Chapter 4

Practicalities and potential problems

Social Policy Bonds, if widely issued by government bodies, would represent a radical change in the way in which our society does things. At first sight, a government-backed bond regime may seem outlandish: it would appear to mean government giving up its responsibility for achieving important social goals to the private sector. It would also allow private companies to profit from the public purse. But it is important to realise that a government that it issued Social Policy Bonds would merely be contracting out the *achievement* of social objectives. The government would still set these goals and, by undertaking to redeem the bonds, would still be the ultimate source of finance for the projects that achieve them. Certainly some wealthy corporations or individuals would become even wealthier under a bond regime, but competitive bidding for bonds would bid away excessive profits. People would need to be reminded of these facts when asked to contemplate a bond regime. Also note that the bonds would simplify the targeting of societal objectives – like the avoidance of large-scale catastrophes - that currently receive scant attention. Nevertheless, the concept does raise some important questions. One concerns free-riders: could they undermine the operation of a bond regime? Another is whether a bond regime might generate perverse financial incentives. This chapter begins by responding to these questions, then goes on to consider other practical aspects of a Social Policy Bond regime.

The free rider question

Many people might purchase Social Policy Bonds with the idea of doing nothing but holding them until they could sell them at a profit. Such passive bondholders would have no intention of doing anything to help achieve the social goal targeted by their bonds. Some of them could be casual purchasers who would buy the bonds with the same intent as they would a lottery ticket. They would hope to hold bonds until their redemption or until their market value had risen sufficiently high for them to enjoy a worthwhile capital gain. Other passive investors might be speculators who thought that the likelihood of the targeted objective being achieved quickly were greater than the rest of the market believed it to be — in other words, that the bonds were underpriced.

Another category of passive investor might be the hedger. These are people who, in the absence of the bond issue, would stand to lose if the particular targeted objective were achieved. Hedgers might buy the bonds as a form of insurance against that possibility. If crime were targeted, for example, hedgers might be those who breed guard dogs, or glaziers who operate where street crime is prevalent. (Actually, though, the losers from particular Social Policy Bond issues might not be clearly identifiable in advance, because the bonds would not stipulate *how* a goal is to be achieved. So, bondholders might decide that one of the most effective ways of reducing crime would be to subsidise the cost of guard dogs to home owners, which would *increase* demand for the animals.)

Casual purchasers and speculators would want to become 'free riders', hoping to benefit from any increase in the bond price without actually participating in any objective-achieving projects. Hedgers wouldn't particularly want the value of their bonds to rise, but their bondholding would similarly reduce the supply of bonds available to active investors. None of these passive purchasers of Social Policy Bonds would do much to help achieve targeted goals. However, markets for the bonds would work to limit the benefits from passive investing. To see this, assume that most of a particular issue of bonds were held by would-be free riders. Then very little, if anything, would be done to help achieve the targeted objective. As the objective became more remote, the value of all the bonds would fall. And as the bonds lost value, they would make a more attractive purchase for people who *were* prepared actively to help achieve the targeted objective. So free riders would be tempted to sell, even at a loss, rather than see the value of their bonds continue to fall. Some history of falling bond prices would tend to make free riding on Social Policy Bonds less appealing with future issues. Free riding then would become a self-cancelling activity. There are other reasons why bondholding would be unattractive to potential free riders:

- Individual free riders would have no incentive to collude with other free riders, because the more they did so, the more remote the targeted objective would become, and the further would the value of their bonds fall. This would act so as to limit any free riding activity to small players.

- As with other financial instruments, small players would have to pay higher transaction costs than the bigger institutions — the ones that would be most likely to initiate objective-achieving projects.

- Small players also would not have access to the research that would enable big players to value the bonds accurately. Therefore they would be at a disadvantage in the market.

- No bondholder, whether an active or passive investor, would want to sell less than their complete holding to people it identified as free riders; otherwise their remaining holding would lose value. Free riders might therefore find it difficult to purchase small parcels of bonds. They would therefore prefer to take a position on the derivatives market; their doing so would therefore not affect the underlying value of the bonds.

Note also that even if free riders were to gain from holding Social Policy Bonds, they would be doing so only because their bonds had risen in value as a result of a targeted objective becoming closer to being achievement. As well, attempted free riding would have positive effects: it would add liquidity to the bond market.

Attempted free-riding could be further mitigated by stipulating time limits in the redemption terms of the bonds. Social Policy Bonds could be issued that target, say, achievement of a 99 percent literacy rate for children aged 11. But if the issuers anticipated too much free-riding, they could stipulate that they would redeem the bonds only if the target rate were achieved within, say, five years. Free-riders would then be holding a wasting asset, whose value as the target becomes more remote would decline even faster than if there were no specified time limitation.

In short, there are grounds to believe that free riding need not seriously undermine the operation of a Social Policy Bond regime, mainly because it is unlikely much successful free riding would occur, and partly because even if it did, it could not do so to such an extent that it would impede the operation of the bond mechanism.

Collusion

It's likely that many bond issues will rely for their success on aggregation of holdings and tacit or overt collusion between the major bondholders, who will co-ordinate their target-achieving activities. But if they collude after the bonds have been floated, why then would they not collude in the market *before* the bonds are floated, agreeing together to refrain from entering the market until the bond issue price falls? They would then pay less for the bonds than they would in a competitive market. This sort of collusion is certainly a problem under the current system where contracts to supply goods or services are put out to tender. But existing corporations are structured entirely around the sale of goods or the provision of services – not the achievement of outcomes. Social Policy Bonds are best applied to broad policy areas where the question of how best to achieve a specific social goal cannot be easily answered at the time the bonds are issued. For example, take a broad objective like reducing air pollution in a region. There will be a wide range of ways in which the bonds can increase in value. These can involve: lobbying for higher tax on petrol, subsidising the sales of catalytic converters to cars-owners, subsidising bus fares or bikes, pedestrianising streets and a wide range of other possibilities. Most probably, the optimal approach will be a combination of many diverse activities, and this combination itself will be changing over time, in response to new events and expanding knowledge. There will be a kaleidoscopic continuum of optimal approaches, which will vary markedly according to the market value of the bonds. So, for example a bond that can be redeemed for $100 may be floated. The optimal combination of possible bond-price raising measures when the bonds are priced at $50 will be quite different from when the bonds are priced at $48, and *so will the range of corporations interested in buying the bonds*. Remember too, that bondholders can profit without holding the bonds till redemption. There will be a range of potential purchasers all with different time periods in mind. Some will have little interest in holding the bonds for a long time, adding to the competitiveness of the bond market.

Once bought, the work to achieve the targeted goal could done by a protean organization whose precise composition cannot and need not be known in advance (see below, 'A new type of organization') Certainly investors are likely to collude *after they purchase the bonds*, but their decisions as to whether to set up an objective-achieving organization, the structure and composition of any such organization, and the activities it pursues, will be entirely subordinated to their wish to see the bonds rise in value. There is a parallel here with the purchasers of shares of companies being floated: they have little in common before they actually own the shares and so no means by which they can collude to reduce the price of the shares they buy. Indeed, they are often competing with each other for the right to buy shares. But after purchase their interests coincide, and they can collectively influence the issuers' activities.

Perverse incentives

Assume that a government or private consortium issues Social Policy Bonds targeting air pollution. Bondholders might then try to persuade or bribe polluting firms to reduce their emissions. But what if polluters spurned bondholders' blandishments and continued to pollute at the same level? The market value of the air pollution bonds would fall, and polluters could collude to buy them at a lower price. They would then profit by reducing pollution and redeeming their bonds. Or they needn't buy bonds themselves; they could just wait for bondholders to offer them payments to reduce pollution. If a pattern of such behaviour were established, would there not then be perverse incentives, which would reward firms for stepping up their pollution (or anti-social or other anti-environmental behaviour) in advance of a bond issue, so that they can buy up bonds, reduce their pollution and reap a large profit?

Assuming pollution to be a by-product of production, then the output of these polluters would be at an above-optimal quantity, so their attempt to cash in on cynically raising their pollution would not be costless. Further, even if they behave in such a way, the targeted objective would still have been achieved for a sum equal to, or less than, the maximum cost for which the issuers have allowed. But it is a fact that the cost to bondholders would be lower if there were no such cynical behaviour. So a better answer to the question is that bonds are only one tool in a government's policy toolbox. National and local governments already have powers to regulate pollution; their ability to impose and strengthen their regulations at any time would make such cynical behaviour risky. In any case, this type of behaviour would probably be a threat only when there were a few big polluters who could collude. In such circumstances a bond regime might anyway not be the best pollution control mechanism, because their informational advantages over tradable permits for example might not be so significant (see chapter 6). The bonds work best for larger-scale problems with a multitude of causes, where there is less opportunity for a few miscreants to undermine their efficiency by performing illegal or anti-social acts.

Cynical polluters might also be restrained by the likelihood that bondholders could react not by paying them to reduce pollution but by looking for more cost-effective reductions elsewhere – including lobbying for stronger regulations or more robust enforcement of existing legislation.

But the possibility does remain that cynical businesses could benefit from their perverse behaviour. Or even that firms that previously generated no pollution whatsoever might begin to pollute so that they could benefit either from bondholders' paying them to pollute less, or from buying pollution reduction bonds cheaply, and then reducing their pollution and selling their bonds at a higher price. In all these cases there need be no collusion amongst bondholders. For 'market fundamentalists' contemplating using Social Policy Bonds as the sole means of achieving social and environmental goals, this might constitute a fatal flaw. But, again, the bonds would almost certainly complement a government's regulatory powers — including its powers to make new regulations and charge companies on the basis of how much pollution they emit. In such instances there would probably be enough existing or potential legal (and moral) sanction against cynical polluters to ensure that it need not happen. Governments would certainly retain its powers to tax or regulate in ways that would make perverse increases in pollution more risky, or criminal. And it bears repeating that, in a bond regime, bondholders would have powerful incentives to see that any existing rules against pollution were enforced, or that new and effective regulations on polluters would be imposed.

Nevertheless, and more generally, Social Policy Bonds would work by generating financial incentives for people to achieve particular goals, and this might encourage people to break the law to do so. Examples of acts that would be illegal, but that certain bond issues might encourage, are:

- emitting pollutants that, while unspecified in bonds targeting pollution, were still controlled or banned,

- forcibly preventing people from registering as unemployed, if bonds targeting unemployment were issued, or

- falsifying data used to compile measures of longevity or infant mortality that were elements of a targeted health objective.

Acts such as these are already illegal and will continue to be so, but people should be aware that any Social Policy Bonds they issue could generate greater inducements to commit them.

The bonds might also induce people to modify behaviour in ways that, while not illegal, undermine that which their issuers are trying to achieve. So, for example, if bonds targeting the number of reported property crimes were issued, bondholders might lobby insurance companies not to insist on police reports before paying out. Or they might persuade, or pay, insurance companies to raise their excess levels. Either activity would discourage people from reporting minor thefts. Neither would do anything to reduce property crime, but they would each make the targeted objective, lower numbers of *reported* property crimes, more achievable, and so lead to a rise in the bonds' market value. Insurance companies themselves could own the bonds, and so it would be in their own interest to deter people from reporting property crimes. In this particular case, the objective could be more carefully specified so as to target not 'reported crimes' but, for instance, the number of people who, in surveys of the public, say that they have experienced property crimes.

If higher levels of literacy were targeted, bondholders may be tempted to lobby in favour of easier reading tests. Again, judicious specification of the targeted objective should prevent this: the bonds could stipulate the exact reading test to be used, or that the test would have to be certified as appropriate by a specified panel of impartial literacy experts.

The need to specify targeted goals carefully is not, of course, limited to a Social Policy Bond regime. Government objectives laid down for schools in the UK, for instance, have led to increased enrolments in 'easy' subjects (media studies, for instance) rather than those (such as German or Spanish) that are graded more harshly.[1] Under the current regime policymakers and officials can escape or deflect censure because the adverse results of their policies are difficult to relate to their cause. If Social Policy Bonds were to lead to negative effects, the relationship between these effects and their cause would be easier to identify, and deterring such effects would be simpler than doing so under the current activity- or institutional- based funding arrangements.

In fact, these negative-but-legal activities could be lessened by a careful and cautious introduction of the Social Policy Bond mechanism.

Introduction of a Social Policy Bond regime

Social Policy Bonds would need to be introduced cautiously. Most likely they would be first tried out by philanthropic groups, non-governmental organizations or private individuals. Initial goals could be relatively small scale, contained and uncontroversial. Prediction markets, see box, might offer a way forward for trials of the bond concept.

Using prediction markets for smaller objectives

Prediction markets are 'speculative markets created for the purpose of making predictions. Assets are created whose final cash value is tied to a particular event (e.g., will the next US president be a Republican) or parameter (e.g., total sales next quarter). The current market prices can then be interpreted as predictions of the probability of the event or the expected value of the parameter. Prediction markets are thus structured as betting exchanges, without any risk for the bookmaker.'[2]

There appears to be some evidence that they are better than pundits at forecasting election results or share prices. Their focus is on speculation or (possibly) hedging against possible events, rather than generating incentives to modify behaviour and bring about positive changes. But they are, in principle, not very different from Social Policy Bonds. An organization could enter a prediction market and place a bet *against*, say, literacy in Pakistan rising to 99 percent. If the bet were big enough, that would create an incentive for people not only to take the bet and wait passively for literacy to rise, but actively to help the process along, perhaps by initiating new projects or financing existing literacy-raising schemes on the expectation of winning their bet.

Existing prediction market platforms could be of great value in refining the Social Policy Bond concept: they could be used by private issuers of the bonds to test and observe their application to small-scale, self-contained social or environmental problems.

Public sector-backed Social Policy Bonds could complement, rather than replace, existing government or local authority programmes. Amongst the first targeted objectives could be petty crime in particular cities, the amount of litter deposited on city streets, or illiteracy rates of schoolchildren or adults. Local authorities or environmental groups could also issue bonds that target the water quality in rivers, for instance; indicators of success could be the number and variety of fish present. Unemployment in particular cities or regions could also be early targets of a government-backed Social Policy Bond regime. Another target could be basic literacy levels, perhaps in a developing country. Such contained, easily identifiable goals would help the bonds gain acceptability amongst the public, and encourage policymakers to discuss and refine the concept. With goals like these, watching out for negative behaviour of, or on behalf of, holders of such locally issued bonds would be a fairly simple matter. And if these bonds were issued in tranches, targeting incremental improvements in indicators, it would be even easier to observe and remedy any negative-but-legal behaviours. Later tranches of bonds could incorporate provisos stipulating that they would be redeemed only if any unwanted, and previously unspecified, results did not exceed a minimal level.

Bond-issuing bodies would apply lessons learned from such trials to subsequent bond issues, while central government or private issuers could collate and apply these lessons before issuing bonds with wider application. When bonds target new objectives for the first time they might be more likely to encourage unanticipated negative behaviour by bondholders. Lessons learned from such initial issues could be applied to later issues targeting the same objective. These lessons would extend beyond how to deal with bondholders' behaviour. They might, for instance, give some direction as to the circumstances under which bonds could best be used as complements to existing policies, and when they could safely replace them.

A cautious, gradual, introduction of Social Policy Bonds would be one means of minimising potential problems of a bond regime. If, despite such an approach, some bondholders behaved illegally, the bond issuers – whether government or private sector – could bring about legal proceedings against them. If bondholders behaved in negative, but legal ways, the bond issuers would have other options. In ascending order of severity, they could:

- persuade or cajole bondholders into toeing the line. They could do this publicly or privately — initially, at least, bondholdings could be registered in the same way as shares;

- buy back bonds, which would have the effect of lowering the market price of bonds remaining on the market (by reducing the total redemption funds; see chapter 5); or

- press for legislation against the negative activity.

In extreme circumstances government could declare any bonds it issues null and void. It could offer compensation related to the bonds' issue price or latest market price.

Effects on government's behaviour

> The desire to overcome politics is based on the assumption that, if not subject to structures imposed from on high, free human action - whether in international affairs or domestic politics - is unstable and dangerous. People who think in this way cannot conceive of there being an order which they have not consciously designed: they cannot imagine that people and states themselves might be able to develop rules, perhaps unspoken ones, to foster peaceful free commerce.[3] John Laughland

One of the likely impediments to a government-backed Social Policy Bond regime is the reluctance that policymakers would probably feel to relinquish some of their power. If it issued the bonds, government would lose most of its control over how society's social and environmental objectives are to be met. For this reason it's likely that the private sector may be the first issuers of the bonds. However, a government, or a body financed by a number of national governments, might decide that, facing a huge problem to which it sees no convincing solution, it could issue Social Policy Bonds. Problems such as nuclear conflict leap to mind. Unfortunately (to this author's mind) these governments believe, or say they believe, they have a solution to climate change in restricting greenhouse gas emissions. More likely is that government will first venture into Social Policy Bonds after the private sector, in one or two policy areas and even then only as a small proportion of its spending and as a supplement to a range of more conventional policy instruments.

Another possible problem arising from the integration of Social Policy Bonds into the current policy-making system arises from government's role as creator of statutes. This was mentioned fleetingly in chapter 3 in connection with holders of bonds targeting crime, who might think it worthwhile to lobby government for longer prison sentences. Government has the power to pass laws that would affect bond prices, or its actions could influence bond prices in other ways. For instance: government could come under great pressure not to increase unemployment benefits from holders of bonds targeting the number of registered unemployed. Note, though, that the source of the pressure, and the motivation for it, would be easy to identify. And lobbying is a legitimate activity. There is no reason why bondholders, in common with other pressure groups, should not lobby politicians. They would be doing so mainly out of financial self-interest of course. But existing pressure groups are also self-interested, and in the case of bondholders their self-interest would be more likely to coincide with society's interests if targeted objectives were correctly specified. Bondholders would lobby for legislative change, and they would benefit in obvious, pecuniary ways if they were successful, but so too would society in general.

As in the current policymaking environment, under a bond regime it would be up to politicians to weigh the evidence for and against any course of action promoted by lobbyists, with due regard to the lobbyists' motivation. And it would be up to potential investors in Social Policy Bonds to take into account likely or possible changes in the legislative environment when bidding for the bonds.

The threat of bondholders lobbying governments for legislative changes could have a positive aspect. If governments intend to issue Social Policy Bonds, they could maximise their chances of the bonds' success by giving assurances as to their future behaviour. These could mean making relatively simple decisions early on. Governments could, for instance, decide now on the type of reading test to be used to measure how closely a national literacy target has been reached in a decade's time. But they could also choose to be more definite about their long-term spending plans. Would-be holders of bonds targeting literacy would be very interested to know as much as possible about government's projected expenditures on education in general, and literacy in particular. Similarly, prospective purchasers of bonds targeting atmospheric pollution would want to have some idea of, to mention just a few items: the government's petrol taxation, electricity generation or road building plans. Government would maximise interest in the bonds by being as open about its legislative and spending intentions as soon as possible. All such assurances would doubtless be subject to the usual scepticism attending pronouncements of this type.

Government would want the Social Policy Bonds it issues to be successful. Its assurances about its legislative and spending plans will never be absolute, but by giving what assurances it could a government would enhance the market for the bonds, and be able to achieve more social goals with the same budget. One way that a government issuing Social Policy Bonds could do this would be for it to specify that, as far as possible, its behaviour would be determined by objective criteria. So government might declare to potential investors in bonds targeting unemployment, for example, that changes in unemployment benefit payments would be strictly correlated with movements in a specified retail price index.

Of course, if the bonds were to target only small changes in unemployment, or crime rates, or air pollution, or whatever, the government's long-range plans would not be so significant to prospective bondholders. Targeting incremental improvements in social indicators, it might emerge after trials of the bond concept, could be the best way of dealing with the uncertainties of future government behaviour. Alternatively there may be many social goals for which it turns out that government's behaviour is a relatively insignificant component of the uncertainty that attaches to investment in any financial instrument: markets routinely deal with uncertainty by attaching lower values to riskier instruments.

While government's assurances about its future behaviour would exercise investors' minds, they would also be important to people who are consumers of government services. There would be important implications for bonds that target welfare expenditure. Take for example Social Policy Bonds that, aiming to tackle unemployment, would be redeemed only when spending on unemployment benefit fell by a certain level. Bondholders would then have an incentive to discourage people from applying for, or continuing to receive, unemployment benefit. They might lobby government not to increase the unemployment benefit paid to each person on the unemployment register, or even to reduce it. While it is difficult to imagine bondholders' doing so, and thereby incurring the wrath of much of the rest of society, there are no compelling reasons for making such lobbying illegal. But where government *should* draw the line, firmly, is on the question of who decides whether or not a person qualifies for state benefits. Decisions as to eligibility for state benefits must remain with the state. This is mainly for ethical reasons: these benefits are set, ultimately, by the political process, and are anyway little more than a safety net for most recipients. Bondholders should have the right to provide alternatives to these benefits; perhaps even the right to pay people not to claim them. But they should not have the right to decide who should qualify for them.

Assessment of indicators and insider trading

A bond regime would rely on authoritative, accurate and timely monitoring of the targeted social or environmental problem so that progress towards its solution could be impartially assessed. For large-scale bond issues there would probably be private sector information gathering, but the definitive, official, figures would have to be seen to be independent of bondholders, who could benefit unfairly from dubious data collection. Naturally the information as to how close the objective were to being achieved would have value. It would not be difficult, for instance, to imagine the latest official unemployment figures being sought in advance of official publication and used for 'insider trading' of bonds targeting unemployment If too much insider trading went on, it would increase the riskiness of the bonds to those without access to this information and tarnish their value as an investment. So how could it be minimised?

- Those involved in gathering, collating and processing relevant data could be bound by terms deterring or forbidding them from abusing privileged information.

- If large sums of money were at stake, there would be a great deal of private information gathering: investors, bondholders, and financial commentators would take their own soundings throughout the lifetime of each bond issue. There would be more interest in more frequently updated information, so that progress toward achieving objectives could be more readily charted. All this would serve to remove some of the allure from privileged figures that had yet to be publicised.

- Indicators for targeted objectives could be chosen with a view to minimising the possibility of insider trading being an important factor. Some imprecision about how objectives would be measured would help: a government could stipulate that bonds targeting such objectives as urban atmospheric pollution or crime rates in cities would be redeemed on the basis of data from a random sample of cities, rather than from all cities or a predetermined set of cities.

- The objectives themselves could be chosen to minimise the possibility of insider trading. Bonds targeting long-range objectives, such as cutting crime rates or unemployment by 50 percent rather than 10 percent, would probably be less sensitive to insider trading. With long-range objectives, each datum illegally withheld from the bond market would probably represent a smaller proportion of the total relevant information available to the bond market, and so have a lesser effect on the bond's market value.

None of these ways of mitigating insider trading will always be fully effective. That said, there are already sensitive indicators, such as unemployment or retail sales figures, that are capable of moving markets, and so there are already in place mechanisms to keep such information secret until it is time for publication. There are also sanctions against those who obtain, and act on, such information illegally. These mechanisms and sanctions might need to be strengthened under a bond regime, but it remains to be seen how important abuse of insider information would be. While insider trading does mean that unscrupulous people benefit at the expense of the public, it does not generally impede the operation of markets. Markets continue to function and the possibility that a low level of insider trading goes on is generally discounted by the broader market.

Futures and options markets

Another possible source of perverse incentives could arise from the development of futures and options markets in Social Policy Bonds. These would enable people to benefit from a falling bond price, so giving them an incentive to delay achievement of the targeted goal.

It is quite likely that there would be futures and options markets for large bond issues, and it is almost certain that the price of any particular Social Policy Bond would not always be rising monotonically from its float price to its redemption value. It would be justifiable, as well as efficient, if bondholders could hedge against consequent falls in the value of their assets. People who do not hold bonds might want to participate in markets for derivatives of bonds, some of which would rise in value as the targeted goal became more remote. This in turn means that speculators and short sellers could certainly profit from *short-term* bond price falls, and the question is whether these people would then take steps to impede progress towards any targeted goal.

There are two main reasons why they would probably not. The first is that, in the long term, the weight of money would be against them. Provided sufficient funds were allocated to achieving the targeted objective, there would be a net positive sum of money payable if the targeted objective were to be achieved, and a net zero sum paid as long as the goal were not achieved. All the long-term incentive would be to achieve the targeted objective. Those who, for whatever reason, would suffer from achievement of the objective could be compensated by bondholders, or bribed to change their ideas. Note also that for every buyer of a 'put' option there would be a seller, and that for every futures contract *bought* on the expectation that the bond price would fall, there would be an equivalent futures contract *sold* on that basis, so that the net incentive generated by derivatives would be in line with the incentive created by the underlying financial instrument, the Social Policy Bond: in the long run, this would favour achievement of the targeted objective.

The other reason that short sellers, or holders of 'put' options, in Social Policy Bonds might not take actions aimed at interfering with achievement of the goal is that such actions might well already be illegal or, again given the incentives that the bonds would generate, be made illegal – or have their provenance more enthusiastically investigated – once the bonds had been issued. Some miscreants might be tempted to sell bonds targeting water pollution short (or buy 'put' options) then dump a million tons of manure into Chesapeake Bay. But they would know that such an act is illegal – and that there will be people at the other end of their transactions who will be highly motivated to see the law enforced to its fullest extent.

Government as purchaser of bonds

Government agencies could, as competitive suppliers of objective-achieving services, participate as active investors in Social Policy Bonds under certain conditions, whether these were issued by another government agency, or by the private sector. Bondholders in the private sector would be unlikely to cry 'unfair competition', even if the operations of these agencies were heavily subsidised, because their own bonds would appreciate as a result of the government, or government-inspired, activity.

If government agencies were to participate in the market for Social Policy Bonds issued by central government or another government body, they should not have privileged access to information, which would deter others from buying the bonds. Also, it is important that any profits they receive, or losses that they incur as a result should accrue to that agency. The people who work for these agencies must have the same incentives as private sector bodies to perform efficiently. This would obviously change the character of those agencies, and would probably lead to their ultimate divorce from the public sector.

A new type of organization

Bondholders would form a coalition whose sole common interest is to enhance the likelihood of early achievement of the targeted social or environmental goal. They need not formalise this coalition. Indeed, its composition would be likely to vary over the time as the Social Policy Bonds could constantly be changing hands. This would not impede finding solutions to short-term, small-scale social or environmental problems, where progress toward solution can be readily monitored. But how could such a protean organization of bondholders work to solve problems that necessarily require a long time to achieve?

Consider the actions that people buying Social Policy Bonds targeting a long-term objective such as climate stability might take. They would want to see some appreciation of the value of their bonds even if they have no intention of holding on to them until the remote target of climate stability has been achieved. They might well realise, quite early on, that their bonds will lose value *unless they set up some sort of body with a longer-term commitment*. One possibility is that larger bondholders would collude to set up an investment company for the lifetime of the bonds. This company would have an appropriate, most probably stable, composition and structure and its job would be to vet potential climate-stabilising projects and help finance the efficient ones. The bondholders, once they had set up this company up could of course always sell their bonds on the open market: the setting up of the investment company could be one of the first projects they undertake in order to maximise the appreciation of their bonds. In principle, it's no different from any other objective-achieving project. Social Policy Bonds sold after the formation of this company would perform in the market like shares in the investment company. In keeping with the Social Policy Bond ethos, of course, all the company's activities would be tightly focused on the achievement of, in this case, climate stability. This avoids the almost inevitable bureaucratisation of large organizations and the supplanting of their founding ideals by their goal of self-perpetuation.

In general, to maximise the value of their bonds, those who buy Social Policy Bonds at flotation will have incentives to set up the most efficient objective-achieving institutional structure they can, whatever form that takes.

Existing institutions and the transition to a Social Policy Bond regime

Few of the bodies currently charged with achieving social goals are paid in ways that encourage better performance. Nevertheless these bodies are perhaps the largest repository of expertise for solving social problems and some of them are bound to be efficient, or to be capable of becoming efficient. It would be unwise as well as unfair and unnecessary for a government moving towards a Social Policy Bond regime to cut their funding too severely. The answer, at least for goals in policy areas for which there are already significant institutions, would be a gradual transition.

Take health, for example. In the UK, central government provides funding for regional health authorities (for spending on doctors, hospitals and prescriptions) according mainly to population level, age and need. Government also supplies funds directly to medical research organizations and academic institutions. A transition to a Social Policy Bond-based, rather than institution- or activity- based, funding programme would see the *direct* funding government gradually decline, while expenditure allocated by bondholders to the outcomes that all these institutions are collectively trying to achieve — longer life spans and a better quality of life, say — would gradually rise.

On introducing such a bond regime a government could decide to reduce its funding of health authorities and research institutes by 1 percent a year, in real terms. (The government could allocate the saved funding to the future redemption of the health bonds it has issued.) So after five years, each health authority would be receiving directly from central government only 95 percent of the funding that it formerly received. But bondholders could choose to supplement the income of some of these health bodies. They may judge a particular group of health authorities to be especially effective at converting the funds they receive into measurable health benefits, as defined by their bonds' redemption terms. Particularly effective health authorities might be working in deprived areas, where small outlays typically bring about larger improvements in health. Or bondholders might judge a particular research body to be worthy of additional funding, because it was conducting excellent research into a condition that would be likely to respond especially effectively, in terms of health outcomes, to additional expenditure. In such cases, bondholders would supplement their selected health authorities' or research institutes' funding. It may well be that these favoured bodies end up receiving a large boost in income throughout the lifetime of a bond regime.

It could also happen that investors in bonds targeting health look at completely new ways of achieving health objectives; ways that currently receive no, or very little, funding. To give a plausible example, they may be convinced that one of the best ways of achieving society's longevity objectives is to deter teenage drinkers from driving. Following this logic, they may find that one of the most efficient ways of doing so would be to lay on subsidised taxis for teenagers attending parties on Friday and Saturday nights – but only in certain parts of the country. It is difficult to imagine how our current centralised government fund allocation mechanisms could go about implementing such a programme. A Social Policy Bond regime would quickly eliminate some of the less rational distortions in other health care matters, amongst them the British National Health Service's terminal-care budget, 95 percent of which was allocated to the 25 percent of the UK's population who die from cancer, and just 5 percent to the 75 percent who die from all other causes.[4]

It is also likely that holders of bonds targeting health outcomes would greatly expand funding in areas such as health education or preventive medicine that rely on expertise outside those bodies traditionally devoted to health care.

Could bonds targeting remote objectives, such as a large rise in longevity, or a halving of the crime rate, be compatible with a gradual transition of the type described above, where funding to existing health institutions reduces by 1 percent annually? At first sight there would seem to be an apparent mismatch between such incremental reductions in government spending and the time scale needed to reach long-range objectives. The critical point here is that bondholders would be investing not on the basis of the annual reductions in government expenditure on existing health institutions, but on the basis of the redemption value of all the bonds issued. To be more precise, it would be this total redemption value, minus the bonds' existing market value, that would inform bondholders' investment decisions. This sum could be many times each year's incremental reduction in government's institution-based spending. One of the virtues of a Social Policy Bond regime is that bondholders could expect capital gains in the short run from investments that will begin to impact on the targeted goal only in the long run. By doing the initial groundwork efficiently and speedily – not usually a very lucrative proposition in the current regime – they could see short term rises in the bond price and early capital appreciation.

The accumulated reductions in spending to existing institutions would be one, but not the only, factor influencing how much government decides to spend on achieving a specified social goal. Also important would be the financial savings (if any) that achieving the objective would bring about, and the value society would place on any nonfinancial benefits.

Similarly gradual transitions would be warranted in other areas, such as education and crime, where schools and police forces, some of which are bound to be much more effective than others, are well entrenched. These institutions would receive slowly diminishing absolute levels of funding directly from government, while bondholders would again focus their spending on especially rewarding, in terms of specified education and crime outcomes, projects and institutions. As with health, it is likely that those areas that are initially most disadvantaged would again provide bondholders with the greatest return per unit outlay.

In newer policy areas, particularly the environment, it may be possible to expand spending allocated via the bonds at a faster rate: expertise in the environment is still relatively mobile, and it would be easier to quickly establish new outcome-based institutions or to reorientate existing ones.

In the shorter run, the Social Policy Bond concept will need to be tried, discussed and refined before it can be implemented for long-term social and environmental goals over a wide area. Most likely the first trials will come from the private sector – see chapter 7.

Interaction with existing programmes and projects

Note that, while changes in the source of funds would be gradual, those involved in existing institutions may well react by quickly reviewing how *all* their existing programmes and projects operate. If bondholders saw existing programmes as being particularly effective in achieving targeted outcomes, then they would be inclined to invest in them. On the one hand, the switch in funding would warn existing institutions that they could expect to see their relatively ineffective operations receive diminishing funds in the future. On the other hand, their effective operations could look forward to higher — possibly much higher — funding. Even a gradual transition involving 1 percent annual cuts in funds allocated to existing institutions that was balanced by a bond issue could bring about a rapid change in the way existing bodies conducted all their programmes. They may have to devote some of their resources into persuading bondholders of the cost-effectiveness of their activities; but this would not represent a radical difference from the way these bodies lobby for government funding nowadays. Under a bond regime they would have to do their lobbying on a more transparent, outcome-oriented, basis.

Would governments play fair?

Might issuing governments themselves try to avoid redeeming Social Policy Bonds, either by reneging on their commitments to do so, or by doing what they could to stop targeted goals from being achieved? The answer is: probably not. If governments were to issue Social Policy Bonds, they would be doing so as representatives of their citizens. They would therefore be under strong moral pressure to comply with their commitment to supply funds for bond redemption, and not to take actions impeding progress toward the targeted goal. But it would also be in governments' own interest to fulfil their obligations. If they did not, they would be discrediting the entire bond principle, which they might well want to deploy again, either domestically or as participants in efforts to solve global social or environmental problems.

Private sector issuers are more likely to default. The market would take this into account when valuing their bonds. Bonds backed by bodies who deposited their redemption funds into an escrow account overseen by a reputable institution would be seen as being virtually immune from the possibility of default, and so valued more highly.

What happens once an objective has been achieved?

Once an objective is close to achievement, the issuing body can float a new set of Social Policy Bonds aimed at maintaining the achieved outcome or at further improvements. Sustaining the outcome beyond the period specified in the original bond issue would probably be cheaper in terms of benefit per unit outlay than achieving it, while it is likely that further improvements targeted by a second bond issue would cost less than those achieved by the first. There are three main reasons for this, the first two of which are linked:

1. Assume that a bond issue aimed at reducing the level of some indicator from x led to its reaching a level of y. Most probably it would take more than a withdrawal of this funding for the indicator to revert back to x. Why? If the indicator represents the rate, in percent, of unemployment in one area, for example, many of the newly employed would stay in work, even if the absence of further expenditure on a bond issue meant that their salary would revert to the level that had previously failed to attract them into work. This would be partly because they were now more aware of the existence of low-paid work, partly because of the costs and disruption of reverting to an unemployed lifestyle and partly because they would now find the prospect of being

unemployed less attractive than previously. If the indicator represented air pollution, to take another example, maintaining lower levels of pollution could be cheaper than achieving it because people would have invested in machinery or other systems that cost less, per unit benefit, to keep running than they did to set up.

2. In a similar fashion, investors in Social Policy Bonds would learn from their experience of achieving the objective targeted by the first bond issue. They would have looked for, and experimented with, different methods of solving the targeted social problem, and would be able to choose the most efficient solutions for subsequent bond issues. If maintaining the cleanliness of a river, for instance, were targeted, then it is likely that any know-how about monitoring systems or equipment installation would be more cheaply available once an initial targeted lower level had already been achieved.

3. Less specifically, it is likely that general improvements in productivity, mainly arising from technology (including information technology), will continue to occur in our economies, and that bondholders would make use of them.

Of course, new issues of Social Policy Bonds will not always be the most cost-effective way of maintaining the achieved outcome. There might well be circumstances in which alternative actions, such as legislation or institutional monitoring, are preferable.

Social Policy Bonds and developing countries

The public sectors of most developing countries are smaller than in the rich countries, nor is their performance so well documented. This makes discussion of policymaking in these countries more difficult. Even so, that should not inhibit their consideration of Social Policy Bonds:

- Public sectors are growing even faster in developing countries than in the developed world from, of course, a smaller base. There is the opportunity therefore to avoid the policy mistakes that developed countries made.

- While public sectors in the developing countries are growing rapidly, they are still not big or efficient enough to cope with their very severe social problems and the enormous social changes that are occurring. Developing countries are urbanising rapidly, with all the social dislocation this entails. Crime rates are high, and there is a great deal of urban poverty and underemployment. Many children are outside the educational system altogether and standards in state systems, while variable, are generally very low. Environmental problems are especially severe in developing countries. Solutions to all these problems are unlikely to arise quickly from existing or evolving public sector bodies.

- Public sector employees in developing countries are generally not well paid, and are more susceptible to corruption than in most developed countries. This lowers their motivation to act in the public interest. So, even more than in developed countries, there is often little relationship between government spending and desirable outcomes. One pointer: an International Monetary Fund (IMF) survey of 50 developing countries concluded that ‘there is little empirical evidence to support the claim that public spending improves education and health indicators’.[5]

Despite their smaller administrations, there is no reason why governments in developing countries could not issue Social Policy Bonds and redeem them. They could target broad health, educational and environmental objectives, where improvements could come quite rapidly, and whose achievement could bring large net financial benefits to the government. It is likely that efforts at data collection in most countries would probably have to be strengthened, but that might be easier and more fruitful than enlarging what, in many cases, is a corrupt and incompetent public sector and trusting in that to achieve social objectives.

Unfortunately, even more than in the rich countries, the stated objectives of politicians and governments differ from their real intentions. In many developing countries powerful politicians use their own hidden networks of placemen in key positions in important ministries to frustrate whatever projects or policies they find inconvenient. Outsiders, including especially overseas aid donors, find little correlation between what the governments in these countries say they want and what they do. World Bank and IMF personnel officially judge countries on their stated policies and plans, but in many countries these bear little relationship to the way the country is actually run.[6]

It may be that, in time, aid to these countries could take the form of Social Policy Bonds, rather than being given on a government-to-government basis. This could enable the bypassing of corrupt politicians, officials, and the institutions they control. Funds aimed at solving global environmental problems, such as climate change, could similarly reward those who undertook worthwhile projects, rather than corrupt governments. Or corrupt governments could choose to buy globally backed bonds. Their financial self-interest would encourage them to modify their behaviour to help achieve targeted global goals.

Summary

The introduction of a government-backed Social Policy Bond regime would be accompanied by operational challenges and problems, not all of which can be anticipated. But these potential problems should not be overstated. First, most probably there would be valuable lessons learned from the private sector's experience in issuing small-scale Social Policy Bonds. Second, existing laws, careful choice and specification of targeted objectives, more transparency in government as to what it wants to achieve and how it will behave would probably circumvent or remedy most of the potential difficulties. And some of the problems that a bond regime would entail are the inevitable result of policies that have as their measure of achievement quantifiable indicators. In an increasingly complex and interlinked world, the trend toward using these indicators for policymaking purposes is going to continue, regardless of whether Social Policy Bonds are issued or not. The key point is that the likely performance of a bond regime needs to be compared not with some imaginary, impractical utopia, but with likely alternative policy-making methods.

Before the next chapter, which looks at the advantages of a Social Policy Bond regime, we provide answers to some frequently asked questions.

Questions and answers

Shouldn't the Social Policy Bond idea be tested before it's applied to critical issues?

Ideally, the concept should be tried on small self-contained problems, where the causes of the problem could be many and not very obvious. Example targets could be a region's crime or literacy rate. One difficulty is that Social Policy Bonds probably work best for broad objectives over large geographical areas, where there are many possible causes of each social or environmental problem, making current policy tools, such as regulation or taxes difficult to implement. But certainly, the Social Policy Bond idea needs experimental application then refinement before it can be deployed to solve critical national or global problems.

Who would issue Social Policy Bonds?

Local and national governments could issue Social Policy Bonds, as could international bodies such as the United Nations and World Bank. But, importantly, non-governmental organizations, private individuals or philanthropic bodies who feel strongly about a particular social or environmental concern could also issue Social Policy Bonds. They could call on members of the public to add to funds available for bond redemption. Purchasers of these bonds could initiate projects that complement activities currently undertaken by governments, or they could aim for objectives that receive no government attention at all.

Who would buy the bonds?

The most important buyers of large bond issues would probably be institutions, who would buy many of the bonds, and use the profits they anticipate from early redemption, or bond price rises, as collateral to finance projects that would help achieve the targeted social objective. For smaller bond issues ordinary members of the public might hold the majority of the bonds.

Wouldn't people just buy Social Policy Bonds, then do nothing?

If too many people failed to take any outcome-achieving activities the value of their bonds would fall, as the targeted objective became ever more remote. At some point, the market price of the bonds would fall to such a low point, that it would pay somebody to buy the bonds, then do something to help achieve the targeted objective.

What happens if Social Policy Bonds are held by many different holders? That would mean that bondholders might be tempted to do nothing, or that they would not be rewarded in proportion to their efforts.

If too many Social Policy Bonds were held by would-be free riders who had no intention of doing anything to help achieve the targeted social objective, then the value of all the bonds would fall. This would lead to aggregation of bond holdings, so that most bonds would be held by relatively large owners. They would then have incentives to cooperate with each other. This would mean, amongst other things, that they would all benefit by agreeing on how the specified social problem could best be targeted. One element of the optimal strategy will be to decide who will be responsible for what activities, and how they shall be paid. Major bondholders will certainly have incentives to share information with each other, and perhaps to trade bonds with each other

But what about those with smaller holdings?

Some might think that holders of bonds representing, say, less than 2 percent of all the bonds issued wouldn't bother to help achieve the targeted objective because they will not be the sole beneficiaries of appreciation in the value of the bonds. There might not be many bonds in the hands of such small holders (see previous question), but if there were, what might happen? Depending on the objective, people may make more of an effort to achieve it, even if they hold only a small number of bonds. Some goals require only small efforts from large numbers of people and if a goal is widely supported and especially if it's applicable to an identifiable community, people might help achieve it regardless of their bondholding. In such cases, the bonds would serve mainly to stimulate a bit more interest or motivate large bondholders to channel the diffuse, but valuable, support for the goal.

Note also that people often *do* take actions that will enrich others as well as themselves. Minority shareholders and company managers, for instance, frequently initiate actions that will see major shareholders benefit far more than themselves. The important criterion for bondholders would be whether their participation objective-achieving activities will generate a sufficient return – financial and psychological – to themselves. They will not be deterred if their activities also benefit others. Of course, if their activities are successful in achieving a specified objective, then other bondholders may replicate them, so raising the price of the bonds significantly.

There is also the possibility that small bondholders (or people who hold no bonds at all) could invest futures or options markets for the bonds to leverage any bond price appreciation resulting from their activities.

What happens when a targeted objective has actually been achieved? Wouldn't more bonds have to be issued to maintain the status quo?

For the bonds to be redeemed, the achievement would have to be *sustained* for a specified period. After that period, it is likely that the most successful and efficient systems developed to solve the social problem the first time will allow the bond to allocate less funding for maintaining or improving the new status quo.

Could the bonds really solve such global problems as climate change and violent political conflict?

Once the bonds have been successfully used at the local and national levels, there would be every reason to apply the principle to global problems. The thrust of the concept is to give people incentives to solve targeted problems. Too many global resources are wasted by inefficient, corrupt or malicious governments who have no wish or incentive to help solve global problems. Social Policy Bonds could bypass, co-opt, undermine or depose regimes that oppose social or environmental goals.

The introduction of a Social Policy Bond regime would be accompanied by operational challenges and problems, not all of which can be anticipated. But these potential problems should not be overstated. Existing laws, careful choice and specification of targeted objectives, more transparency in government as to what it wants to achieve and how it will behave would probably circumvent or solve most of them. And some of the problems that a bond regime would entail are the inevitable result of policies that have as their measure of achievement quantifiable indicators. In an increasingly complex and interlinked world, the trend toward using these indicators for policymaking purposes is likely to continue, regardless of whether Social Policy Bonds are issued or not. The likely performance of a bond regime needs to be compared with current policy-making methods.

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[1] *Languages 'at point of no return',* BBC News Channel, 24 August 2006, http://news.bbc.co.uk/1/hi/education/5281126.stm, sighted 17 July 2008.

[2] Source: Wikipedia (http://en.wikipedia.org/wiki/Prediction_market), which has links to other sites of interest in this fast-moving field.

[3] *The Tainted Source: The Undemocratic Origins of the European Idea,* John Laughland, Time Warner paperbacks, 1998, ISBN 0751523240 (page 162).

[4] See *Alternative endings*, 'Radio Times' (UK), 13 July 2002. This was the subject of a British Channel 4 television documentary *Death: you're better off with cancer* broadcast on 16 July 2002.

[5] *Does higher government spending buy better results in education and health care?*, Anjeev Gupta, Marijn Verhoeven and Erwin Tiongson, IMF Working Paper WP/99/21, February 1999.

[6] *Africa: the heart of the matter*, 'The Economist', 13 May 2000.