense and moral hazard by providing for a "capitation equivalent" in their simulation model. They introduce a capitation index, which is an amount providers receive in advance, adjusted for some cost-sharing ratio, for each beneficiary enrolled. A prospective pricing system such as capitation confronts providers with the incentive to be more cost-conscious, that is, to search for cost-reducing modes of treatment and to economize on expensive hospital services. Nevertheless, if under a fee reimbursement basis, the number of medical services may unnecessarily increase through additional tests and procedures (because the extent and level of services are endogenous decisions by providers), the reverse could happen under capitation. Providers have the incentive to restrict the number of services provided and the time spent with each patient in order in order to contain costs. In other words, quality of services is traded off with cost containment.

Any substantial reduction in the relative incomes of providers arising from alterations in payment modes may frustrate the objectives of Medicare reform. Any payment policy that discriminates against rural providers brings about disincentives for providing adequate care in rural areas (the fee schedules, no matter how uncompetitive, still reward specialists and penalize those engaged in primary care). Different fees (for that matter, different capitation equivalents) for different geographical areas are likely to penalize those areas where medical charges have typically been lower and reward those areas where providers have been able to earn higher incomes. If capitation could be introduced on an experimental basis, further research would be needed on whether it would lead to the desired outcome of cost containment without sacrificing the quality of medical services, nationally and in the various regions. A sensible early step would be making regional facilities the setting for a small-scale experimentation with a capitation system.

3. Aiming for universal coverage

The rationale for expanding Medicare coverage is to eliminate the inequities arising from incomplete coverage. But the simulation exercises for universal health insurance coverage suggest that the strategy would fall through without a sustained effort at increasing the HIF income levels. Covering the uninsured is often viewed as a public sector solution to insurance market failure, but if financing would continue to be based on the payroll tax, the key question is *feasibility*: how much more the collection income could be raised without experiencing any backlash from both employers and workers. The simulation indicates that the figures involved are substantial. Moreover, if extra revenue is raised by enforcing new tax rates on employers and employees--assuming opposition to new round of increases in the payroll tax is neutralized--a new worry, labor market distortions, might arise (see preceding discussion).

The idea for Phase I, to begin with, is to make Medicare self-financing for the current members. But the fact is, the present members are still not fully paying the costs of their own care. This suggests that the program will have to be carefully configured so that at the very least, Phase 1 members won't be subsidizing the Phase 2 newcomers. That would be difficult, unless new subsidy sources are found.

"Sin" taxes (those levied on tobacco and alcoholic drinks) could substitute for the payroll tax, but this method of financing does raise the issue of deadweight loss. There are no rough-and-ready estimates of the losses involved, but they might be considerable. Subsidizing Phase 2 through general tax revenues, moreover, should be done only if the cross-subsidies are already benefitting the poorer members; otherwise, it makes the setup as inequitable as before, paid for in part by the low income groups.

For prospective members who belong to low-income groups, Medicare should arrange for more innovative premium collection and reimbursement systems. "Vouchers" or health cards entitling the poor to medical care for a specified period could be issued to the poor at modest costs. Thailand's health card system that expands risk coverage for poor groups could serve as a model.

Phase 2 would probably make more economic sense under a prepayment scheme (e.g., capitation). Providers will have more incentives to utilize time, supplies and equipment efficiently and to avoid waste. Reimbursements with high caps induce more expensive services than are required, as the Medicare experience confirms.

These are a few of the many considerations that have to be carefully weighed in a thorough examination of the benefits and costs of expanded Medicare coverage.

4. The outlook for a single Medicare fund and a consolidated SSS-GSIS Medicare setup

The question of whether the SSS and GSIS Medicare functions are to be merged is inseparable from the question of whether their HIFs should be combined into a single fund. Operationally, both will have to be addressed in tandem. In the long run, each question should be decided on the basis of whether the consolidation will result in the most efficient use of resources, taking into account the equity objectives of Medicare reform and the administrative costs of setting up and maintaining the combined system. Of the two issues, the first is the less difficult to resolve. The evidence currently available (see Gamboa, 1991; Gonzalez, et.al., 1994) is predisposed toward integration because of scale economies and operational efficiency concerns. As has been pointed out, consolidation will bring about economies of size, encourage better fiscal management, and lead to socially optimal allocations of expenditures. The principal function of both institutions--claims processing--will improve tremendously as it can tap the pool of skilled personnel of each. Managers of the unified structure can evolve innovations in systems and procedures using the best practices and routines developed and institutionalized separately in SSS and GSIS.

At the policy level, the new setup will possibly erase the existing dichotomy in benefit payments and administrative expense, lessen adverse selection through a more balanced distribution of risk, and maintain a better congruity between the benefit structure and the pattern of premium collections. Unifying the HIF is a more complex issue. Implementing the one-fund concept is not as straightforward as the merging of the Medicare departments of the two systems. As the findings of this study indicate, there are short-term problems that need to be resolved in a combined HIF. Because of the weaker financial condition of GSIS, the likelihood of SSS Medicare, with its built-in surplus, subsidizing GSIS Medicare is great. The outcome is not a win-win situation.

The simulation exercises in effect suggest that policy corrections will have to be applied separately to GSIS and SSS before the merger should even be considered. For GSIS, both the equity effects and financial viability of its program will be enhanced if the salary-based cap on premium contributions were to be totally lifted, and the payroll tax rate adjusted according to the benefits being planned. For SSS, policy adjustments will require increasing the income ceiling and benefit rate, while keeping the tax rate at its present level. Obviously, constant policy realignments will have to be subsequently made so that at the point of merger, both will have a uniform, or nearly identical, benefit and contribution structure.

Interviews made with PMCC board officials revealed there are no legal obstacles to individual initiatives in altering both contribution and benefit structures, as called for in the simulation exercises. As a matter of political expediency, however, contribution and benefit patterns have always been made nearly identical. In the past, most of the proposals made by SSS to increase the benefit rate of private sector workers were turned down by the board because of the inability of GSIS to match the offer. In recent months, however, the board has allowed SSS to grant a 5 to 20 percent increase in benefits for its members without asking GSIS to do the same. In the future, the board will have to consider more seriously the possibility of asking both GSIS and SSS to synchronize their reform efforts, within a mutually agreed timeframe. Pressure must also be exerted on GSIS to be more proactive in securing reform initiatives. That will guarantee that the consolidation will be a real one, and not just a marriage of political convenience.

Appendix A

COMPARING APPLES WITH ORANGES³

The SSS and GSIS use different accounting procedures. Comparing the cost of Medicare benefit administration on the basis of both the Systems' respective financial reports would be like comparing apples with oranges. They are not comparable.

In the case of SSS, effective 1986, the application of the benefit payment ratio (i.e., the ratio of benefit disbursements of one fund to the total benefit disbursements of the three funds) was adopted in the distribution of expenses incurred by SS, Medicare and EC funds to facilitate analysis of expenses which include supportive cost.

Supportive cost is the indirect cost consisting of personnel usage, computer usage, and other operating expenses incurred by the Systems in support of their operations. The SSS used to charge this indirect cost of three percent (3%) and two percent (2%) for Medicare and Employees' Compensation, respectively, which is based on the total operational cost of the three funds. Depreciation was also considered as part of operating expenses starting 1986 but was distributed by fund only starting 1992.

GSIS, on the other hand, "excludes overhead expenses, like rent, equipment, rental, light, and water. GSIS charges actual direct expenses on the basis of Medicare related expenses, which also explains the low level of its operating expense." (page 28, paragraph 4)

In view of the foregoing, the operating costs of SSS and GSIS should not be taken as they are but have to be reevaluated. The following paragraphs support our position.

OPERATING EXPENSES

Year	SSS	GSIS
1980	P3.800 M	P15.116 M
1985	9.066	13.390
1986	27.257	7.340
1990	60.222	8.464

³Excerpts of a paper which presents the position of the Social Security System as regards the Results of Recent Research Concerning Medicare in the Philippines (Health Finance Development Project Monograph No. 7) authored by Emelina Almario, Ma. Luisa Beringuela, Eduardo Gonzalez and James Jeffers.

Please note the effect of the change in the SSS accounting system of operating expenses which explains the 201 percent abrupt increase in SSS-Medicare operating expenses from P9.066 M in 1985 to P27.257 M in 1986. The SSS-Medicare administrative cost has pulled away since then. Also, the fluctuations in the GSIS administrative expenses from 1980 to 1986 need more scrutinizing. Annex A shows a comparison of SSS and GSIS average expense per claim from 1980 to 1991.

RECOMPUTED OPERATING EXPENSES

Year	SSS	GSIS
1980	P28.536 M	P - M
1985	27.628	42.337
1986	30.731	29.009
1990	75.691	75.691

Annex B shows the comparison of GSIS and SSS operating expenses under the scenario that GSIS will apply the present accounting system as SSS. The ideal way to recompute the operating expenses is to deduct first the GSIS Board/SSS Commission and EC Commission expenses from the total operating expenses before applying the benefit payment ratio. However, due to unavailability of data, the benefit payment ratio is directly applied to the total operating expenses of the two Systems.

The results indicate that, save for 1986, the cost per claim in GSIS will yield higher processing cost than that of SSS for the period 1981 to 1991. This supports our objection to the researchers' opinion that "these differences in accounting methods are not expected to alter the overall expenditures picture significantly." (page 28, paragraph 4)

Annex A

Average Expense per Claim (1980 - 1991)

Year	Operating Expenses		Number of Claims		Expense/Claim		GSIS Over SSS
	SSS	GSIS	SSS	GSIS	SSS	GSIS	
1980	P 3.800	M 15.116	748,274	465,064	P 5.08	32.50	540.03%
1981	7.100	19.340	762,198	465,587	9.32	41.54	345.93%
1982	7.120	4.479	895,355	488,838	7.95	9.16	15.22%
1983	7.325	7.296	913,229	547,817	8.02	13.32	66.04%
1984	8.905	10.610	818,801	587,792	10.88	18.05	65.97%
1985	9.066	13.390	869,489	558,668	10.43	23.97	129.87%
1986	27.257	7.340	828,793	535,142	32.89	13.72	-58.29%
1987	34.741	7.661	762,799	585,640	45.54	13.08	-71.28%
1988	42.003	6.509	890,614	607,050	47.16	10.72	-77.26%
1989	44.414	7.317	717,864	506,802	61.87	14.44	-76.66%
1990	60.222	8.465	650,359	572,520	92.60	14.79	-84.03%
1991	86.635	11.182	752,428	622,181	115.14	17.97	-84.39%

Average Growth Rate

1980-85	18.99%	-2.40%	3.05%	3.74%	15.47%	-5.91%
1986-91	26.02%	8.78%	-1.91%	3.06%	28.48%	5.55%

Annex B

Social Security System

Year	Benefits MCR		Total		Total Expenses		Recomputed Medicare Expenses		Number of MCR Claims		Recomputed Expense per Claim	
	(1)		(2)		(3)		(3)*(1)/(2) (4)		(5)		(4)/(5) (6)	
1980	P	203.831 M	P	660.423 M	P	92.459 M	P	28.536 M	748,274 P		38.14	
1981		214.676		791.418		104.232		28.298	762,198		37.13	
1982		251.498		1,016.660		113.103		27.979	895,355		31.25	
1983		259.395		1,174.178		124.986		27.611	913,229		30.23	
1984		239.355		1,315.702		164.121		29.857	818,801		36.46	
1985		264.507		1,531.453		159.959		27.628	869,489		31.77	
1986		279.118		1,829.840		201.464		30.731	828,793		37.08	
1987		350.247		2,535.275		269.869		37.282	762,799		48.88	
1988		474.474		3,655.720		349.932		45.417	890,614		51.00	
1989		449.521		4,267.023		463.835		48.864	717,864		68.07	
1990		710.502		5,872.523		556.429		67.321	650,359		103.51	
1991		1,022.847		7,903.323		739.184		95.665	752,428		127.14	

Government Service Insurance System

Year	Benefits MCR		Total		Total Expenses		Recomputed Medicare Expenses		Number of MCR Claims		Recomputed Expense per Claim		GSIS Over SSS
	(7)		(8)		(9)		(9)*(7)/(8) (10)		(11)		(10)/(11) (12)		(12)/(6)-1
1980	P	114.825 M	P	na M	P	na M	P	na M	465,064 P				
1981		125.050		906.809		291.488		40.197	465,587		86.34		132.53%
1982		128.230		1,067.091		314.489		37.791	488,838		77.31		147.39%
1983		147.368		1,267.392		320.728		37.293	547,817		68.08		125.21%
1984		171.041		1,509.017		375.862		42.602	587,792		72.48		98.79%
1985		174.053		1,731.899		421.270		42.337	558,668		75.78		138.53%
1986		174.368		1,931.000		321.250		29.009	535,142		54.21		46.20%
1987		224.498		2,182.900		452.498		46.537	585,640		79.46		62.56%
1988		239.320		2,518.498		554.281		52.670	607,050		86.76		70.12%
1989		276.552		2,892.506		589.060		56.320	506,802		111.13		63.26%
1990		416.454		3,778.871		686.816		75.691	572,520		132.21		27.73%
1991		708.743		5,535.691		810.302		103.744	600,181		166.74		31.15%

REFERENCES

- Abel-Smith, Brian. Health Insurance in Developing Countries: Lessons from Experience. Health Policy and Planning, Vol. 7, No. 3, 1992.
- Almario, Emelina, Ma. Luisa Beringuela, Eduardo Gonzalez, and James Jeffers. Results of Recent Research Concerning Medicare in the Philippines. Health Finance Development Project Monograph No. 7. Manila: Management Sciences for Health, 1993.
- Beringuela, Ma. Luisa. The Performance of Medicare I: An Economic Evaluation. Draft Report submitted to the Philippine Institute for Development Studies, 1993.
- De Feranti, David. Paying for Health Services in Developing Countries: An Overview. World Bank Staff Working Paper No. 721. Washington, DC: The World Bank, 1985.
- Gamboa, Rhais. Background Paper on Health Insurance in the Philippines. USAID, 1991.
- Goddeeris, John H. Insurance and Incentives for Innovation in Medical Care, Southern Economic Journal, Vol. 51, No. 2, 1984.
- Gonzalez, Eduardo, Corazon Urquico and Edwin Canonizado. Evaluation of Medicare I: Administrative Issues. Draft Report submitted to the Philippine Institute for Development Studies, 1993.
- Pauly, Mark V. Taxation, Health Insurance, and Market Failure in the Medical Economy, Journal of Economic Literature, Vol. 24, No. 2, 1986.
- Scanlon, William J. Possible Reforms for Financing Long-Term Care, Journal of Economic Perspectives, Vol. 6, No. 3., 1992.
- Solon, Orville and Joseph Capuno. How Much Will A National Health Insurance Program Cost? Some Issues, Questions and Estimates. UP Economics Foundation-HPDP, 1994.
- Weisbrod, Burton A. The Health Care Quadrilemma: An Essay om Technological Change, Insurance, Quality of Care, and Cost Containment. Journal of Economic Literature, Vol. 29, No. 2, 1991.