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Assessing the Success of Microinsurance Programs in Meeting the Insurance Needs of the Poor

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Introduction

Risk and vulnerability to risk are fundamental causes of underdevelopment (World Bank 2000; Dercon 2006; Islam 2009). Shocks, in the shape of sudden misfortunes causing a loss of income and productive potential, typically force poor people exposed to them to dispose of productive assets, which may force them into lower productivity, lower income, and higher vulnerability in the future—a process known as the poverty–vulnerability vicious circle. In addition, the expectation of such shocks motivates the vulnerable to invest their resources in low-yield activities, such as production of drought-resistant subsistence crops, to protect themselves against those shocks, and thus depresses the potential income of the poor below what it would be if they were not exposed to shocks. For both reasons, the costs of risk to the livelihoods of poor people are severe. Stefan Dercon, in his survey of income shocks suffered by individuals covered by the Ethiopian Rural Household Survey between 1999 and 2004, estimates that “if these shocks had been insured and smoothed, poverty would have been lower by about a third” (Dercon 2006: 123). The specific shock of the Ethiopian drought of 2002 is estimated to have pushed 1 million additional people below the poverty line into destitution (Hess et al. 2006: 3). And drought is only one of the many sources of vulnerability which poor people encounter.

Insurance, potentially, is one of the basic institutions which can provide a defense against social and financial exclusion for people whose existing coping strategies are failing. And if people’s livelihoods are effectively protected, that

should encourage investment among lower-income groups and raise overall investment and growth rates. And yet, as the *2000 World Development Report* on poverty puts it, “there are almost no insurance markets in developing countries because of problems of contract enforcement and asymmetric information” (World Bank 2000: 143). Slightly over the top though this description of the situation is, there is no doubt that the provision of one of the potentially most poverty-reducing services is seriously deficient—especially at the bottom end of the market where risk-coping capacity is at its worst. Thus the spotlight is thrown on what the microfinance movement, so dynamic in other parts of the financial spectrum, is able to do to redeem this deficiency. In this chapter, we examine what this contribution might be, and how its effectiveness might be optimized in the light of experiments with insurance for the poor so far.

Insurance, everywhere, is traded in a highly imperfect market. The research which has been done on microfinance customers’ expressed need for risk management and insurance services (Alderman and Paxson 1993; World Bank 2000: chapter 8; Sebstad and Cohen 2001) suggests a substantial thwarted demand for insurance services, a demand which probably increases in intensity as one moves down the income scale, and substantial use of informal emergency loans, rotating savings, and credit associations and other insurance substitutes. A component of this repressed demand appears to be gender specific: as Elson (1999: 616) argues, “in general, risk-reducing mechanisms have been much more a feature of male forms of market participation—such mechanisms include trade unions, job security rights, social insurance benefit, business and professional associations.”¹ But for all poor people, information asymmetries are extremely serious, with too many people on the demand side of the insurance market quite unaware not only of the quality of the product they are buying, but also of its nature.² Finally, we may note, and it is a key theme of this chapter, that much of the benefit from insurance—and therefore the demand for it—accrues to persons other than those who buy the insurance contract. This is not only because the reduction of poverty and inequality is a public good, benefiting the community as a whole, but also because insurance, if it works, stabilizes income and thus saves *financial institutions* the costs of chasing unpaid loans; protects *human capital* by enabling households hit by a shock to continue to make school fee payments and seek medical treatment for their families;³ and protects *social capital* by preventing groups of all kinds (including families) from breaking up because one of their member has a debt which is unpaid as the consequence of an insurable shock. This combination of externality and hidden information

creates a compelling case for external agency to fill the gaps in financial markets referred to earlier.

External agency has indeed entered the market for risks to low-income people in the past, often in the form of crop yield guarantee schemes for smallholders. The results however have often been disastrous, which explains much of the skepticism still currently expressed toward microinsurance.⁴ A review from the 1980s (Hazell et al. 1986: chapter 1) reported that “multiple-hazard insurance has proved costly, and governments would be well advised to stop and look carefully before entering this market.” The message from these studies is of course not that the demand for insurance is not there, but rather that the supply side needs reconfiguring. The lessons usually drawn (e.g. *ibid.*; Hazell 1992) have been that the supply should be of insurance against *one insurable hazard only*, such as hail, death of the insured, or burglary; that it should be protected against the moral hazard and adverse selection problems which render insurance so vulnerable to financial collapse; and that the provision of insurance should move from the state to the private sector or an NGO.

What has actually emerged in developing countries after that first wave of failure is the cluster of activities known as microinsurance, within which agriculture and insurance against climatic risk currently play a lagging role, and the leading role is played by life and health insurance. Microinsurance has been defined by Churchill as “the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and risk of cost involved” (Churchill 2006: 11). The microinsurance movement has, essentially, three components, each of which springs from a distinctive historical root. The first is experimental schemes setup by NGOs (or, uncommonly these days, the state) to insure against *single perils* such as property, health, and life insurance risks; the scheme operated by FINCA Uganda, to be discussed later, is a good example of these. These attempt to draw on the lessons from the failure of multiple-risk schemes, and aim at financial sustainability over the medium term; often they are connected with microlending operations, and originate in “emergency fund” life insurance schemes which repay the outstanding balance of a loan in the event that the borrower dies.⁵ The second strand is profit-making schemes set up by the private sector (*Gono Bima* of Bangladesh is one of the largest examples), not specifically to cater for the bottom end of the market, but willing to offer small insurance contracts (especially to cover personal effects, etc.) to low-income borrowers; these derive essentially from a movement downmarket by commercial insurance businesses observing the profits to be made out of microfinance. The third strand, which overlaps with the first, is

schemes operated by not-for-profit organizations which explicitly on behalf of disadvantaged groups insure a range of social functions, generally beginning with family health but often extending into a range of personal asset insurances. One of the oldest and most famous of these, for example—SEWA of north-western India—is also a registered trade union, and has aimed since the 1970s to provide “work and income security, food security and social security” (Sinha 2002: xi); and to supply many of the functions of social protection conventionally supplied by the welfare state in industrialized countries. As a women’s organization, it addresses the asymmetry of risk between men and women described by Elson. A similar gender bias characterizes the *Grameen Kalyan* (Grameen Welfare Organisation) established in 1996 to handle the health insurance business of the Grameen Bank, arising from the realization that “illness was the major reason for 44% of our defaults” (Daiyan 2001: 1). Other schemes of this type, such as BRAC’s rural health scheme, are less strongly focused on women clients, but share the same social objectives. The crux however is that at least in this third sector of microinsurance what is going on is not at all a neoliberal retreat, but rather an expansion into areas of social protection not covered by conventional loan-based microfinance.⁶ Indeed, rather than the private sector expanding at the expense of the public, the NGO sector is expanding at the expense of both—motivated both by the potential synergies between different elements in microfinance programs and by the deficiencies in developing-country social protection systems. We discuss the synergies in detail later and the overall social protection dimension of microinsurance is covered in more detail in chapter 8 of Mosley (2003).

Illustrations of the distribution of microinsurance institutions by region and type are provided in Table 5.1. As discussed by Brown and Churchill (2000) and by Churchill (2006), progress during the recent phase of microinsurance development has been most marked in the fields of life and health insurance, with agricultural and climatic risks a long way down the list. This ordering, and in particular the salience of health, only in a limited way reflects the ordering of specific risks by the respondents to the *2000 World Development Report*.⁷ Notable among the differences is the deficiency in insurance schemes to cover drought and flood risks, mentioned by Dercon (2006) as the most severe risk faced by low-income Ethiopian rural people. In addition, the supply of insurance schemes, relative to their demand, to cover against damage to and theft of assets (e.g. livestock, equipment, local infrastructural assets), can be considered to be deficient especially in poor developing countries. A major theme of this chapter will be that the current supply of microinsurance does not meet the demand

Table 5.1 Classification of microinsurance organizations (number of persons covered in 2004 in brackets)

	Group 1 Not-for-profit, single risk	Group 2 Not-for-profit, multiple risk	Group 3 Private sector for-profit
Asia	<i>Life</i> Grameen Life, Bangladesh (58,000) <i>Health</i> BRAC Health, Bangladesh (12,000) ASA, Bangladesh (55,000) Society for Social Services, Bangladesh (27,000) Mutuelles de sante (francophone West Africa) <i>Climatic/agricultural</i> BASIX Agricultural, India (c. 500)	VimoSEWA, India (120,000) Groupe de Recherche et d'Echanges technologiques (GRET), Cambodia	Gono Bima, Bangladesh National Life, Bangladesh
Latin America		IPTK, Bolivia Seguro Basico de Salud, Bolivia Servi Peru (94,000)	COLUMNA de Seguros, Guatemala (500,000) La Equidad Seguros, Colombia (30,000) King Finance, South Africa
Africa	<i>Health</i> FINCA Health, Uganda Christian Enterprise Trust (CETZAM), Zambia Bima ya Afya, Tanzania <i>Climatic/agricultural</i> Centenary Rural Development Bank weather insurance, Uganda (in preparation) World Bank Ethiopia schemes (pilots) (200) World Bank Malawi scheme (pilot) (200) TUW SKOK (Poland)		
Elsewhere			

Source: Churchill (2006), in conjunction with other sources.

from the poorest people, and to ask what can be done to right the balance. (For more details, see Mosley 2009.)

Our task in this chapter is, therefore, to examine how well, in the light of the experience so far, the sector is reconciling the requirements of viability and poverty reduction, and where possible to make proposals for how this could be done better. In “Basic principles: organization, pricing, and incentives,” we initially examine design issues at the level of risks to cover. In “What does microfinance achieve? Some preliminary findings,” we examine the performance of some microinsurance schemes to date, and present a small selection of some quantitative impact assessment results. We next consider whether the insurance function can be performed by what we call “quasi-insurance,” or close substitutes for insurance, rather than by insurance proper. The “Conclusions for policy and institutional design” presents a “map” of tentative policy recommendations.

Basic principles: Organization, pricing, and incentives

Underlying principles

Our approach, following Siegel et al. (2001), is that microinsurance should be seen as one possible instrument of *social risk management*, that is, the control of risk in the interests of low-income people. In other words, it is one possible instrument of risk management which may be useful and practicable in some contexts and places, but not in others. In determining whether insurance is to be the selected instrument for the control of risk, it is important to acknowledge that the effectiveness of any risk management instrument depends on the nature of risks, household and group characteristics and dynamics, and the availability of alternative risk management options. It is possible to distinguish between *risk anticipation*, *risk mitigation*, and *risk-coping* strategies: the many possible varieties of insurance mechanisms (listed in bold in Table 5.2) are just one possible strategy for the mitigation of risk, which is just one of three different options for risk management. Some of these alternative risk management options are illustrated in Table 5.2.

In this chapter, we are interested in the links between the approaches to risk defined in the three parts of the table (risk-anticipating, risk-mitigating, and risk-coping strategies), and especially interested in the comparative advantage, or otherwise, of insurance, within the category of risk-mitigating strategies. It

Table 5.2 Instruments available for rural households to manage risk

	Micro (household level)	Meso (community level)	Macro (extra-community level)
Risk anticipation	Investment to protect, maintain, and enhance assets Adopt new technology Adjust asset portfolio and income-generating activities Permanent migration	Investments in physical and social infrastructure Social ties and networks Participation in community institutions and decision-making Rights and security	Information on risk and risk reduction Rules and regulations Guaranteed rights and security Stable macro-economy, policy regime, and political system Functioning markets Investments in public goods, physical and social infrastructure
Risk mitigation			
Asset portfolio management	Adjust asset portfolio and income-generating activities Hold financial or nonfinancial assets (e.g. livestock, food stocks, jewelry) for precautionary savings Seasonal migration	Markets for household assets Physical and social infrastructure	Markets for household assets Market information Investments in physical and social infrastructure
Insurance	Formal insurance Informal insurance based on intra-household social capital claims Interlinked contracts	Informal insurance based on community social capital claims Formal community insurance pooling associations	Formal insurance, private and public sector, and international organizations (e.g. crop insurance, health insurance) Disaster aid funds
Finance	Formal and informal credit Interlinked contracts	Community credit unions and savings clubs, and “banks” for other asset stocks	Financial systems, national and international Intercommunity credit associations and “banks” for other stocks
Risk coping			
	Draw down assets (e.g. skip meals, mine soil, not pay school fees) Use underemployed assets (e.g. off farm employment, child labor) Sell assets Encroach on assets of others Illegal activities Formal and informal credit Depend on charity	Draw down community assets (e.g. reduce maintenance, harvest, or mine natural resources) Depend on charity or aid from outside community	Targeted safety nets (transfers, public works)— <i>c.f. IGVGD Bangladesh</i> Social investment projects (e.g. social funds) Depend on charity or aid from national or international organizations International food aid Donor assistance

Source: Adapted from Siegel et al. (2001).

has often been noted that microfinance institutions which offer *some insurance function* (savings, insurance, or emergency loans) within their portfolio are more effective both in cost recovery and in downreach to the poorest than institutions which do not (see, e.g. Hulme and Mosley 1996: table 3.3; also Hulme and Mosley 1998), but the question of whether the insurance component should be supplied by microinsurance has not been researched. Indeed, in the known cases where a breakthrough has been made to incorporate extremely poor people previously out of reach of financial services, of which the classic example is the Income Generation for Vulnerable Groups Development (IGVGD) schemes of BRAC, Bangladesh, this has not been achieved by microinsurance as such, but rather by the provision of microsavings and food aid in kind, both of which make feasible, for some clients, a low-risk transition from the relatively non-risky environment of the subsistence economy to the risky environment of the cash economy (Matin and Hulme 2003; Halder and Mosley 2004). All of this forces us to consider both the question of how microinsurance institutions can make this transition possible, and how non-microinsurance institutions can best fulfill a risk mitigation function. After a discussion of microinsurance proper through the remainder of “Basic principles: organization, pricing, and incentives” and “What does microfinance achieve? Some preliminary findings” we then return to the second question in Section discussing “quasi-insurance.”

Coverage and incentives

If risk mitigation is the chosen instrument of risk management, and insurance is the chosen instrument of risk mitigation, then in order to reconcile the objectives of viability and poverty reduction, the hurdles which have to be overcome are the following:

Moral hazard—the tendency for the existence of insurance to create perverse incentives to claim spuriously and behave carelessly, causing resource costs which may wipe out the benefits of insurance.

Adverse selection—the tendency for the demand for insurance to concentrate among the worst risks.

Effective targeting—the possibility that poor clients may not opt, or be able to opt, for insurance.

Administrative cost—the risk that the overcoming of all the above problems may bankrupt the insurer.

As mentioned earlier, the current generation of microinsurance institutions has been engaged in a strenuous process of learning from the failures of

previous insurance experiments in order to try and achieve some reasonably satisfactory solution to these problems. This process has been improvisatory, and we begin by enumerating (in Table 5.3) the solutions which have been adopted to these design problems by a group of six microfinance institutions in Africa and South Asia. The criterion for inclusion is that the schemes are in intention explicitly poverty related, and that we have some performance data on them which go beyond financial ratios and look also at social impact, although the data we have under this heading have been collected by several different hands for different purposes and are therefore for many evaluation criteria not conformable. Of the schemes described, four (Grameen, BRAC, SEWA, and FINCA) fit within the “not-for-profit multiple risk” and two (BASIX, and the World Bank Ethiopia and Malawi weather insurance schemes) fit within the “not-for-profit single risk” classification.⁸ Information on weather insurance schemes is mainly unpublished, and a more detailed summary of these is given at Appendix 1. We note, in particular, the following points of common experience:

1. All these schemes are typically confined to named insurable risks such as life, funeral expenses, hospitalization, accidental damage, theft, and drought—insurable in the sense that their likelihood of occurrence can be predicted within reasonable limits. The exception is BASIX agricultural insurance, which in the old Indian tradition guarantees a minimum return; but even here there are exclusions to defend against moral hazard.⁹
2. Premiums are set by these nonprofit organizations in order to broadly cover costs, already marking a huge advance on the old generation of hugely loss-making insurance schemes. In addition, in the health schemes the indemnity payout is limited by confining payments to a fixed sum, which can be visualized as the cost of the risk, less an “excess” designed to discourage excessive or improper claims.¹⁰
3. Additional controls against fraud and moral hazard consist of ex-post checking of claims in the case of the medical schemes, and a payout based on *rainfall deficiency* (not on a short crop) in the case of the World Bank Ethiopia micro and macro weather-insurance schemes, which are of particular importance to this chapter since they insure against the hazard which for the poorest people in the world is the greatest hazard to livelihood, namely drought. In the Ethiopia micro scheme, like other pilots, based on the model set out by Gautam et al. (1994), the defense against moral hazard is exceptionally powerful because payouts are based not on information provided by claimants but purely on the weather, which neither

claimants nor anybody else can influence.¹¹ In the BASIX crop-insurance scheme, the payout is based on the deficiency in the value of the harvest, which would appear to invite moral hazard, but the defense remains, by contrast with the old Indian crop insurance schemes, that this payout—see (1) earlier—is based on evidence of good husbandry during the planting and growing season.

4. Of the schemes mentioned, only FINCA health employs an explicit defense against adverse selection, which is to require at least two-thirds of all group members to be members of the insurance scheme.
5. None of the insurance schemes listed later is free standing, except the World Bank “Ethiopia micro” weather insurance scheme; all are layered on top of an existing microfinance operation (and in the case of SEWA, a number of trade union and social welfare functions also). This has multiple implications:
 - There is cost saving on the administration and in particular the salesmanship of insurance, since the infrastructure with which to disseminate information about the scheme is already in position.
 - Specifically, many clients join insurance schemes because of their existing bond with the “parent” microfinance organization. This often, sometimes in conjunction with an external shock (see later), acts as a recruiting device for a new and unfamiliar microinsurance scheme that overcomes, for new members, the barriers of cost, unfamiliarity, and distrust associated with membership. Often preexisting *groups* of microfinance members have joined the scheme together.
 - In this sense, social capital is an input into, as well as hopefully an output of, the microinsurance scheme.
 - Over and above the “social” benefits of a lower disaster risk for a given level of assets and income, the sponsoring microfinance organization, in all of these cases, reaps the benefits of lower default rates (this was precisely the purpose of the scheme in Grameen Bank, as we saw).
6. All of the schemes have negotiated reinsurance for themselves on local or international markets—somewhat in contradiction of Brown and Churchill’s (2000: xiii) claim that “reinsurance is largely unavailable for microinsurers.”
7. Explicit targeting on the poor, in the sense of concessional benefits for those below a certain income level, is practiced only by the Bangladesh institutions—Grameen and BRAC—each of whom offer lower premiums to the “ultra-poor”—and by the Ethiopia macro scheme, which has the advantage of being available to landless workers and other vulnerable

individuals who are damaged by drought indirectly rather than directly. There may also be a certain amount of self-targeting, in the sense that it may be particularly the most vulnerable who are risk averse, and the risk averse who opt for insurance. As an additional offset, it seems to be that the fraud/moral hazard problem may be less with low-income customers—as there is some evidence from the insurance trade that moral hazard risk declines along with income. As the general manager of the COLUMNA insurance company in Guatemala put it, “Thinking about how to take advantage of an insurance policy seems to be something that declines with income and education” (cited in Brown and Churchill 2000: 69). In other words, targeting on poor clients acts as a multiplier—as an additional defense against moral hazard, as in the case of microfinance.

The question now for discussion is whether some further learning may be possible from the experience of these schemes which may make possible an enlargement and a diffusion of their benefits. This must be placed in context: microinsurance is by no means the only instrument of poverty reduction or even of risk reduction. *Prima facie* there is a great deal to commend Brown and Churchill’s (2000: xii) observation that “savings are more effective than insurance for providing protection against common stresses (whereas insurance provides protection against larger losses that occur more infrequently).” The role of savings and other noninsurance forms of microfinance is discussed in the Section on “quasi-insurance.”

The experience shows that the solution to the twin challenge of serving the poor while being financially viable has typically been found either in the form of subsidy from an external sponsor, or in the form of support from a “parent” microfinance organization—often, as in the case of BRAC and Grameen, an organization with an established reputation which expects insurance to be able to confer financial and other synergies to it. Luckily, such external or internal support can be justified by the external benefits which insurance confers, and does not have to be justified on purely pragmatic grounds.

These external benefits of microinsurance are essentially of four kinds:

1. *Knowledge achieved by experimentation.* By experimenting with different institutional designs, “pioneer” insurers create for their successors ideas and information concerning what will and will not work in a particular environment. They also provide support for other parts of the organization, as in the case of Grameen Kalyan discussed earlier. This information is free to the beneficiaries, inside and outside the microinsurance organization, and thus confers an external benefit on them. But it can only exist if the

Table 5.3 Six “new-generation” microinsurance schemes: summary description

Scheme	SEWA, Gujarat Multiple: life, health, and housing	FINCA Health	Grameen Kalyan, Bangladesh	BRAC Health, Bangladesh	World Bank pilots Weather, Ethiopia and elsewhere	BASIX, Hyderabad, India Weather/agricultural production
<i>Location</i>	Multiple within Gujarat state, India	Urban Kampala, Uganda	Multiple within Bangladesh	Multiple within Bangladesh	Alaba wereda, South Ethiopia; Malawi; Ukraine; others in preparation	Multiple within Andhra Pradesh, South India
<i>Date established</i>	1992 (parent organization established in 1975)	1998 as health insurance scheme	1993 as Rural Health Programme (reconstituted as Grameen Kalyan, 1997)	2001 (parent organization established in 1973)	Pilot established in 2005	Initiated as trial scheme in 1999, remodeled in 2000, remodeled again in 2002
<i>Organizational type</i>	Registered trade union involved in political and organizational support to self-employed women This operates a bank and an autonomous social insurance scheme	Company limited by guaranteee and NGO <i>Operates partner-agent model</i> , with insurance services provided by a specialist health insurance company (MicroCare) and reinsurance by DFID	Health insurance offshoot of microfinance NGO. Operates <i>full-service model</i> . Grameen Kalyan is the insurer	Health insurance offshoot of microfinance NGO. Operates <i>full-service model</i> . BRAC is the insurer	Commercial bank. <i>Proposed scheme operates full-service model</i> , with insurance being provided by the Ethiopian Insurance Corporation	NGO. <i>Now operates partner- agent model</i> : as of 2003, insurance is provided by a separate insurance company
<i>Customers</i>	Any self-employed woman, whether member of parent SEWA organization or not. Insurance of husbands' lives and hospital charges available at additional charge	Patients of six named hospitals who hold an “insurance card” (some of them FINCA customers)	Any, but Grameen Bank customers pay a discounted premium	Any, but BRAC customers pay a discounted premium	Any: voluntary participation	BASIX members only
<i>Risks covered</i>	Health, life, and asset insurance against fire, flood, and natural calamities; husband's death and hospitalization	Hospital costs	Maternal and child health, checkups, subsidized drugs	Maternal and child health, checkups, subsidized drugs, hospitalization partly paid for	Rainfall more than 20% below moving average	Original scheme: shortfall of yield below specified level

<i>Defenses against moral hazard</i>	Co-payment (registration fee), exclusions, payments limited to cases where patients hospitalized	Single risk which the insured cannot influence	Single risk which the insured cannot influence	Single risk which the insured cannot easily influence	Peer monitoring of claims; claims assessed and verified by a village committee which includes a BASIX representative. At least 50% of indemnity value must come from member's own deposit in village fund
<i>Defenses against adverse selection</i>	<p>1. Life insurance compulsory for all borrowers</p> <p>2. More than 60% of all members must enroll before coverage is extended to a village bank</p>	Hospitalization claims reviewed by doctor	Under rainfall insurance the risk suffered by all claim holders is uniform in the event of deficient rainfall, and individuals with low yields do not have a superior incentive to seek insurance in relation to individuals with high yields		
<i>Premium (US\$/ annum)</i>	Three options: I: US\$1.53 II: US\$3.67 III: US\$7.44	US\$46 (Ushs 69,000) per four family members	Taka 100–120/ US\$2.50 (nonmembers); Taka 50/US\$1 (members)	100 taka plus 2taka/visit (members); 250 taka plus 5 taka/visit (nonmembers)	Charged on a per acre basis, link the product to total agricultural activity rather than loan size and giving the farmer the flexibility to buy multiple units based on affordability
<i>Targeting devices and other special features</i>	Richer members can become life members of scheme through fixed deposit of Rs. 700; these payments cross-subsidize poorer members. Two-thirds of premium is subsidized by grants from GTZ and Ministry of Labour	Discounts for ultra-poor	Discounts for ultra-poor	Discounts for ultra-poor	Village self-management—of the 20% mentioned above, 10% goes to a village fund, 5% to an inter-village fund (which finances payouts) and 5% to BASIX

FINCA exclusions: The scheme will not cover—complex dental surgery other than as a result of accident; optical appliances; hearing aids; cosmetic surgery; intentional self-inflicted injury or illness; injury or illness arising out of intentional involvement in riot, civil commotion, affray, political, or illegal act by a member; alcoholism or drug addiction.

pioneer is able to survive for long enough to develop and test the original design. The issue of complementarity and positive interaction between different parts of a microfinance organization is potentially important, and not much discussed within the vast microfinance literature (see, e.g. Hermes and Lensink 2007).

2. *“Bonding social capital” benefits achieved through lower individual and group vulnerability.* An insured group of microfinance clients is less vulnerable than an uninsured group (providing that payouts happen reliably and on time).¹² Similarly, the variability of income within the group is in principle less and the likelihood that clients will be stopped from making loan repayment installments by a sudden negative shock is reduced, enabling trust between clients within groups (“bonding social capital”) to increase.¹³ This improvement in social capital is an external benefit to the group—a reduction in its costs of doing business, caused by the insurance, for which it does not pay.
3. *“Linking social capital” benefits achieved through an improvement in clients’ awareness of service quality.* Evidence from BRAC (discussed later) suggests that the consumption of insurance, in combination with training, acts as an empowering mechanism: clients meet more often and as a consequence discuss more frequently the quality of the healthcare they are receiving, putting pressure on the provider to improve that service. In this way, the introduction of the insurance appears to trigger social capital between group members and health service provider—benefits for which, again, the group members do not pay, so that they constitute an external benefit of the scheme.
4. “Beneficial contagion” in which benefits acquired by the insured by virtue of their insurance then increase the utility of the uninsured—cures from a contagious disease which the sick seek only because they are insured are an obvious example.

How can a microinsurance organization increase its coverage while not eschewing the poor? Churchill and Frankiewicz (2006: 564–582) suggest two particular routes by which this can be done:

1. *Limit the benefits offered* (one practical suggestion made is to stick to life insurance or credit protection, as “safe,” predictable-risk insurance instruments. Another idea, used in practice by SEWA and other organizations, is to put an upper limit on the payout that can be made. A third is to focus on major perils, such as hospitalization in the case of health insurance).

2. *Focus on cost efficiency* (e.g. use low-cost premium payment methods, such as automatic deductions from a member's savings account, and low-cost distribution systems, such as microfinance institutions themselves. Churchill et al. (2006) argue that, as in microfinance, minimizing "default" on premium payments is also crucial; and subsidies obtained from government and inside the parent organization can also help).

Based on further consideration of the issue, we suggest the following four ways in which a microinsurance agency can attempt to make sure that its expansion path is pro-poor:

1. The organization can diversify its product in a poverty-oriented direction. Thus Grameen and BRAC of Bangladesh have diversified from life insurance into health insurance; BASIX from agricultural insurance, which it has now given up, into livestock and weather insurance; and SEWA, which began by offering only a basic life insurance product, into insuring healthcare for clients, their spouses and (from 2003) their children. Even more exciting, it may be possible to diversify, as the World Bank is seeking to do in Ethiopia and other African countries, into weather insurance at the macro level in support of the national "productive safety net," which potentially may be supportive of people at a level of poverty not covered by previous insurance schemes.
2. The organization can seek to make itself more accessible to the poorest, by a range of routes:

Direct subsidy, as practiced by the Grameen Bank and BRAC through charging lower premiums to the ultra-poor;

Savings linkages, to make a safe savings instrument available to the insured person and provide additional protection both for the client and the insurer;

Direct targeting of client organizations with high impact on the poorest (these will not necessarily be the poorest entrepreneurs, as it is often possible to achieve indirect impact on poor members of the labor force by targeting the nonpoor individuals who employ them—see Mosley and Rock (2004));

Marketing to overcome misperception by poor clients of the risks to which they are exposed.¹⁴ Imaginative marketing strategies have been used by some organizations to overcome this blockage.¹⁵ But often what has caused a big surge in demand has nothing to do with marketing policy, but rather was an extraneous event which has made individuals only too well aware of the risks to which they are exposed—such as the Gujarat earthquake of January 2001, following which membership of the SEWA insurance scheme rose.

3. The organization can subsidize the provision of those external impacts mentioned earlier which are pro-poor.
4. The organization can use methods of what we call quasi-insurance, social protection delivered by an instrument which formally is not insurance, to supplement the poverty-reducing impact of its microinsurance measures.

We now turn to some impact assessment studies of microinsurance.

What does microfinance achieve? Some preliminary findings

We have impact data for five microinsurance schemes, four of them in the general field of health and one in the field of weather insurance; however, the evaluations have been carried out by different people, and therefore are of only limited comparability. All of the evaluations use “classical” control-group methods on a group of insurance clients and non-clients in both institutions. The schemes in question are the health insurance schemes of the giant Bangladeshi microfinance conglomerates, such as BRAC, Grameen, and Society for Social Services (SSS), plus FINCA Uganda, another health microinsurance scheme, and the World Bank’s Ethiopia weather schemes. The results are recorded in Table 5.4, and they are divided into four groups: indicators of *operational performance*; indicators of *client-level impact*; indicators of *wider impact* which go beyond the individual client; and *side effects*. Only in the second and third cases, we can get any clear picture of the poverty dimension of impact.

We may briefly summarize the general thrust of these impacts as follows. All the insurance schemes are quite close to being viable in their own right, and there is some, at this stage very mild, evidence that they improve loan repayment rates; insurance appears to have a positive impact on physical and human capital expenditures, apparently mediated via higher absorptive capacity for loans; insurance clients perceive themselves as less vulnerable than non-clients;¹⁶ and several of the “wider impacts” on which we speculated earlier do indeed materialize, as we discuss later.

Focusing on the poverty reduction impacts, both client level and “wider,” the effects in Table 5.4 (except in the World Bank Ethiopia scheme) are measured separately for clients falling below the poverty line and others, and only the effects for clients below the poverty line are recorded in the table. These effects fall, as discussed earlier, into five distinct categories:

1. Effects operating via *individual well-being*—for example, all the Bangladesh schemes—Grameen, BRAC, and SSS—improve self-reported health in relation to that of a control group.

2. Effects operating via *stability of income and expenditure*, which transmitted scheme benefits from clients to the wider community of non-clients. These appear, in both countries, to have raised physical investment, often in the business,¹⁷ but even more typically in the home. Investment in business equipment (such as a motor cycle necessary to deliver product or service) was prevalent. Land purchase was the most commonly cited form of investment under this heading. Sometimes insurance raised human capital investment. There were also, in Uganda, minor effects on labor hiring, and this had a small multiplier effect on poverty reduction. It should be noted that the persons reporting the positive impact on human capital investment were members of the control group, that is, *non-clients* who benefited from the scheme as a consequence of local expenditure patterns becoming more stable and clients investing more. For this impact to happen what is vital is that insurance have the effect of making people's expenditures more stable and predictable.

3. Effects operating via *social capital and interpersonal relations*. These are both positive and negative. Within local communities there is compelling evidence that “bonding” social capital, in the sense of trust, has indeed been strengthened as a consequence of the advent of insurance. In many cases, this was as a consequence of expenditures, and liabilities, becoming more predictable, so that individuals had an increased incentive to trust one another. A particular aspect of this predictability was reduced reliance on informal emergency borrowing.

The effect of insurance on “linking” social capital—between those local communities and other organizations—is much more complex: in Bangladesh, there is evidence that the insurance scheme has incentivized clients to find out more about, and improve, the quality of the medical service, but among nearly half of the Ugandan clients who answered our questionnaire it was clear that they felt service had deteriorated and that they were not in possession of any levers by which they could improve it. Many of them were responding based on *actual or perceived exclusions from the scheme*. What has happened is that FINCA (by contrast with BRAC) has become a junior partner with a rapidly growing insurance enterprise to whom low-income microfinance clients are “nothing special,” and as described earlier, feel they are being exploited. This suggests that the often-praised “partner-agent” model of microinsurance,¹⁸ under which a

Table 5.4 Microinsurance institutions: indicators of targeting and impact

	Health schemes			Weather schemes	
	FINCA Uganda	BRAC Bangladesh	Grameen Kalyan	SSS	BASIX, India
Activities supported	Health insurance in support of microfinance activities	Health insurance in support of multiple development activities	Health insurance in support of multiple development activities	Health insurance in support of microfinance activities	Index-based weather insurance, free-standing
1. Operational indicators					
Profitability	About 73% of costs of claims plus operations currently covered from premiums	About 80% of costs of claims plus operations currently covered from premiums	100% costs are being recovered from revenue generation in the old health centers	45% costs are being recovered from revenue generation	More than 100% costs recovered; no subsidy
Arrears rates	1.6% of insured, 1.4% for uninsured (i.e. difference “positive” but insignificant) ¹		No difference in the arrears rate between program and control areas	Arrears rate in the program area is 1.5%, but it is zero in control areas	Minimal
2. Indicators of direct impact					
Savings	Positive (significant at 5% level) ²		Mean difference between program and control areas is positive (significant at 1% level)	Mean difference between program and control areas is negative, but not significant	
Investment	Positive (significant at 1% level) ²	Positive	Mean difference between program and control area is positive (significant at 1% level)	Mean difference between program and control area is positive (significant at 9% level)	Substantially higher among clients than among a control group of non-clients
Educational expenditure	Positive* (significant at 5% level) ²	Positive	Mean difference is negative (not significant)	Mean difference between program and control area is positive (not significant)	
Loan growth	Positive (significant at 1% level) ¹		—	—	
Vulnerability	83% of respondents say that membership of the scheme gives “more peace of mind”		88% of the microentrepreneurs in program area compared 12% in control area say that they do not have any anxiety in managing medical expenditure	81% of the microentrepreneurs in program area compared 19% in control area say that they do not have any anxiety in managing medical expenditure	

Health indicators

Income Scheme members are better off than nonscheme members)² The scheme has been extended to a number of ultra-poor clients

Mean difference of ADL index between program and control area is positive (significant at 5% level)

Mean difference of ADL index between program and control area is positive (insignificant)

Average beneficiary income range Rs. 12,000–30,000 pa (i.e. below US\$1/day)
80% have land holding less than 2 hectares

Assets

3. Indicators of indirect (wider) impact

Financial risk to sponsor 71% of respondents feel “less likely to get into financial trouble since joining the scheme”²

Stability of income Insignificant difference between treatment and control group² Positive*
Social capital and intra-group relations Improved levels of trust within solidarity groups² “The scheme has encouraged us to take more interest in the quality of healthcare we are receiving”

Positive but insignificant difference between program and control areas

No difference between program and control areas

Higher among clients than in control group

Incorporation of socially excluded Little evidence (indeed, scheme members are better off than nonscheme members)² The scheme has been extended to a number of ultra-poor clients

Generally progressive (e.g. average beneficiary income below US\$1/day)

4. Side effects

Relations with project staff Became more neglectful in some cases²

Care for personal health (moral hazard) No evidence of moral hazard (DPT vaccination and malaria protection rates same between treatment and control group)²

Sources: BRAC: field tests, Sultanpur, April 2002. FINCA: 1 Survey of 200 clients, January 2003, from FINCA records; 2 Survey of 62 clients from Nsambya and Mukisa branches, Kampala, interviewed February 2003. Data for survey (2) available from p.mosley@sheffield.ac.uk and more detailed results are provided in Mosley (2003: chapter 6). Ethiopia results from World Bank (2006). BASIX: from BASIX (2007) and Manuamorn (2007). Malawi and Ethiopia micro: from World Bank (2006). Ethiopia macro: from Syroka and Willcox (2006).

microfinance provider buys insurance from a third party for its clients, may have its problems if the insurance provider, as here, grows too large to care about the quality of service provided to a poor and ill-favored group of clients.

In the World Bank Ethiopian weather schemes, the social impact was limited, in the case of the microscheme, by the choice of partner NGOs. The Bank was only willing, in their pilot scheme, to work with NGOs and with financial institutions linked to the ruling coalition party—and hence forfeited the opportunity to penetrate to the ultra-poor (Stefan Dercon, private communication). This limited the downreach of the Ethiopian micro crop insurance scheme in Alaba Wereda, in contrast with several crop insurance schemes in India, notably the BASIX scheme, which have been implemented by NGOs independent of government and were better able to reach the poor.

4. There are also effects operating via *the downward extension of the market for financial services*. Especially in Bangladesh, pressure has been exerted to make sure that some ultra-poor clients join the scheme, and so a social inclusion impact has been deliberately engineered into the implementation of the scheme. Again, this effect is not guaranteed. In Uganda, for example, in spite of our prior hypothesis that the demand for insurance would be greatest among the poorest, insurance scheme members are actually richer than the control group of nonmembers.

5. Finally, there are effects operating through the provision of *an institutional model* (we have not attempted to quantify these in Table 5.4). For example, information on the design of the existing, pioneering, microinsurance institutions and the lessons which can be learned from their experience can be transmitted almost costlessly—via the internet and other means—to those wishing to emulate and improve on the precedents.

The crux of our argument is that since the beneficiaries of nearly all these impacts are not those who pay the premium, there will be underinvestment in a state of nature at the bottom end of the microinsurance market (as the World Bank eloquently noted) and there is a case for institutional intervention to remedy a situation which is still not very far away from total market failure. One way of doing this is by means of a subsidy which enables the scheme to break even on economic, rather than on financial criteria; but what needs to be subsidized is not only the level of premium, but also the creativity that enables institutional models that are properly adapted to local environments to be brought into being. So far, just a very few NGOs have managed this, but at least their number is growing.

“Quasi-insurance”: Financial substitutes for microinsurance proper

As discussed earlier (Table 5.1), many organizations which are not insurers, including lenders, nonetheless provide an insurance function. As Morduch (1999: 1605–1606) notes, “microfinance borrowing is shown to improve the ability to smooth consumption across seasons, and entry into the programs is driven in part by insurance concerns . . .” Substantively, the results suggest that benefits from risk reduction may be as important (or more important) than direct impacts on average levels of consumption. In every case where a choice has to be made concerning risk management strategies, it is desirable to assess whether such noninsurance options offer a lower-cost or more effective method of protecting the poor than microinsurance. We call this approach “quasi-insurance.” The ways in which microfinancial services may be able to achieve this function are multiple. For illustration, we consider here just four outstanding cases:

1. *“Risk-minimizing” credits for the ultra-poor:* The very poorest, who are most exposed to risk, do not often take advantage of microfinancial services, or a fortiori of microinsurance; and yet, precisely because they are most exposed to shocks, they are most in need of support services—essentially fulfilling an insurance function, as above—which may help them smooth consumption. The Bangladeshi NGO BRAC (formerly Bangladesh Rural Advancement Committee) sought to break into this vicious circle by providing under its IGVGD (Income Generation for Vulnerable Groups Development) and CFP (Challenging the Frontiers of Poverty) schemes for ultra-poor single women, by first providing food aid on its own, requesting that a part of that food aid be converted into small cash savings, then linking the savings to training in a low-capital low-risk enterprise (such as poultry raising, goat-keeping, small-scale fish-farming, or sericulture), and finally providing conventional microfinance loans to those who wished to receive. For the ultra-poor and risk-averse client, an “escalator” was thus established, beginning at minimal levels of risk—as appropriate for destitute people frightened of the cash economy—providing them with insurance via savings, and then gradually increasing both risk and potential return via a loan facility. It is the escalator that provides the insurance, therefore, rather than a stand-alone microinsurance institution.

2. *Emergency loans from “village banks”*: The Bolivian NGOs *Promujer* and *CRECER* (which cater for a lower stratum of the population than any others in the country) practice a “village bank” model, in which training, maternal and child health, and legal advice services are provided alongside group credit for those desiring them. They also offer an emergency loan facility. Essentially this loan facility (known in Bolivia as a *cuenta interna* or “internal account”) functions like a rotating savings and credit association—it takes a fortnightly or monthly subscription from clients, which goes into a common pool from which, in case of need such as a sudden income shock, members are entitled to draw emergency loans supplementary to their existing borrowings, if approved by a vote of the members of their borrower group. Such emergency loans, alongside progressive lending relating loan size to loan repayment, protect clients against the risk of ejection from the credit market due to unanticipated shocks (Lenton and Mosley 2007). This facility therefore provides a form of quasi-insurance: it shelters those most prone to shocks, financing the shelter by means of a subscription which is not called an insurance premium but nonetheless acts as one. When put under pressure in the civil emergencies in Bolivia of October 2003 and June 2005, it protected not only the livelihoods of clients but also repayment rates—and it was supplemented by additional improvised measures to protect repayment rates, such as emergency in-kind food donations and “home collections” of loans from clients who were apprehensive of having to cross a barricade to make their repayments (Aliaga and Mosley 2007).
3. *Microsavings schemes*: Savings, classically, enable the “protection” function of insurance to be performed by enabling the low-income household to draw on a cash reserve, rather than an insurance policy, at times of crisis. As described in Hulme et al. (2009 and Chapter 6), microsavings remain a neglected element in microfinance, historically of great importance since the nineteenth century as an instrument by which poor households buffered themselves against shocks, and in the twenty-first century, at least in potential, fulfilling the role, since the consequences of shocks are worst for the poorest, as a highly progressive component of the microfinance operation. This potential however is not fulfilled at present. A majority of microfinance schemes do not offer any savings facility. Of the 336 microfinance institutions (MFIs) globally for which 2006 data were available, two-thirds (215 institutions) showed no savers at all, and of the remaining 121, 45 had fewer savers than active borrowers (ibid.). These

institutions' data on client poverty status are very limited, but given that the function of savings is principally of protection, and that protection against shock is needed by people in inverse proportion to their wealth, it seems probable that the narrow scope of savings institutions acts, like the constraints on formal microinsurance, as a limitation on the antipoverty leverage of the microfinance sector as a whole. Part of this undersupply of savings services is caused by regulatory restrictions that prevent microfinance NGOs from taking deposits (and, at the same time, from offering insurance facilities, except in the form of informal emergency funds or loan facilities). Even those MFIs that offer savings facilities are often unsympathetic to the savings needs of the poor (e.g. *BancoSol* of Bolivia will not accept deposits less than \$10). A way around these restrictions is offered by the kind of linkage arrangements described next.

4. *Loan-savings linkages:* In a number of countries, NGOs, which are the dominant form of microfinance organization, are not authorized to take savings deposits, which as discussed earlier represent the least risky mode of contact with the financial system. Consequently, in the assumed absence of microinsurance, individuals who wish to receive financial services are obliged to take loans, and are not able to protect themselves by savings against the risk of decapitalization caused by the combination of overborrowing and external shock (see Hulme et al. 2009 and Chapter 6). One important potential way around this problem is by the formation of linkages between microfinance NGOs and banks or nonbank financial intermediaries. Under this approach, savings services and their associated quasi-insurance function are supplied to customers of microfinance NGOs via such linkages rather than directly. These linkages provide a buffer against the risk of decapitalization, and in industrialized countries, where much microfinance takes the form of small loans to unemployed people caught in the "debt trap," such linkages may enable an improvement in the debt management capacity of people previously unable to save, and enable them to utilize the "savings buffer" previously referred to in case of emergency (Mosley et al. 2007).

Especially in environments where microinsurance is not available but even in environments where it is, it may therefore be appropriate to consider quasi-insurance options as a strategy for protecting the poor—these may be able to provide particular forms of protection against risk at lower cost than microinsurance proper.

Conclusions for policy and institutional design

Microinsurance organizations can pursue the quest for viability either in a poverty-reducing or in a non-poverty-reducing way. The impact analysis of the previous section has presented some findings concerning the extent to which different institutional development strategies may impact favorably on the poor, and these are presented in Table 5.4. In the light of the table, we can now recapitulate the lessons of this chapter concerning how microinsurance and substitutes for it can help to move in the right way to reduce poverty, in the light of the empirical evidence just presented.

As mentioned earlier, we may take six possible approaches, either separately or in combination, to making microinsurance more poverty focused. The following is the sequence in which these have been presented in our argument earlier:

1. Lower the cost of microinsurance by enabling microinsurance firms to *move down their cost curve*. This is essentially the approach taken by Churchill (2006) in his final chapter. It is vital, because if microinsurance is not viable it cannot supply services to the poor or anyone else. In our judgment, however, it can usefully be supplemented by the following pro-poor options.
2. *Vary the microinsurance product-mix*. As indicated by our previous argument, the availability of insurance types does not match well to the needs of the poorest: those most vulnerable to risks either cannot insure at all or cannot insure against the risks which matter most to them. Ultimately, this requires ingenuity both in designing insurance against risks which are crucial but historically have proved hard to insure against—such as weather risk—and in making potential clients aware of the options which exist. This has been successfully achieved, on the available evaluation evidence, by BASIX and SEWA, both of which have broadened their basic insurance product so that it reaches further down the income scale. In principle, the World Bank's experimental weather insurance schemes also achieve this, but we do not yet have hard data on whether this is happening.
3. *Make microinsurance services more affordable by the ultra-poor*. This may be done by a range of methods:
 - (i) Interest-rate subsidy (as practiced by BRAC, Bangladesh), which has been successful in bringing a number of ultra-poor clients into the fold of microinsurance.
 - (ii) By offering a savings facility which gradually enables the poor to pay their premiums (as in SEWA, India). The compendium by Churchill

- (section 2.3: 111–130) also mentions a number of schemes which link insurance to savings so as to make premiums easier to repay.
- (iii) By bending the design of the microinsurance scheme so that it focuses on services especially consumed by the poor (such as maternal and child health). This was successfully achieved by BRAC and SSS.
 - 4. Design microinsurance schemes so that they maximize spillovers to *the very poor*. Table 5.4 showed that for FINCA, Uganda, BRAC Bangladesh, and SSS Bangladesh, there are substantial spillovers to non-borrowers through income stabilization, through health, and through empowerment (Effects 3 and 4 can be supplemented by sponsors providing a results-based subsidy). (Another crucial element is lobbying and persistence. Any number of regulatory obstacles can be invented by an obstructionist person or environment.)
 - 5. Where microinsurance is not available or not suitable, provide “quasi-insurance” services which provide protection against shocks even though not labeled as insurance. Illustrations of how this may be approached have been provided in the previous section.
 - 6. Where the option exists of anticipating rather than simply providing insurance against shocks, use that as a complementary approach. One approach to this is to incentivize, via agricultural extension, the planting of drought-resistant varieties.

It is of course feasible for both local and national branches of government to support pro-poor actions at the local level by maintaining an appropriate regulatory and policy framework—in particular through support for informal and labor-intensive activities.

Thus there is substantial empirical evidence already to back the proposition that microinsurance, if the appropriate complementary policies and design features are embedded into it, may be a powerful instrument against poverty. Substantial additional research is however needed both to validate the tentative and incomplete impact assessments provided in Table 5.4, and, above all, creativity and experimentation are needed to devise and locally test new poverty-focused insurance instruments, and dedication and courage are needed to pursue the case for these in face of inevitable opposition from those who see radical designs as “not fitting into the box.” Insurance is, of its nature, a conservative profession, dedicated to the minimization of risks, and what is needed in the present case is to combine that conservatism in the control of costs and risks with extreme daring and perseverance in the process of including the very poor and vulnerable in design and implementation.

Appendix 1: Weather insurance schemes

Globally, drought and weather-related disturbances are a major cause of poverty, specifically in Africa. Syroka and Willcox argue that “the predominant risks faced by vulnerable populations in sub-Saharan Africa are meteorological in nature” (2006: 203). When a drought occurs, it occurs across a wide range of communities and often over most of Africa (as in 1992 and 2002)—so that risks co-vary, and thus informal insurance mechanisms cannot cope. Yet very little formal insurance is available against these risks, especially for the protection of poor people, and most of the literature on the experimental schemes which exist is unpublished. Thus we provide here some background data on what is known about these schemes, and their potential ability to provide “insurance against poverty.”

As discussed in the text, early agricultural insurance schemes in developing countries were a disaster, partly because they were operated by parastatal organizations not subject to rigorous financial discipline and partly because they were not able to overcome the moral hazard problem: they typically offered “area yield guarantees” which were an invitation to slack husbandry because they paid out the same indemnity however large or small was the effort put into the care of the crop. An important practical breakthrough was made by Gautam et al. (1994), who showed that an ideal defense against moral hazard was to insure not against *deficiency of income*, which was an invitation to reduce effort in face of the protection provided by insurance, but rather against *deficiency of rainfall*, which was exempt from moral hazard, because nobody can influence rainfall. Even better, rainfall-deficiency insurance economizes on scarce administrative

resources, because no expenditure is required on checking of claims: the payout of indemnities can be made as soon as the size of the local rainfall deficiency is known. Gautam et al. thus proposed that the problem of drought losses should be dealt with by inviting *all* individuals in the drought-prone country (not only those subject to drought) to participate in a lottery: tickets could be bought (premiums could be paid) by anyone, and payouts proportionate to the extent of likely crop losses would be made if the rainfall index fell below (say) 80 percent of its moving average value. Over and above the advantages mentioned earlier, this way of designing the scheme had the merit that it potentially provided benefits to low-income individuals who were affected indirectly, rather than directly, by drought—for example, landless laborers, who are often the poorest and most vulnerable people of all.

For all its merits, this idea did not begin to be implemented until the beginning of the 2000s. Several proposals for complementing microfinance in agricultural areas with weather index-based insurance were made on the basis of the Gautam et al.'s approach,¹⁹ but the honor of the first commercially viable rainfall insurance model belongs to the South Indian NGO BASIX in 2003, as described later. Pilot insurance projects to insure a target population in a particular area against rainfall deficiency have also been completed by the World Bank, for Ethiopia, Malawi, and Ukraine, with forthcoming pilots in other countries. Finally, in Ethiopia in the wake of the severe drought of 2002–2003 the UN World Food Programme has sponsored a form of rainfall insurance which covers the whole country rather than a particular locality: it activates the food aid social safety net *across the country* in immediate response to evidence of rainfall deficiency *averaged across the country*, and thus combines the approach of a Gautam–Hazell–Alderman rainfall-based payout with the new and powerful idea of anticipating *ex ante*, rather than responding to *ex post*, suffering due to drought.

We now discuss and compare the experience of each of these schemes to date. Table A5.1 summarizes the comparison in a tabular form.

“Micro” (farmer-based) schemes

BASIX and others, India

India is the country where modern-style weather insurance has gone furthest. In June 2007, some 500,000 Indian farmers were covered by weather-index insurance contracts (see Manuamorn 2007). The breakthrough with this new form of microinsurance was made at the bottom end of the market by a

nongovernmental organization, BASIX, which since its foundation in the 1990s has provided a range of rural development services to low-income farmers,²⁰ including microfinance and microinsurance. Its approach to insurance has been experimental and evolutionary, beginning with life insurance, progressing in the later 1990s into agricultural insurance (administered on the traditional Indian “area yield guarantee” model) and livestock insurance, and initiating a pilot weather index insurance scheme in 2003 in Mahboobnagar district of Andhra Pradesh, in collaboration with the commercial insurance company ICICI-Lombard. Following the success of this pilot, BASIX began selling weather-index insurance outside its home state of Andhra Pradesh. By 2006, 11,500 farmers in six states of India were buying rainfall insurance from BASIX—and these, notably, were low-income farmers, with an income range of 12,000 to 30,000 rupees per annum, that is, less than US\$1 a day.

BASIX’s weather insurance product has been sold throughout without subsidy, and over the 4 years 2003–2006, the ratio of claims to payouts is only 70 percent, so that the scheme has been able to build up reserves.

The structure of trust relationships which BASIX had developed with its clients over the years acted as a strong pedestal on which to ground the new experimental structure of microinsurance, and BASIX provides an important illustration of the principle that microinsurance often works better if it can provide synergies to, and receive them, other parts of the organization (see further). What was also crucial was that BASIX had the creativity and the patience to experiment, over the 10 year period from 1995 to 2005, with several microinsurance models, rather than commit itself by premature salesmanship to a fixed blueprint and then lose credibility by having to retreat from it.

World Bank pilot, Ethiopia

A pilot rainfall insurance scheme, operating on essentially the same principles as BASIX, was executed in Alaba Wereda (a high-productivity smallholder region of southern Ethiopia) in 2006, using a state-owned insurance company, the Ethiopia Insurance Corporation, as intermediary distribution agent, but with totally different results to those achieved in BASIX. The key problem was that the pilot, in the words of the evaluation, “failed to identify any organisations that could be used to reach clients effectively and provide the necessary capacity building and product education to farmer clients.” No bank was willing to

become involved, since banks' fertilizer loans were already fully guaranteed by the government (hence more lucrative than insurance). *Faute de mieux*, the Ethiopia Insurance Corporation agreed to fill the gap, but the results were predictable. It proved hard to sell any policies, and only 30 farmers took up the offer of insurance.

This is the only case reviewed here where microinsurance has been offered on a stand-alone basis, rather than being layered onto the efforts of an existing organization; and the consequences were disastrous, since the organization retailing the insurance (the Ethiopia Insurance Corporation) did not believe in, and therefore was not able to inspire trust among skeptical farmers in its own insurance product. It had no existing goodwill in the region, and being able only to entice a few farmers into the scheme had to charge a proportionately high premium, which deterred any potential customer wavering on the brink. The Alaba pilot experiment has now been abandoned.

World Bank pilot, Malawi

By contrast with the "Ethiopia micro" case reviewed earlier, in Malawi the World Bank offered microinsurance alongside something farmers badly wanted, namely credit, in an environment where commercial banks were refusing to lend to smallholders. For the pilot in 2005, the offer of rainfall-based insurance was made only on one crop, namely hybrid groundnuts, and by the following year, 2006, 892 insurance contracts had been sold, with the National Smallholder Farmers' Association of Malawi (NASFAM) acting as agent. The growth of the scheme was inhibited, ironically, by a good harvest in 2006, which pushed down the price of groundnuts to the point where farmers found it hard to afford their insurance premiums; but for now, the Malawi pilot continues, having achieved take-off neither like BASIX nor oblivion like the parallel Ethiopia pilot.

"Macro" (social safety net-linked) schemes

World Food Programme (WFP) pilot, Ethiopia

The origins of the WFP scheme go back to the 2002 drought, which was the worst in Ethiopia since the catastrophic famine of 1984–1985, a repetition of which

Table A5.1 Weather insurance schemes compared

	Micro (farmer-level) schemes			Macro (country-level) schemes
	BASIX, India	World Bank pilot, Alaba, South Ethiopia	World Bank pilot, Malawi	Social safety net project, Ethiopia (countrywide)
Initiated	2003 in present form, after experimentation with life, agricultural, and livestock insurance	Pilot, 2006	Pilot, 2005	Pilot, 2006
Distribution agent	BASIX (NGO)	Ethiopia Insurance Corporation	National Smallholder Farmers' Association of Malawi	WFP
Payment trigger	Weather index	Weather index	Weather index	Weather index
Beneficiary income/impact	Average beneficiary income range Rs. 12,000–30,000 pa (i.e. below US\$1/day)	Not measured	Not measured	None as yet: potentially massive, since benefits of food for work become more timely
Beneficiary resource allocation/impact	By comparison with uninsured farmers, less shifts into lower-yield crops	Not measured	Not measured	Not measured
Current status	Being scaled up	Abandoned	Continuing	Being scaled up

was only prevented by massive disbursements of responsive food aid through the national social safety net program. Much of this food aid, as always, arrived late, and the thought occurred to many that “prevention” of the food shortage would have been not only more dignified than “cure” based on food shipments in response to disturbing images of malnutrition, but also productively far more efficient, because it would have equipped vulnerable households with the means to cope *before* they lapsed into destitution. The truly innovative idea was to combine this anticipatory approach with Gautam–Hazell–Alderman rainfall insurance so as to construct the beginnings of a weather insurance-based social safety net. Reinsurance cover was arranged for the 2006 season from Africa

Re, which would have provided deficiency food aid payments for 62,000 low-income individuals if the 2006 rains had failed. However, in the event, the 2006 rains were abundant in all parts of Ethiopia, and no payouts were made. Because of this, it was not possible to see the *ex-post* impacts of the scheme; however, it is possible to be excited by the potential of the idea. The key to it is that the Productive Safety Net (food-for-work) schemes developed by the Ethiopian government for the chronically food insecure in partnership with donors still, in spite of current political troubles, command substantial farmer-level support, because they are increasingly depended on it for subsistence (Hess et al. 2006: 3) and the insurance pilot was able to build on this support. It was intended to develop the scheme gradually so that it was in full production by the 2009/2010 season, protecting 5 million food-insecure individuals—a scheme which dwarfs in size all microinsurance schemes put together.

Key lessons

All of the weather insurance schemes discussed here are “new model” schemes which have learned the lessons of previous unhappy experience, as spelled out in the main text. But beyond this, the following lessons can be learned specifically from the handful of weather insurance schemes we have examined:

1. A reliable and trusted distribution channel (which typically is but does not have to be an existing MFO) is absolutely vital. Without this, there is no hope of building up a clientele.
2. To work, all microinsurance, and especially innovative forms of it such as weather insurance, need to be bundled together with something which clients really value (e.g. credit; healthcare). Indeed, stand-alone insurance schemes may not work: microinsurance is synergistic with other elements in the microfinance program.
3. Ownership is key. The organization which pioneered commercial weather insurance, BASIX, believed in its product, knew that its customers would desert it if it did not keep them regularly supplied with weather information and the opportunity to provide feedback, and thus was able to move down along the cost curve while preserving the access for the poor.
4. Experimentation is extremely valuable—the right technical solution may not and, in microinsurance, typically does not seem to come first time. Again the

experience of BASIX is relevant—they experimentally tried old-style crop and livestock insurance linked to village-bank lending, failed with it, but rather than give up hope tried again with the different model weather insurance, and the second time were rewarded. Success often depends on willingness to modify rather than jettison a good idea which fails to work in practice.

Notes

- 1 Elson continues: “Labour market institutions have typically been constructed on the assumption that women employees were secondary earners who could draw upon the assets and earnings of men (male partners, husbands, fathers, brothers, etc.) to cushion them against risk. That is, labour market institutions have assumed that men have ‘extended entitlements’ which do not have the force of law, but are sanctioned by accepted norms about what is a legitimate claim. Women’s very act of participating in the labour market, however, may weaken their extended entitlements, if it involves stepping outside what have been accepted as the normal roles for women. The possibility of earning an income of their own may empower them to take more decision about their own lives—but it may also cut them off from support by male kin, leaving them on their own, and newly vulnerable to market forces.”
- 2 As one SEWA loan supervisor explained, “They put money in, as with savings, so they do not understand when they cannot draw out the whole of the money they have put in whenever they want . . . so they ask for their money back, and they are surprised when in the early days of the insurance contact it is less than they put in” (interview, April 4, 2002). This kind of unawareness is not confined to India, or to developing countries.
- 3 As McCord (2000: 24) comments, “Illness often creates a downward financial spiral in a household where ineffective measures are used and paid for until the illness becomes a crisis and the patient requires hospitalisation. With hospitalisation, the patient then needs continuous care, usually by the mother/wife/daughter. The family experiences a liquidation of available resources, climbing debt and a reduced ability to earn money since the woman is not at her business. Business assets are then sold to generate the needed funds to pay the medical bills. This cycle often returns reducing households to poverty . . .”
- 4 State-financed agricultural insurance schemes have operated at a large loss in the United States, India, the Philippines, Brazil, and Mexico (leading to the closure of the insurer in the last three cases; Mosley and Krishnamurthy (1995)). Often this has been because they insure against deficient crop yield or even deficient crop income—thereby inviting moral hazard and deficient husbandry.

- 5 An example is the original “emergency fund” of the Grameen Bank of Bangladesh, which since inception in 1983 has imposed a surcharge of 25 percent on the standard interest rate—essentially a life insurance premium—as a contribution to an “emergency fund” which pays out only in the event of the member’s death. (The Grameen Health Insurance Scheme is a separate operation developed much later, in 1996.)
- 6 For more illustrations of this “social welfare and employment protection” model of microinsurance from Asia, Latin America, and Africa, see Lund and Srinivas (2000).
- 7 Of 120 (mostly urban) Bolivian microfinance clients asked “What do you perceive as the main risk to your livelihood?” in 1999 and 2000, 105 (85%) mentioned health and accidents, 59 (49%) mentioned competition and market collapse, and 41 (34%) mentioned crime and theft. See Mosley (2001b): table 7, p. 122. By contrast, in rural Ethiopia health problems were the third most salient risk (at 40% of households affected) after harvest failure (78%) and policy problems such as resettlement or taxation (42%). After this came oxen problems (39%), land problems (17%), asset losses (16%), and war/civil disturbance risks (7%). See Dercon and Krishnan (2000: table 5).
- 8 In Ethiopia, the World Bank operates two types of pilot scheme: a microscheme in which payouts are made to farmers if rainfall at local weather stations falls below its target level, and a macro scheme in which a social safety net of food-for-work schemes is activated on a national basis if rainfall falls below its target level. Details of these schemes, and other experimental weather index schemes within the World Bank portfolio, are provided in the Appendix.
- 9 In particular, payouts for crop losses have been conditional on proof of good husbandry.
- 10 In the appendix to chapter 4 of Mosley (2003), we examine how the value of this excess should be computed.
- 11 For other attempts to apply the Gautam, Hazell, and Alderman model in Africa, see Skees et al. (2005) and Mosley (2001a), also the Appendix.
- 12 From the point of view of making microfinance schemes work, a lot depends on the practicalities of whether this is in fact the case. For the case of the Indian Comprehensive Crop Insurance scheme of the early 1990s, where payouts were restricted to so few individuals and happened so late that the variance of the incomes of the insured was actually greater than the variance of the incomes of the uninsured, see Mosley and Krishnamurthy (1995).
- 13 For a general discussion of the social capital concept in relation to the data from our institutions, see Mosley et al. (2003), Chapter 6.
- 14 As the director of Grameen Kalyan put it, “people are not aware of their health before they become bedridden”: Interview, Sheikh Abdud Daiyan, Dhaka, January 8, 2002.

- 15 The Peruvian microinsurance organization IFOCC “created simple figures to help clients understand the benefit and the relative cost of the insurance. In addition, IFOCC helped clients to understand the relative size of the premium payments by asking them to think of the funds received from a loan as a jaguar, the interest paid on the loan as a rabbit, and the insurance premium as a guinea pig” (Brown and Churchill 2000: 20). More broadly rapid diffusion of insurance membership may be used by imaginative use of local opinion leaders, see the case of BRAC later.
- 16 As movingly described by an insurance scheme member: “My children were sickly and I used to spend so much at a time I wasn’t expecting, but now I have a plan to spend I get enough time to look for the money (because) when illness comes it doesn’t give you time to first look around for money.”
- 17 It was a very common observation that availability of insurance reduced the need to deplete investment by raiding the business to finance working capital.
- 18 See, for example, McCord (2000) and Brown and Churchill (2000).
- 19 Including one by the present author, working with Centenary Bank of Uganda (Mosley 2001) which was aborted when the chief executive of Centenary died in May 2001.
- 20 Eighty percent of these have a landholding of less than 2 hectares (BASIX 2007).

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